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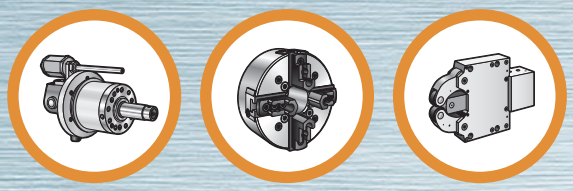

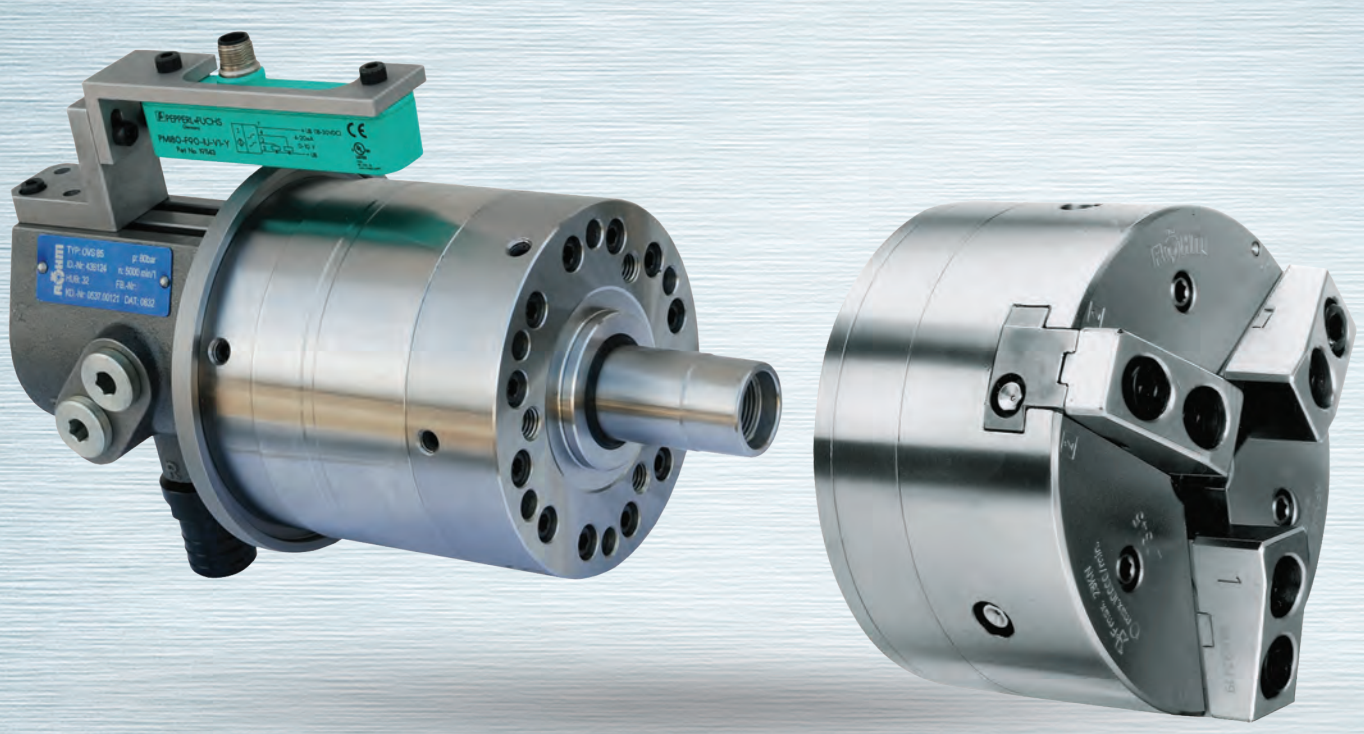

biting.

Power Chucks
Cylinders - Steady Rests

2013/2014

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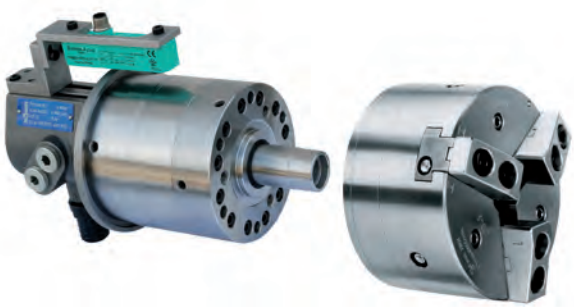
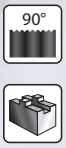
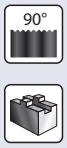
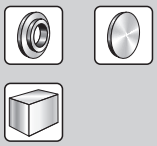
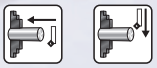
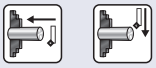
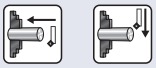
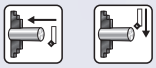
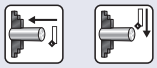
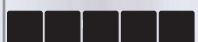
driven by technology

POWER CHUCKS - CYLINDERS - STEADY RESTS

Power chucks - Cylinders - Steady rests



Operation guide

	Power chucks without through-hole					
	KFD-EC	**KFD-F-EC**	**KFD-HS oil**	**KFD**	**KFL**	**KFD-G**
Power transmission	wedge	wedge	wedge	wedge	wedge	wedge
Feature	low-maintenance, quick jaw changing	low-maintenance, quick jaw changing, centrifugal force compensation	hermetically sealed with oil bath lubrication		light-weight chuck	large jaw stroke
Size	200 - 400	200 - 400	210 - 333	85 - 800	250 - 600	125 - 400
Chucking capacities	16 - 490	16 - 490		4 - 890	40 - 690	
Mount	**DIN 6353**	**DIN 6353**	**DIN 6353** **ISO 702-1** (DIN 55026) **DIN 55021**	**DIN 6353** **similar DIN 6353**	**Cylindrical centre mount**	**Cylindrical centre mount**
Number of jaws						
Type of jaws						
Workpiece						
Machining						
Rotating / Stationary						
Clamping force						
Speeds						
Page	6013	6014	6020	6022	6036	6039

 2-jaw chuck

 3-jaw chuck

 4-jaw chuck

 serration 60°

 serration 90°

 tongue and groove

 module toothing

 positive taper lock

 collet

 pipe

 bar

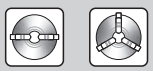
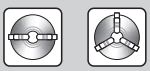
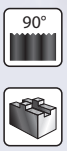
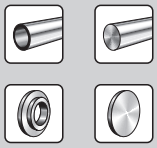
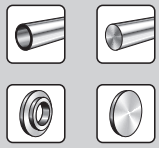
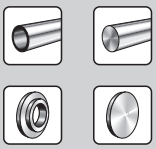
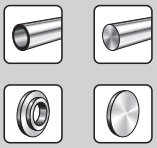
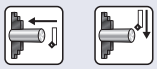
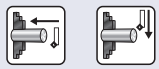
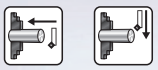
 disc

 flange

 asymmetrical workpiece

 length machining

Operation guide

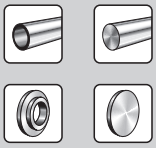
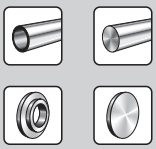
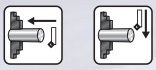
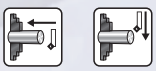
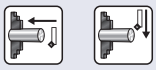
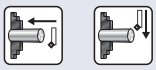
	without through-hole	Power chucks with through-hole			
	MSF	**KFD-HS**	**KFD-HE**	**KFM**	**KFG**
Power transmission	diaphragm	wedge	wedge	angle lever	angle lever
Feature	quick-acting jaw change system HSK centric clamping			large through-hole, medium jaw movement	large through-hole, long jaw movement
Size	210 - 400	110 - 500	110 - 400	130 - 350	160 - 350
Chucking capacities	20 - 345	6 - 580	5 - 484	5 - 462	5 - 472
Mount	**Cylindrical centre mount, ISO 702-1** (DIN 55026)	**DIN 6353 ISO 702-1** (DIN 55026) **DIN 55021**	**DIN 6353 ISO 702-1** (DIN 55026) **DIN 55021**	**Cylindrical centre mount**	**Cylindrical centre mount**
Number of jaws					
Type of jaws					
Workpiece					
Machining					
Rotating / Stationary					
Clamping force					
Speeds					
Page	6045	6051	6068	6081	6084

 side machining

 rotating

 stationary

Operation guide

	Power chucks with quick-acting jaw change system		Collet chucks		
	DURO-NC	**DURO-NCSE**	**KZF**	**KZZF**	**KZZT**
Power transmission	wedge	wedge	draw tube	draw tube	draw tube
Feature	central jaw unlocking	central jaw unlocking	quick-acting bayonet catch	quick-acting bayonet catch, pull down	solid through-hole, with cylindrical centre
Size	140 - 630	170 - 630	40 - 80	40 - 80	32 - 120
Chucking capacities	5 - 780	8 - 667	2 - 80	2 - 80	4 - 120
Mount	**DIN 6353** **ISO 702-1** (DIN 55026) **DIN 55021**	**DIN 6353** **ISO 702-1** (DIN 55026) **DIN 55021**	**Cylindrical centre mount, short taper mount**	**Cylindrical centre mount**	**short taper mount**
Number of jaws					
Type of jaws					
Workpiece					
Machining					
Rotating / Stationary					
Clamping force					
Speeds					
Page	6098	6112	6125	6128	6132

 2-jaw chuck

 3-jaw chuck

 4-jaw chuck

 serration 60°

 serration 90°

 tongue and groove

 module toothing

 positive taper lock

 collet

 pipe

 bar

 disc

 flange

 asymmetrical workpiece

 length machining

Operation guide

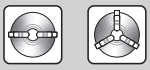
	Collet chucks			Draw-down power chucks	
	KZZT-A	**KZZT-AF**	**KZF-S**	**KFD-N**	**KBF-N**
Power transmission	draw tube	draw tube	draw tube	wedge	wedge
Feature	solid through-hole, rigid axial stop	solid through-hole, rigid axial stop, clamping jaws Top Grip	quick-acting bayonet catch, pull down, operation of the mandrel	Active pull down for external chucking	Active pul down, hermetically sealed with oil bath lubrication
Size	32 - 120	32 - 120	80 - 180	220 - 800	170 - 400
Chucking capacities	4 - 120	4 - 120	30 - 180		
Mount	**short taper mount**	**short taper mount**	**Adapter plate**	**ISO 702-1** (DIN 55026) **DIN 55021**	**DIN 6353** **ISO 702-1** (DIN 55026) **DIN 55021**
Number of jaws					
Type of jaws					
Workpiece					
Machining					
Rotating / Stationary					
Clamping force	■■■■■	■■■■■	■■■■□	■■■■■	■■■□□
Speeds	■■■■■	■■■■■	■■■■■	■■■□□	■■■■□
Page	6134	6136	6141	6145	6148

side machining

rotating

stationary

Operation guide

	Compensating chucks			Air-operated self-contained chucks	
	KFD-AF	**KFE**	**KKHFR**	**LVE**	**LVE large through-hole**
Power transmission	wedge	angle lever	angle lever	wedge	wedge
Feature	compensating jaws, piston with additional guidance	compensating jaws	retractable jaws, piston with additional guidance	incorporated actuating cylinder	incorporated actuating cylinder, large through-hole
Size	160 - 315	170 -350	160 - 450	125 - 315	400 - 1000
Chucking capacities	5 - 393	24 - 473	18 - 300	12 - 400	85 - 1135
Mount	**Cylindrical centre mount, short taper mount, with option for radial fine adjustment**	**Cylindrical centre mount**	**ISO 702-1** (DIN 55026)	**Cylindrical centre mount, ISO 702-1**(DIN 55026), **ISO 702-2** (DIN 55029), **ISO 702-3** (DIN 55027)	**Cylindrical centre mount**
Number of jaws					
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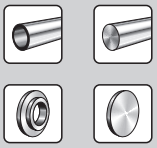
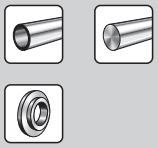
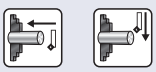
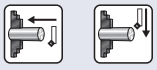
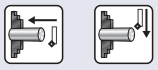
Workpiece					
Machining					
Rotating / Stationary					
Clamping force					
Speeds					
Page	6154	6160	6166	6196	6204

 2-jaw chuck

 3-jaw chuck

 4-jaw chuck

 serration 60°

 serration 90°

 tongue and groove

 module toothing

 positive taper lock

 collet

 pipe

 bar

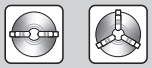
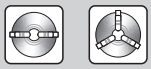
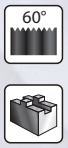
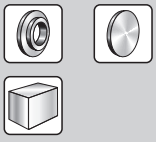
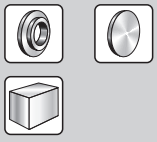
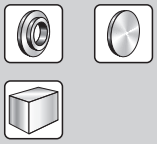
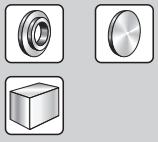
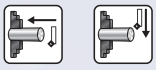
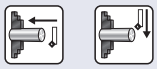
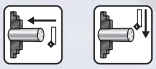
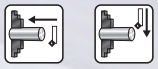
 disc

 flange

 asymmetrical workpiece

 length machining

Operation guide

	Stationary power chucks			
	SSP	**SSH**	**KZS-P**	**KZS-PG**
Power transmission	wedge	wedge	wedge	wedge
Feature	pneumatically, without through-hole	hydraulically, without through-hole	pneumatically, centering vices	pneumatically, centering vices, long jaw movement
Size	160 - 315	160 - 315	64 - 315	100 - 250
Chucking capacities	28 - 400	28 - 400		
Mount	Adapter plate	Adapter plate	Clamping sleeve DIN 7346	Clamping sleeve DIN 7346
Number of jaws				
Type of jaws				
Workpiece				
Machining				
Rotating / Stationary				
Clamping force				
Specialty	serration 60°, tongue and groove and / or through-hole on request	serration 60°, tongue and groove and / or through-hole on request		
Page	6215	6215	6222	6222

 side machining

 rotating

 stationary

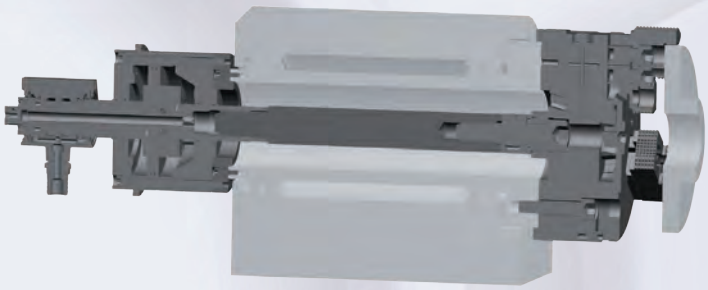
Clamping combinations

Power chucking package without through-hole (closed center chucking)

Clamping cylinder without through-hole

OVS
OVUSHH
LVS
EVS

Applicable for parts similar to flanges



Power chuck without through-hole

KFD
KFL
KFD-EC
KFD-F-EC
KFD-HS oil
KFD-G
KFD-N
KBF-N
KFD-AF
KKHFR *
* only with OVUSHH

Power chucking package with through-hole (hollow-center chucking)

Clamping cylinder with through-hole

SZS
LHS-L
EHS

Applicable for shafts and bar work

Power chuck with through-hole

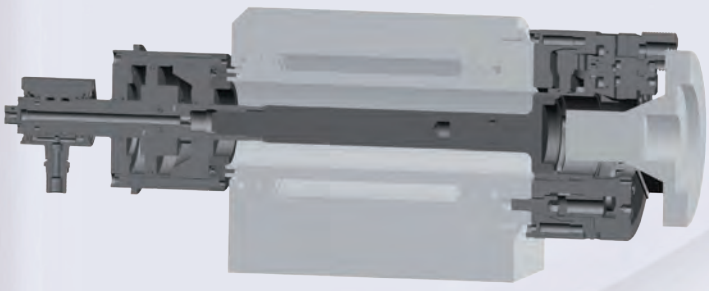
KFD-HS
KFD-HE
DURO-NC
DURO-NCSE
KZF
KZZT/KZZT-A/
KZZT-AF
KFE, KFM, KFG
ZFM
LVE

Power chucking package with partial through-hole (partial hollow-center chucking)

Clamping cylinder without through-hole

OVS
LVS
EVS

Applicable for parts with flange-type shoulders



Power chuck with through-hole

KFD-HS
KFD-HE
DURO-NC
DURO-NCSE
KZF
KZZT/KZZT-A/
KZZT-AF
KFE, KFM, KFG
ZFM

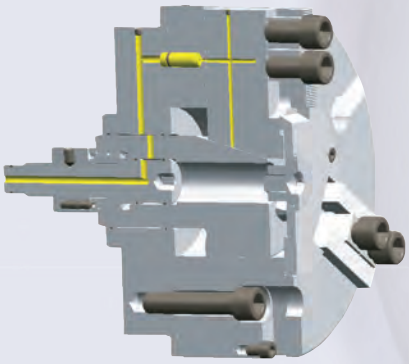
Flexibility of media supply

For power chucks with or without through-hole

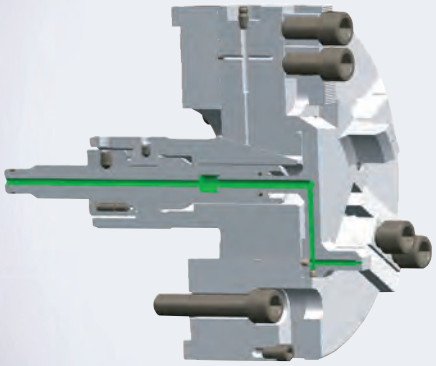
Available on request:

- with air passage for air sensing, air blocking or blast air
- central lubrication
- with guided and sealed piston neck
- with drainage groove or drainage bore as well as covers resp. inserts for the center bore

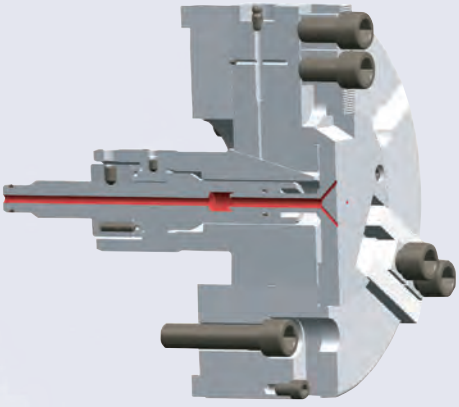
Examples of modified power chucks with connections for:



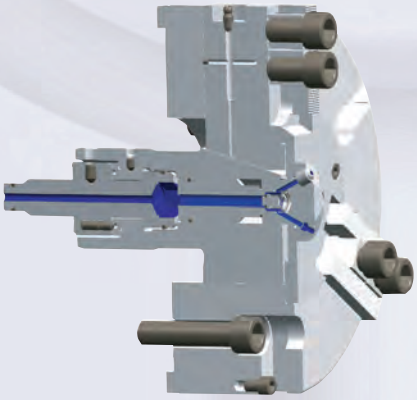
Central lubrication via distributor flange
with dosage valves



Air sensing



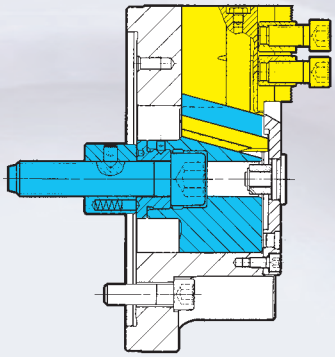
Blast air



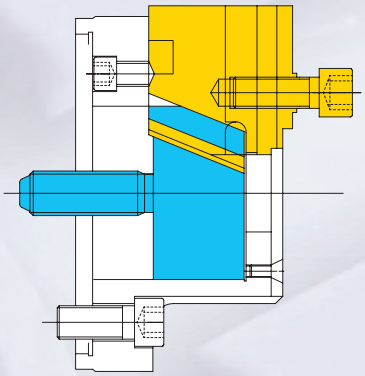
Coolant

Double connections, i. e. for central lubrication and air sensing are possible.

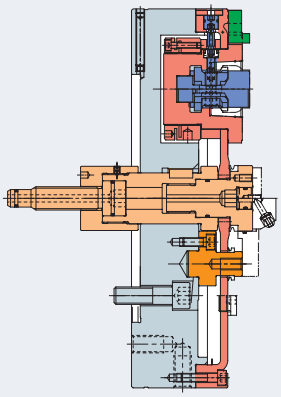
Overview clamping systems



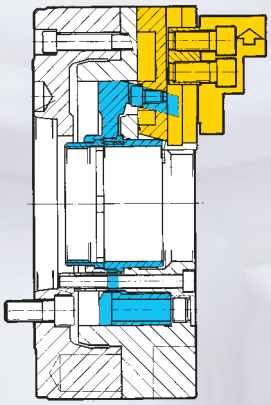
KFD
Wedge system
without through-hole



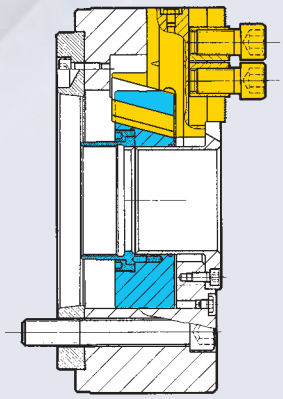
KFD-G
Wedge system
with large total jaw
movement,
without through-hole



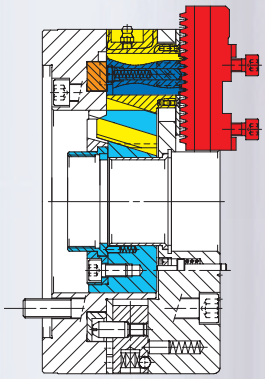
Diaphragm clamping chucks
Centrically clamping,
ideally suited for
grinding and hard turning
with high precision, with
HSK mounting for swift and
simple chuck



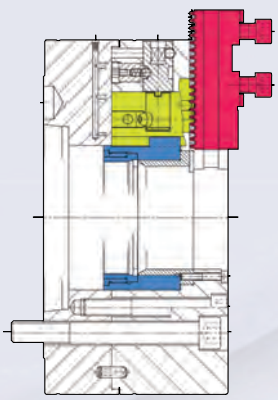
KFD-HS
Wedge system
with large through-hole,
for very high speeds,
with minimal loss of
gripping force



KFD-HE
Wedge system
with large through-hole

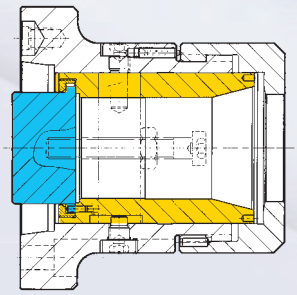


DURO-NC
Jaw quick change system
with central jaw unlocking

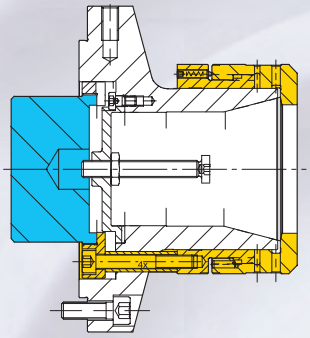


DURO-NCSE
Quick-acting jaw change
system with individual
jaw unlocking.

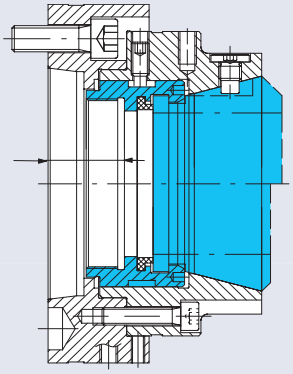
Overview clamping systems



KZF
Power-operated collet chuck (push) with through-hole, with rapid action bayonet catch, for steel collets to DIN 6343



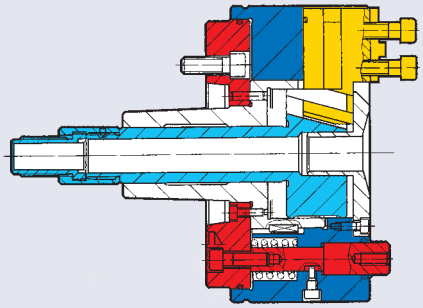
KZZF
Power-operated collet chuck (pull) with through-hole, with rapid action bayonet catch, for steel collets to DIN 6343



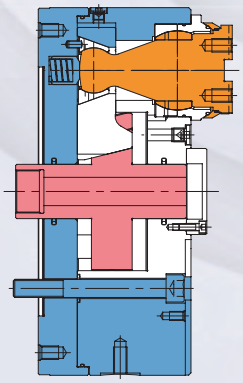
KZZT
Pulling collets with full through hole

KZZT-A
Pulling collets with full through hole and a rigid axial stop

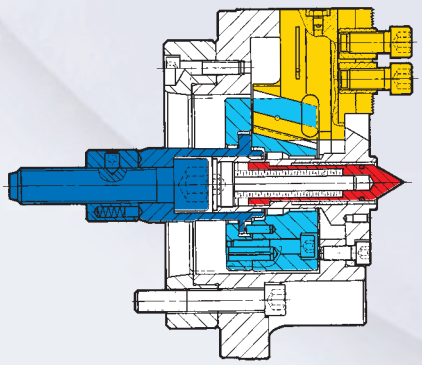
KZZT-AF
Power-operated collet chucks with fixed clamping jaws



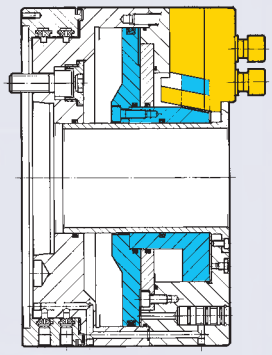
KFD-N
Wedge system with draw-down effect, with through-hole



KBF-N
Power operated Ball Lock Drawdown Chuck with active drawdown action, hermetically sealed, oilfilled

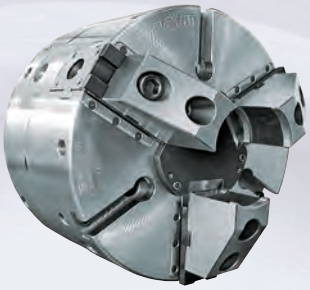


KFD-AF
Wedge system base jaw compensating, with interchangeable centering inserts, without through-hole



LVE
Wedge system actuating cylinder is incorporated in the chuck body, with through-hole

Overview



KFD-EC from page 6013

Wedge system
Low maintenance
3-jaw design
Options: with or without force compensation

KFD-HS oil from page 6020

Wedge system
Almost maintenance-free due to oil bath lubrication
3-jaw design

KFD from page 6022

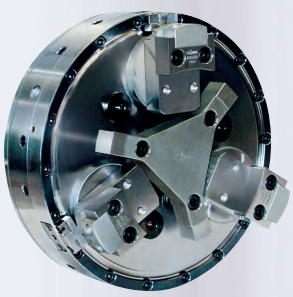
Wedge system
2-, 3- and 4-jaw design
Options: Weight reduced design

KFL from page 6036

Wedge system
Light weight, Body in aluminium design
3-design design

KFD-G from page 6039

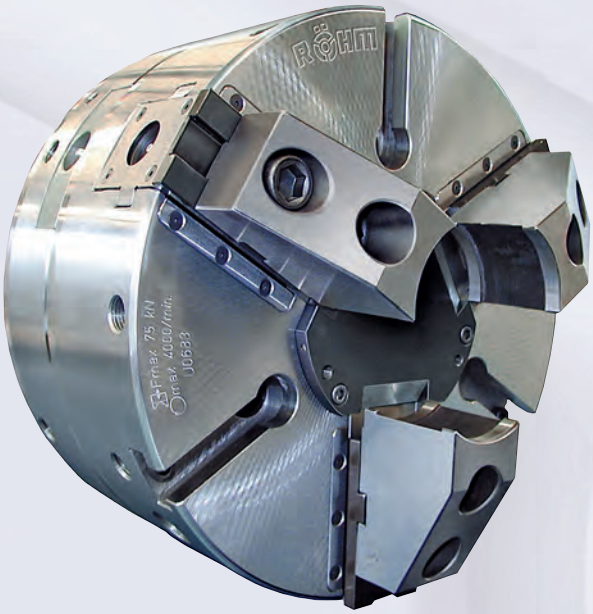
Wedge system
Large jaw stroke
2-jaw design



MSF from page 6045

Diaphragm clamping chuck
Highest precision, with quick-acting jaw change system HSK
3-jaw design

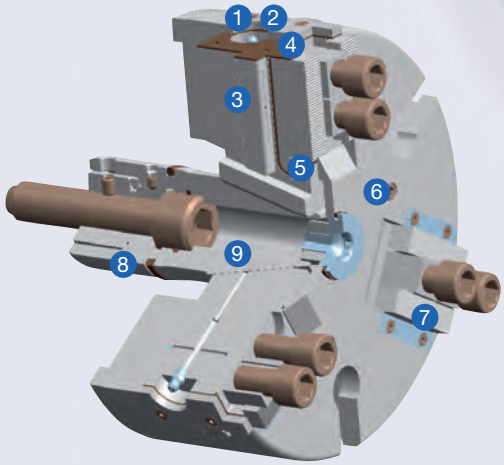
KFD-EC / KFD-F-EC



Technical features:

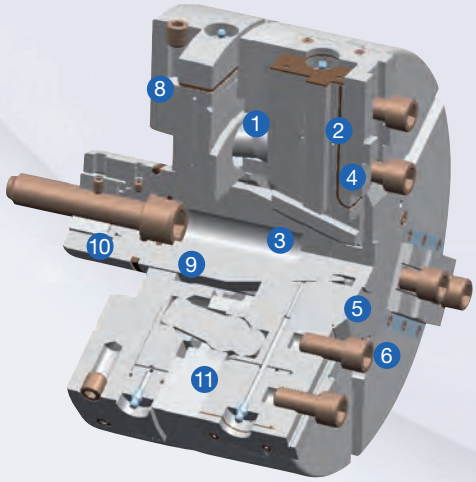
- Easy Care: low-maintenance and wear resistant
- Abrasionproof coating of the base jaw guidings
- Improofed dirt protection by integrated jaw guiding seals
- Especially for extreme operation conditions like dry or raw part machining and/or high coolant pressure
- Maintenance intervals up to every 600 operation hours, depending on the operation conditions
- Wedge system
- Used in conjunction with RÖHM actuating cylinders with safety device SZS, OVS, LHS-L, LVS, EHS and EVS the power chucks KFD-EC and KFD-F-EC meet the requirements of the German Employers' Insurance Association

KFD-EC without centrifugal force compensation



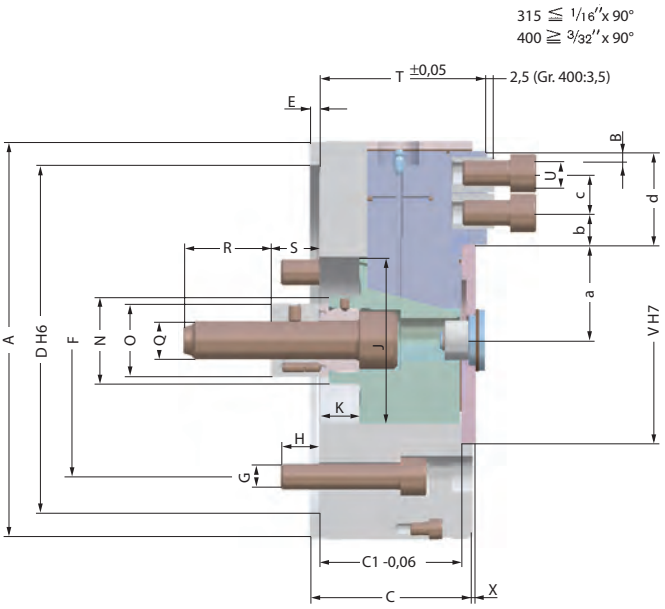
1. Body
2. End cover
3. Base jaw
4. Flat seal
5. Square ring
6. Cover
7. Wiper plates
8. O-Ring
9. Piston

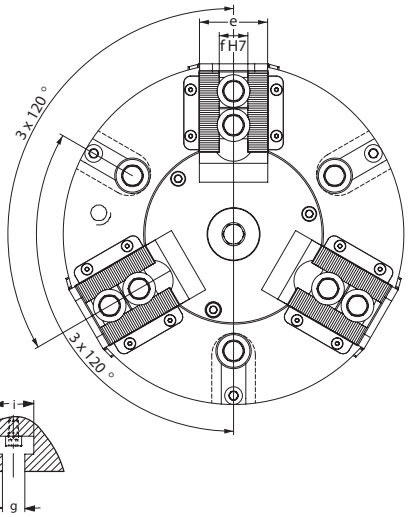
KFD-F-EC with centrifugal force compensation

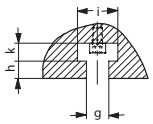


1. Body
2. End cover
3. Base jaw
4. Flat seal
5. Square ring
6. Cover
7. Wiper plates
8. Square ring
9. Centrifugal force compensation mass
10. O-Ring
11. Piston

KFD-EC 3-jaw, without force compensation, serration 90°







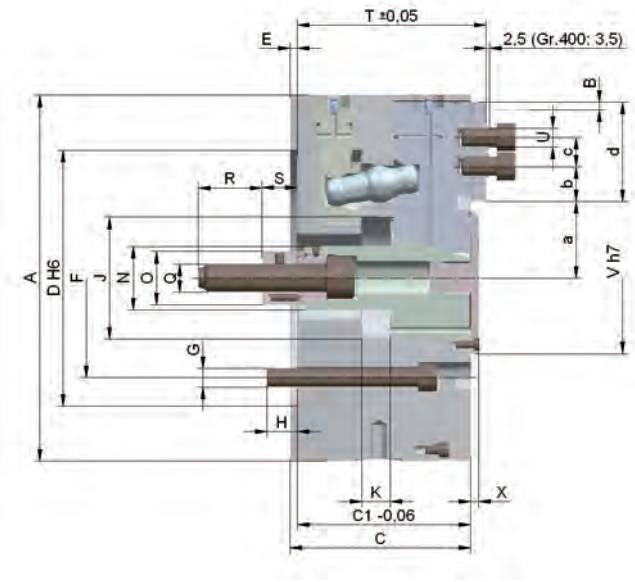
Tool group
Type 538-00 Low-Maintenance
3 jaw power chuck **KFD-EC**, **with short piston, without force compensation, with serration 90°**
centric clamping
Adaptor recess, mounting dimensions to **DIN 6353**

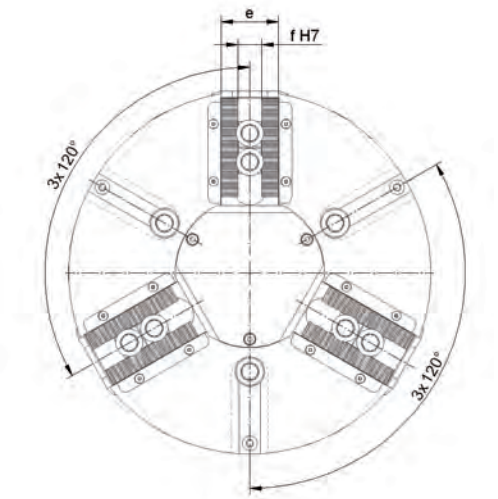
Item no.	**166183** ●	**166184** ●	**166185** ●	**166186** ●
Size	200	250	315	400
A	200	250	315	400
Jaw travel B	6,7	6,7	8	9,3
C	86	98	113	121
C1-0,06	80	92	107	115
Mount D^{H6}	170	220	300	300
E	6	6	6	6
F	133,4	171,4	235	235
G	3xM12	3xM16	3xM20	3xM20
H	18	23	31	30
J	85	105	120	155
Wedge stroke K	25	25	30	35
N	45	55	60	60
O	40	46	46	55
Q	M20	M24	M24	M24
R	45	55	55	55
S min.	30	30	30	30
S max.	55	55	60	65
$T^{\pm 0,05}$	90	105	120	130
U	M12x25	M16x30	M16x30	M20x40
V^{H7}	110	130	160	190
X	7	7	9	9
a min.	43,3	53,3	59,5	77,7
a max.	50	60	67,5	87
b min.	8	10	10	14
c min.	19	25	25	31
c max.	34,5	47,5	70,5	87
d	45	59	84	107
e	35	50	55	60
f^{H7}	17	21	21	25,5
g	14	18	18	22
h	11	13	13	22
i	11	14	14	18
k	25	32	32	40
Maximum draw bar pull kN	45	65	80	95
Max. total clamping force kN	90	140	190	250
Max. admissible speed min^{-1}	4000	3200	2800	2000
Moment of inertia J kgm^2	0,1	0,28	0,89	2,02
Weight without jaws approx. kg	19,3	34,8	63,6	88,4

Intermediate flanges for short taper adaption on request

● from stock ■ 4 - 6 weeks ▲ on request

KFD-F-EC 3-jaw, with force compensation, serration 90°

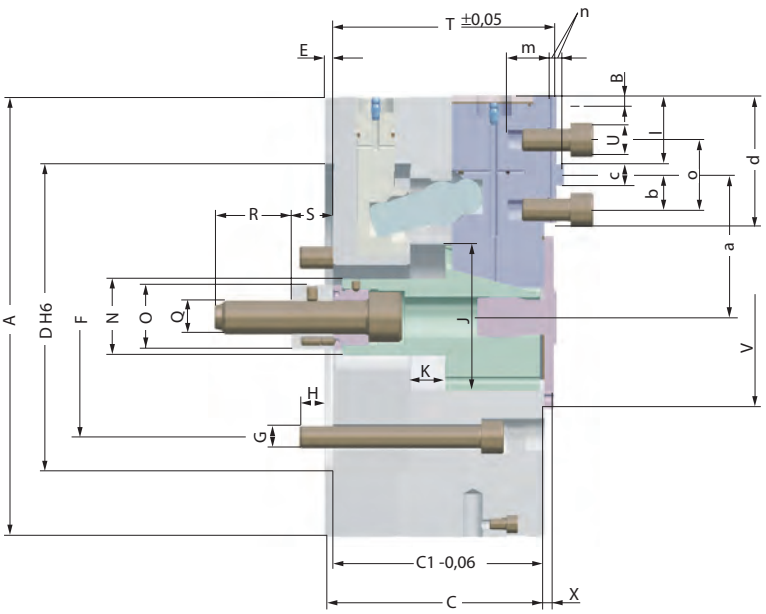


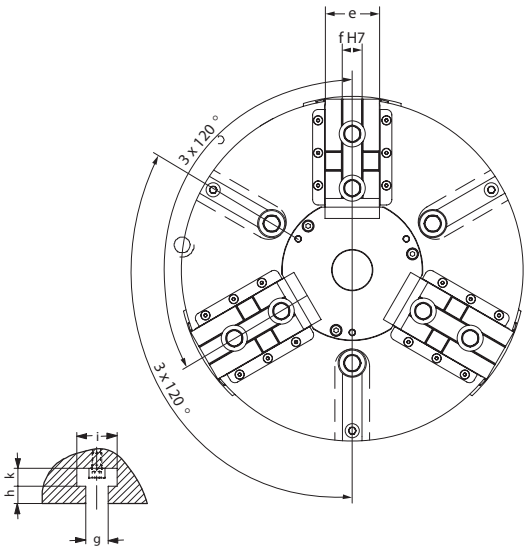


Tool group C15
Type 541-00 **Low-Maintenance 3 jaw** power chuck **KFD-F-EC**, **with short piston, with force compensation**, **with serration 90°,** centric clamping
Adaptor recess, mounting dimensions to **DIN 6353**

Item no.	167329 ■	167330 ■	167331 ■	167332 ■
Size	200	250	315	400
A	200	250	315	400
Jaw travel B	5,3	6,7	6,7	8
C	115	141	155	161
C1-0,06	109	135	149	161
Mount D^{H6}	170	220	300	300
E	6	6	6	6
F	133,4	171,4	235	235
G	3 x M12	3 x M16	3 x M20	3 x M20
H	18	25	31	30
J	85	105	120	155
Wedge stroke K	20	25	25	30
N	45	55	55	55
O	40	46	46	46
Q	M20	M24	M24	M24
R	45	55	55	55
S min.	30	30	30	30
S max.	50	55	55	60
$T^{\pm 0,05}$	122	148	162	180
U	M12 x 25	M16 x 30	M16 x 30	M20 x 40
V^{H7}	110	130	160	190
X	7	7	9	9
a min.	40,7	48,3	59,3	79
a max.	46	55	66	87
b	8	10	10	14
d	49	64	85,5	107
e	35	50	55	60
f^{H7}	17	21	21	25,5
g	14	18	18	22
h	11	13	13	22
i	25	32	32	40
k	11	14	14	18
Maximum draw bar pull kN	45	65	75	110
Max. total clamping force kN	95	140	180	250
Max. admissible speed min^{-1}	5000	4000	4000	3000
Moment of inertia J kgm^2	0,13	0,4	1,1	2,7
Weight without jaws approx. kg	25,7	49,3	88,2	152,8

KFD-F-EC 3-jaw, with force compensation, tongue and groove





Tool group C15
Type 541-10 **Low-Maintenance 3 jaw** power chuck **KFD-F-EC, with short piston, with force compensation**, **with tongue and groove,** centric clamping
Adaptor recess, mounting dimensions to **DIN 6353**

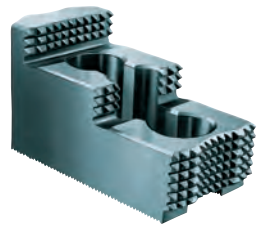
Item no.	166187 ■	166188 ■	166189 ■	166190 ■
Size	200	250	315	400
A	200	250	315	400
Jaw travel B	5,3	6,7	6,7	8
C	115	141	155	167
C1-0,06	109	135	149	161
Mount D^{H6}	ZA 170	ZA 220	ZA 220	ZA 300
E	6	6	6	6
F	133,4	171,4	171,4	235
G	3xM12	3xM16	3xM16	3xM20
H	18	25	26	30
J	85	105	105	155
Wedge stroke K	20	25	25	30
N	45	55	55	55
O	40	46	46	46
Q	M20	M24	M24	M24
R	45	55	55	55
S min.	30	30	30	30
S max.	50	55	55	60
$T^{\pm 0,05}$	118	144	158	170
U	M12	M16	M16	M20
V^{H7}	110	130	130	190
X	7	7	7	9
a min.	64,7	81,3	103,5	133,5
a max.	70	88	110,5	141,5
b	15	20	25	40
cg6	12	16	16	25
d	55	70	91,5	115
e	35	50	50	60
f^{H7}	16	20	20	25
g	14	18	18	22
h	11	13	13	22
i	25	32	32	40
k	11	14	14	18
l	24	29	39	46
m	18	22	26	30
n	5	5	5	6
o	30	40	50	80
Max. interferences diameter top jaws mm	216,1	269,1	334,8	423,9
Maximum draw bar pull kN	45	65	75	110
Max. total clamping force kN	95	140	180	250
Max. admissible speed min^{-1}	5000	4000	4000	3000
Moment of inertia J kgm^2	0,13	0,4	1,1	2,7
Weight without jaws approx. kg	25,7	49,4	88,4	152,1

Intermediate flanges for short taper adaption on request

● from stock ■ 4 - 6 weeks ▲ on request

Jaws KFD-EC / KFD-F-EC

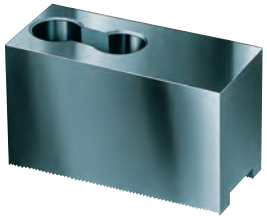
Tool group C 21
Type 543/538 **Reversible top jaws, 3-jaw set, hardened**
Serration 90°- material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
118522 ●	200	75	49	36	1/16"x 90°
046414 ●	250/315	103,5	58	50	1/16"x 90°
037531 ●	400	135	65	68	3/32"x 90°

[1] one step only
[2] one step only, extended
Hardened jaws, supplied as supplement or as spares, must be ground on the chuck.

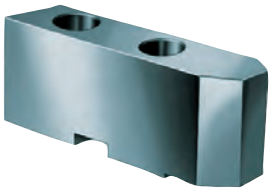
Tool group C 21
Type 543/538 **Soft top jaws, 3-jaw set, can be hardened**
Serration 90°- material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
133153 ●	200	75	53	36,5	1/16"x 90°
133154 ●	250	95	54,5	45	1/16"x 90°
133155 ●	315	103	80	50	1/16"x 90°
133156 ●	400	130	80	50	3/32"x 90°

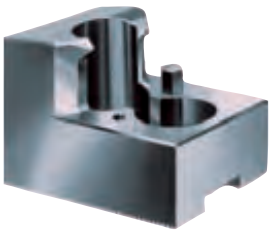
[1] heavy design

Tool group C 21
Type 549/538 **Soft top jaws, 3-jaw set, can be hardened**
tongue and groove 120° bevelled, material: 16 MnCr 5



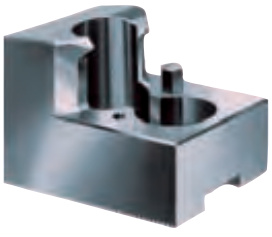
Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
123430 ●	200	90,3	53	36,5
123433 ●	250/315	115,3	54,5	45
129849 ●	315/400	146	80	50

Tool group C 21
Type 544-50 **Claw-type jaws**, 1 piece, **hardened**
Serration 90° - width of the groove **17**



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
137031 ●	200	67	45	53
137032 ●	200	65	45	46
137033 ●	200	55	45	39
137034 ●	200	50	45	31
137035 ●	200	55	45	27
137036 ●	200	65	45	19
137037 ●	200	65	45	26
137038 ●	200	55	45	24
137039 ●	200	55	45	40

Tool group C 21
Type 544-50 **Claw-type jaws**, 1 piece, **hardened**
Serration 90° - width of the groove **21**



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
137041 ●	250/315	95	50	80
137042 ●	250/315	75	50	60
137043 ●	250/315	60	50	43
137044 ●	250/315	70	50	37
137045 ●	250/315	95	50	25
137046 ●	250/315	80	50	30

Jaws KFD-EC / KFD-F-EC

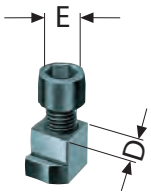
Tool group C 21
Type 544-50 **Claw-type jaws**, 1 piece, **hardened**
Serration 90° - width of the groove **25,5**

Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
137051 ●	400	130	65	113
137052 ●	400	90	65	67
137053 ●	400	100	65	45
137054 ●	400	130	65	33

Accessories KFD-EC / KFD-F-EC

Tool group C 15

Type 538-00 **T-nuts**
without screw



Item no.	Contents of delivery	D	E
241674 ●	piece	17	M12
241675 ●	piece	21	M16
241676[1] ●	piece	25,5	M20

Single T-nut
[1] metric dimensions

Tool group C 15

Type 0040-Y **Mounting screws**

Item no.	Contents of delivery	Thread	Length
227692 ●	piece	M12x25	
229157 ●	piece	M16	30
233047 ●	piece	M20x40	

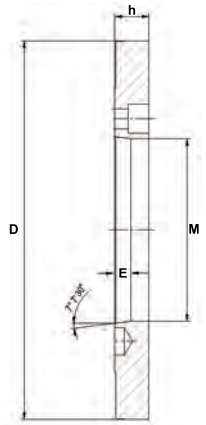
Socket head cap screw to DIN 912, 12.9

Tool group C15

Type 1028 **Special grease** F80 for **lathe chucks**
for lubrication and conservation of chucking power

Item no.	Design	Contents
028975 ●	Tin	1 kg
308555 ●	Cartridge	0,5 kg

Tool group A09
Type 619-30 Short-taper adapter plate ISO 702-1 (DIN 55026/55021) - ASA B 5.9 (without mounting bolts)
finished on machine side, faced on chuck side, especially

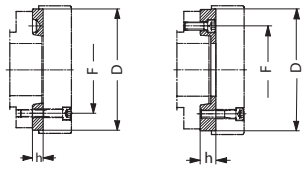


Id.-Nr.	Spindle nose size	h	E^{H6}	M	D
144933 ▲	3	18	40	40	125
145296 ▲	4	18	40	40	125
145328 ▲	3	18	40	40	160
145342 ▲	4	18	40	40	160
145343 ▲	5	21	50	50	160
145344 ▲	4	21	50	50	200
145345 ▲	5	21	50	50	200
145346 ▲	6	27	50	50	200
145347 ▲	4	27	63	63	250
145348 ▲	5	27	63	63	250
145349 ▲	6	27	63	63	250
145350 ▲	8	27	63	63	250
145351 ▲	5	36	63	63	315
145352 ▲	6	36	63	63	315
145353 ▲	8	36	63	63	315
145354 ▲	11	36	63	63	315
145355 ▲	6	40	63	63	400
145356 ▲	8	40	63	63	400
145357 ▲	11	40	63	63	400
145358 ▲	15	40	63	63	400
145359 ▲	8	42	80	80	500
145360 ▲	11	42	80	80	500
145364 ▲	15	42	80	80	500

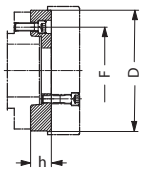
● from stock ■ 4 - 6 weeks ▲ on request

Accessories KFD-EC / KFD-F-EC

Tool group C 15
Type 594-32 Intermediate adaptor plates
with cylindrical centre mount DIN 6353 for three-jaw chucks
Mounting from front to ISO 702-1 (DIN 55026/55021) and ASA B 5.9 A1/A2 with metric mounting bolts



Design I Design II

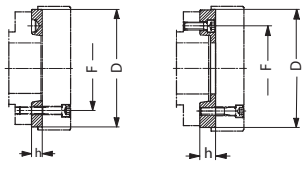


Design III

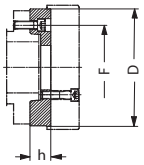
Id.-Nr.	Spindle nose size	Size	Design	h	F	D
145127 ●	5	200	II	21	104,8	170
145155 ●	6	200	I	16	133,4	170
145131 ●	6	250	II	27	133,4	220
145133 ●	6	315	II	27	133,4	300
145135 ●	8	200	III	39	171,4	170
145157 ●	8	250	I	18	171,4	220
145137 ●	8	315/400	II	38	171,4	300
145143 ●	11	250	III	48	235	220
145159 ●	11	315	I	19	235	300
145149 ●	15	400	III	58	330,2	300

All fastening parts are included
Intermediate adaptors for two- and four-jaw-design on request
[1] DIN 55021 on request

Tool group C 15
Type 594-35 Intermediate adaptor plates
with cylindrical centre mount DIN 6353 for three-jaw chucks
Mounting from front to ASA B 5.9 A1/A2 with inch threaded mounting bolts



Design I Design II

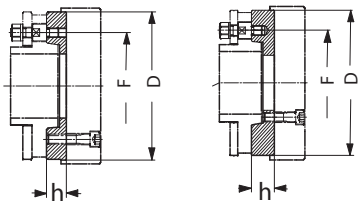


Design III

Id.-Nr.	Spindle nose size	Size	Design	h	F	D
145192 ■	5	200	II	21	104,8	170
145155 ●	6	200	I	16	133,4	170
145194 ■	6	250	II	27	133,4	220
145195 ■	6	315	II	27	133,4	300
145196 ■	8	315	II	39	171,4	300
145157 ●	8	250	I	18	171,4	220
145197 ■	8	315/400	II	38	171,4	300
145200 ■	11	250	III	48	235	220
145159 ●	11	315	I	19	235	300
145203 ■	15	400	III	58	330,2	300

All fastening parts are included
Intermediate adaptors for two- and four-jaw-design on request

Tool group C 15
Type 594-33 Intermediate adaptor plates
with cylindrical centre mount DIN 6353 for three-jaw chucks
Bayonet fixing to ISO 702-3 (DIN 55027)/ DIN 55022

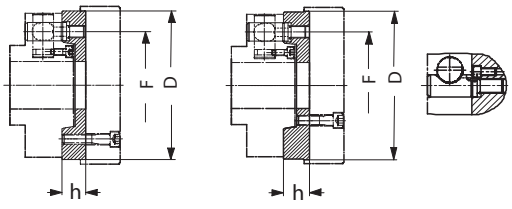


Design II Design III

Id.-Nr.	Spindle nose size	Size	Design	h	F	D
145210 ■	5	200	II	21	104,8	170
145240 ■	6	200	II	22	133,4	170
145214 ■	6	250/315	II	27	133,4	220
145216 ■	6	315	II	27	133,4	300
145218 ■	8	200	III	39	171,4	170
145242 ■	8	250	II	30	171,4	220
145220 ■	8	315/400	II	38	171,4	300
145226 ■	11	250	III	48	235	220
145244 ■	11	315/400	II	36	235	300
145232 ■	15	400	III	58	330,2	300
145248 ■	15	400/500	II	40	330,2	380

All fastening parts are included
Intermediate adaptors for two- and four-jaw-design on request

Tool group C 15
Type 594-36 Intermediate adaptor plates
with cylindrical centre mount DIN 6353 for three-jaw chucks
Camlock fixing to DIN 55029/ASA B 5.9 D1



Design II Design III

Id.-Nr.	Spindle nose size	Size	Design	h	F	D
145254 ■	5	200	II	30	104,8	170
145284 ■	6	200	II	35	133,4	170
145258 ■	6	250	II	35	133,4	220
145260 ■	6	315	II	35	133,4	300
145262 ■	8	200	II	46	171,4	170
145286 ■	8	250	II	38	171,4	220
145264 ■	8	315/400	II	38	171,4	300
145270 ■	11	250	III	53	235	220
145288 ■	11	315/400	II	45	235	300
145276 ■	15	400	III	58	330,2	300
145292 ■	15	400/500	II	50	330,2	380

All fastening parts are included
Intermediate adaptors for two- and four-jaw-design on request

KFD-HS oil

Technical features:

- Almost maintenance-free
- Hermetically sealed from coolant and filth
- All moving parts are oil bathed
- Control unit monitoring oil level
- High radial and axial true-running accuracy
- High clamping forces
- Long jaw ways
- High speed
- Steel design
- All parts subject to wear are hardened and ground
- Base jaw secured against throw-off
- Used in conjunction with RÖHM actuating cylinders with safety device SZS, OVS, LHS-L, LVS, EHS and EVS the power chucks KFD-HS oil meet the requirements of the German Employers' Insurance Association

Design principle

The power operated chuck **KFD-HS oil** is based upon the approved power operated chuck KFD-HS. In contrast with other chucks this design has its advantages in having all moving parts permanently lubricated in an oil bath.
That is the reason for the **KFD-HS oil being almost maintenance free.**
An integrated control unit is monitoring the oil level inside the chuck. Specially sealed from coolant and filth.

Design versions (on request):

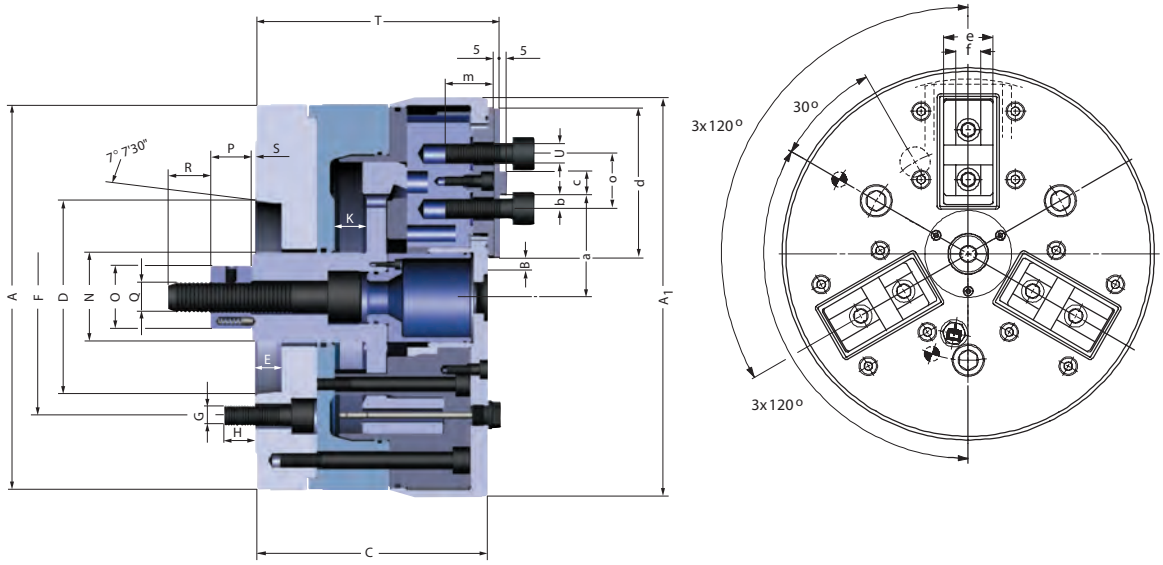
2-, 3- or 4-jaw-design

Serration 90° or tongue and groove

Short taper or cylindrical center mount

With or without through-hole

KFD-HS oil bath lubricated, tongue and groove



Tool group C15
Type 549 **3 jaw** power chuck, **tongue and groove, oil bath lubricated**
short taper mount

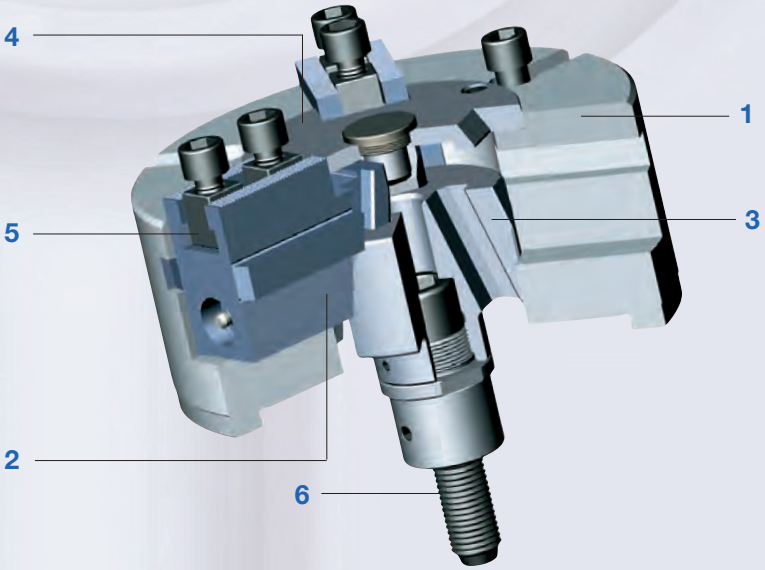
Item no.	426225 ■	421626 ■	421627 ■	421244 ■
Size	210	270	300	333
number of jaws	3	3	3	3
A1	210	270	300	333
A	200	250	280	315
Jaw travel B	4,9	6,2	6,2	6,2
C	110	152	152	165
Mount D	Ø 170	8	8	11
E	6	19	19	21
F	133,4	171,4	171,4	235
G	M 12	M 16	M 16	M 20
H	18	23	23	33
Wedge stroke K	16	23	23	23
N	40	68	68	118
O	40	46	46	-
P	30	30	30	-
Q	M 20	M 24	M 24	M 80 x 2
R	45	55	55	36
S min.	30	15	15	-9
S max.	46	38	38	14
T	110	147	152	165
U	M12	M12	M12	M16
a min.	56,6	78,8	73,8	93,8
a max.	61,5	85	80	100
b	15	16	20	23
c	12	16	20	20
d	54	62	76	78
e	32	40	40	42
fH7-0,025	16	20	20	20
m	22	18	18	27
o	30	32	40	46
Maximum draw bar pull kN	45	65	65	80
Max. total clamping force kN	88	150	150	180
Max. admissible speed min^{-1}	3700	3700	3400	3150
Moment of inertia J kgm^2	0,14	0,5	0,7	1,2
Weight without jaws approx. kg	27	65	75	95

Top jaws hardened or soft, with serration or draw down body on request

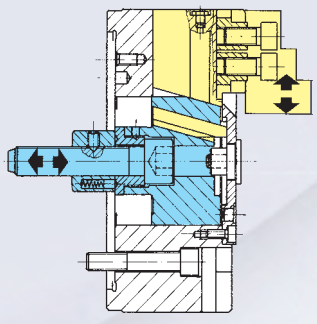
KFD

Technical features:

- Proved power chuck with high load carrying capacity, long life and high workholding accuracy
- The operating power is transmitted by means of a sturdily dimensioned wedge system
- Sizes up to 315 in all-steel construction. Larger sized 3-jaw chucks are of nodular iron and weight-reduced
- All moving parts hardened and ground
- Base jaws secured against throw-off
- Direct lubrication of base jaws
- Size 200 and larger with roller for limiting the jaw movement
- Piston travel limited by a stop in the cylinder in the forward direction, by a stop on the spindle or spindle flange in the rearward direction
- Used in conjunction with RÖHM actuating cylinders with safety device SZS, OVS, LHS-L, LVS, EHS and EVS the power chucks KFD meet the requirements of the German Employers' Insurance Association
- Unbalance of all Types within the limits permitted by DIN 6386
- Straight recess mounting, dimensions to DIN 6353 or specially adapted to specific spindles (on request)



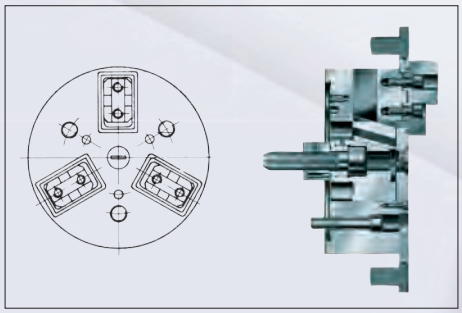
Components KFD
1. Body
2. Base jaw
3. Piston
4. Cover
5. T-nut
6. Draw bolt



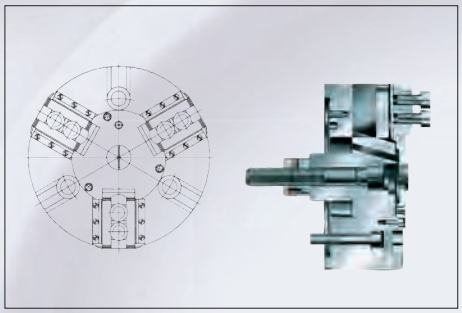
Design principle wedge system

On request:

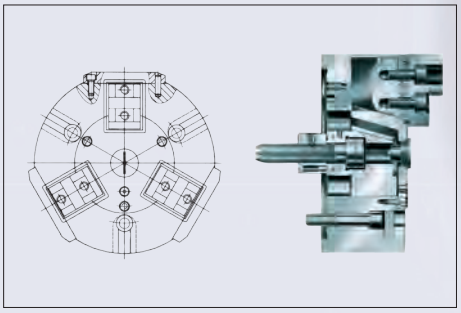
KFD in Special design (with additional sealing)



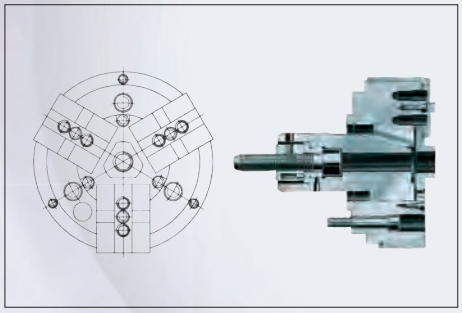
Type 538-40
For stationary mounting, hermetically sealed. Used on transfer lines and rotary indexing table machines.



Type 538-42
Efficient sealing by means of wipers. Used on lathes.



Type 538-41
For stationary or rotary mounting, hermetically sealed. Used on transfer lines and rotary indexing table machines, requiring very little space.



Type 538-43
Hermetically sealed, for applications involving particularly high chip and coolant flows, such as automatics and production machines, rotating or stationary.

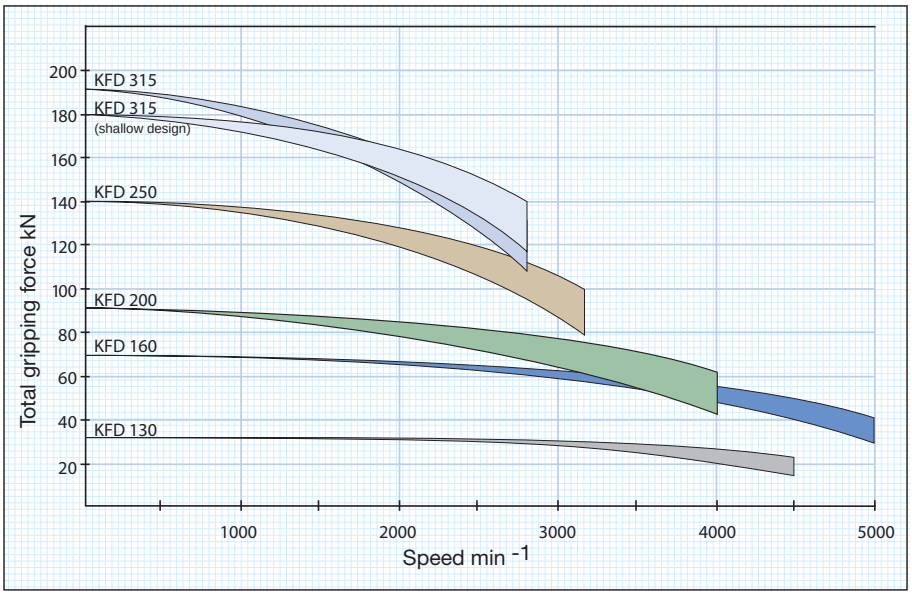
KFD

Gripping force/speed diagrams

The loss of gripping force was determined experimentally on a chuck with matched UB top jaws. It is largely independent of the initial gripping force at zero speed.

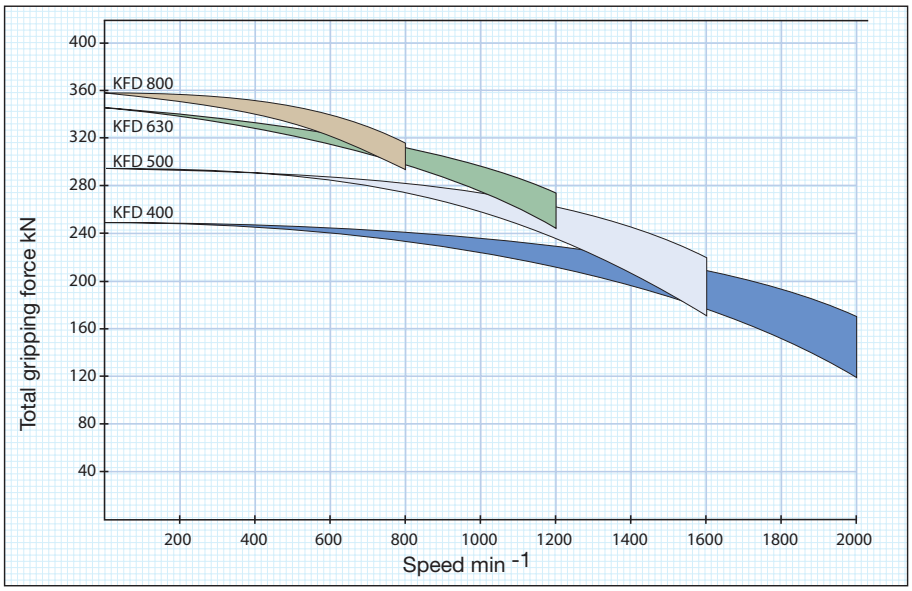
Upper curve: min. centrifugal force of top jaw

Lower curve: max. centrifugal force of top jaw

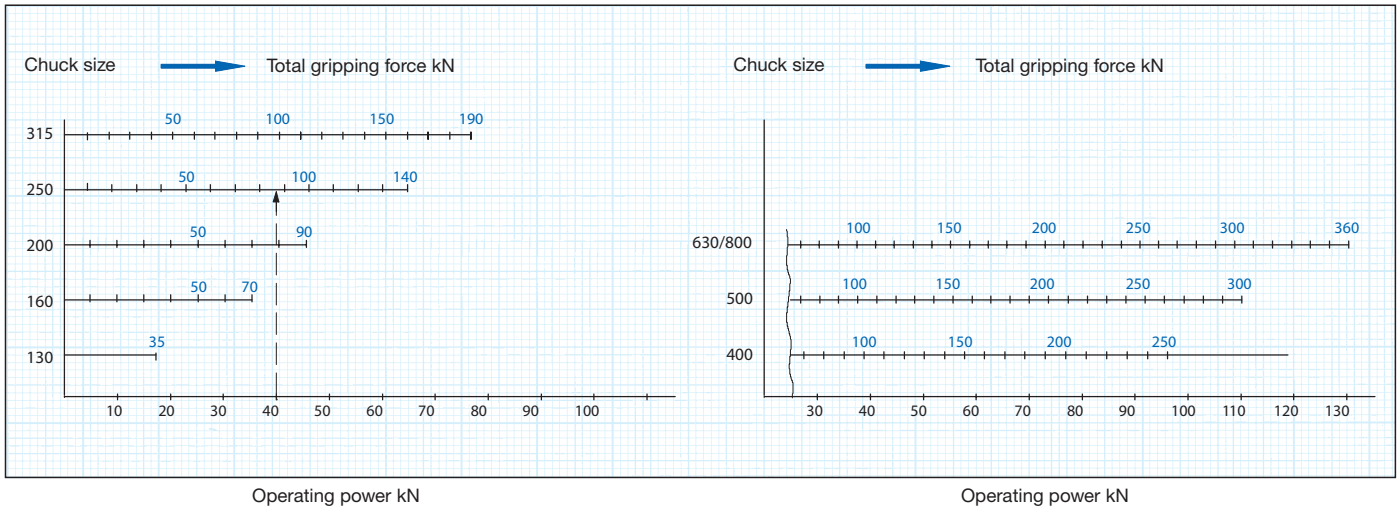


To obtain the specified gripping forces, the chuck must be in a perfect condition and lubricated with F 80 lubricant recommended by Röhm. Measuring point near chuck face.

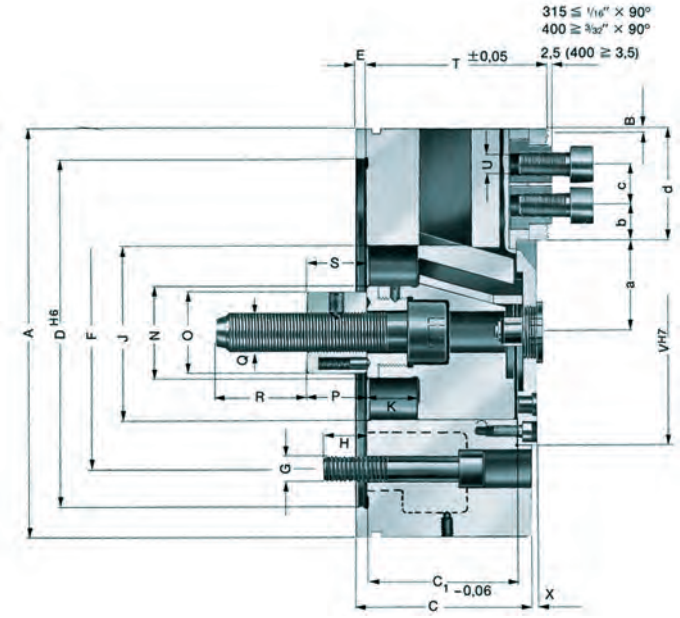
Example:
For a KFD chuck size 250 and an applied operating power of 40 kN, the total gripping force is approx. 86 kN.

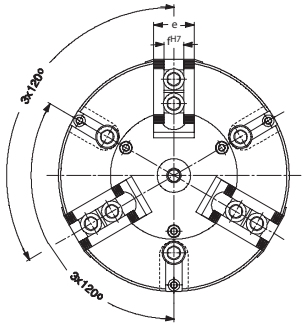


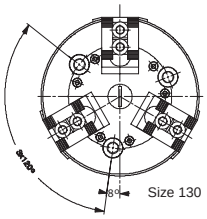
Gripping force/operating power diagram for three-jaw chucks



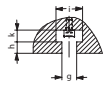
KFD, 3-jaw, standard design, serration 90°

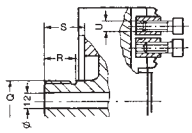






Tool group C15
Type 538-05 /
-55 (shallow design)
3 jaw power chuck,
standard design, serration 90° Adaptor recess, mounting dimensions to **DIN 6353**





Size 110, 125, 140

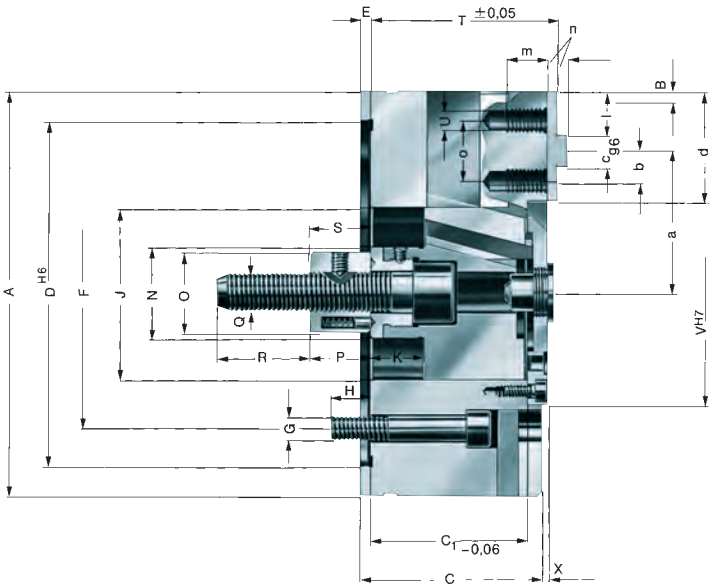
Item no.	004250 ●	128405[1] ●	041240 ●	128406[1] ●	023520 ●	040630 ●	144598 ●	1445991) ●	040653 ●	040660 ●	040669 ●	040676 ●	061163 ▲
Size	110	125	130	140	160	200	250	315	315	400	500	630	800
A	110	125	130	140	160	200	250	315	315	400	500	630	800
Jaw travel B	2,1	3,7	5,3	3,7	5,3	6,7	6,7	6,7	8	9,3	9,3	10,5	10,5
C	31,5	40	69	40	79	87	102	102	117	127	127	140	160
C1-0,06	28,55	37,05	58,05	37,05	66,05	74,05	89,05	89,05	104,05	111,05	111,05	125,05	142,05
Mount D^{H6}	92	105	115	105	140	170	220	220	300	300	380	380	460
E	3	3	6	3	6	6	6	6	6	6	6	8	8
F	80	80	85	80	104,8	133,4	171,4	171,4	235	235	330,2	330,2	380
G	3 x M 8	3 x M 8	3 x M 10	3 x M 8	3 x M 10	3 x M 12	3 x M 16	3 x M 16	3 x M 20	3 x M 20	6 x M 24	6 x M 24	6 x M 24
H	12	14	15	12	17	20	26	26	30	35	35	35	35
J	45	50	58	50	65	85	105	105	120	155	155	180	180
Wedge stroke K	8	14	20	14	20	25	25	25	30	35	35	40	40
N	-	-	35	-	35	45	55	55	60	60	60	80	80
O	-	-	34	-	34	40	46	46	46	55	55	55	55
P	-	-	25	-	25	30	30	30	30	30	30	30	30
Q	M20x1,5	M20x1,5	M 16	M20x1,5	M 16	M 20	M 24	M 24	M 24	M 24	M 30	M 30	M 30
R	20	20	40	20	40	45	55	55	55	55	55	63	85
S min.	25	25	36	25	25	30	30	30	30	30	30	28	30
S max.	33	39	56	39	45	55	55	55	60	65	65	68	70
$T^{\pm 0,05}$	34	44	73	44	80	90	105	105	120	130	130	148	161
U	M 6x18	M 6x18	M 8x20	M 6x18	M 12x25	M 12x25	M 16x30	M 16x30	M 16x30	M 20x40	M 20x40	M 20x40	M 20x40
V^{H7}	-	-	85	-	85	110	130	130	160	190	190	220	220
X	4	6	5	6	3	3	3	3	3	3	3	6	3
a min.	23,9	24,3	25	24,3	26,7	38,3	48,3	48,3	54	72,7	72,7	85,2	84,5
a max.	26	28	30,3	28	32	45	55	55	62	82	82	95,7	95
b min.	8,2	7	6	7	9	8	10	10	10	14	14	18	18
c min.	10	10	14	10	19	19	25	25	25	31	31	31	31
c max.	14,8	25	26	25	36,5	44,5	58,5	89,5	81,5	98	148	197	282
d	28	34,5	34,5	42	48	55	70	102,5	95	118	164	219,3	305
e	25	25	30	25	35	35	50	50	55	60	60	70	70
f^{H7}	10	10	12	10	17	17	21	21	21	25,5	25,5	25,5	25,5
g	-	-	-	-	14	14	18	18	18	22	22	22	22
h	-	-	-	-	11	11	13	13	13	22	22	22	22
i	-	-	-	-	25	25	32	32	32	40	40	40	40
k	-	-	-	-	11	11	14	14	14	18	18	18	18
Max. swing top jaws mm	172	192	184	207	215	290	345	410	410	560	660	790	960
Maximum draw bar pull kN	7	9	18	9	35	45	65	75	80	95	110	130	130
Max. total clamping force kN	12	15	35	15	70	90	140	180	190	250	300	360	360
Max. admissible speed min^{-1}	4000	5000	5000	4500	4500	4000	3200	2800	2800	2000	1600	1200	800
Moment of inertia J kgm^2	0,003	0,007	0,014	0,011	0,035	0,095	0,28	0,72	0,87	1,96	4,31	13,4	31,2
Weight without jaws approx. kg	2,1	3,6	6,8	4,6	10,9	19	35,5	58,5	70	98	138	270	390

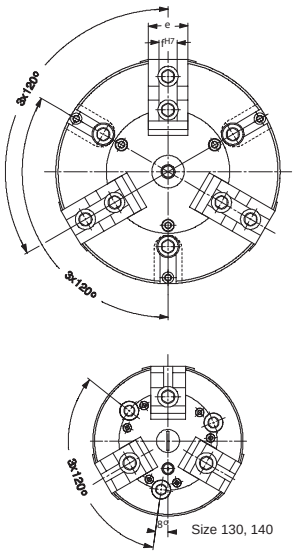
Design with guided piston available on request.

[1] Shallow design

● from stock ■ 4 - 6 weeks ▲ on request

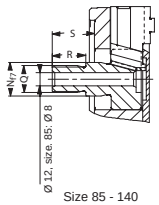
KFD 3-jaw, standard design, tongue and groove



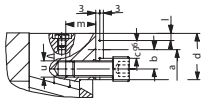


Size 130, 140

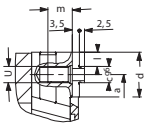
Tool group C15
Type 538-10 /
-60 (shallow design)
3 jaw power chuck,
with tongue and groove
Adaptor recess, mounting dimensions to **DIN 6353**



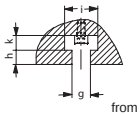
Size 85 - 140



Size 130 - 140



Size 85



from size 160

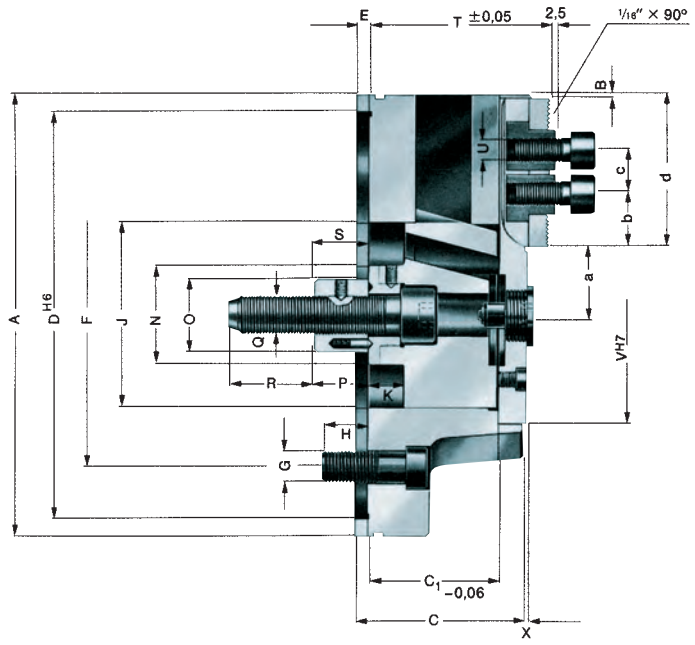
Item no.	123110 ●	004266 ●	128427[1] ●	041246 ■	128428[1] ■	023529 ●	040639 ■	144604 ●	144605 ■
Size	85	110	125	130	140	160	200	250	315
A	85	110	125	130	140	160	200	250	315
Jaw travel B	2,6	2,1	3,7	5,3	3,7	5,3	6,7	6,7	6,7
C	31,5	31,5	40	69	40	79	87	102	102
C1-0,06	28,55	28,55	37,05	58,05	37,05	66,05	74,05	89,05	89,05
Mount D^{H6}	70	92	105	115	105	140	170	220	220
E	3	3	3	6	3	6	6	6	6
F	54	80	80	85	80	104,8	133,4	171,4	171,4
G	3 x M8	3 x M8	3 x M8	3 x M10	3 x M8	3 x M10	3 x M12	3 x M16	3 x M16
H	12	12	14	15	14	17	20	26	26
J	36	45	50	58	50	65	85	105	105
Wedge stroke K	10	8	14	20	14	20	25	25	25
N	20	-	-	35	-	35	45	55	55
O	-	-	-	34	-	34	40	46	46
P	-	-	-	25	-	25	30	30	30
Q	M16 x 1,5	M20 x 1,5	M20 x 1,5	M16	M20 x 1,5	M16	M20	M24	M24
R	20	20	20	40	20	40	45	55	55
S min.	25	25	25	36	25	25	30	30	30
S max.	35	33	39	56	39	45	55	55	55
$T^{\pm 0,05}$	33	33	44	73	44	80	90	105	105
U	M8	M6	M6	M12	M12	M12	M12	M16	M16
V^{H7}	-	-	-	85	-	85	110	130	130
X	4	4	6	5	6	3	3	3	3
a min.	29,4	37,9	40,3	47,5	53,8	46,7	63,3	81,3	93,3
a max.	32	40	44	52,8	57,5	52	70	88	100
b	-	7,5	7,5	14,5	14,5	12,5	15	20	25
cg6	8	8	8	13	13	10	12	16	16
d	22	28	34,5	34	42	48	55	70	102
e	20	25	25	30	25	35	35	50	50
f^{H7}	8	8	8	8	8	16	16	20	20
g	-	-	-	-	-	14	14	18	18
h	-	-	-	-	-	11	11	13	13
i	-	-	-	-	-	25	25	32	32
k	-	-	-	-	-	11	11	14	14
l	7	10	12,75	5,5	6	23	24	29	49
m	14	12	12	20	20	20	20	25	25
n	2,5	2,5	3	3	3	5	5	5	5
o	-	15	15	-	-	25	30	40	50
Maximum draw bar pull kN	7	7	9	18	9	35	45	65	75
Max. total clamping force kN	12	12	15	35	15	70	90	140	180
Max. admissible speed min^{-1}	5000	4000	5000	5000	4500	4500	4000	3200	2800
Moment of inertia J kgm^2	0,001	0,003	0,007	0,0145	0,012	0,035	0,096	0,28	0,73
Weight without jaws approx. kg	1,3	2,1	3,7	6,9	4,7	11	19,2	36	59

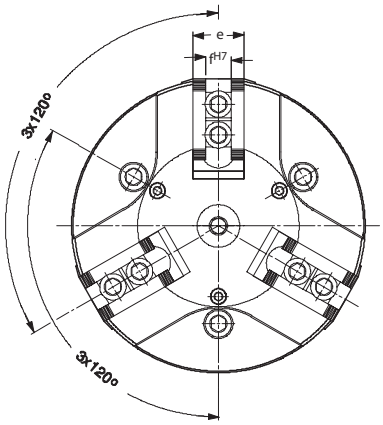
Design with guided piston available on request.

[1] Shallow design

● from stock ■ 4 - 6 weeks ▲ on request

KFD 3-jaw, weight reduced, serration 90°





Tool group C15
Type 538-03 **3 jaw** power chuck, **weight reduced, serration 90°**
Adaptor recess, mounting dimensions to **DIN 6353**

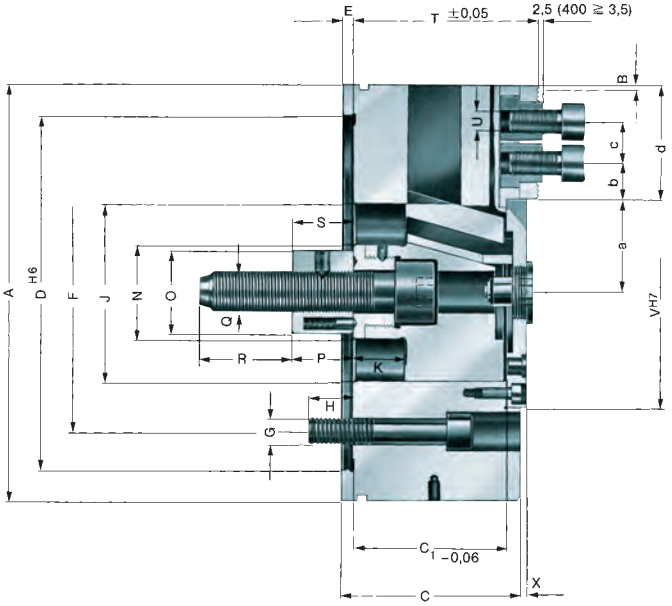
Item no.	046730 ●	046731[1] ■	046744 ■	046745[1] ■	144594 ■	144595[1] ■	144596 ■	144597[1] ■
Size	160	160	200	200	250	250	315	315
A	160	160	200	200	250	250	315	315
Jaw travel B	5,3	5,3	6,7	6,7	6,7	6,7	6,7	6,7
C	79	79	87	87	102	102	102	102
C1-0,06	66,05	66,05	74,05	74,05	89,05	89,05	89,05	89,05
Mount D^{H6}	140	150	170	185	220	220	220	220
E	6	6	6	6	6	6	6	6
F	104,8	100	133,4	133,4	171,4	171,4	171,4	171,4
G	3 x M 10	3 x M 12	3 x M 12	3 x M 12	3 x M 16	3 x M 16	3 x M 16	3 x M 16
H	17	20	20	20	26	26	26	26
J	65	65	85	85	105	105	105	105
Wedge stroke K	20	20	25	25	25	25	25	25
N	35	35	45	45	55	55	55	55
O	34	34	40	40	46	46	46	46
P	25	25	30	30	30	30	30	30
Q	M16	M 16	M20	M 22	M24	M 22	M24	M 22
R	40	40	45	50	55	50	55	50
S min.	25	25	30	30	30	30	30	30
S max.	45	45	55	55	55	55	55	55
$T^{\pm 0,05}$	80	80	90	90	105	105	105	105
U	M 12 x 25	M 12 x 25	M 12 x 25	M 12 x 25	M 16 x 30	M 16 x 30	M 16 x 30	M 16 x 30
V^{H7}	85	85	110	110	130	130	130	130
X	3	3	3	3	3	3	3	3
a min.	26,7	26,7	38,3	38,3	48,3	48,3	48,3	48,3
a max.	32	32	45	45	55	55	55	55
b min.	9	9	8	8	10	10	10	10
c min.	19	19	19	19	25	25	25	25
c max.	36,5	36,5	44,5	44,5	58,5	58,5	89,5	89,5
d	48	48	55	55	70	70	102,5	102,5
e	35	35	35	35	50	50	50	50
f^{H7}	17	17	17	17	21	21	21	21
Max. swing top jaws mm	215	215	290	290	345	345	410	410
Maximum draw bar pull kN	35	35	45	45	65	65	75	75
Max. total clamping force kN	70	70	90	90	140	140	180	180
Max. admissible speed min^{-1}	4500	4500	4000	4000	3200	3200	2800	2800
Moment of inertia J kgm^2	0,027	0,027	0,076	0,076	0,226	0,226	0,496	0,496
Weight without jaws approx. kg	8,5	8,5	15,2	15,2	29	29	40	40

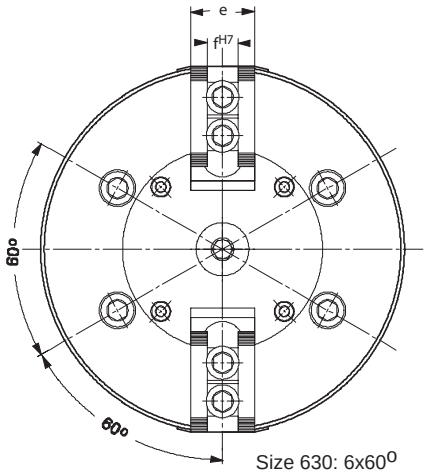
[1] Mounting dimensions different to DIN 6353

Design with guided piston available on request.

● from stock ■ 4 - 6 weeks ▲ on request

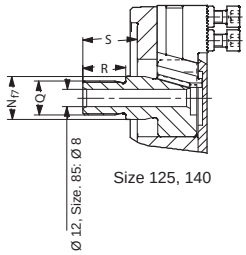
KFD 2-jaw, standard design, serration 90°





Size 630: 6x60°

Tool group C15
Type 528-05 /
-15 (shallow design)
2 jaw power chuck,
standard design, serration 90°
Adaptor recess, mounting dimensions to **DIN 6353**



Size 125, 140

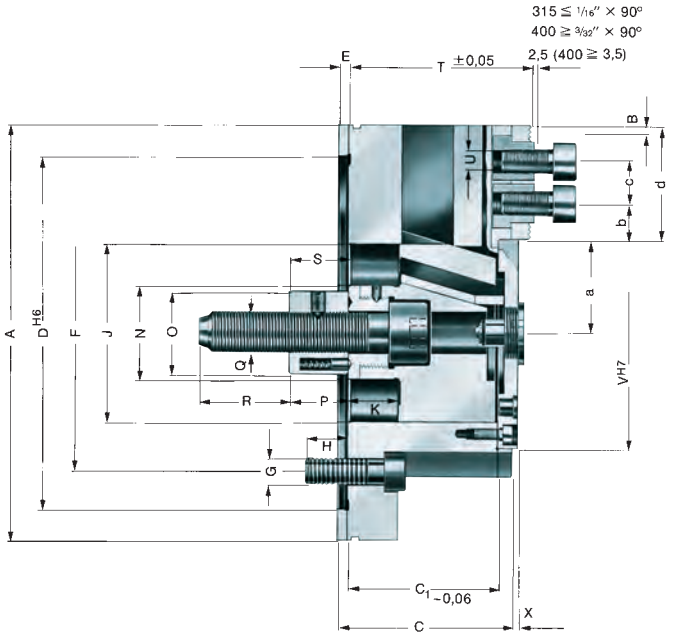
Item no.	128409[1]	046722	128412[1]	046733	046747	144610	144611[1]	045563	045574	045582	045590
Size	125	130	140	160	200	250	315	315	400	500	630
A	125	130	140	160	200	250	315	315	400	500	630
Jaw travel B	3,7	5,3	3,7	5,3	6,7	6,7	6,7	8	9,3	9,3	10,5
C	40	69	40	79	87	102	102	117	127	127	140
C1-0,06	37+0,07	58,05	37+0,07	66,05	74,05	89,05	89,05	104,05	111,05	111,05	125,05
Mount D^{H6}	105	115	105	140	170	220	220	300	300	380	380
E	3	6	3	6	6	6	6	6	6	6	8
F	80	85	80	104,8	133,4	171,4	171,4	235	235	330,2	330,2
G	4xM8	4xM10	4xM8	4xM10	4xM12	4xM16	4xM16	4xM20	4xM20	4xM24	6xM24
H	14	15	14	17	20	26	26	26	35	35	35
J	50	58	50	65	85	105	105	120	155	155	180
Wedge stroke K	14	20	14	20	25	25	25	30	35	35	40
N	-	35	-	35	45	55	55	60	60	60	80
O	-	34	-	34	40	46	46	46	55	55	55
P	-	25	-	25	30	30	30	30	30	30	30
Q	M20x1,5	M16	M20x1,5	M16	M20	M24	M24	M24	M24	M30	M30
R	20	40	20	40	45	55	55	55	55	55	61
S min.	25	36	5	25	30	30	30	30	30	30	30
S max.	39	56	19	45	55	55	55	60	65	65	70
T$^{\pm 0,05}$	44	73	44	80	90	105	105	120	130	130	148
U	M6x8	M8x20	M6x18	M12x25	M12x25	M16x30	M16x30	M16x30	M20x40	M20x40	M20x40
V^{H7}	-	85	-	85	110	130	130	160	190	190	220
X	6	5	6	3	3	3	3	3	3	3	8
a min.	24,3	25	24,3	26,7	38,3	48,3	48,3	54	72,7	76,7	85,2
a max.	28	30,3	28	32	45	55	55	62	82	86	95,7
b min.	7	6	7	9	8	10	10	10	14	16	18
c min.	10	14	10	19	19	25	25	25	31	31	31
c max.	25	26	32,5	36,5	44,5	58,5	89,5	81,5	98	144	197
d	34,5	34,5	42	48	55	70	102,5	95	118	164	219,3
e	25	30	25	35	35	50	50	55	60	60	70
f^{H7}	10	12	10	17	17	21	21	21	25,5	25,5	25,5
Max. swing top jaws mm	192	184	207	215	290	345	410	410	560	660	770
Maximum draw bar pull kN	6	12	6	23	30	43	50	55	65	75	90
Clamping force/ jaw kN	6,5	13	6,5	25	33	48	56	62	75	85	120
Max. admissible speed min^{-1}	5000	4500	4500	4500	4000	3200	2800	2800	2000	1600	1200
Moment of inertia J kgm^2	0,007	0,014	0,011	0,035	0,095	0,28	0,72	0,87	2,34	6,10	16,6
Weight without jaws approx. kg	3,6	6,8	4,6	10,9	19	35,5	58,5	70	117	195	335

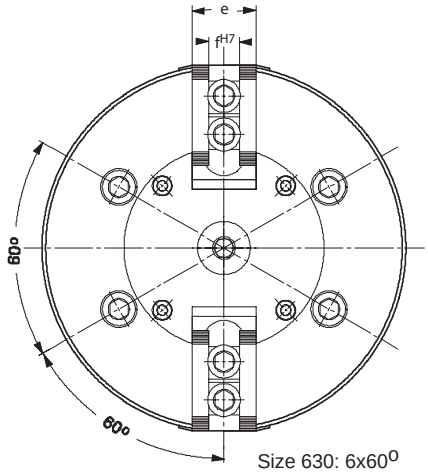
[1] Shallow design

Design with guided piston available on request.

● from stock ■ 4 - 6 weeks ▲ on request

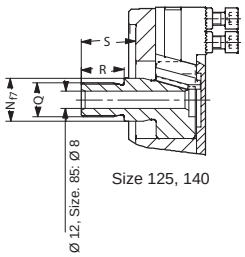
KFD 2-jaw, weight reduced, serration 90°





Size 630: 6x60°

Tool group C15
Type 528-03 /
-13 (shallow design)
2 jaw power chuck,
weight reduced, serration 90°
Adaptor recess, mounting dimensions to **DIN 6353**



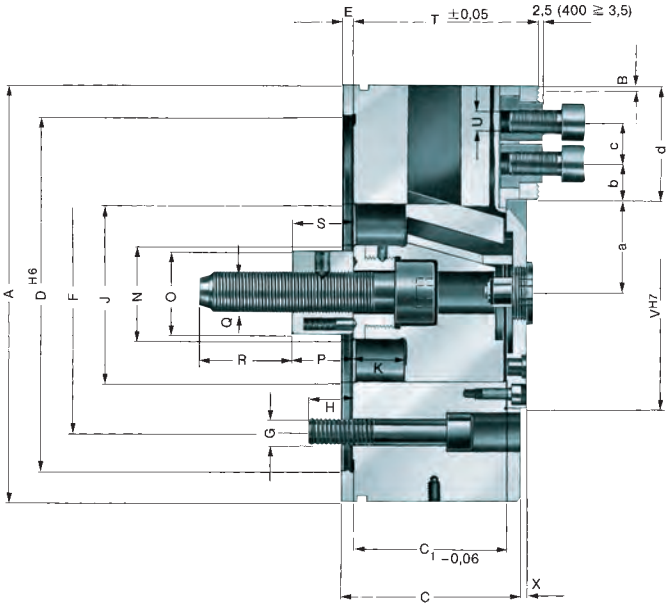
Size 125, 140

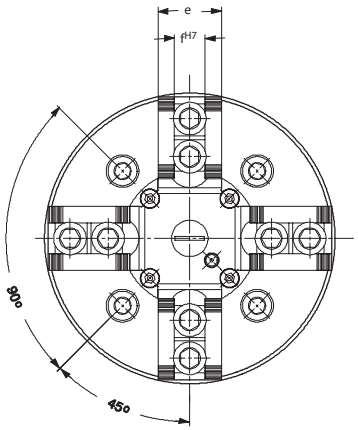
Item no.	046736 ■	046750 ■	144608 ■	144609[1] ■	045566 ■	128421 ■	128422 ▲	128423 ▲
Size	160	200	250	315	315	400	500	630
A	160	200	250	315	315	400	500	630
Jaw travel B	5,3	6,7	6,7	6,7	8	9,3	9,3	10,5
C	79	87	102	102	117	127	127	140
C1-0,06	66,05	74,05	89,05	89,05	104,05	111,05	111,05	125,05
Mount D H6	140	170	220	220	300	300	380	380
E	6	6	6	6	6	6	6	8
F	104,8	133,4	171,4	171,4	235	235	330,2	330,2
G	4 x M10	4 x M12	4 x M16	4 x M16	4 x M20	4 x M20	4 x M24	6 x M24
H	17	20	26	26	26	35	35	35
J	65	85	105	105	120	155	155	180
Wedge stroke K	20	25	25	25	30	35	35	40
N	35	45	55	55	60	60	60	80
O	34	40	46	46	46	55	55	55
P	25	30	30	30	30	30	30	30
Q	M16	M20	M24	M24	M24	M24	M30	M30
R	40	45	55	55	55	55	55	63
S min.	25	30	30	30	30	30	30	28
S max.	45	55	55	55	60	65	65	68
T ±0,05	80	90	105	105	120	130	130	148
U	M12 x 25	M12 x 25	M16 x 30	M16 x 30	M16 x 30	M20 x 40	M20 x 40	M20 x 40
V H7	85	110	130	130	160	190	190	220
X	3	3	3	3	3	3	3	6
a min.	26,7	38,3	48,3	48,3	54	72,7	76,7	85,2
a max.	32	45	55	55	62	82	86	95,7
b min.	9	8	10	10	10	14	16	18
c min.	19	19	25	25	25	31	31	31
c max.	36,5	44,5	58,5	89,5	81,5	98	144	197
d	48	55	70	102,5	95	118	164	219,3
e	35	35	50	50	55	60	60	70
f H7	17	17	21	21	21	25,5	25,5	25,5
g	95	120	140	140	170	220	240	265
Max. swing top jaws mm	215	290	345	410	410	560	660	790
Maximum draw bar pull kN	23	30	43	50	55	65	75	90
Clamping force/jaw kN	25	33	48	56	62	75	85	120
Max. admissible speed min^{-1}	4500	4000	3200	2800	2800	2000	1600	1200
Moment of inertia J kgm^2	0,027	0,075	0,222	0,564	0,62	1,92	5,31	12,9
Weight without jaws approx. kg	8,5	15	28,5	45,5	53	96	170	200

[1] Shallow design

Design with guided piston available on request.

KFD 4-jaw, standard design, serration 90°





Tool group C15
Type 548-05 /
-15 (shallow design)
4 jaw power chuck,
serration 90° Adaptor recess,
mounting dimensions to **DIN 6353**

Item no.	252920 ■	046753 ■	144612 ■	144613[1] ■	045569 ■	045577 ■	045585 ▲	045593 ▲	117976 ▲
Size	160	200	250	315	315	400	500	630	800
A	160	200	250	315	315	400	500	630	800
Jaw travel B	4	6,7	6,7	6,7	8	9,3	9,3	10,5	10,5
C	74	87	102	102	117	127	127	140	160
C1-0,06	63,55	74,05	89,05	89,05	104,05	111,05	111,05	125,05	142,05
Mount D^{H6}	140	170	220	220	300	300	380	380	460
E	6	6	6	6	6	6	6	8	8
F	104,8	133,4	171,4	171,4	235	235	330,2	330,2	380
G	4xM10	4xM12	4xM16	4xM16	4xM20	4xM20	4xM24	4xM24	4xM24
H	20	20	26	26	26	35	35	35	35
J	75	85	105	105	120	155	155	180	180
Wedge stroke K	15	25	25	25	30	35	35	40	40
N	35	45	55	55	60	60	60	80	80
O	34	40	46	46	46	55	55	55	55
P	30	30	30	30	30	30	30	30	30
Q	M16	M20	M24	M24	M24	M24	M30	M30	M30
R	34	45	55	55	55	55	55	63	85
S min.	30	30	30	30	30	30	30	28	30
S max.	45	55	55	55	60	65	65	68	70
$T^{\pm 0,05}$	73,5	90	105	105	120	130	130	148	161
U	M12x25	M12x25	M16x30	M16x30	M16x30	M20x40	M20x40	M20x40	M20x40
V^{H7}	75	110	130	130	160	190	190	220	220
X	2	3	3	3	3	3	3	6	3
a min.	29	38,3	48,3	48,3	54	72,7	76,7	85,2	84,5
a max.	33	45	55	55	62	82	86	95,7	95
b min.	12,5	8	10	10	10	14	16	18	18
c min.	19	19	25	25	25	31	31	31	31
c max.	31	44,5	58,5	89,5	81,5	98	144	197	282
d	45	55	70	102,5	95	118	164	219,3	305
e	35	35	50	50	55	60	60	70	70
f^{H7}	17	17	21	21	21	25,5	25,5	25,5	25,5
Max. swing top jaws mm	215	290	345	410	410	560	660	790	960
Maximum draw bar pull kN	35	45	65	75	80	95	110	130	130
Max. total clamping force kN	70	90	140	180	190	250	300	360	360
Max. admissible speed min^{-1}	3500	3000	2500	2200	2200	1800	1500	1000	800
Moment of inertia J kgm^2	0,035	0,095	0,280	0,72	0,87	2,34	6,10	16,6	45,2
Weight without jaws approx. kg	11	19	35,5	58,5	65,4	117	195	335	565

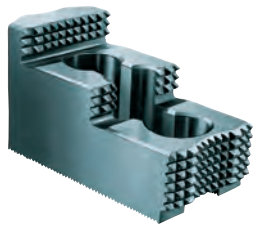
[1] Shallow design

Design with guided piston available on request.

● from stock ■ 4 - 6 weeks ▲ on request

Jaws KFD

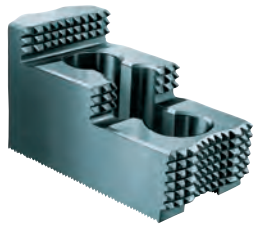
Tool group C 21
Type 543/538 **Reversible top jaws, 2-jaw set, hardened**
Serration 90°- material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
046545 ■	125/140	56	37,5	26	1/16"x 90°
045796 ■	130	56	37,5	26	1/16"x 90°
046429 ■	160	68	45	34,7	1/16"x 90°
118521 ■	200/250	75	49	36	1/16"x 90°
046435 ■	250/315	103,5	58	50	1/16"x 90°
046447 ■	400/500/630	135	65	68	3/32"x 90°

Hardened jaws, supplied as supplement or as spares, must be ground on the chuck.

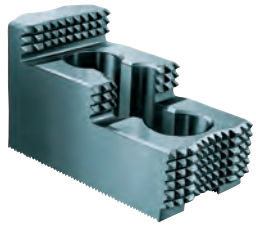
Tool group C 21
Type 543/538 **Reversible top jaws, 3-jaw set, hardened**
Serration 90°- material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
046544 ●	110/125/140	56	37,5	26	1/16"x 90°
046404 ●	130	56	37,5	26	1/16"x 90°
046408 ●	160	68	45	34,7	1/16"x 90°
118522 ●	200	75	49	36	1/16"x 90°
046414 ●	250/315	103,5	58	50	1/16"x 90°
037531 ●	400	135	65	68	3/32"x 90°

Hardened jaws, supplied as supplement or as spares, must be ground on the chuck.

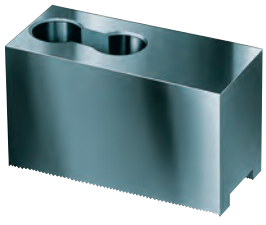
Tool group C 21
Type 543/538 **Reversible top jaws, 4-jaw set, hardened**
Serration 90°- material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
046456 ■	160	68	45	34,7	1/16"x 90°
118523 ●	200	75	49	36	1/16"x 90°
046462 ■	250/315	103,5	58	50	1/16"x 90°
046474 ■	400/500/630/800	135	65	68	3/32"x 90°

Hardened jaws, supplied as supplement or as spares, must be ground on the chuck.

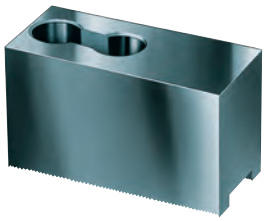
Tool group C 21
Type 543/538 **Soft top jaws, 2-jaw set, can be hardened**
Serration 90°- material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
045794 ■	125/140	53	30	22,5	1/16"x 90°
045795 ●	130	55	38	26,5	1/16"x 90°
133147 ●	160	66,7	53	36,5	1/16"x 90°
133148 ●	200/250	75	53	36,5	1/16"x 90°
133149 ●	250	95	54,5	45	1/16"x 90°
133150 ●	315	103	80	50	1/16"x 90°
133151 ■	400/500/630	130	80	50	3/32"x 90°
046446 ■	400/500/630	130	89	68	3/32"x90°

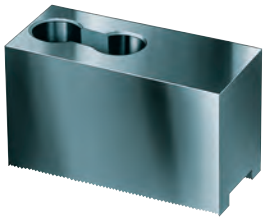
Jaws KFD

Tool group C 21
Type 543/538 **Soft top jaws, 3-jaw set, can be hardened**
Serration 90°- material: 16 MnCr 5



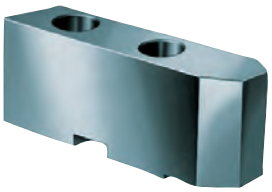
Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
046402 ●	110/125/140	53	30	22,5	1/16”x 90°
046403 ●	130	55	38	26,5	1/16”x 90°
133152 ●	160	66,7	53	36,5	1/16”x 90°
133153 ●	200	75	53	36,5	1/16”x 90°
133154 ●	250	95	54,5	45	1/16”x 90°
133155 ●	315	103	80	50	1/16”x 90°
133156 ●	400	130	80	50	3/32”x 90°
046423 ●	400/500/630/800	130	89	68	3/32”x 90°

Tool group C 21
Type 543/538 **Soft top jaws, 4-jaw set, can be hardened**
Serration 90°- material: 16 MnCr 5



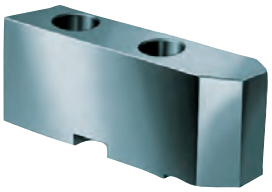
Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
133157 ●	160	66,7	53	36,5	1/16”x 90°
133158 ●	200	75	53	36,5	1/16”x 90°
133159 ●	250	95	54,5	45	1/16”x 90°
133160 ●	315	103	80	50	1/16”x 90°
133161 ●	400/500/630/800	130	80	50	3/32”x 90°
046473 ■	400/500/630/800	130	89	68	3/32”x 90°

Tool group C 21
Type 549/538 **Soft top jaws, 2-jaw set, can be hardened**
tongue and groove 120° bevelled,
material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
046860 ■	125	51	30	22,5
123356 ■	130/140	58	38	26,5
123359 ■	160	72,7	53	36,5
123431 ■	200	90,3	53	36,5
123434 ■	250	115,3	54,5	45
129847 ■	315	146	80	50

Tool group C 21
Type 549/538 **Soft top jaws, 3-jaw set, can be hardened**
tongue and groove 120° bevelled,
material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
119459 ●	85	40	30	22,5
046859 ●	110/125	51	30	22,5
123355 ●	130/140	58	38	26,5
123358 ●	160	72,7	53	36,5
123430 ●	200	90,3	53	36,5
123433 ●	250/315	115,3	54,5	45
129849 ●	315/400	146	80	50

● from stock ■ 4 - 6 weeks ▲ on request

Jaws KFD

Tool group C 21
Type 544-50 **Claw-type jaws**, 1 piece, **hardened**
Serration 90° - width of the groove **12**

Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
144320 ●	130	66	38	52
144321 ●	130	56	38	34
144322 ●	130	66	38	25

Tool group C 21
Type 544-50 **Claw-type jaws**, 1 piece, **hardened**
Serration 90° - width of the groove **17**

Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
137031 ●	200	67	45	53
137032 ●	200	65	45	46
137039 ●	200	55	45	40
137034 ●	200	50	45	31
137035 ●	200	55	45	27
137036 ●	200	65	45	19
137037 ●	200	65	45	26
137038 ●	200	55	45	24
137033 ●	200	55	45	39

Tool group C 21
Type 544-50 **Claw-type jaws**, 1 piece, **hardened**
Serration 90° - width of the groove **21**

Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
137041 ●	250/315	95	50	80
137042 ●	250/315	75	50	60
137043 ●	250/315	60	50	43
137044 ●	250/315	70	50	37
137045 ●	250/315	95	50	25
137046 ●	250/315	80	50	30

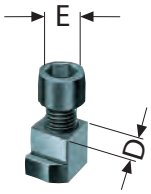
Tool group C 21
Type 544-50 **Claw-type jaws**, 1 piece, **hardened**
Serration 90° - width of the groove **25,5**

Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
137051 ●	400	130	65	113
137052 ●	400	90	65	67
137053 ●	400	100	65	45
137054 ●	400	130	65	33

Accessories KFD

Tool group C 15

Type 538-00 **T-nuts**
without screw



Item no.	Chuck Size	Contents of delivery	D	E
004254 ●	110/125/140	piece	10	M6
241673 ●	130	piece	12	M8
241674 ●	200	piece	17	M12
241675 ●	250/315	piece	21	M16
241676[1] ●	400	piece	25,5	M20

Single T-nut
[1] metric dimensions

Tool group C 15

Type 0040-Y **Mounting screws**

Item no.	Size	Contents of delivery	Thread	Length
343003 ●	110/125/140	piece	M6	18
233058 ●	130	piece	M8x20	20
227692 ●	200	piece	M12x25	25
229157 ●	250/315	piece	M16	30
233047 ●	400	piece	M20x40	40

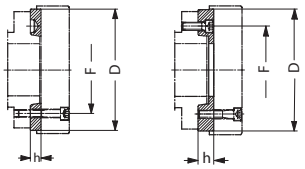
Socket head cap screw to DIN 912, 12.9

Tool group C15

Type 1028 **Special grease** F80 for **lathe chucks**
for lubrication and conservation of chucking power

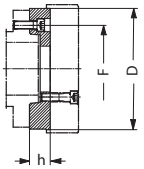
Item no.	Design	Contents
308555 ●	Cartridge	0,5 kg
028975 ●	Tin	1 kg

Tool group C 15
Type 594-32 Intermediate adaptor plates
with cylindrical centre mount DIN 6353 for three-jaw chucks
Mounting from front to ISO 702-1 (DIN 55026/55021) and ASA B 5.9 A1/A2 with metric mounting bolts



Design I

Design II

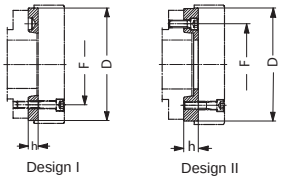


Design III

Id.-Nr.	Spindle nose size	Size	Design	h	F	D
145125[1] ●	4	160	II	18	82,6	140
145153 ●	5	175	I	15	104,8	140
145127 ●	5	200	II	21	104,8	170
145129 ●	6	160	III	35	133,4	140
145155 ●	6	200	I	16	133,4	170
145131 ●	6	250	II	27	133,4	220
145133 ●	6	315	II	27	133,4	300
145135 ●	8	200	III	39	171,4	170
145157 ●	8	250	I	18	171,4	220
145137 ●	8	315/400	II	38	171,4	300
145141 ●	8	500/630	II	38	171,4	380
145143 ●	11	250	III	48	235	220
145159 ●	11	315	I	19	235	300
145145 ●	11	500/630	II	40	235	380
151300 ●	11	800	II	40	235	460
145149 ●	15	400	III	58	330,2	300
145161 ●	15	400/500/630	I	21	330,2	380
145151 ●	15	800	II	42	330,2	460

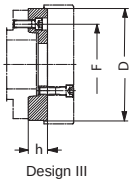
All fastening parts are included
Intermediate adaptors for two- and four-jaw-design on request
[1] DIN 55021 on request

Tool group C 15
Type 594-35 Intermediate adaptor plates
with cylindrical centre mount DIN 6353 for three-jaw chucks
Mounting from front to ASA B 5.9 A1/A2 with inch threaded mounting bolts



Design I

Design II



Design III

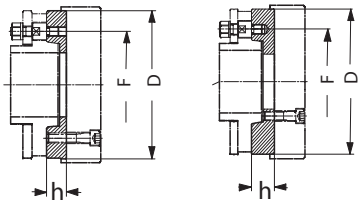
Id.-Nr.	Spindle nose size	Size	Design	h	F	D
145191 ■	4	160	II	18	82,6	140
145153 ●	5	175	I	15	104,8	140
145192 ■	5	200	II	21	104,8	170
145193 ■	6	160	II	35	133,4	140
145155 ●	6	200	I	16	133,4	170
145194 ■	6	250	II	27	133,4	220
145195 ■	6	315	II	27	133,4	300
145196 ■	8	315	II	39	171,4	300
145157 ●	8	250	I	18	171,4	220
145197 ■	8	315/400	II	38	171,4	300
145199 ■	8	500/630	II	38	171,4	380
145200 ■	11	250	III	48	235	220
145159 ●	11	315	I	19	235	300
145201 ■	11	500/630	II	40	235	380
151304 ■	11	800	II	40	235	460
145203 ■	15	400	III	58	330,2	300
145161 ●	15	400/500/630	I	21	330,2	380
145204 ■	15	800	II	42	330,2	460

All fastening parts are included
Intermediate adaptors for two- and four-jaw-design on request

● from stock ■ 4 - 6 weeks ▲ on request

Accessories KFD

Tool group C 15
Type 594-33 Intermediate adaptor plates
with cylindrical centre mount DIN 6353 for three-jaw chucks
Bayonet fixing to ISO 702-3 (DIN 55027)/ DIN 55022

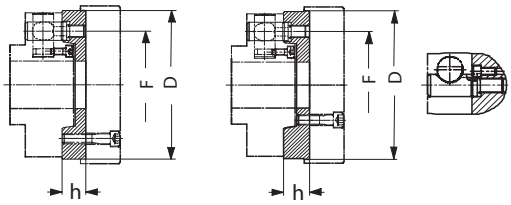


Design II Design III

Id.-Nr.	Spindle nose size	Size	Design	h	F	D
145208 ■	4	160	II	18	82,6	140
145236 ■	5	160	II	21	104,8	140
145210 ■	5	200	II	21	104,8	170
145212 ■	6	160	III	35	133,4	140
145240 ■	6	200	II	22	133,4	170
145214 ■	6	250/315	II	27	133,4	220
145216 ■	6	315	II	27	133,4	300
145218 ■	8	200	III	39	171,4	170
145242 ■	8	250	II	30	171,4	220
145220 ■	8	315/400	II	38	171,4	300
145224 ■	8	500/630	II	38	171,4	380
145226 ■	11	250	III	48	235	220
145244 ■	11	315/400	II	36	235	300
145228 ■	11	500/630	II	40	235	380
151305 ■	11	800	II	40	235	460
145232 ■	15	400	III	58	330,2	300
145248 ■	15	400/500	II	40	330,2	380
145234 ■	15	800	II	42	330,2	460

All fastening parts are included
Intermediate adaptors for two- and four-jaw-design on request

Tool group C 15
Type 594-36 Intermediate adaptor plates
with cylindrical centre mount DIN 6353 for three-jaw chucks
Camlock fixing to DIN 55029/ASA B 5.9 D1

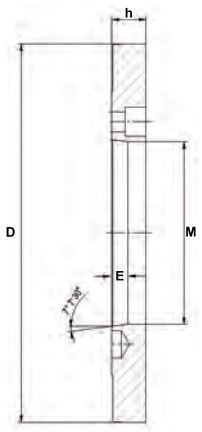


Design II Design III

Id.-Nr.	Spindle nose size	Size	Design	h	F	D
145252 ■	4	160	II	28	82,6	140
145280 ■	5	160	II	30	104,8	140
145254 ■	5	200	II	30	104,8	170
145256 ■	6	160	III	43	133,4	140
145284 ■	6	200	II	35	133,4	170
145258 ■	6	250	II	35	133,4	220
145260 ■	6	315	II	35	133,4	300
145262 ■	8	200	II	46	171,4	170
145286 ■	8	250	II	38	171,4	220
145264 ■	8	315/400	II	38	171,4	300
145268 ■	8	500/630	II	38	171,4	380
145270 ■	11	250	III	53	235	220
145288 ■	11	315/400	II	45	235	300
145272 ■	11	500/630	II	45	235	380
151307 ■	11	800	II	45	235	460
145276 ■	15	400	III	58	330,2	300
145292 ■	15	400/500	II	50	330,2	380
145278 ■	15	800	II	50	330,2	460

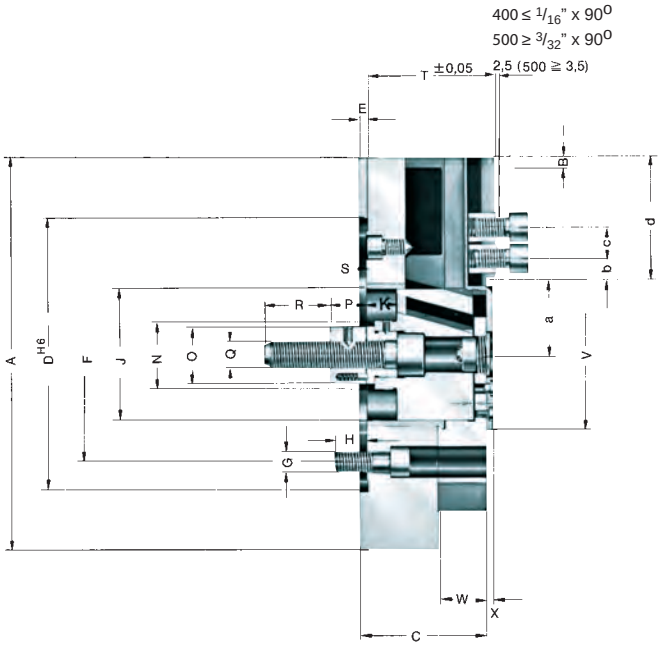
All fastening parts are included
Intermediate adaptors for two- and four-jaw-design on request

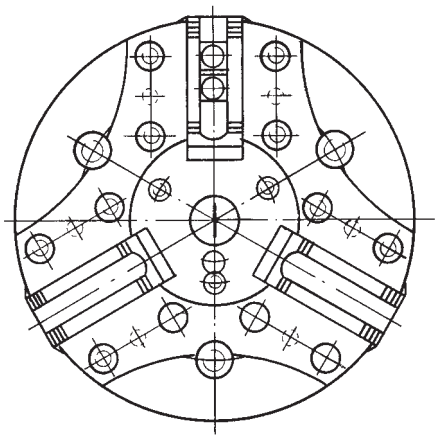
Tool group A09
Type 619-30 Short-taper adapter plate ISO 702-1 (DIN 55026/55021) - ASA B 5.9 (without mounting bolts)
finished on machine side, faced on chuck side, especially

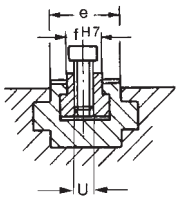


Id.-Nr.	Spindle nose size	h	E	M	D
144933 ▲	3	18	40	40	125
145296 ▲	4	18	40	40	125
145328 ▲	3	18	40	40	160
145342 ▲	4	18	40	40	160
145343 ▲	5	21	50	50	160
145344 ▲	4	21	50	50	200
145345 ▲	5	21	50	50	200
145346 ▲	6	27	50	50	200
145347 ▲	4	27	63	63	250
145348 ▲	5	27	63	63	250
145349 ▲	6	27	63	63	250
145350 ▲	8	27	63	63	250
145351 ▲	5	36	63	63	315
145352 ▲	6	36	63	63	315
145353 ▲	8	36	63	63	315
145354 ▲	11	36	63	63	315
145355 ▲	6	40	63	63	400
145356 ▲	8	40	63	63	400
145357 ▲	11	40	63	63	400
145358 ▲	15	40	63	63	400
145359 ▲	8	42	80	80	500
145360 ▲	11	42	80	80	500
145364 ▲	15	42	80	80	500

KFL light weight, serration 90°







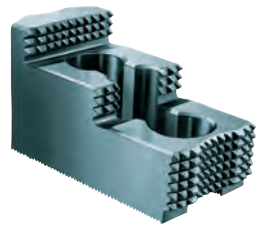
Tool group C15
Type 536-20 **3 jaw** power chuck,
light weight, serration 90°
cylindrical centre mount

Item no.	119137 ■	119138 ■	119139 ▲	119140 ▲	119141 ▲
Size	250	315	400	500	600
A	250	315	400	500	600
Jaw travel B	6,7	6,7	6,7	9,3	9,3
C	87	99	99	117	117
Mount D^{H6}	220	220	300	460	460
E	6	6	6	6	6
F	171,4	171,4	235	300	300
G	3 x M16	3 x M16	3 x M20	3 x M24	3 x M24
H	26	26	35	35	35
J	85	105	105	155	155
Wedge stroke K	25	25	25	35	35
N	45	55	55	60	60
O	40	46	46	55	55
P	30	30	30	30	30
Q	M22	M22	M22	M24	M24
R	50	50	50	55	55
S min.	30	30	30	30	30
S max.	55	55	55	65	65
$T^{\pm 0,05}$	90	102	102	120	120
U	M12 x 25	M16 x 30	M16 x 30	M20 x 40	M20 x 40
V^{H7}	105	118	118	176	176
W	35	40	40	60	60
X	6	6	6	7	7
a min.	47,3	54,3	54,3	76,7	76,7
a max.	54	61	61	86	86
b min.	10	11	11	14	14
c min.	19	25	25	35	35
c max.	59	84	126	148	198
d	71	96,5	139	164	214
e	35	45	45	60	60
f^{H7}	17	21	21	25,5	25,5
Max. swing top jaws mm	340	410	515	660	760
Maximum draw bar pull kN	35	50	50	75	75
Max. total clamping force kN	70	110	110	170	170
Max. admissible speed min^{-1}	3500	3000	2100	1800	1500
Moment of inertia J kgm^2	0,133	0,353	0,8	2,187	5,175
Weight without jaws approx. kg	17	28,5	40	70	115

● from stock ■ 4 - 6 weeks ▲ on request

Jaws KFL

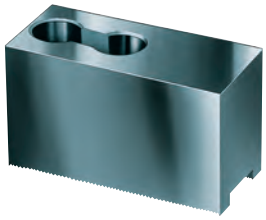
Tool group C 21
Type 543/538 **Reversible top jaws, 3-jaw set, hardened**
Serration 90°- material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
118522 ●	200	75	49	36	1/16"x 90°
046414 ●	250/315	103,5	58	50	1/16"x 90°
037531 ●	400	135	65	68	3/32"x 90°

Hardened jaws, supplied as supplement or as spares, must be ground on the chuck.

Tool group C 21
Type 543/538 **Soft top jaws, 3-jaw set, can be hardened**
Serration 90°- material: 16 MnCr 5

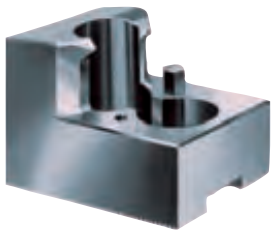


Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
133153 ●	200	75	53	36,5	1/16"x 90°
133154 ●	250	95	54,5	45	1/16"x 90°
133155 ●	315	103	80	50	1/16"x 90°
133156 ●	400	130	80	50	3/32"x 90°

Tool group C 21
Type 544-50 **Claw-type jaws**, 1 piece, **hardened**
Serration 90° - width of the groove **17**

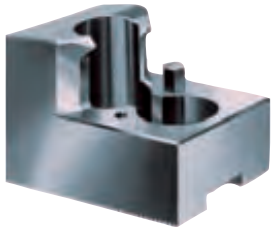
Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
137031 ●	200	67	45	53
137032 ●	200	65	45	46
137039 ●	200	55	45	40
137034 ●	200	50	45	31
137035 ●	200	55	45	27
137036 ●	200	65	45	19
137037 ●	200	65	45	26
137038 ●	200	55	45	24
137033 ●	200	55	45	39

Tool group C 21
Type 544-50 **Claw-type jaws**, 1 piece, **hardened**
Serration 90° - width of the groove **21**



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
137041 ●	250/315	95	50	80
137042 ●	250/315	75	50	60
137043 ●	250/315	60	50	43
137044 ●	250/315	70	50	37
137045 ●	250/315	95	50	25
137046 ●	250/315	80	50	30

Tool group C 21
Type 544-50 **Claw-type jaws**, 1 piece, **hardened**
Serration 90° - width of the groove **25,5**

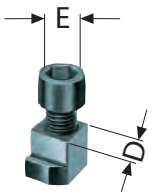


Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
137051 ●	400	130	65	113
137052 ●	400	90	65	67
137053 ●	400	100	65	45
137054 ●	400	130	65	33

Accessories KFL

Tool group C 15

Type 538-00 **T-nuts**
without screw



Item no.	Chuck Size	Contents of delivery	D	E
241674 ●	200	piece	17	M12
241675 ●	250/315	piece	21	M16
241676[1] ●	400	piece	25,5	M20

Single T-nut
[1] metric dimensions

Tool group C15

Type 1028 **Special grease** F80 for **lathe chucks**
for lubrication and conservation of chucking power

Item no.	Design	Contents
308555 ●	Cartridge	0,5 kg
028975 ●	Tin	1 kg

Tool group C 15

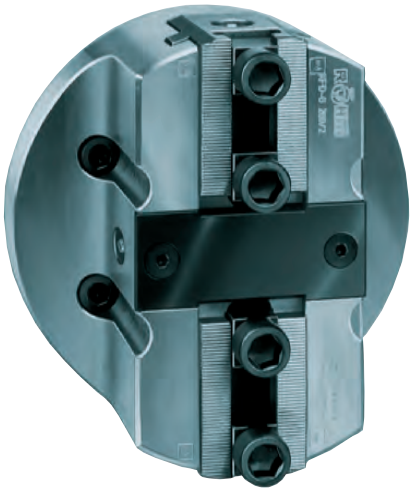
Type 0040-Y **Mounting screws**

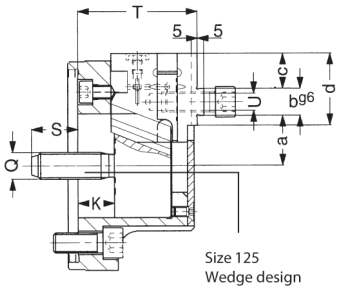
Item no.	Size	Contents of delivery	Thread
227692 ●	200	piece	M12x25
229157 ●	250/315	piece	M16
233047 ●	400	piece	M20x40

Socket head cap screw to DIN 912, 12.9

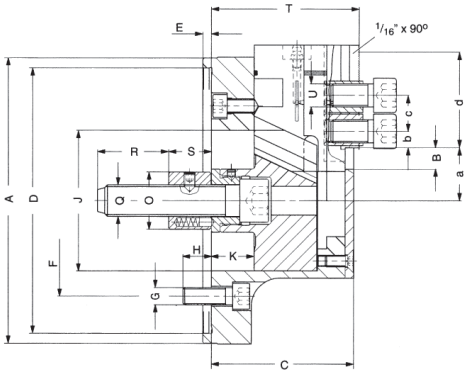
● from stock ■ 4 - 6 weeks ▲ on request

KFD-G 2-jaw, large jaw movement, serration 90°



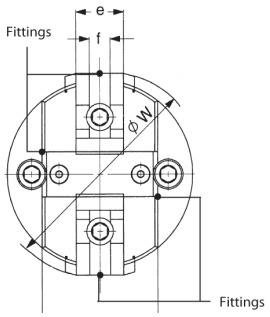


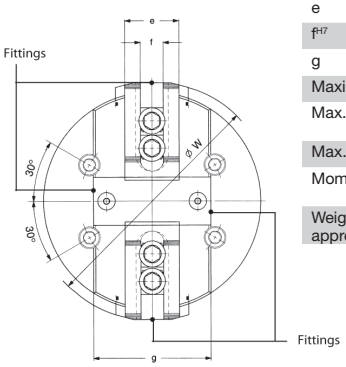
Size 125
Wedge design



Tool group C15
Type 581 **2-jaw** power chuck
KFD-G, with large jaw movement, Adaptor recess
Without disclaiming high clamping forces it is possible to clamp work-pieces with collars or shoulders (i.e. fittings).
- Full steel design
- weight reduction
- direct lubricated
- special sealing against dirt and water

Size 125 + 160
Tongue and groove

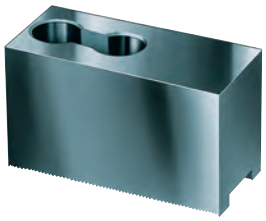




Item no.	154025 ●	154026 ●	154027 ●	154028 ■	154029 ■	154030 ■
Size	125	160	200	250	315	400
A	125	160	200	250	315	400
Jaw travel B	8,5	11	14	14,4	14,4	14,4
C	70	81	100	102	102	108
Mount D^{H6}	115	140	185	220	220	300
E	6	6	6	6	6	6
F	92	104,8	133,4	171,4	171,4	250
G	2 x M 12	4 x M 10	4 x M 12	4 x M 16	4 x M 16	4 x M 24
H	15	16	20	25	25	35
J	62	75	98	98	98	120
Wedge stroke K	22	27	30	31	31	31
O	-	35	44	44	44	52
Q	M 16	M 16	M 22	M 22	M 22	M 24
R	-	40	50	50	50	50
S min.	28	33	30	29	29	25
S max.	50	60	60	60	60	55
$T^{\pm 0,05}$	72	84	103,7	105,7	105,7	111,7
U	M 12	M 16	M 16	M 20	M 20	M 20
$W_{Max.}$	140	180	220	270	334	420
a min.	21,5	32,5	23	22,6	22,6	28,6
a max.	30	43,5	37	37	37	43
b min.	16g6	18g6	14	14	14	14
c min.	21	26	25	31	31	31
c max.	21	26	55,5	77	103	136
d	43	57,5	71,5	96	128,5	165
e	32	35	50	55	55	60
f^{H7}	14	18	21	25,5	25,5	25,5
g	78	91	108	120	120	135
Maximum draw bar pull kN	13	16	35	45	45	57
Max. total clamping force kN	10	12	25	29	29	37
Max. admissible speed min^{-1}	3500	3000	3000	2500	2200	2000
Moment of inertia J kgm^2	0,01	0,04	0,09	0,2	0,4	1,1
Weight without jaws approx. kg	5	9	17	25	36,5	60

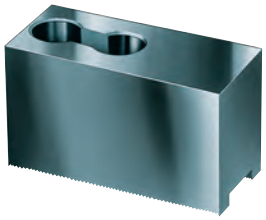
KFD-G

Tool group C 21
Type 581 **Soft top jaws, stationary, 2-jaw set, can be hardened tongue and groove** for 2-jaw chucks, material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
120321 ●	125	56,5	53	36,5
120320 ●	160	74,5	53	36,5
120318 ●	200	94	89	68
120316 ●	250	110	89	68
120073 ●	315/400	130	89	68

Tool group C 21
Type 543/538 **Soft top jaws, 2-jaw set, can be hardened Serration 90°**- material: 16 MnCr 5

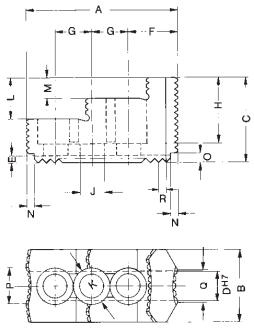


Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
133149 ●	250	95	54,5	45	1/16”x 90°

● from stock ■ 4 - 6 weeks ▲ on request

Jaw dimensions KFD / KFL / KFD-EC / KFD-F-EC

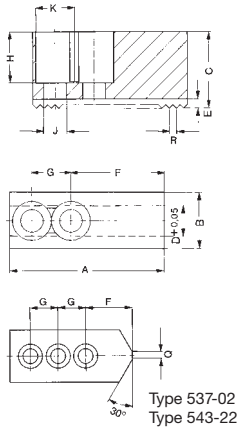
Reversible top jaws UB,
hardened, serration 90°, modul toothing (size 1000-1600)



Chuck size	110/125/140	130	160	200/250 [1]	250/315	400-800	1000-1600
Type	537-02	538-02	538-03	538-04	538-05	538-07 [2]	543-61 [2]
Item no. 2-jaw	**046545**	**045796**	**046429**	**118521**	**046435**	**046447**	**-**
Item no. 3-jaw	**046544**	**046404**	**046408**	**118522**	**046414**	**037531**	**152789**
Item no. 4-jaw	**046546**	**046452**	**046456**	**118523**	**046462**	**046474**	**-**
A	56	56	68	75	103,5	135	200
B	26	26	34,7	36	50	68	80
C	37,5	37,5	45	49	58	65	85
D^{H7}	10	12	17	17	21	25,5	30
E	3,5	3,5	5	5	5	5	8
F	10	14	17	21,5	33,5	48	78
G	12 [3]	15	19	19	25	31	42
H	29	29	33,5	37,5	45	48	62
J	6,4	8,4	13	13	17	21	26
K	10,4	13,5	19	19	25	31	40
L	20	20	20	24	28	-	-
M	10	10	10	12	14	26	35
N	4	4	5	6	6	6,5	6,5
O	4	4	7	7,5	6,5	5,5	9
P	5	5	10	18	24,5	34	40
Q	5	5	5	7	22,5	40	40
R	1/16"x90°	1/16"x90°	1/16"x90°	1/16"x90°	1/16"x90°	3/32"x90°	m 2
Weight/jaw kg	0,130	0,170	0,350	0,460	1,130	2,000	6,000

1) Size 250: Chuck in flat design
2) one step only
3) 4 mounting holes

Soft top jaws AB,
serration 90°,
modul toothing (size 1000-1600)

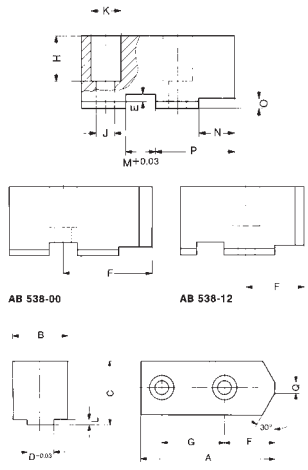


Type 537-02
Type 543-22

Chuck size	110/125/140	130	160	200/250 [1]	250	315	400-800	400-800	1000-1600
Type	537-02	538-02	538-03	538-04	538-05	538-06	538-07	538-07 [2]	543-62
Item no. 2-jaw	**045794**	**045795**	**133147**	**133148**	**133149**	**133150**	**133151**	**046446**	**-**
Item no. 3-jaw	**046402**	**046403**	**133152**	**133153**	**133154**	**133155**	**133156**	**046423**	**152790**
Item no. 4-jaw	**-**	**046451**	**133157**	**133158**	**133159**	**133160**	**133161**	**046473**	**461716**
A	53	55	66,7	75	95	103	130	130	200
B	22,5	26,5	36,5	36,5	45	50	50	68	80
C	30	38	53	53	54,5	80	80	89	89
D	10	12	17	17	21	21	25,5	25,5	30
E	3,5	3,5	5	5	5	5	5	5	8
F	20	31	36	44	55	62	79	75	94
G	12 [3]	15	19	19	25	25	31	35	42 [1]
H	20	28	43	43	42,5	67	60	69	69
J	6,4	8,4	13	13	17	17	21	21	26
K	10,4	13,5	19	19	25	25	31	31	40
Q	3	-	-	-	-	-	-	-	-
R	1/16"x90°	1/16"x90°	1/16"x90°	1/16"x90°	1/16"x90°	1/16"x90°	3/32"x90°	3/32"x90°	m 2
Weight/jaw kg	0,223	0,320	0,700	0,880	1,400	2,580	3,1	5,120	8,5

1) Size 250: Chuck in flat design
2) heavy design
3) 3 mounting holes

Soft top jaws AB,
tongue and groove

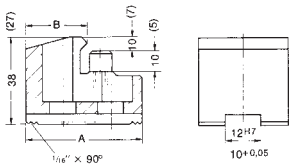


Chuck size	85	110/125 [1]	130/140 [1]	160	200	250	315
Type	538-00	537-03	538-12	538-13	538-14	538-15	538-66
Item no. 2-jaw	**119458**	**046860**	**123356**	**123359**	**123431**	**123434**	**129847**
Item no. 3-jaw	**119459**	**046859**	**123355**	**123358**	**123430**	**123433**	**129849**
A	40	51	58	72,7	90,3	115,3	146
B	22,5	22,5	26,5	36,5	36,5	45	50
C	30	30	38	53	53	54,5	80
$D_{-0,03}$	8	8	8	16	16	20	20
E	3	3,5	3,5	5,5	5,5	5,5	5,5
F	29	29,5	31,5	32,5	45,3	58,3	63,5
G	-	15	-	25	30	40	50
H	20	20	25	38	38	38	60
J	9	6,4	13	13	13	17	17
K	15	10,4	19	19	19	25	25
L	2,5	2,5	2,5	4,5	4,5	4,5	4,5
$M^{+0,03}$	8	8	13	10	12	16	16
N	18	23	23	24,7	35,3	45,3	43
O	4	4	3	5	5	5	5
P	25	33	39,5	39,7	54,3	70,3	80,5
Q	3	3	3	3	6	6	6
Weight/jaw kg	0,146	0,200	0,310	0,720	1,000	1,550	3,600

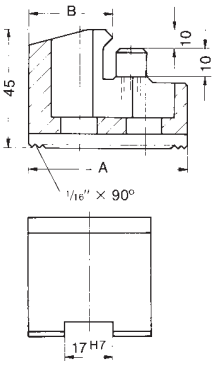
1) Shallow design

Jaw dimensions KFD

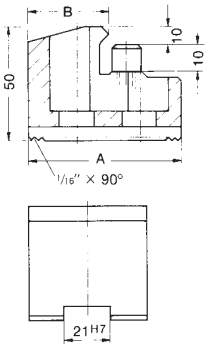
Claw type jaws KB,
serration 90°



Chuck size	A	B	130
Item no. Piece			Capacities external
144320	66	52	38-82
144321	56	34	78-122
144322	66	25	120-144
			Capacities internal
144322	66	25	70-98
144321	56	34	92-138
144320	66	52	122-178

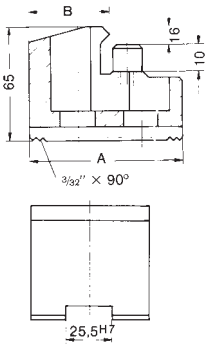


Chuck size	A	B	160	200
Item no. Piece			Capacities external	
137031	67	53	38-56	60-96
137032	65	46	51-71	73-111
137039	55	40	66-87	88-127
137034	50	31	83-102	105-142
137035	55	27	97-117	119-157
			Capacities internal	
137036	65	19	50-70	72-110
137037	65	26	68-85	90-125
137038	55	24	82-104	104-144
137035	55	27	102-116	124-156
137034	50	31	114-123	136-163
137039	55	40	120-135	144-175
137033	55	39	132-165	154-205
137032	65	46	146-178	168-218



Chuck size	A	B	250	315 [1]	315
Item no. Piece			Capacities external		
137041	95	80	53-95	53-160	66-160
137042	75	60	92-133	92-198	105-198
137043	60	43	125-167	125-232	138-232
137044	70	37	156-198	156-263	169-263
			Capacities internal		
137045	95	25	68-112	68-117	81-177
137046	80	30	108-154	108-219	121-219
137044	70	37	146-186	146-240	159-240
137043	60	43	178-240	178-305	191-305
137042	75	60	212-265	212-330	225-330

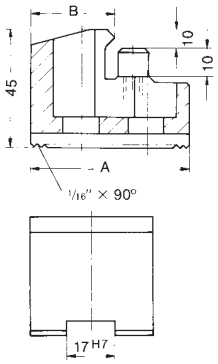
[1] Shallow design chuck



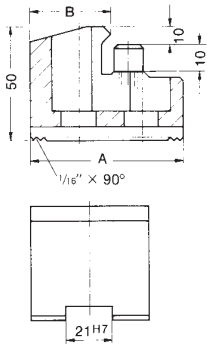
Chuck size	A	B	400	500	630	800
Item no. Piece			Capacities external			
137051	130	113	80-180	80-280	114-410	114-580
137052	90	67	170-270	170-370	204-500	204-670
137053	100	45	256-390	270-495	290-625	290-790
			Capacities internal			
137054	130	33	100-215	100-315	134-445	134-615
137053	100	45	260-395	275-500	295-625	295-795
137051	130	113	300-460	300-560	334-690	334-860

Jaw dimensions KFL

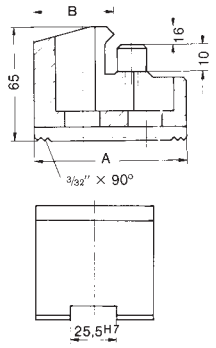
Claw type jaws KB, serration 90°



Size	A	B	250
Item no. Piece		Capacities external	
137031	67	53	82-146
137032	65	46	95-161
137039	55	40	110-177
137034	50	31	127-192
137035	55	27	141-207
		Capacities internal	
137036	65	19	94-160
137037	65	26	112-175
137038	55	24	126-194
137035	55	27	146-206
137034	50	31	158-213
137039	55	40	166-255
137033	55	39	176-255
137032	65	46	190-268



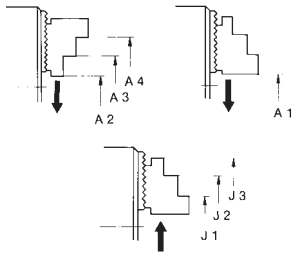
Size	A	B	315	400
Item no. Piece			Capacities external	
137041	95	80	67-160	67-245
137042	75	60	106-198	106-283
137043	60	43	139-232	139-317
137044	70	37	170-263	170-348
			Capacities internal	
137045	95	25	82-177	82-262
137046	80	30	122-219	122-304
137044	70	37	160-240	160-336
137043	60	43	192-305	192-390
137042	75	60	226-330	226-415



Size	A	B	500	600
Item no. Piece			Capacities external	
137051	130	113	88-280	88-380
137052	90	67	178-370	178-470
137053	100	45	265-195	265-595
			Capacities internal	
137054	130	33	108-315	108-415
137053	100	45	270-502	270-602
137051	130	113	308-560	308-660

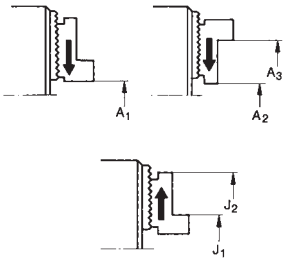
Chucking capacities KFD

Chucking capacities with reversible top jaws UB/AB for 2- and 3-jaw chucks



Chuck size		110	125	130	140	160	200	250 1)	250	315 1)	315	400	500	630	800
with reversible jaws	Type	537-02	537-02	538-02	537-02	538-03	538-04	538-04	538-05	538-05	538-05	538-07	538-07	538-07	538-07
	Jaw position														
External chucking	A1	4-62	4-78	6-66	4-93	5-73	16-108	16-159	20-124	20-189	34-189	40-225	40-325	60-450	60-620
	A2	-	-	-	-	-	28-118	28-169	38-152	38-217	52-217	70-280	70-380	108-510	106-680
	A3	47-105	75-126	60-119	75-140	70-140	86-173	86-223	120-232	120-297	134-297	-	-	-	-
	A4	82-140	110-161	94-151	110-176	110-182	137-224	137-274	200-314	200-379	214-379	275-480	275-580	310-700	310-870
Internal chucking	J1	40-95	40-110	42-96	40-125	53-120	70-156	70-208	70-170	70-233	84-233	102-305	102-405	136-530	136-700
	J2	74-130	72-145	74-130	72-160	92-163	120-208	120-258	146-251	146-313	160-313	-	-	-	-
	J3	112-168	116-190	118-175	116-205	144-200	173-261	173-311	236-328	236-393	250-393	295-490	295-590	328-720	328-890

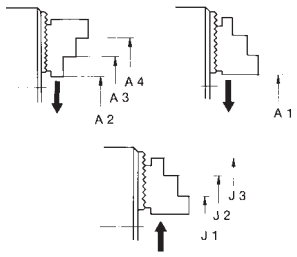
1) Shallow design chuck



Chuck size		1000	1250	1400	1600
with reversible jaws	Type	538-09	538-09	538-09	538-09
	Jaw position				
External chucking	A1	100-640	100-890	100-1040	100-1240
	A2	180-720	180-970	180-1120	180-1320
	A3	450-1000	450-1250	450-1400	450-1600
Internal chucking	J1	200-750	200-1000	200-1150	200-1350
	J2	480-1030	480-1280	480-1430	480-1630

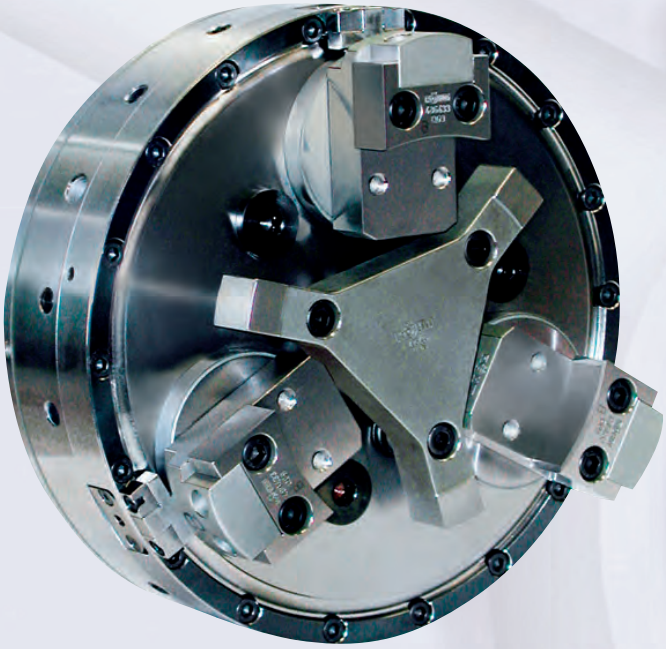
Chucking capacities KFL

Chucking capacities with reversible top jaws UB



Chuck size		250	315	400	500	600
with reversible jaws	Type	538-04	538-05	538-07	538-07	538-07
	Jaw position					
External chucking	A1	40-160	22-189	22-270	37-325	37-425
	A2	55-173	51-217	51-302	81-380	81-480
	A3	110-225	134-297	134-382	-	-
	A4	160-276	214-379	214-482	287-580	287-680
Internal chucking	J1	88-204	73-233	73-318	108-405	108-505
	J2	138-256	150-313	150-398	-	-
	J3	192-310	228-393	228-478	305-590	305-690

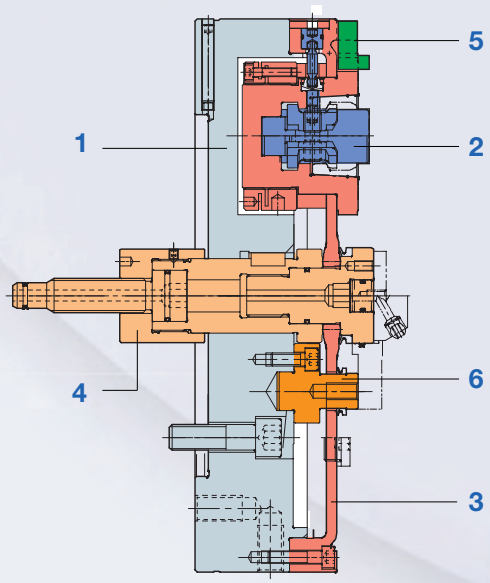
Diaphragm clamping chuck MSF



Fast and easy jaw change with outstandingly good levels of precision

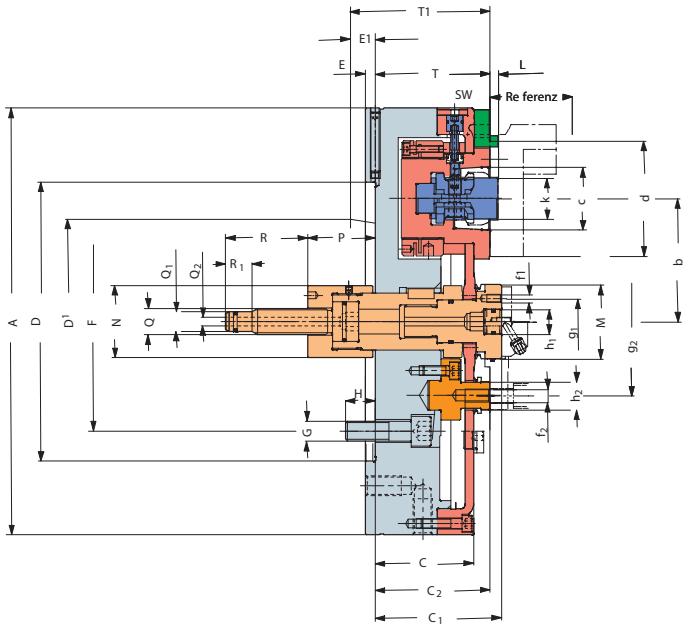
Technical features:

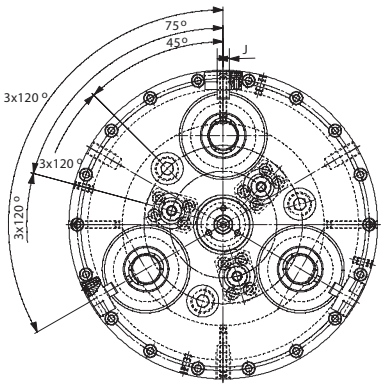
- Flat design
- Diaphragms operate for long periods of time almost free of wear and in constantly uniform quality
- Quick-acting jaw change system via HSK-interface guarantees high stiffness at highest precision (change precision)
- Jaw chucks reground in the system combination of diaphragm and HSK mount achieve change precision values of ≤ 0.005 mm when refitted after a change
- Unaffected by dirt
- A media feed system, provided as standard, provides the opportunity for coolants or blown air to be conducted through the diaphragm jaw chuck directly to the workpiece, or to accommodate the workpiece air-contact monitoring device in the workpiece mounts.
- Ideally suited for grinding and hard turning with high accuracy
- Used in conjunction with RÖHM actuating cylinders with safety device SZS, OVS, LHS-L, LVS, EHS and EVS the power chucks MSF meet the requirements of the German Employers' Insurance Association



1. Body
2. HSK holding clamp
3. Diaphragm with HSK mounting
4. Piston
5. Secured against rotation
6. Support element

MSF centric clamping, with quick-acting jaw change system HSK





Tool group C 15
Type 587 Diaphragm jaw chuck **MSF**, **centric clamping**, with **quick-acting jaw change system HSK**, chucking precision **0,005 mm cylindrical centre mount / short taper mount**

Item no.	432410 ■	432411 ■	432412 ■	432413 ■	432414 ■	432415 ■	432416 ▲	432417 ▲
Size	210	210	260	260	315	315	400	400
A	210	210	260	260	315	315	400	400
Mount D^{H6} / D^1	ZA 170	KK 6	ZA 170	KK 6	ZA 220	KK 8	ZA 300	KK 11
Jaw movement (refer to ref.) B	± 1,2	± 1,2	± 1,3	± 1,3	± 1,5	± 1,5	± 1,4	± 1,4
Aperture angle	± 1°9'	± 1°9'	± 1°10'	± 1°10'	± 1°13'	± 1°13'	± 1°	± 1°
C	60	60	60	60	80	80	80	80
C1	77 (min. 78,5 max. 75,5)	77 (min. 78,5 max. 75,5)	77 (min. 79 max. 75)	77 (min. 79 max. 75)	98 (min. 95,5 max. 100,5)	98 (min. 95,5 max. 100,5)	98 (min. 95 max. 101)	98 (min. 95 max. 101)
C2	70	70	70	70	90	90	90	90
E	6	6	6	6	6	6	6	6
E_1	-	15	-	15	-	17	-	19
F	ø 133,4 ± 0,2	ø 133,4 ± 0,2	ø 133,4 ± 0,2	ø 133,4 ± 0,2	ø 171,4 ± 0,2	ø 171,4 ± 0,2	ø 235 ± 0,2	ø 235 ± 0,2
G	M 12	M 12	M 12	M 12	M 16	M 16	M 20	M 20
H	18	17	18	17	24	22	31	32
J-0,01/-0,02	10	10	10	10	12	12	12	12
Wedge stroke K	3	3	4	4	5	5	6	6
L	5	5	5	5	5	5	5	5
Mg6	ø 45	ø 45	ø 45	ø 45	ø 54	ø 54	ø 54	ø 54
N	ø 44	ø 44	ø 44	ø 44	ø 56	ø 56	ø 56	ø 56
P	41 (min. 39,5 max. 42,5)	41 (min. 39,5 max. 42,5)	41 (min. 39 max. 43)	41 (min. 39 max. 43)	42,5 (min. 40 max. 45)	42,5 (min. 40 max. 45)	42,5 (min. 39,5 max. 45,5)	42,5 (min. 39,5 max. 45,5)
Q	M 16	M 16	M 16	M 16	M 24	M 24	M 24	M 24
Q1f7	ø 12	ø 12	ø 12	ø 12	ø 20	ø 20	ø 20	ø 20
Q2	ø 5	ø 5	ø 5	ø 5	ø 5	ø 5	ø 5	ø 5
R	50	50	50	50	65	65	65	65
R_1	16	16	16	16	20	20	20	20
T	70	70	70	70	90	90	90	90
T_1	-	86,2	-	86,2	-	107	-	109,4
Referenz	50	50	50	50	60	60	60	60
b ± 0,01	57	57	75	75	90	90	132,5	132,5
c	HSK50	HSK50	HSK50	HSK50	HSK63	HSK63	HSK63	HSK63
d	ø 70	ø 70	ø 70	ø 70	ø 80	ø 80	ø 80	ø 80
f1	M 5/9	M 5/9	M 5/9	M 5/9	M 5/9	M 5/9	M 5/9	M 5/9
f2	M 8/15	M 8/15	M 8/15	M 8/15	M 8/15	M 8/15	M 8/15	M 8/15
g1 ± 0,2	ø 28	ø 28	ø 28	ø 28	ø 28	ø 28	ø 28	ø 28
g2 ± 0,2	ø 80	ø 80	ø 90	ø 90	ø 120	ø 120	ø 180	ø 180
h1 H7	ø 15/11	ø 15/11	ø 15/11	ø 15/11	ø 15/11	ø 15/11	ø 15/11	ø 15/11
h_2	ø 17	ø 17	ø 17	ø 17	ø 20	ø 20	ø 20	ø 20
k-0,1	ø 25	ø 25	ø 25	ø 25	ø 33	ø 33	ø 33	ø 33
Key-width SW	4	4	4	4	5	5	5	5
Maximum draw bar pull kN	20	20	25	25	30	30	30	30
Min. operating force to open the diaphragm kN	10	10	15	15	20	20	15	15
Max. admissible speed min^{-1}	5500	5500	4500	4500	4000	4000	3000	3000
Moment of inertia J kgm^2	0,09	0,09	0,2	0,2	0,56	0,60	1,4	1,5
Weight without base jaws approx. kg	16	17	24	25	45	48	69	74

Further mountings possible with adaptor plates

● from stock ■ 4 - 6 weeks ▲ on request

Jaws MSF

Tool group C 21
Type 587-04 **Base jaws** for diaphragm jaw chucks

Item no.	Chuck Size	Clamping insert	Jaw length	Jaw height	Jaw width
499956 ■	210	I	64	20	45
499957 ■	210	II	70	20	45
499958 ■	210	III	73	20	45
499961 ■	260	I	89	20	45
499962 ■	260	II	80	20	45
499963 ■	260	III	90	20	45
499964 ■	315/400	I	103	20	60
499965 ■	315/400	II	90	20	60
499966 ■	315/400	III	107,5	20	60

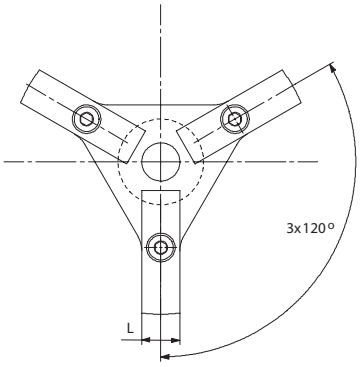
On request, it is also possible to supply special interchangeable jaws and special base jaws adapted to a specific workpiece.

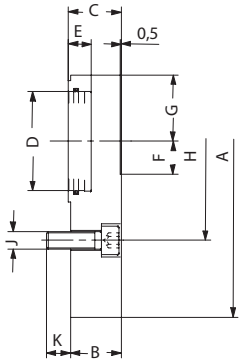
Tool group C 21
Type 587-04 **Clamping sets** for Base jaws

Item no.	Chuck Size	Clamping insert	Length	Height	Width
499968 ■	210/260	II	55	20	50
499969 ■	210/260	III	42	20	50
499967 ■	260	I	62	20	50
499970 ■	315/400	I	70	20	60
499971 ■	315/400	II	62	20	60
499972 ■	315/400	III	42	20	60

Clamping insert I not suitable at size 210

Accessories MSF





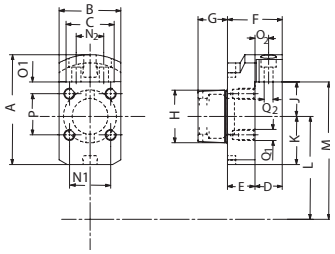
Tool group C 15
Type 587-04 **Contact stars**
Contact stars are used as a longitudinal stop for the workpiece. The standard contact stars enable the entire clamping range of the standard jaws to be covered.

Item no.	499874 ■	499875 ■	499876 ■	499877 ■
Size	210	260	315	400
A	150	150	250	335
B	23	23	23	23
C	24	24	24	24
DH7	ø 45	ø 45	ø 54	ø 54
E	10,5	10,5	13	13
F	7,5	15	20	60
G	26	30	36,5	36,5
H	80	90	120	180
J	M8	M8	M8	M8
K	11	11	11	11
L	20	20	35	35
Contact area	ø 15-150	ø 30-190	ø 40-250	ø 120-335

In addition, special versions are possible with an air contact check for the blast air, pre-centering or adapted to a certain workpiece geometry.

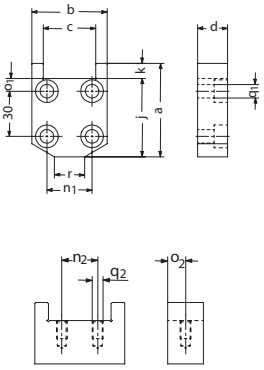
Jaw dimensions MSF

Base jaws for
Diaphragm clamping chucks



Chuck size	210			260			315			400		
	External chucking			External chucking			External chucking			External chucking		
Clamping insert	I	II	III	I	II	III	I	II	III	I	II	III
Item no.	**499956**	**499957**	**499958**	**499961**	**499962**	**499963**	**499964**	**499965**	**499966**	**499964**	**499965**	**499966**
A	64	70	73	89	80	90	103	90	107,5	103	90	107,5
B		45			45			60			60	
C		35			35			40			40	
D		20			20			20			20	
E		20			20			20			20	
F		40			40			40			40	
G		21,5			21,5			27			27	
H		HSK 50			HSK 50			HSK 63			HSK 63	
J	-5	25	35	-5	25	35	-6	30	47,5	-6	30	47,5
K	20	25	25	50	35	35	61	40	40	61	40	40
L		57			75			90			132,5	
M External chucking	52	82	88	70	100	100	84	120	137,5	126,5	162,5	180
N1		30			30			40			40	
N2		20			20			25			25	
O1		8,5			8,5			12			12	
O2		10			10			10			10	
P	-	30	-	30	30	-	36	36	-	36	36	-
Q1		M8/12			M8/12			M8/12			M8/12	
Q2		Ø 6,6/Ø 11			Ø 6,6/Ø 11			Ø 6,6/Ø 11			Ø 6,6/Ø 11	
Chucking capacities with base jaws HSK and clamping inserts												
Base jaw I	-	20-70	45-84	40-57 86-110	55-110	80-120	50-70 100-130	66-130	106-150	135-155 185-215	151-215	191-235
Base jaw II	-	80-130	105-144	100-117 145-170	115-170	140-180	122-142 166-202	138-202	188-222	207-227 250-287	223-287	273-307
Base jaw III	-	92-142	117-160	120-137 165-190	135-190	160-200	157-177 200-237	173-237	213-260	242-262 285-322	258-322	298-345

Clamping inserts
for base jaws



Chuck size	210			260			315			400		
	External chucking			External chucking			External chucking			External chucking		
Clamping insert	I	II	III	I	II	III	I	II	III	I	II	III
Item no.	**1)**	**499968**	**499969**	**499967**	**499968**	**499969**	**499970**	**499971**	**499972**	**499970**	**499971**	**499972**
a	-	55	42	62	55	42	70	62	42	70	62	42
b		50			50			60			60	
c		35			35			40			40	
d		20			20			20			20	
j	-	45	32	52	45	32	60	52	32	60	52	32
k		10			10			10			10	
n1		30			30			40			40	
n2		20			20			25			25	
o1		8,5			8,5			12			12	
o2		10			10			10			10	
p	-	-	-	30	-	-	36	-	-	36	-	-
q1	-	Ø 9/15	-	-	Ø 9/15	-	Ø 9/15	Ø 9/15	-	Ø 9/15	Ø 9/15	-
q2	-	-	M6/10	-	-	M6/10	-	-	M6/10	-	-	M6/10
r	-	20/30°	-	20/30°	20/30°	-	36/30°	-	-	36/30°	-	-
Chucking capacities with base jaws HSK and clamping inserts												
Base jaw I	-	20-70	45-84	40-57 86-110	55-110	80-120	50-70 100-130	66-130	106-150	135-155 185-215	151-215	191-235
Base jaw II	-	80-130	105-144	100-117 145-170	115-170	140-180	122-142 166-202	138-202	188-222	207-227 250-287	223-287	273-307
Base jaw III	-	92-142	117-160	120-137 165-190	135-190	160-200	157-177 200-237	173-237	213-260	242-262 285-322	258-322	298-345

1) not suitable at size 210

Notes

Overview

KFD-HS **from page 6051**

Wedge system (ring piston)

Few loss of centrifugal force, high precision

2-, 3- and 4-jaw design

KFD-HE **from page 6068**

Wedge system (wedge piston)

3-jaw design

Options: With or without draw tube-connector

KFM / KFG **from page 6081**

Toggle joint leverssystem

Large jaw movement due to Toggle joint leverssystem

2- and 3-jaw design

Options: With medium jaw movement (KFM) or large jaw movement (KFG)

PKF **from page 6090**

Precision-Wedge system with integrated pneumatic chucking piston

Top precision chucking

3-jaw design

GF **from page 6094**

Gripper chuck

Used for moving and positioning bars and tubes

The power chucks **KFD-EC** (from page 6013) and **KFD-HS oil** (from page 6020) are also available with through-hole. Please contact us.

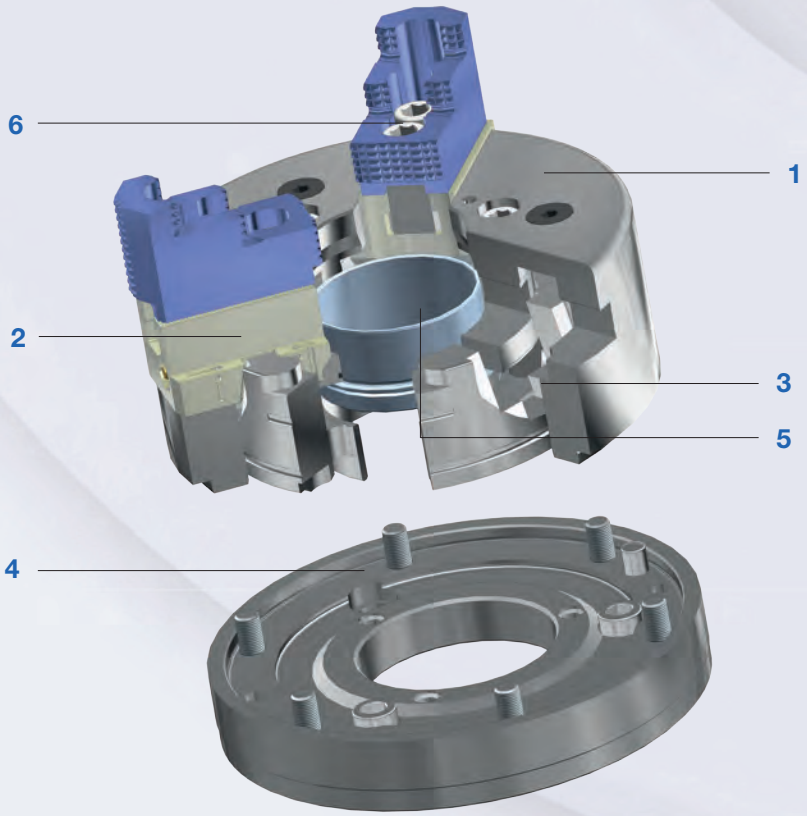
KFD-HS

Technical features:

- Wedge hook system with annular piston for highest accuracy in case of loss of centrifugal force
- Above-average mechanical efficiency
- Very few components, long jaw ways, very large through-hole
- Universal design of wedge connection (even in the fully retracted position the wedge neck does not project into the area of the spindle bore)
- If necessary, quick conversion to a different spindle nose, by simply exchanging the centering adapter
- Use of clamping inserts for bar work (special design)
- Base jaw secured against throw-off
- Used in conjunction with RÖHM actuating cylinders with safety device SZS, OVS, LHS-L, LVS, EHS and EVS the power chucks KFD-HS meet the requirements of the German Employers' Insurance Association

Two-, three- and four-jaw chucks, with large through-hole, for very high speeds

The design principle of the power chuck KFD-HS is to absorb most of the centrifugal forces occurring during the machining process in order to minimize their influence on the clamping forces. This will be done by a special wedge-connection, resulting only in a small loss of clamping forces even at high speeds. The screwed connection between chuck body and chuck flange provides a high chuck rigidy. So this chuck type offers an optimum of conditions for precise machining of both shaft and flange typed workpieces.



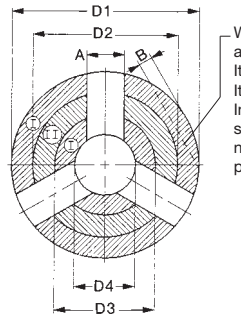
Components KFD-HS

1. Body
2. Base jaw
3. Piston
4. Adaptor plate
5. Protective bushing
6. T-nut

Scope of delivery:
Chuck and jaw mounting screws, assembly wrench, T-nuts (without top-jaws)

KFD-HS

Drilling areas on frontside of KFD-HS power chucks



Weight reduced at size 315
Item no. 144261
Item no. 143748
In the weight saving area no drilling permitted

	110	130	140	160	175	200	250	315	400	500
A	36	38	38	50	50	58	73	73	84	84
B	-	-	-	-	-	-	-	43	-	62
D1	110	130	140	160	175	200	250	315	400	500
D2	85	98	112	125	134	158	196	196	340	340
D3	56	65	72	86	95	110	140	140	262	262
D4	42	38	46	55	65	74	102	102	185	185
Max. drill depth - Zone I	25	25	25	30	30	40	40	40	40	40
Max. drill depth - Zone II	8	6	6	9	9	9	12	12	10	10

Gripping force/speed diagram (three jaw chucks only)

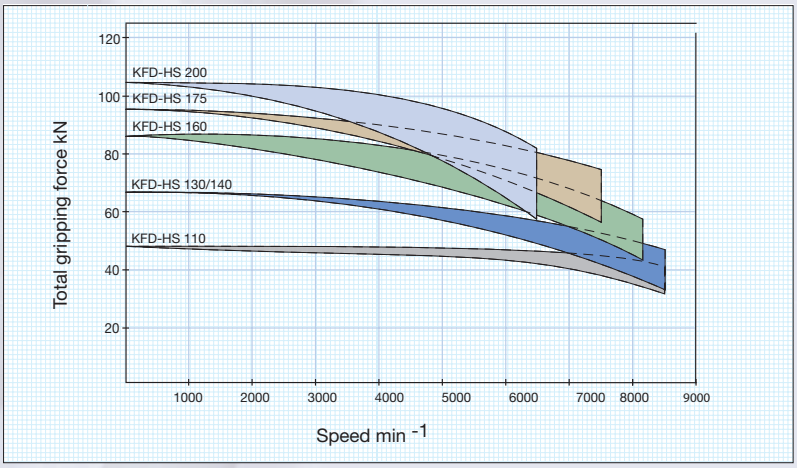
The loss of gripping force was determined experimentally on a chuck with matched UB top jaws. It is largely independent of the initial gripping force at zero speed.

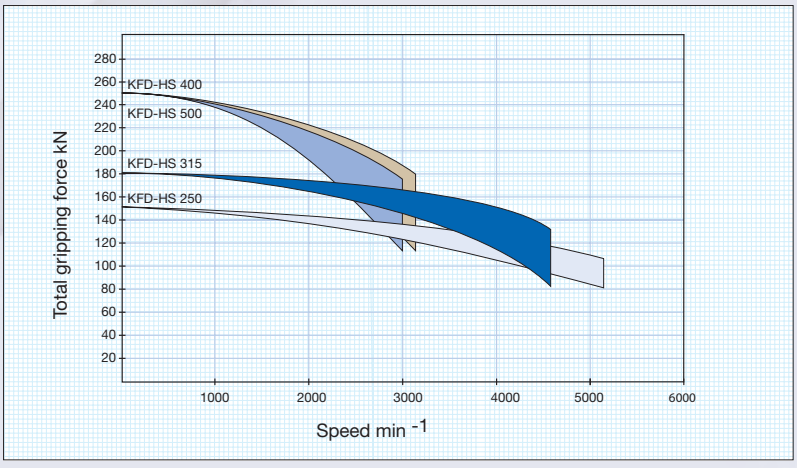
Upper curve: min. centrifugal force of top jaw

Lower curve: max. centrifugal force of top jaw

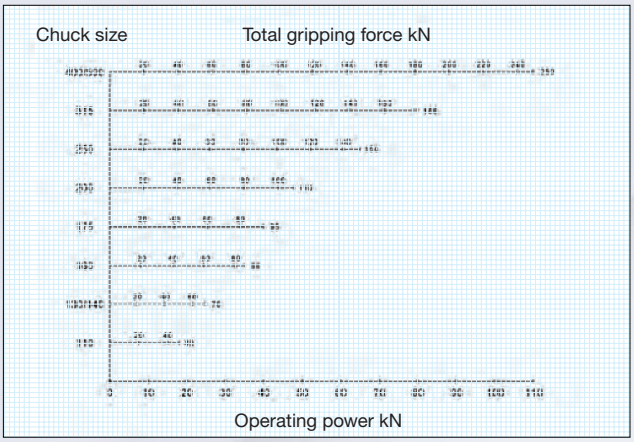
To obtain the specified gripping forces, the chuck must be in a perfect condition and lubricated with F 80 lubricant recommended by Röhm. Measuring point near chuck face.

Example: For a chuck size 250 and an applied operating power of 40 kN, the total gripping force is approx. 92 kN.

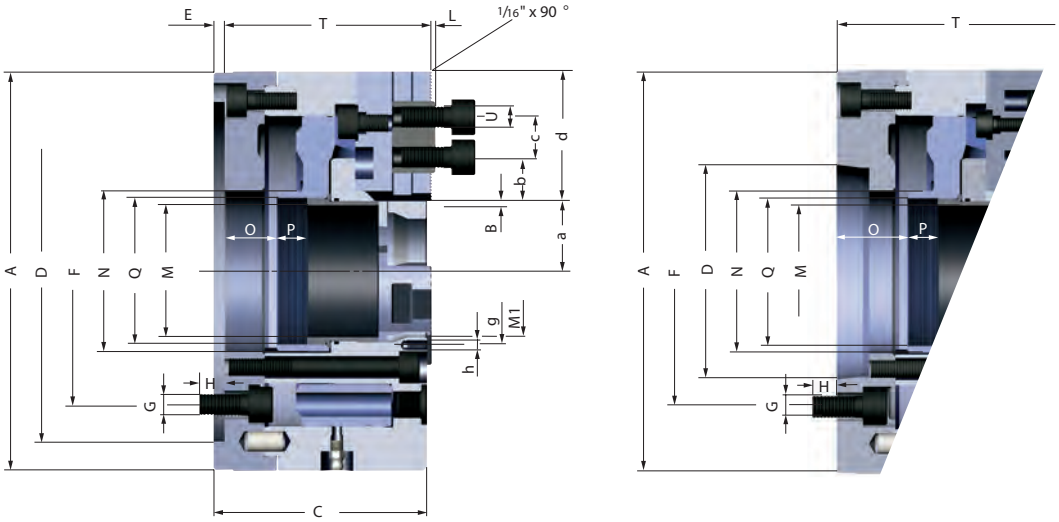




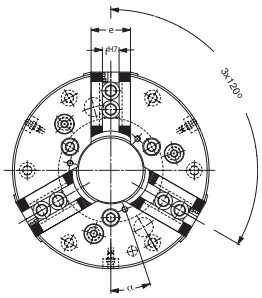
Gripping force/operating power diagram



KFD-HS 3-jaw, serration 90°



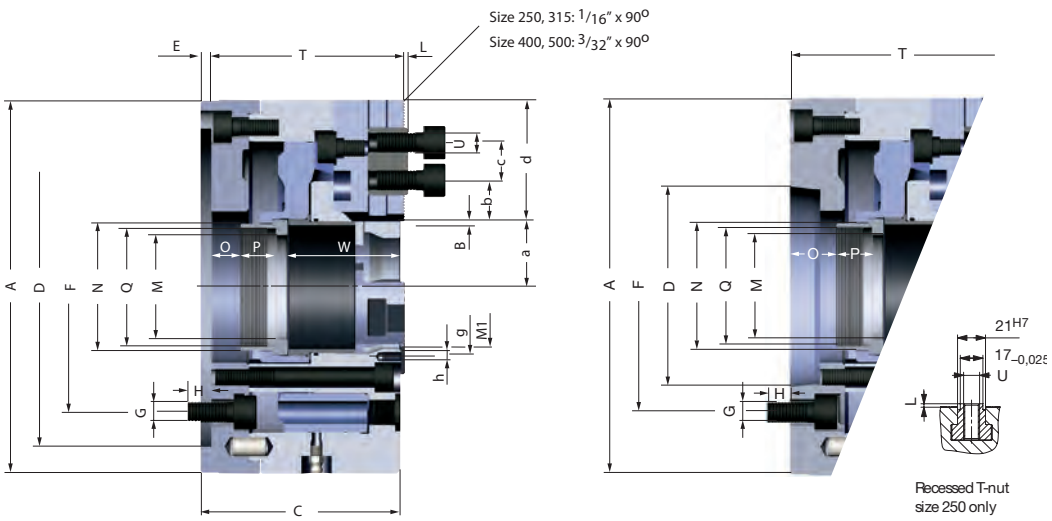
Tool group C 15
Type 549-00/ 549-22 **3 jaw** power chuck **KFD-HS, with tightening thread, serration 90°**Adaptor recess, mounting dimensions to **DIN 6353/** short taper mount (KK) **ISO 702-1** (DIN 55026/55021)



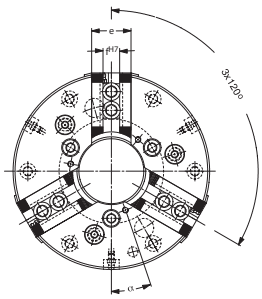
Item no.	149406 ●	149405 ●	144257 ●	142477 ●	144258 ●	142690 ●	143692 ●	142478 ●	144259 ●	143893 ●	143888 ●	142479 ●
Size	110	110	130	130	140	140	160	160	175	175	200	200
number of jaws	3	3	3	3	3	3	3	3	3	3	3	3
A	110	110	130	130	140	140	160	160	175	175	200	200
Jaw travel B	3,2	3,2	3,2	3,2	3,2	3,2	4	4	4	4	5	5
C	78	86	88	90	88	92	102	108	102	108	107	112
Mount D	ZA 60	KK 4*	ZA 100	KK 4*	ZA 120	KK 5	ZA 140	KK 5	ZA 140	KK 5	ZA 170	KK 6
E	6	13	6	13	6	15	6	16	6	16	6	16
F	82,6	82,6	82,6	82,6	104,8	104,8	104,8	104,8	104,8	104,8	133,4	133,4
G	3xM10	3xM10	3xM10	3xM10	3xM10	3xM10	3xM10	3xM10	3xM10	3xM10	3xM12	3xM12
H	15	14	15	14	15	17	15	14	15	14	18	17
Wedge stroke K	12	12	12	12	12	12	15	15	15	15	18,5	18,5
L	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5
M max.	26	26	32	32	37	37	46	46	56	56	66	66
M_1^{H7}	32	32	32	32	37	37	46	46	56	56	66	66
N	38	38	42	42	48	48	58	58	68	68	80	80
O min.	-1	11	6	12	5	13	6	16	6	16	7,5	16,5
O max.	11	23	18	24	17	25	21	31	21	31	26	35
P	12	12	14	14	14	14	16	16	16	16	15	15
Q	M34x1,5	M34x1,5	M38x1,5	M38x1,5	M44x1,5	M44x1,5	M54x1,5	M54x1,5	M65x1,5	M65x1,5	M74x1,5	M74x1,5
T	80	84	84	88	84	90	98	106	98	106	103	110
U	M8	M8	M6	M6	M6	M6	M8	M8	M8	M8	M12	M12
a min.	10,8	10,8	14,3	14,3	16,8	16,8	24	24	29	29	35	35
a max.	14	14	17,5	17,5	20	20	28	28	33	33	40	40
b min.	3	3	0	0	0	0	0	0	0	0	8,5	8,5
b max.	23	23	23,5	23,5	26	26	22	22	24,5	24,5	32,5	32,5
c	15	15	2x12	2x12	2x12	2x12	2x15	2x15	2x15	2x15	19	19
d	41	41	47,5	47,5	50	50	52	52	54,5	54,5	60	60
e	24	24	25	25	25	25	32	32	32	32	40	40
fH7-0,025	10	10	10	10	10	10	12	12	12	12	17	17
g	50	50	75	75	68	68	76	76	76	76	84	84
h	M5x8	M5x8	M5x8	M5x8	M5x8	M5x8	M6x10	M6x10	M6x10	M6x10	M6x10	M6x10
α	0°	0°	15°	15°	22° 30'	22° 30'	20°	20°	20°	20°	20°	20°
Max. swing top jaws mm	113	113	170	170	180	180	195	195	210	210	250	250
Maximum draw bar pull kN	18	18	25	25	25	25	35	35	40	40	48	48
Max. total clamping force kN	48	48	70	70	70	70	86	86	95	95	110	110
Max. admissible speed min^{-1}	8500	8500	8000	8000	8000	8000	8000	8000	7000	7000	6500	6500
Moment of inertia J kgm^2	0,007	0,007	0,015	0,015	0,022	0,022	0,0415	0,0415	0,057	0,057	0,1	0,1
Weight without jaws approx. kg	5	5	7	7	9	9	12	12	15	15	20	20

* ISO 702-1 (DIN 55026) only (DIN 55021 on request)

KFD-HS 3-jaw, serration 90°



Tool group C 15
Type 549-00/ 549-22 **3 jaw** power chuck **KFD-HS, with tightening thread, serration 90°**
Adaptor recess, mounting dimensions to **DIN 6353**/short taper mount (KK) **ISO 702-1** (DIN 55026/55021)

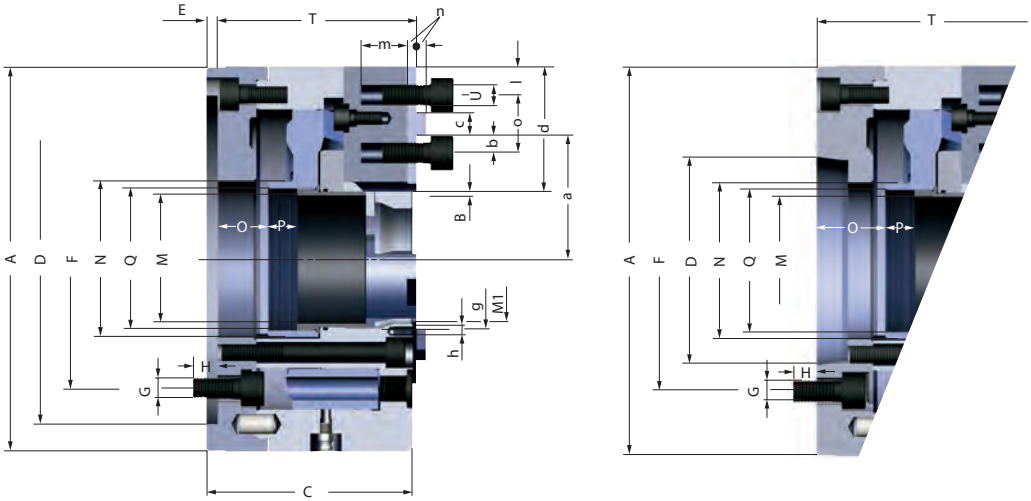


Item no.	161725 ●	144260 ●	143726 ●	142691 ●	144261 ●	143748 ●	144262 ■	143749 ■	161843 ■	144263 ●	143750 ■	143751 ■	144264 ▲	146228 ▲	143752 ▲
Size	250	250	250	250	315	315	315	315	400	400	400	400	500	500	500
number of jaws	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
A	250	250	250	250	315	315	315	315	400	400	400	400	500	500	500
Jaw travel B	6,2	6,2	6,2	6,2	6,2	6,2	6,2	6,2	7,5	7,5	7,5	7,5	7,5	7,5	7,5
C	128	128	130	130	128	130	139	143	156	156	156	156	156	156	156
Mount D	ZA 170	ZA 220	KK 6	KK 8	ZA 220	KK 8	ZA 300	KK 11	ZA 300	ZA 380	KK 11	KK 15	ZA 380	KK 11	KK 15
E	6	6	15	19	6	19	6	21	6	6	18	21	6	18	21
F	133,4	171,4	133,4	171,4	171,4	171,4	235	235	235	330,2	235	330,2	330,2	235	330,2
G	3xM12	3xM16	3xM12	3xM16	3xM16	3xM16	3xM20	3xM20	3xM20	3xM24	3xM20	3xM24	3xM24	3xM20	3xM24
H	16	24	18	24	24	24	30	30	36	30	30	30	30	30	30
Wedge stroke K	23	23	23	23	23	23	23	23	28	28	28	28	28	28	28
L	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	3,5	3,5	3,5	3,5	3,5	3,5	3,5
M max.	66	86	66	86	86	86	108	108	126	165	126	165	165	165	165
M_1^{H7}	94	94	94	94	94	94	115	115	172	172	172	172	172	172	172
N	110	99	80	99	99	99	126	126	142	180	142	180	180	142	180
O min.	0	-6	2	2	-6	2	-9	1	-6	-12	0	-6	-12	0	-6
O max.	23	17	25	25	17	25	14	24	22	16	28	22	16	28	22
P	19	25	25	25	25	25	25	25	35	35	35	35	35	35	35
Q	M74 x1,5	M94 x1,5	M74 x1,5	M94 x1,5	M94 x1,5	M94 x1,5	M120 x1,5	M120 x1,5	M132 x1,5	M172 x3	M132 x1,5	M172 x3	M172 x3	M132 x1,5	M172 x3
T	124	124	132	132	124	132	135	145	153	153	159	159	153	159	159
U	M12	M12	M12	M12	M16	M16	M16	M16	M20	M20	M20	M20	M20	M20	M20
W	74	74	74	74	74	74	85	85	88	88	88	88	88	88	88
a min.	43,8	43,8	43,8	43,8	43,8	43,8	54,8	54,8	80,5	80,5	80,5	80,5	80,5	80,5	80,5
a max.	50	50	50	50	50	50	61	61	88	88	88	88	88	88	88
b min.	6	6	6	6	10,5	10,5	10,5	10,5	14,5	14,5	14,5	14,5	14,5	14,5	14,5
b max.	47,5	47,5	47,5	47,5	72	72	61	61	66,5	66,5	66,5	66,5	116,5	116,5	116,5
c	19	19	19	19	25	25	25	25	31	31	31	31	31	31	31
d	75	75	75	75	107,5	107,5	96,5	96,5	112	112	112	112	162	162	162
e	50	50	50	50	50	50	50	50	60	60	60	60	60	60	60
fH7-0,025	17	17	17	17	21	21	21	21	25,5	25,5	25,5	25,5	25,5	25,5	25,5
g	108	108	108	108	108	108	136	136	190	190	190	190	190	190	190
h	M6x10	M6x10	M6x10	M6x10	M6x10	M6x10	M8x12	M8x12	M8x12	M8x12	M8x12	M8x12	M8x12	M8x12	M8x12
α	15°	0°	15°	0°	0°	0°	0°	0°	15°	15°	15°	15°	15°	15°	15°
Max. swing top jaws mm	305	305	305	305	380	380	380	380	520	520	520	520	620	620	620
Maximum draw bar pull kN	65	65	65	65	80	80	80	80	110	110	110	110	110	110	110
Max. total clamping force kN	150	150	150	150	180	180	180	180	250	250	250	250	250	250	250
Max. admissible speed min^{-1}	5000	5000	5000	5000	4200	4200	4200	4200	3150	3150	3150	3150	2800	2800	2800
Moment of inertia J kgm^2	0,35	0,35	0,35	0,35	0,74	0,74	0,74	0,74	2,4	2,4	2,4	2,4	6	6	6
Weight without jaws approx. kg	40	40	40	40	56	56	56	56	120	120	120	120	190	190	190

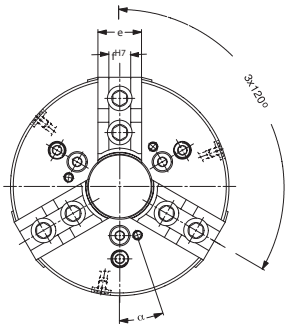
* ISO 702-1 (DIN 55026) only (DIN 55021 on request)

● from stock ■ 4 - 6 weeks ▲ on request

KFD-HS 3-jaw, tongue and groove



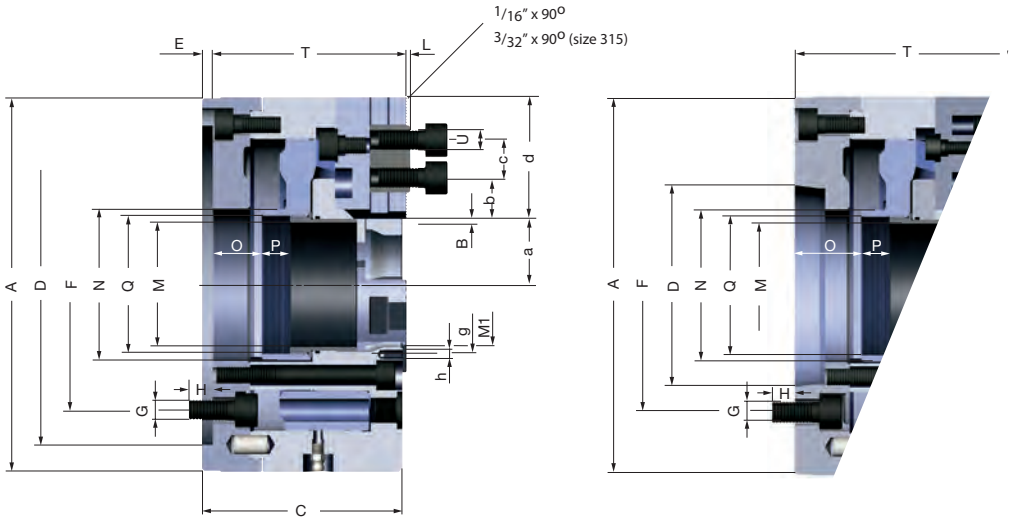
Tool group C15
Type 549-10/549-12 **3 jaw** power chuck **KFD-HS, with tightening thread, with tongue and groove**
Adaptor recess,
mounting dimensions to **DIN 6353/** short taper mount (KK) **ISO 702-1** (DIN 55026/55021)



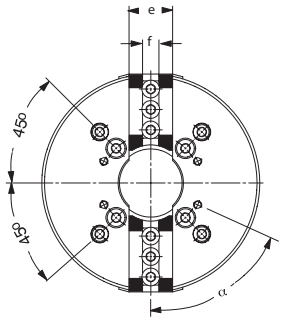
Item no.	149846	149543	151532	156580	153182	157768	154239	155099	153302	157624	160898
Size	110	110	140	140	160	160	200	200	250	250	250
number of jaws	3	3	3	3	3	3	3	3	3	3	3
A	110	110	140	140	160	160	200	200	250	250	250
Jaw travel B	3,2	3,2	3,2	3,2	4	4	5	5	6,2	6,2	6,2
C	80	86	88	92	102	108	107	112	128	132	132
Mount D	ZA 60	KK 4*	ZA 120	KK 5	ZA 140	KK 5	ZA 170	KK 6	ZA 220	KK 6	KK 8
E	6	13	6	16	6	15	6	16	6	15	19
F	82,6	82,6	104,8	104,8	104,8	104,8	133,4	133,4	171,4	133,4	171,4
G	3xM10	3xM10	3xM10	3xM10	3xM10	3xM10	3xM12	3xM12	3xM16	3xM12	3xM16
H	15	14	15	17	15	14	18	17	24	18	24
Wedge stroke K	12	12	12	12	15	15	18,5	18,5	23	23	23
M max.	26	26	37	37	46	46	66	66	86	66	86
M_1^{H7}	32	32	37	37	46	46	66	66	94	94	94
N	38	38	48	48	58	58	80	80	99	80	99
O min.	-1	11	5	13	6	16	7,5	16,5	-6	2	2
O max.	11	23	17	25	21	31	26	35	17	25	25
P	12	12	14	14	16	16	15	15	25	25	25
Q	M34x1,5	M34x1,5	M44x1,5	M44x1,5	M54x1,5	M54x1,5	M74x1,5	M74x1,5	M94x1,5	M74x1,5	M94x1,5
T	78	80	84	90	98	106	103	110	124	130	130
U	M8	M8	M12	M12	M12	M12	M12	M12	M16	M16	M16
W	-	-	-	-	-	-	-	-	74	74	74
a min.	31,8	31,8	45,3	45,3	43	43	59	59	73,8	73,8	73,8
a max.	35	35	48,5	48,5	47	47	64	64	80	80	80
c	10	10	13	13	10	10	12	12	16	16	16
d	30	30	50	50	56	56	65	65	81	81	81
e	24	24	25	25	32	32	40	40	50	50	50
fH7-0,025	10	10	8	8	16	16	16	16	20	20	20
g	50	50	68	68	76	76	84	84	108	108	108
h	M5x8	M5x8	M5x8	M5x8	M6x10	M6x10	M6x10	M6x10	M6x10	M6x10	M6x10
l	6,5	6,5	29	29	15,5	15,5	15	15	23	23	23
m	11	11	19	19	18	18	20	20	28	28	28
n	3	3	3	3	5	5	5	5	5	5	5
α	0°	0°	22° 30'	22° 30'	20°	20°	20°	20°	0°	15°	0°
Max. swing top jaws mm	113	113	180	180	170	170	210	210	305	305	305
Maximum draw bar pull kN	18	18	25	25	35	35	48	48	65	65	65
Max. total clamping force kN	48	48	70	70	86	86	110	110	150	150	150
Max. admissible speed min^{-1}	8500	8500	8000	8000	8000	8000	6500	6500	5000	5000	5000
Moment of inertia J kgm^2	0,007	0,007	0,022	0,022	0,0415	0,0415	0,1	0,1	0,35	0,35	0,35
Weight without jaws approx. kg	5	5	9	9	12	12	20	20	40	40	40

* ISO 702-1 (DIN 55026) only (DIN 55021 on request)

KFD-HS 2-jaw, serration 90°



Tool group C15
Type 549-00/549-02 **2 jaw** power chuck **KFD-HS, with tightening thread, serration 90°**Adaptor recess, mounting dimensions to **DIN 6353/**short taper mount (KK) **ISO 702-1** (DIN 55026/55021)

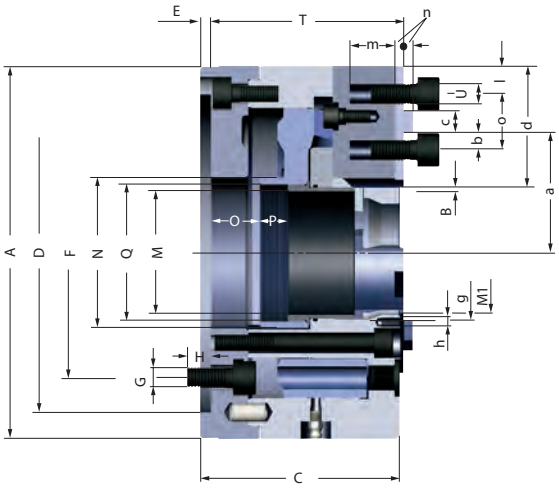


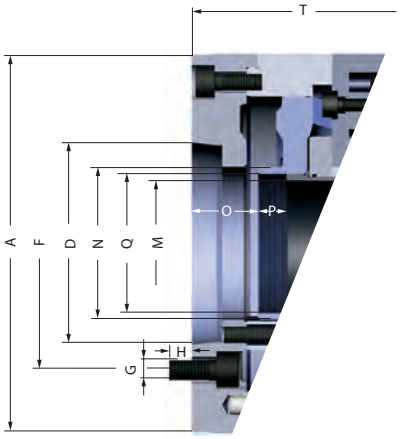
Item no.	147281 ■	147282 ■	147285 ■	147286 ■	148036 ■	148023 ■	148031 ■	162995 ■
Size	160	160	200	200	250	250	250	315
number of jaws	2	2	2	2	2	2	2	2
A	160	160	200	200	250	250	250	315
Jaw travel B	4	4	5	5	6,2	6,2	6,2	6,25
C	102	108	107	112	128	132	132	130
Mount D	ZA 140	KK 5	ZA 170	KK 6	ZA 220	KK 6	KK 8	ZA 300
E	6	15	6	16	6	15	19	6
F	104,8	104,8	133,4	133,4	171,4	133,4	171,4	235
G	4xM10	4xM10	4xM12	4xM12	4xM16	4xM12	4xM16	4xM20
H	15	14	18	17	24	18	24	30
Wedge stroke K	15	15	18,5	18,5	23	23	23	23
L	2,5	2,5	2,5	2,5	2,5	2,5	2,5	3,5
M max.	46	46	66	66	86	66	86	108
M_1^{H7}	46	46	66	66	94	94	94	115
N	58	58	80	80	99	80	99	126
O min.	6	16	7,5	16,5	-6	2	2	-9
O max.	21	31	26	35	17	25	25	14
P	16	16	15	15	25	25	25	25
Q	M54x1,5	M54x1,5	M74x1,5	M74x1,5	M94x1,5	M74x1,5	M94x1,5	M120x1,5
T	98	106	103	110	124	130	130	135
U	M8	M8	M 12	M12	M12	M12	M12	M16
W	-	-	-	-	-	74	74	85
a min.	24	24	35	35	43,8	43,8	43,8	54,8
a max.	28	28	40	40	50	50	50	61
b min.	0	0	8,5	8,5	6	6	6	10,5
b max.	22	22	32,5	32,5	47,5	47,5	47,5	61
c	2x15	2x15	19	19	19	19	19	25
d	52	52	60	60	75	75	75	96,5
e	32	32	40	40	50	50	50	50
fH7-0,025	12	12	17	17	17	17	17	21
g	76	76	84	84	108	108	108	136
h	M6x10	M6x10	M6x10	M6x10	M6x10	M6x10	M6x10	M8x12
α	40°	40°	60°	60°	60°	60°	60°	60°
Max. swing top jaws mm	170	170	250	250	305	305	305	380
Maximum draw bar pull kN	20	20	30	30	42	42	42	55
Max. total clamping force kN	45	45	66	66	94	94	94	120
Max. admissible speed min^{-1}	8000	8000	6500	6500	5000	5000	5000	4200
Moment of inertia J kgm^2	0,0415	0,0415	0,1	0,1	0,35	0,35	0,35	0,62
Weight without jaws approx. kg	12	12	20	20	40	40	40	60

Further sizes on request

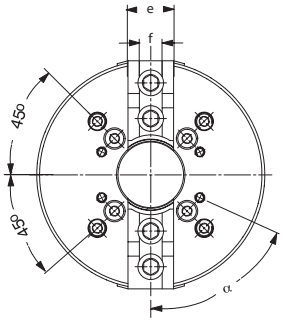
● from stock ■ 4 - 6 weeks ▲ on request

KFD-HS 2-jaw, tongue and groove



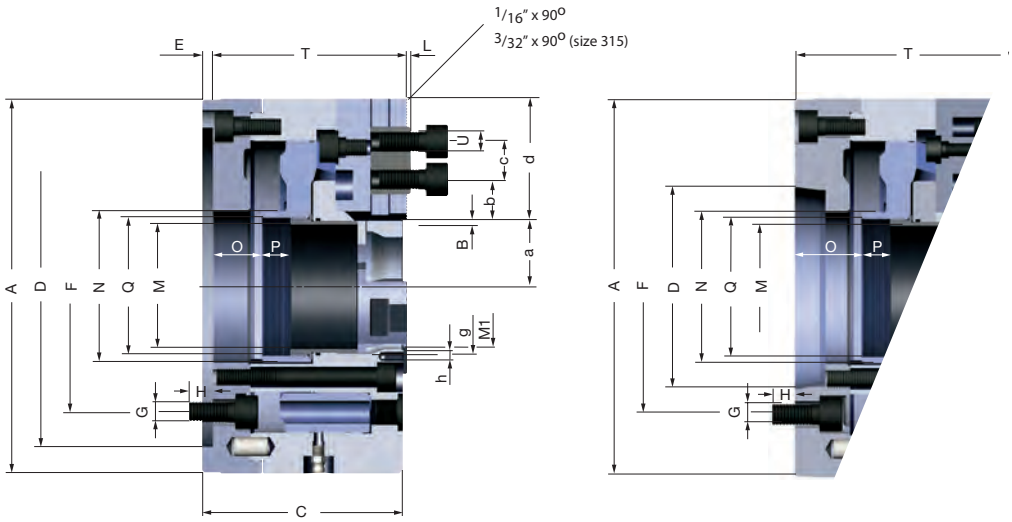


Tool group C15
Type 549-10/549-12 **2 jaw** power chuck **KFD-HS, with tightening thread, with tongue and groove**
Adaptor recess,
mounting dimensions to **DIN 6353/** short taper mount (KK) **ISO 702-1** (DIN 55026/55021)

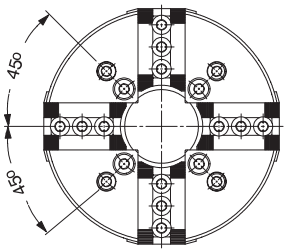


Item no.	160899	160900	160901	160902	160903	160904	160905
Size	160	160	200	200	250	250	250
number of jaws	2	2	2	2	2	2	2
A	160	160	200	200	250	250	250
Jaw travel B	4	4	5	5	6,2	6,2	6,2
C	102	108	107	112	128	124	132
Mount D	ZA 140	KK 5	ZA 170	KK 6	ZA 220	KK 6	KK 8
E	6	15	6	16	6	15	19
F	104,8	104,8	133,4	133,4	171,4	133,4	171,4
G	4xM10	4xM10	4xM12	4xM12	4xM16	4xM12	4xM16
H	15	14	18	17	24	18	24
Wedge stroke K	15	15	18,5	18,5	23	23	23
M max.	46	46	66	66	86	66	86
M_1^{H7}	46	46	66	66		94	94
N	58	58	80	80	99	80	99
O min.	6	16	7,5	16,5	-6	2	2
O max.	21	31	26	35	17	25	25
P	16	16	15	15	25	25	25
Q	M54x1,5	M54x1,5	M74x1,5	M74x1,5	M94x1,5	M74x1,5	M94x1,5
T	98	106	103	110	103	130	130
U	M12	M12	M12	M12	M12	M12	M12
W	-	-	-	-	-	74	74
a min.	43	43	59	59	73,8	73,8	73,8
a max.	47	47	64	64	80	80	80
c	10	10	12	12	16	16	16
d	56	56	65	65	81	81	81
e	32	32	40	40	50	50	50
fH7-0,025	16	16	16	16	20	20	20
g	76	76	84	84	108	108	108
h	M6x10	M6x10	M6x10	M6x10	M6x10	M6x10	M6x10
l	15,5	15,5	15	15	23	23	23
m	18	18	20	20	28	28	28
n	5	5	5	5	5	5	5
α	40°	40°	60°	60°	60°	60°	60°
Max. swing top jaws mm	170	170	210	210	305	305	305
Maximum draw bar pull kN	20	20	30	30	42	42	42
Max. total clamping force kN	45	45	66	66	94	94	94
Max. admissible speed min^{-1}	8000	8000	6500	6500	5000	5000	5000
Moment of inertia J kgm^2	0,0415	0,0415	0,1	0,1	0,35	0,35	0,35
Weight without jaws approx. kg	12	12	20	20	40	40	40

KFD-HS 4-jaw, serration 90°



Tool group C15
Type 549-00/549-02 **4 jaw** power chuck **KFD-HS, with tightening thread, serration 90°**Adaptor recess, mounting dimensions to **DIN 6353/**short taper mount (KK) **ISO 702-1** (DIN 55026/55021)

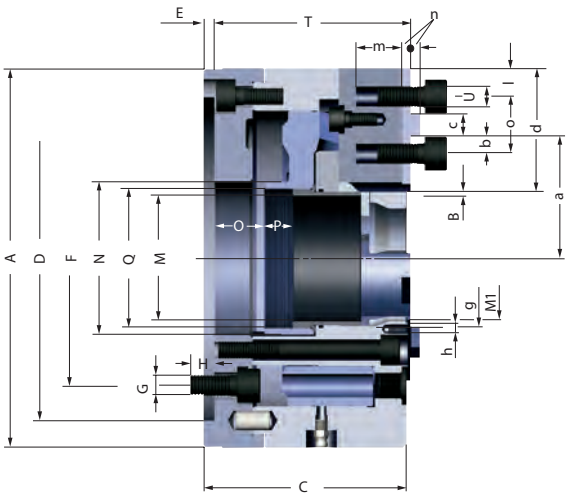


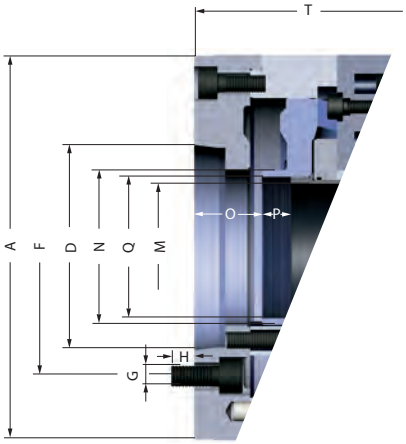
Item no.	147283 ■	147284 ■	147287 ■	147288 ■	148034 ■	147533 ■	148026 ■
Size	160	160	200	200	250	250	250
number of jaws	4	4	4	4	4	4	4
A	160	160	200	200	250	250	250
Jaw travel B	4	4	5	5	6,2	6,2	6,2
C	102	108	103	112	128	132	132
Mount D	ZA 140	KK 5	ZA 170	KK 6	ZA 220	KK 6	KK 8
E	6	15	6	16	6	15	19
F	104,8	104,8	133,4	133,4	171,4	133,4	171,4
G	4xM10	4xM10	4xM12	4xM12	4xM16	4xM12	4xM16
H	15	14	18	17	24	18	24
Wedge stroke K	15	15	18,5	18,5	23	23	23
L	2,5	2,5	2,5	2,5	2,5	2,5	2,5
M max.	46	46	66	66	86	66	86
M_1^{H7}	46	46	66	66	94	94	94
N	58	58	80	80	99	80	99
O min.	6	16	7,5	16,5	-6	2	2
O max.	21	31	26	35	17	25	25
P	16	16	15	15	25	25	25
Q	M54x1,5	M54x1,5	M74x1,5	M74x1,5	M94x1,5	M74x1,5	M94x1,5
T	98	106	107	110	124	130	130
U	M8	M8	M12	M12	M12	M12	M12
W	-	-	-	-	74	74	74
a min.	24	24	35	35	43,8	43,8	43,8
a max.	28	28	40	40	50	50	50
b min.	0	0	8,5	8,5	6	6	6
b max.	22	22	32,5	32,5	47,5	47,5	47,5
c	2x15	2x15	19	19	19	19	19
d	52	52	60	60	75	75	75
e	32	32	40	40	50	50	50
fH7-0,025	12	12	17	17	17	17	17
g	76	76	-	-	-	-	-
h	M6x10	M6x10	-	-	-	-	-
α	45°	45°	-	-	-	-	-
Max. swing top jaws mm	170	170	250	250	305	305	305
Maximum draw bar pull kN	30	30	45	45	65	65	65
Max. total clamping force kN	67,5	67,5	100	100	150	150	150
Max. admissible speed min^{-1}	6400	6400	5200	5200	3600	3600	3600
Moment of inertia J kgm^2	0,0415	0,0415	0,1	0,1	0,35	0,35	0,35
Weight without jaws approx. kg	12	12	20	20	40	40	40

Further sizes on request

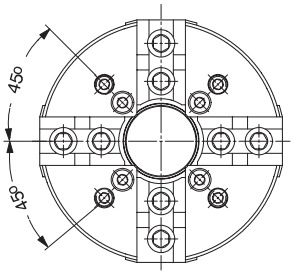
● from stock ■ 4 - 6 weeks ▲ on request

KFD-HS 4-jaw, tongue and groove





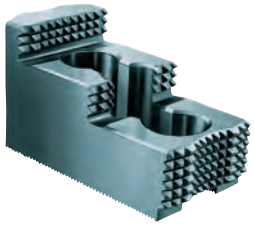
Tool group C15
Type 549-10/549-12 **4 jaw** power chuck **KFD-HS, with tightening thread, with tongue and groove**
Adaptor recess,
mounting dimensions to **DIN 6353**/short taper mount (KK) **ISO 702-1** (DIN 55026/55021)



Item no.	160906	160907	160908	160909	160910	160911	160912
Size	160	160	200	200	250	250	250
number of jaws	4	4	4	4	4	4	4
A	160	160	200	200	250	250	250
Jaw travel B	4	4	5	5	6,2	6,2	6,2
C	102	108	107	112	103	124	132
Mount D	ZA 140	KK 5	ZA 170	KK 6	ZA 220	KK 6	KK 8
E	6	15	6	16	6	15	19
F	133,4	104,8	133,4	133,4	171,4	133,4	171,4
G	4xM10	4xM10	4xM12	4xM12	4xM16	4xM12	4xM16
H	15	14	18	17	24	18	24
Wedge stroke K	15	15	18,5	18,5	23	23	23
M max.	46	46	66	66	86	66	86
M_1^{H7}	46	46	66	66	94	94	94
N	58	58	80	80	99	80	99
O min.	6	16	7,5	16,5	-6	2	2
O max.	21	31	26	35	17	25	25
P	16	16	15	15	25	25	25
Q	M54x1,5	M54x1,5	M74x1,5	M74x1,5	M94x1,5	M74x1,5	M94x1,5
T	98	106	103	110	128	130	130
U	M12	M12	M12	M12	M12	M12	M12
W	-	-	-	-	-	74	74
a min.	43	43	59	59	73,8	73,8	73,8
a max.	47	47	64	64	80	80	80
c	10	10	12	12	16	16	16
d	56	56	65	65	81	81	81
e	32	32	40	40	50	50	50
fH7-0,025	16	16	16	16	20	20	20
g	76	76	-	-	-	-	-
h	M6x10	M6x10	-	-	-	-	-
l	15,5	15,5	15	15	23	23	23
m	18	18	20	20	28	28	28
n	5	5	5	5	5	5	5
α	45°	45°	-	-	-	-	-
Max. swing top jaws mm	170	170	210	210	305	305	305
Maximum draw bar pull kN	30	30	45	45	65	65	65
Max. total clamping force kN	67,5	67,5	100	100	150	150	150
Max. admissible speed min^{-1}	6400	6400	5200	5200	3600	3600	3600
Moment of inertia J kgm^2	0,0415	0,1	0,1	0,35	0,35	0,35	0,35
Weight without jaws approx. kg	12	12	20	20	40	40	40

Jaws KFD-HS

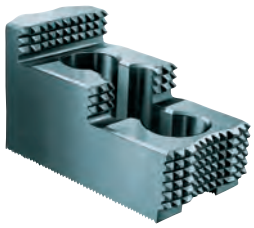
Tool group C 21
Type 543/538 **Reversible top jaws, 2-jaw set, hardened**
Serration 90°- material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
045796 ■	130	56	37,5	26	1/16”x 90°
118521 ■	200/250	75	49	36	1/16”x 90°
046435 ■	250/315	103,5	58	50	1/16”x 90°

Hardened jaws, supplied as supplement or as spares, must be ground on the chuck.

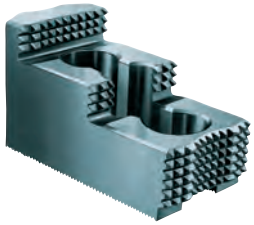
Tool group C 21
Type 543/538 **Reversible top jaws, 3-jaw set, hardened**
Serration 90°- material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
149352 ●	110	45	32	26	1/16”x 90°
046544 ●	110/125/140	56	37,5	26	1/16”x 90°
046404 ●	130	56	37,5	26	1/16”x 90°
351320 ●	160	51,5	26	26	1/16”x 90°
118522 ●	200	75	49	36	1/16”x 90°
609592 ■	200	80	37	36	1/16”x 90°
046414 ●	250/315	103,5	58	50	1/16”x 90°
037531 ●	400	135	65	68	3/32”x 90°

Hardened jaws, supplied as supplement or as spares, must be ground on the chuck.

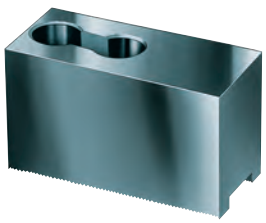
Tool group C 21
Type 543/538 **Reversible top jaws, 4-jaw set, hardened**
Serration 90°- material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
046452 ■	160	56	37,5	26	1/16”x 90°
118523 ●	200	75	49	36	1/16”x 90°

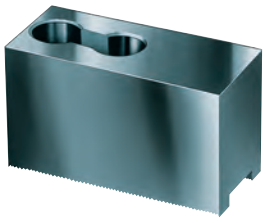
Hardened jaws, supplied as supplement or as spares, must be ground on the chuck.

Tool group C 21
Type 543/538 **Soft top jaws, 2-jaw set, can be hardened**
Serration 90°- material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
045795 ●	130	55	38	26,5	1/16”x 90°
133147 ●	160	66,7	53	36,5	1/16”x 90°
133148 ●	200/250	75	53	36,5	1/16”x 90°
133149 ●	250	95	54,5	45	1/16”x 90°

Tool group C 21
Type 543/538 **Soft top jaws, 3-jaw set, can be hardened**
Serration 90°- material: 16 MnCr 5

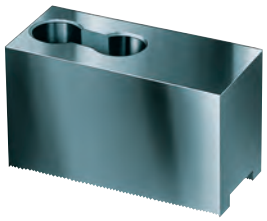


Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
149353 ●	110	45	38	26,5	1/16”x 90°
046402 ●	110/125/140	53	30	22,5	1/16”x 90°
046403 ●	130	55	38	26,5	1/16”x 90°
133152 ●	160	66,7	53	36,5	1/16”x 90°
133153 ●	200	75	53	36,5	1/16”x 90°
133154 ●	250	95	54,5	45	1/16”x 90°
133156 ●	400	130	80	50	3/32”x 90°

● from stock ■ 4 - 6 weeks ▲ on request

Jaws KFD-HS

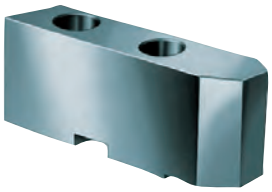
Tool group C 21
Type 543/538 **Soft top jaws, 4-jaw set, can be hardened Serration 90°**- material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
046451 ●	160	55	38	26,5	1/16"x 90°
133157 ●	160	66,7	53	36,5	1/16"x 90°
133158 ●	200	75	53	36,5	1/16"x 90°

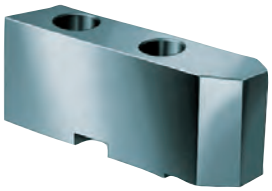
[1] heavy design

Tool group C 21
Type 549/538 **Soft top jaws, 2-jaw set, can be hardened tongue and groove 120° bevelled**, material: 16 MnCr 5



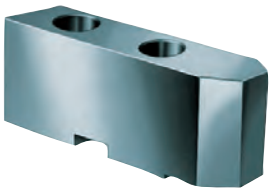
Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
123359 ■	160	72,7	53	36,5
123431 ■	200	90,3	53	36,5
123434 ■	250	115,3	54,5	45

Tool group C 21
Type 549/538 **Soft top jaws, 3-jaw set, can be hardened tongue and groove 120° bevelled**, material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
144082 ●	110	53	30	22,5
123355 ●	130/140	58	38	26,5
123358 ●	160	72,7	53	36,5
123430 ●	200	90,3	53	36,5
123433 ●	250/315	115,3	54,5	45

Tool group C 21
Type 549/538 **Soft top jaws for 4-jaw chucks, 2-jaw set (please order 2 sets), can be hardened tongue and groove 120° bevelled**, material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
123359 ■	160	72,7	53	36,5
123431 ■	200	90,3	53	36,5
123434 ■	250	115,3	54,5	45

Please order 2 sets

Tool group C 21
Type 544-50 **Claw-type jaws**, 1 piece, **hardened Serration 90°** - width of the groove **10**

Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
149920 ●	110	42	27	37,1
149921 ●	110	42	27	23,4
149922 ●	110	47	27	17,7

Jaws KFD-HS

Tool group C 21
Type 544-50 **Claw-type jaws**, 1 piece, **hardened**
Serration 90° - width of the groove **10**

Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
147259 ▲	130/140	50	27	41
147261 ▲	130/140	44	27	22

Tool group C 21
Type 544-50 **Claw-type jaws**, 1 piece, **hardened**
Serration 90° - width of the groove **12**

Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
144320 ●	130	66	38	52
144321 ●	130	56	38	34
144322 ●	130	66	38	25

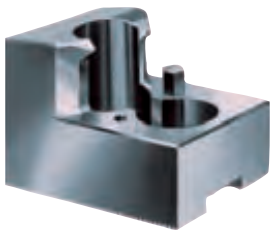
Tool group C 21
Type 544-50 **Claw-type jaws**, 1 piece, **hardened**
Serration 90° - width of the groove **17**

Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
137031 ●	200	67	45	53
137032 ●	200	65	45	46
137033 ●	200	55	45	39
137034 ●	200	50	45	31
137035 ●	200	55	45	27
137036 ●	200	65	45	19
137037 ●	200	65	45	26
137038 ●	200	55	45	24
137039 ●	200	55	45	40

Tool group C 21
Type 544-50 **Claw-type jaws**, 1 piece, **hardened**
Serration 90° - width of the groove **21**

Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
137041 ●	250/315	95	50	80
137042 ●	250/315	75	50	60
137043 ●	250/315	60	50	43
137044 ●	250/315	70	50	37
137045 ●	250/315	95	50	25
137046 ●	250/315	80	50	30

Tool group C 21
Type 544-50 **Claw-type jaws**, 1 piece, **hardened**
Serration 90° - width of the groove **25,5**



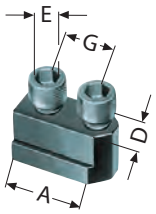
Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
137051 ●	400	130	65	113
137052 ●	400	90	65	67
137053 ●	400	100	65	45
137054 ●	400	130	65	33

● from stock ■ 4 - 6 weeks ▲ on request

Accessories KFD-HS

Tool group C 15

Type 549-00 **Extended T-nuts**
without screw



Item no.	Chuck Size	Contents of delivery	A	D	E	G
149471 ●	110	piece	30	10	M8	15
298082 ●	130/140	piece	34	10	M6	2x12
343234 ●	160/175	piece	42	12	M8	2x15
135765 ●	200	piece	36	17	M 12	19
143595 ●	250	piece	36	17	M12	19
135767[1] ●	315	piece	46	21	M16	25
135769 ●	400/500	piece	59	25,5	M 20	31

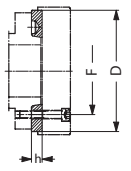
Tool group C 15

Type 0040-Y **Mounting screws**

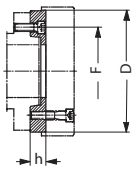
Item no.	Size	Contents of delivery	Thread
233058 ●	130	piece	M8x20
343003 ●	110/125/140	piece	M6
227692 ●	200	piece	M12x25
229157 ●	250/315	piece	M16
233047 ●	400	piece	M20x40

Socket head cap screw to DIN 912, 12.9

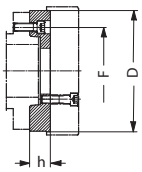
Tool group C 15
Type 594-32 Intermediate adaptor plates
with cylindrical centre mount DIN 6353 for three-jaw chucks
Mounting from front to ISO 702-1 (DIN 55026/55021) and ASA B 5.9 A1/A2 with metric mounting bolts



Design I



Design II

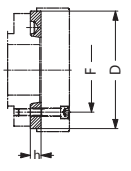


Design III

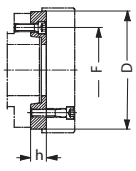
Id.-Nr.	Spindle nose size	Size	Design	h	F	D
145125[1] ●	4	160	II	18	82,6	140
145153 ●	5	175	I	15	104,8	140
145127 ●	5	200	II	21	104,8	170
145129 ●	6	160	III	35	133,4	140
145297 ●	6	175	III	35	133,4	140
145155 ●	6	200	I	16	133,4	170
145131 ●	6	250	II	27	133,4	220
145135 ●	8	200	III	39	171,4	170
145157 ●	8	250	I	18	171,4	220
145139 ●	8	315	II	38	171,4	300
145143 ●	11	250	III	48	235	220
145159 ●	11	315	I	19	235	300
145147 ●	11	400	II	40	235	380
145161 ●	15	400/500/630	I	21	330,2	380

All fastening parts are included
Intermediate adaptors for two- and four-jaw-design on request
[1] DIN 55021 on request

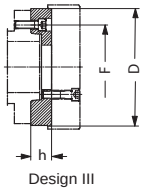
Tool group C 15
Type 594-35 Intermediate adaptor plates
with cylindrical centre mount DIN 6353 for three-jaw chucks
Mounting from front to ASA B 5.9 A1/A2 with inch threaded mounting bolts



Design I



Design II



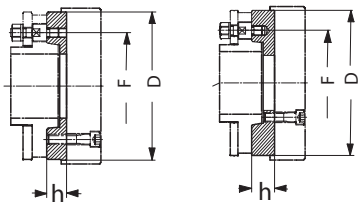
Design III

Id.-Nr.	Spindle nose size	Size	Design	h	F	D
145191 ■	4	160	II	18	82,6	140
145153 ●	5	175	I	15	104,8	140
145192 ■	5	200	II	21	104,8	170
145193 ■	6	160	II	35	133,4	140
145301 ■	6	175	III	35	133,4	140
145155 ●	6	200	I	16	133,4	170
145194 ■	6	250	II	27	133,4	220
145196 ■	8	315	II	39	171,4	300
145157 ●	8	250	I	18	171,4	220
145198 ■	8	315	II	38	171,4	300
145200 ■	11	250	III	48	235	220
145129 ●	6	160	III	35	133,4	140
145202 ■	11	400/500	II	40	235	380
145161 ●	15	400/500/630	I	21	330,2	380

All fastening parts are included
Intermediate adaptors for two- and four-jaw-design on request

Accessories KFD-HS

Tool group C 15
Type 594-33 Intermediate adaptor plates
with cylindrical centre mount DIN 6353 for three-jaw chucks
Bayonet fixing to ISO 702-3 (DIN 55027)/ DIN 55022

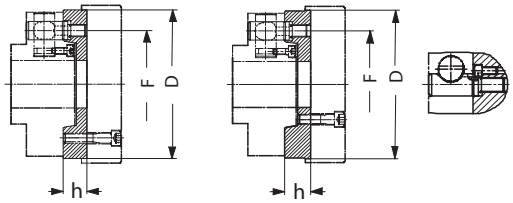


Design II Design III

Id.-Nr.	Spindle nose size	Size	Design	h	F	D
145208 ■	4	160	II	18	82,6	140
145236 ■	5	160	II	21	104,8	140
145238 ●	5	175	II	21	104,8	140
145210 ■	5	200	II	21	104,8	170
145212 ■	6	160	III	35	133,4	140
145303 ●	6	175	III	35	133,4	140
145240 ■	6	200	II	22	133,4	170
145214 ■	6	250/315	II	27	133,4	220
145218 ■	8	200	III	39	171,4	170
145242 ■	8	250	II	30	171,4	220
145222 ■	8	315	II	38	171,4	300
145226 ■	11	250	III	48	235	220
145246 ■	11	315	II	36	235	300
145230 ■	11	400/500	II	40	235	380
145250 ■	15	630	I	40	330,2	380

All fastening parts are included
Intermediate adaptors for two- and four-jaw-design on request

Tool group C 15
Type 594-36 Intermediate adaptor plates
with cylindrical centre mount DIN 6353 for three-jaw chucks
Camlock fixing to DIN 55029/ASA B 5.9 D1

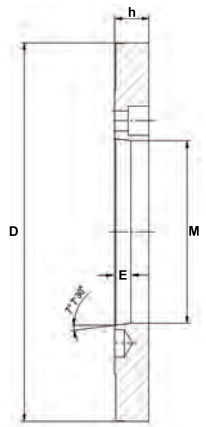


Design II Design III

Id.-Nr.	Spindle nose size	Size	Design	h	F	D
145252 ■	4	160	II	28	82,6	140
145280 ■	5	160	II	30	104,8	140
145282 ■	5	175	II	30	104,8	140
145254 ■	5	200	II	30	104,8	170
145256 ■	6	160	III	43	133,4	140
145594 ■	6	175	III	43	133,4	140
145284 ■	6	200	II	35	133,4	170
145258 ■	6	250	II	35	133,4	220
145262 ■	8	200	II	46	171,4	170
145286 ■	8	250	II	38	171,4	220
145266 ■	8	315	II	38	171,4	300
145270 ■	11	250	III	53	235	220
145290 ■	11	315	II	45	235	300
145274 ■	11	400/500	II	45	235	380
145294 ■	15	630	I	50	330,2	380

All fastening parts are included
Intermediate adaptors for two- and four-jaw-design on request

Tool group A09
Type 619-30 Short-taper adapter plate ISO 702-1 (DIN 55026/55021) - ASA B 5.9 (without mounting bolts)
finished on machine side, faced on chuck side, especially

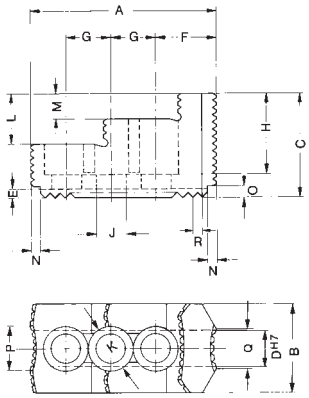


Id.-Nr.	Spindle nose size	h	E	M	D
144933 ▲	3	18	40	40	125
145296 ▲	4	18	40	40	125
145328 ▲	3	18	40	40	160
145342 ▲	4	18	40	40	160
145343 ▲	5	21	50	50	160
145344 ▲	4	21	50	50	200
145345 ▲	5	21	50	50	200
145346 ▲	6	27	50	50	200
145347 ▲	4	27	63	63	250
145348 ▲	5	27	63	63	250
145349 ▲	6	27	63	63	250
145350 ▲	8	27	63	63	250
145351 ▲	5	36	63	63	315
145352 ▲	6	36	63	63	315
145353 ▲	8	36	63	63	315
145354 ▲	11	36	63	63	315
145355 ▲	6	40	63	63	400
145356 ▲	8	40	63	63	400
145357 ▲	11	40	63	63	400
145358 ▲	15	40	63	63	400
145359 ▲	8	42	80	80	500
145360 ▲	11	42	80	80	500
145364 ▲	15	42	80	80	500

● from stock ■ 4 - 6 weeks ▲ on request

Jaw dimensions KFD-HS

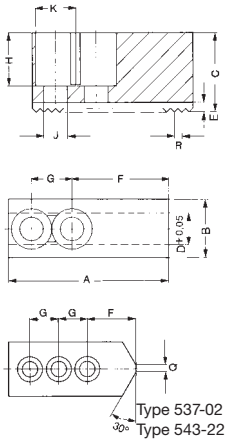
Reversible top jaws UB, hardened, serration 90°, material 16MnCr5



Chuck size	110	130/140	160/175	160	200	200/250	315	400/500
Type	543-21	537-02	538-02	543 1)	543-09 2)	538-04	538-05	538-07
Item no. 2-jaw	**149490**	**046545**	**045796**	**-**	**-**	**118521**	**046435**	**046447**
Item no. 3-jaw	**149352**	**046544**	**046404**	**351320**	**609592**	**118522**	**046414**	**037531**
Item no. 4-jaw	**155395**	**046546**	**046452**	**-**	**-**	**118523**	**046462**	**046474**
A	45	56	56	51,5	80	75	103,5	135
B	26	26	26	26	36	36	50	68
C	32	37,5	37,5	26	37	49	58	65
D^{H7}	10	10	12	12	17	17	21	25,5
E	3,5	3,5	3,5	3,5	5	5	5	5
F	15	10	14	23	41	21,5	33,5	48
G	15	12 3)	15	15 4)	19 4)	19	25	31
H	23	29	29	17	25,5	37,5	45	48
J	8,4	6,4	8,4	9	13	13	17	21
K	13,5	10,4	13,5	14	19	19	25	31
L	14	20	20	-	-	24	28	-
M	7	10	10	8	12	12	14	26
N	4	4	4	3	6	6	6	6,5
O	4	4	4	4	7,5	7,5	6,5	5,5
P	8	5	5	20	-	18	24,5	34
Q	5	5	5	3	7	7	22,5	40
R	1/16"x90°	1/16"x90°	1/16"x90°	1/16"x90°	1/16"x90°	1/16"x90°	1/16"x90°	3/32"x90°
Weight/jaw kg	0,155	0,130	0,170	0,150	0,235	0,460	1,130	2,000

1) one step only, for 8000 min^{-1}
2) one step only, extended
3) 4 mounting holes
4) 2 mounting holes

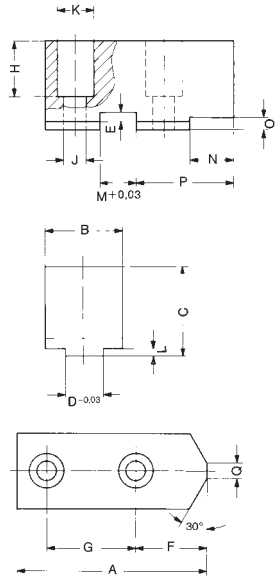
Soft top jaws AB, serration 90°, material 16MnCr5



Chuck size	110	130/140	160/175	200	250	315	400/500
Type	543-22	537-02	538-02	538-03	538-04	538-05	538-07
Item no. 2-jaw	**149690**	**045794**	**045795**	**133147**	**133148**	**133149**	**133151**
Item no. 3-jaw	**149353**	**046402**	**046403**	**133152**	**133153**	**133154**	**133156**
Item no. 4-jaw	**-**	**046450**	**046451**	**133157**	**133158**	**133159**	**133161**
A	45	53	55	66,7	75	95	130
B	26,5	22,5	26,5	36,5	36,5	45	50
C	38	30	38	53	53	54,5	80
D	10	10	12	17	17	21	25,5
E	3,5	3,5	3,5	5	5	5	5
F	15	20	31	36	44	55	79
G	15	12 1)	15	19	19	25	31
H	23	20	28	43	43	42,5	60
J	8,4	6,4	8,4	13	13	17	21
K	13,5	10,4	13,5	19	19	25	31
Q	5	3	-	-	-	-	-
R	1/16"x90°	1/16"x90°	1/16"x90°	1/16"x90°	1/16"x90°	1/16"x90°	3/32"x90°
Weight/jaw kg	0,210	0,223	0,320	0,700	0,880	1,400	3,100

1) 3 mounting holes

Soft top jaws AB, with tongue and groove, material 16MnCr5

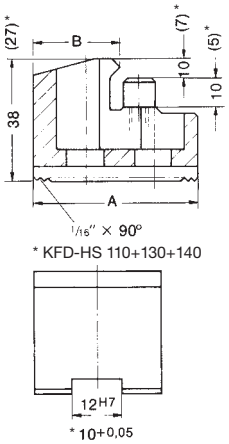


Chuck size	110	130/140	160	200	250
Type	549-10	538-22	538-13	538-14	538-15
Item no. 2-jaw	**144115**	**123356**	**123359**	**123431**	**123434**
Item no. 3-jaw	**144082**	**123355**	**123358**	**123430**	**123433**
Item no. 4-jaw	**144115**	**123356**	**123359**	**123431**	**123434**
A	53	58	72,7	90,3	115,3
B	22,5	26,5	36,5	36,5	45
C	30	38	53	53	54,5
$D_{-0,03}$	10	8	16	16	20
E	3,5	3,5	5,5	5,5	5,5
F	26,5	31,5	32,2	45,3	58,3
G	17	-	25	30	40
H	20	25	38	38	38
J	9	13	13	13	17
K	15	19	19	19	25
L	2,5	2,5	4,5	4,5	4,5
$M^{+0,03}$	10	13	10	12	16
N	20	23	24,7	35,3	45,3
O	4	3	5	5	5
P	30	39,5	39,7	54,3	70,3
Q	3	3	3	6	6
Weight/jaw kg	0,21	0,46	0,720	1,0	1,55

Soft blank top jaws are ideal for high-accuracy chucking. When turning these top jaws for a specific chucking diameter, be sure to have the jaws under pressure. Top jaws which are to be hardened must be ground on the chuck after hardening.
Note: At high speeds, heavy jaw weights must be avoided because of their own centrifugal force, resulting in a reduction of gripping force.

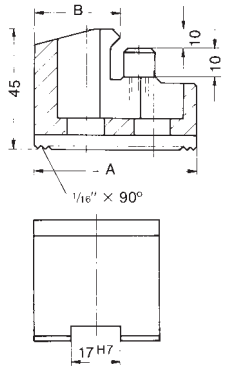
Jaw dimensions KFD-HS

Claw type jaws KB
serration 90°,
Type 544-50

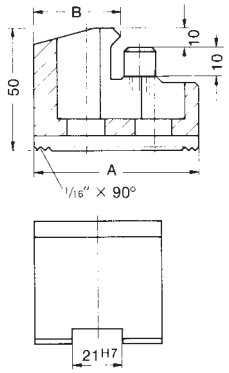


Piece	A	B	H	KFD-HS 110 External chucking	Piece	A	B	KFD-HS 130/140 External chucking
Item no.					**Item no.**			
149920	42	37,1	27	20-49	**147259**	50	41	27-67/35-72
149921	42	23,4	27	47-70	**147261**	44	22	58-108/61-114
149922	47	17,7	27	68-100				
Piece	A	B	H	KFD-HS 110 Internal chucking	Piece	A	B	KFD-HS 130/140 Internal chucking
Item no.					**Item no.**			
149922	47	17,7	27	45-75	**147261**	44	22	58-108/61-114
149921	42	23,4	27	56-102	**147259**	50	41	100-130/106-140
149920	42	37,1	27	84-130				

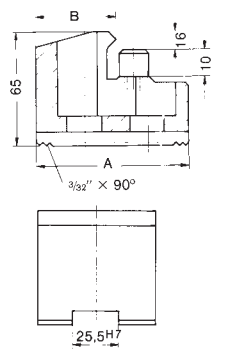
Piece	A	B	KFD-HS 160 External chucking	KFD-HS 175 External chucking
Item no.				
144320	66	52	38-84	48-100
144321	56	34	78-122	88-140
144322	66	25	120-146	130-160
Piece	A	B	KFD-HS 160 Internal chucking	KFD-HS 175 Internal chucking
Item no.				
144322	66	25	70-100	70-115
144321	56	34	92-140	102-155
144320	66	52	122-180	132-195



Piece	A	B	KFD-HS 200 External chucking	KFD-HS 250 External chucking
Item no.				
137031	67	53	55-110	68-162
137032	65	46	68-124	80-173
137039	55	40	95-150	108-200
137034	50	31	102-158	115-206
137035	55	27	110-168	125-220
Piece	A	B	KFD-HS 200 Internal chucking	KFD-HS 250 Internal chucking
Item no.				
137036	65	19	65-125	80-172
137037	65	26	86-142	100-192
137038	55	24	100-156	112-206
137035	55	27	120-178	135-228
137034	50	31	132-188	145-236
137039	55	40	136-195	150-245
137033	55	39	150-207	165-257
137032	65	46	164-222	179-270



Piece	A	B	KFD-HS 315 (86) [1] External chucking	KFD-HS 315 (108) [1] External chucking
Item no.				
137041	95	80	46-175	65-175
137042	75	60	92-220	104-220
137043	60	43	114-250	135-250
137044	70	37	142-275	166-275
Piece	A	B	KFD-HS 315 (86) [1] Internal chucking	KFD-HS 315 (108) [1] Internal chucking
Item no.				
137045	95	25	65-200	82-200
137046	80	30	108-242	130-242
137044	70	37	142-275	164-275
137043	60	43	170-305	195-305
137042	75	60	202-340	224-340

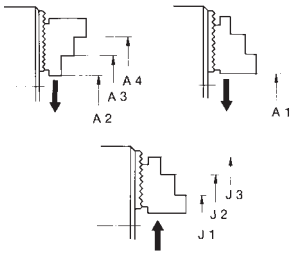


Piece	A	B	KFD-HS 400 External chucking	KFD-HS 400 (165) [1] External chucking	KFD-HS 500 External chucking
Item no.					
137051	130	113	70-270	94-270	94-370
137052	90	67	150-304	183-304	183-404
137053	100	45	175-390	210-390	210-490
Piece	A	B	KFD-HS 400 Internal chucking	KFD-HS 400 (165) [1] Internal chucking	KFD-HS 500 Internal chucking
Item no.					
137054	130	33	96-290	110-290	110-390
137053	100	45	160-305	195-305	195-405
137051	130	113	280-490	302-490	302-590

[1] chuck through-hole M

Chucking capacities KFD-HS

Chucking capacities with reversible top jaws UB, for 3-jaw chucks



Chuck size		110	130	140	160	160*	175	200	200**	250	315	400	500
with reversible jaws	Type	543-21	537-02	527-02	538-02	543	538-02	538-04	543-09	538-04	538-05	538-07	538-07
	Jaw position												
External chucking	A1	6-46	5-58	5-68	6-67	4-52	6-82	12-98	4-70	22-144	25-169	30-203	30-303
	A2	-	-	-	-	21-73	-	26-112	-	40-156	45-196	47-250	47-350
	A3	41-76	52-105	52-115	53-118	-	54-133	82-165	-	94-210	127-280	-	-
	A4	68-106	87-140	87-150	88-165	94-146	90-180	132-218	112-170	146-262	209-360	245-453	245-553
Internal chucking	J1	42-80	35-90	35-100	36-99	32-84	36-114	61-144	60-126	76-192	76-216	96-280	96-380
	J2	70-108	70-125	70-135	71-134	-	71-149	110-198	-	128-244	150-348	-	-
	J3	96-135	117-192	117-182	118-181	102-157	118-196	162-248	-	182-298	230-380	277-478	277-580

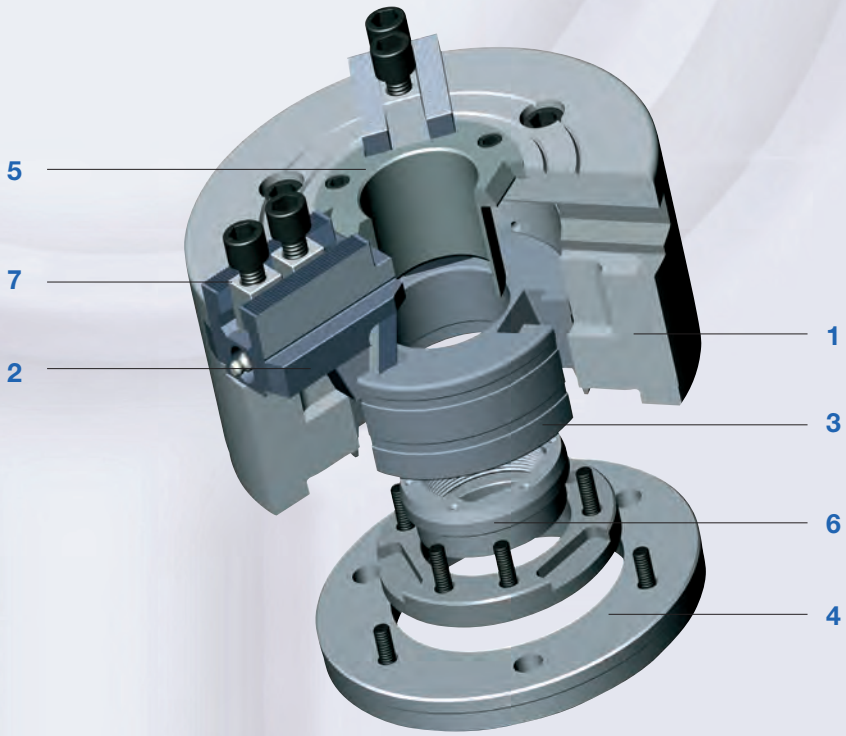
* one step only
* one step only, extended

KFD-HE

Technical features:

- Rugged construction
- Large through-hole
- High radial and axial true-running accuracy
- Direct lubrication of all wearing surfaces
- Used in conjunction with RÖHM actuating cylinders with safety device SZS, OVS, LHS-L, LVS, EHS and EVS the power chucks KFD-HE meet the requirements of the German Employers' Insurance Association

For use on modern lathes. With large through-hole, suitable for both bar work and chucking of flange Type parts. The chucking power is transmitted by means of the proven wedge system.



Components KFD-HE

1. Body
2. Base jaw
3. Piston
4. Adaptor plate
5. Protective bushing
6. Ring nut
7. T-nut

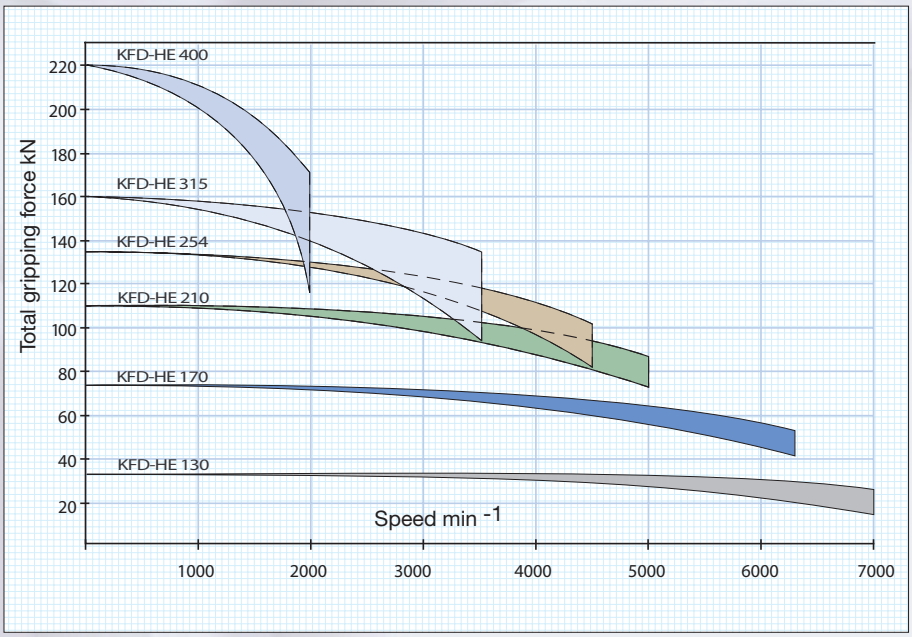
KFD-HE

Gripping force/speed diagram

The loss of gripping force was determined experimentally on a chuck with matched UB top jaws. It is largely independent of the initial gripping force at zero speed.

Upper curve:
min. centrifugal force of top jaw

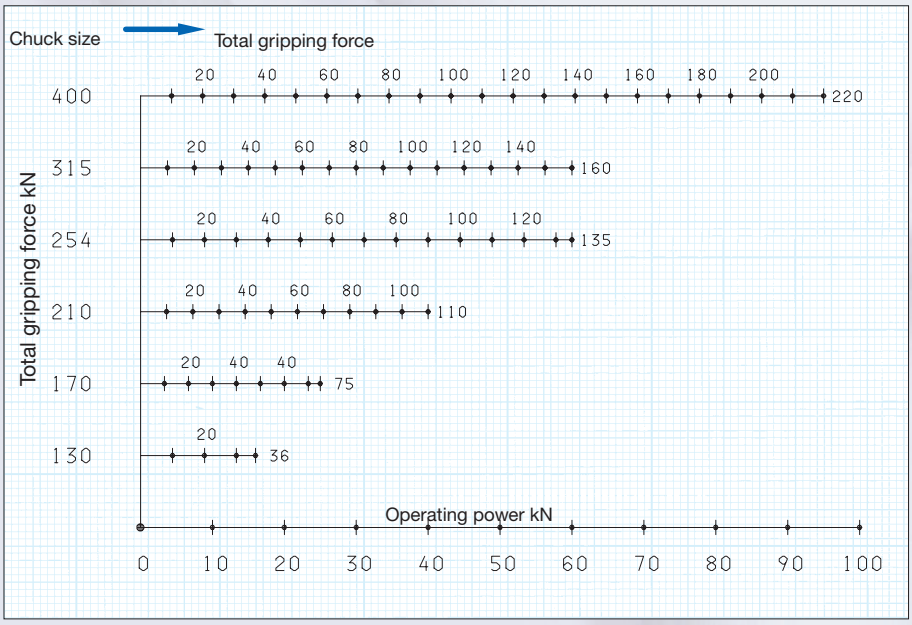
Lower curve:
max. centrifugal force of top jaw



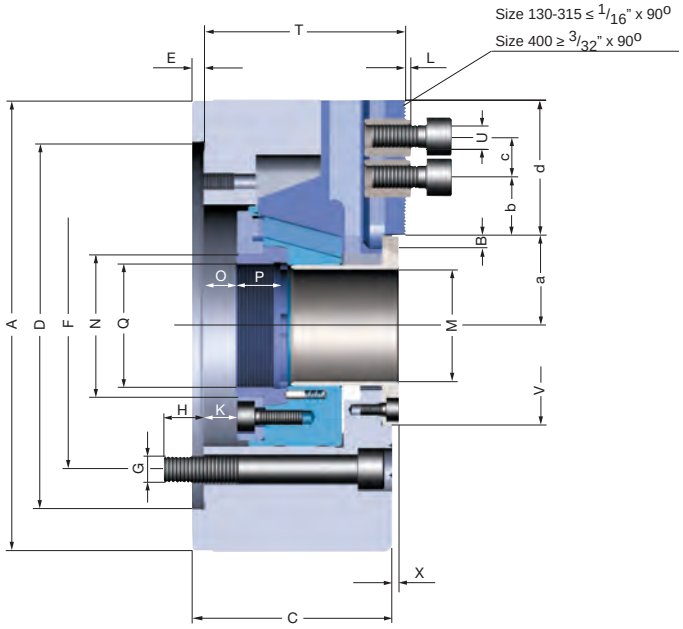
Gripping force/operating power diagram

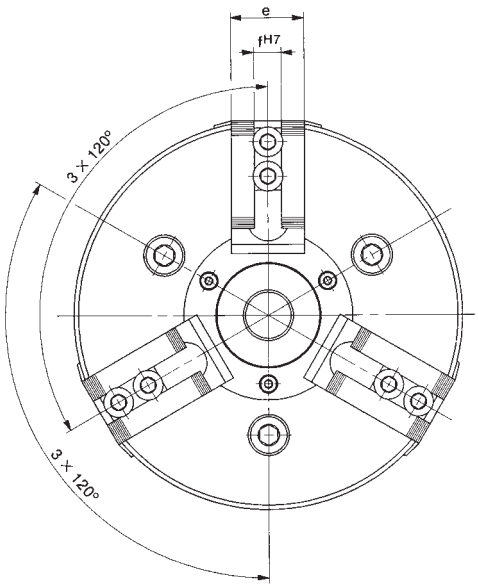
To obtain the specified gripping forces, the chuck must be in a perfect condition and lubricated with F 80 lubricant recommended by Röhm. Measuring point near chuck face.

Example:
For a chuck size 254 and an applied operating power of 40 kN, the total gripping force is approx. 90 kN.



KFD-HE 3-jaw, standard design, serration 90°



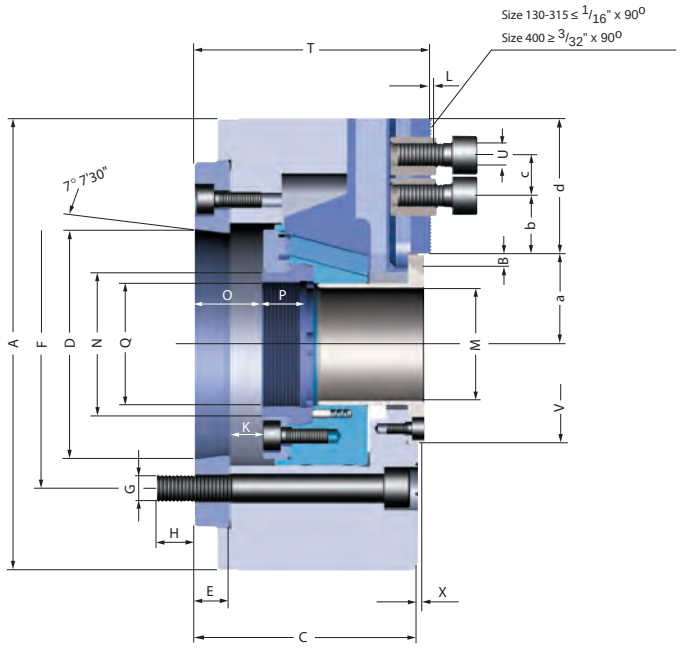


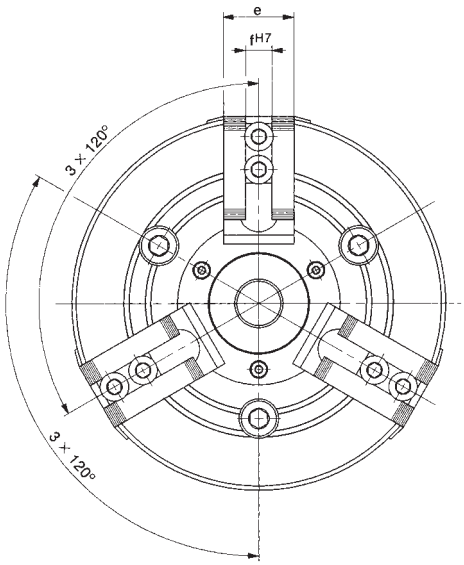
Tool group C 15
Type 440-50 **3 jaw** power chuck
KFD-HE, serration 90°
Adaptor recess, mounting dimensions to **DIN 6353**

Item no.	154806 ●	154384 ●	154031 ●	154032 ●	154810 ●	154829 ●	151554 ●
Size	130	170	210	254	315	315	400
number of jaws	3	3	3	3	3	3	3
A	130	170	210	254	315	315	400
Jaw travel B	2,7	3,2	4,3	5,1	5,3	5,3	8
C	60	82	93	101	104	114	128
DH6	110	140	170	220	220	300	300
E	4	6	6	6	6	6	6
F	82,6	104,8	133,4	171,4	171,4	235	235
G	3 x M 10	3 x M 10	3 x M 12	3 x M 16	3 x M 16	3 x M 20	3 x M 20
H	15	15	19	23	24	28	29
Wedge stroke K	10	14	16	19	23	23	30
L	2,75	2,5	2,5	2,5	2,5	2,5	3,5
Through-hole M	33	43	52	75	91	121	121
N	45	57	66	94	108	143	136
O min.	-9	-2,6	-0,7	-10,3	-14,8	-9,4	-21
O max.	1	11,4	15,3	8,7	8,2	13,6	9
P	20	19	20,5	28	32	26	28
Q	M 40 x 1,5	M 52 x 1,5	M 58 x 1,5	M 82 x 1,5	M 98 x 1,5	M 126 x 1,5	M 126 x 1,5
T	61	82	93	101	110	114	129
U	M 8	M 8	M 12	M 16	M 16	M 16	M 20
$V^{H7}_{-0,05}$	60	74	92	125	135	170	170
X	3	3	3	3	3	3	4
a min.	23,8	34,8	37,7	50,9	56	72,2	79
a max.	26,5	38	42	56	61,3	77,5	87
b min.	7	7,5	9	10	12	12	19
c min.	14	2 x 15	19	25	25	25	31
c max.	-	-	47	59	84	69	80
d	38,5	47	63	71	96	80	113
e	25	32	40	50	50	50	60
fH7-0,025	10	12	17	21	21	21	25,5
Max. swing top jaws mm	170	230	290	345	410	410	560
Maximum draw bar pull kN	16	25	40	60	60	60	95
Max. total clamping force approx. kN	36	75	110	135	160	160	220
Max. admissible speed min^{-1}	7000	6300	5000	4500	3500	3500	2000
Moment of inertia J kgm^2	0,011	0,038	0,09	0,22	0,8	0,8	1,88
Weight without jaws approx. kg	5,5	12	18	29	53	50	100

● from stock ■ 4 - 6 weeks ▲ on request

KFD-HE 3-jaw, standard design serration 90°

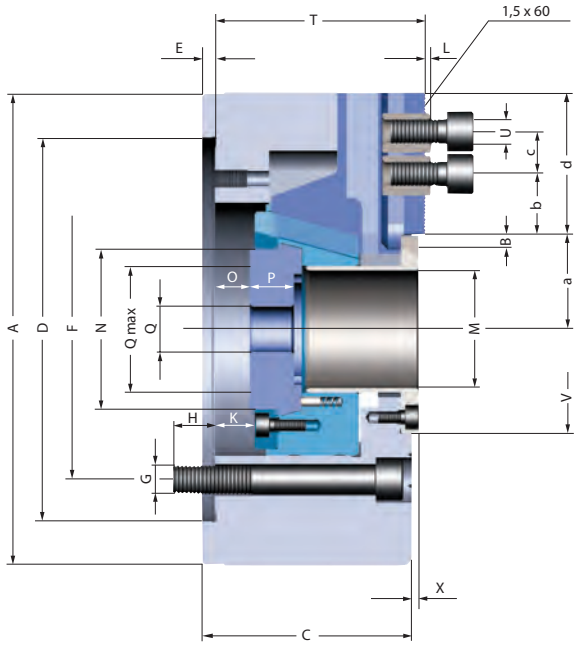


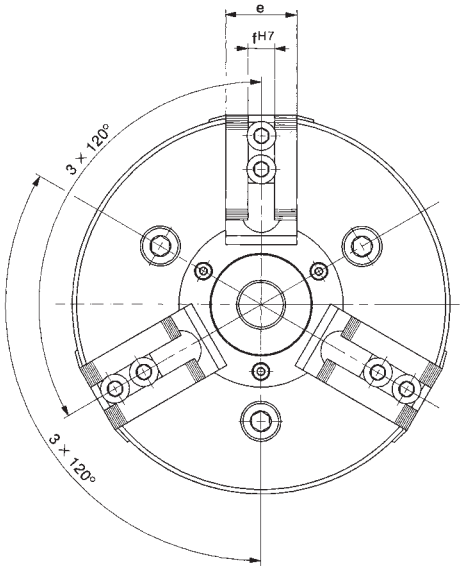


Tool group C 15
Type 440-52 **3 jaw** power chuck
KFD-HE, serration 90°
Short taper mount for **ISO 702-1**
(DIN 55026/55021)

Item no.	154807 ■	154385 ■	154034 ■	154037 ■	154811 ■	154831 ■	151553 ■
Size	130	170	210	254	315	315	400
number of jaws	3	3	3	3	3	3	3
A	130	170	210	254	315	315	400
Jaw travel B	2,7	3,2	4,3	5,1	5,3	5,3	8
C	67,5	90,6	103,2	112,8	121,8	127,4	141,4
Short taper D	4 (nur 55026)	5	6	8	8	11	11
E	11,5	15	16	17,8	17,8	19,4	19,4
F	82,6	104,8	133,4	171,4	171,4	235	235
G	3 x M 10	3 x M 10	3 x M 12	3 x M 16	3 x M 16	3 x M 20	3 x M 20
H	13	15	18	23	24	29	30
Wedge stroke K	10	14	16	19	23	23	30
L	2,75	2,5	2,5	2,5	2,5	2,5	3,5
Through-hole M	33	43	52	75	91	121	121
N	45	57	66	94	108	143	136
O min.	2,5	12	15,5	7,5	3	10	-1,6
O max.	12,5	26	31,5	26,5	26	33	28,4
P	20	19	20,5	28	32	26	28
Q	M 40 x 1,5	M 52 x 1,5	M 58 x 1,5	M 82 x 1,5	M 98 x 1,5	M 126 x 1,5	M 126 x 1,5
T	72,5	96,6	109,2	118,8	127,8	133,4	128,4
U	M 8	M 8	M 12	M 16	M 16	M 16	M 20
$V^{H7}_{-0,05}$	60	74	92	125	135	170	170
X	3	3	3	3	3	3	4
a min.	23,8	34,8	37,7	50,9	56	72,2	79
a max.	26,5	38	42	56	61,3	77,5	87
b min.	7	7,5	9	10	12	12	19
c min.	14	2 x 15	19	25	25	25	31
c max.	-	-	47	59	84	69	80
d	38,5	47	63	71	96	80	113
e	25	32	40	50	50	50	60
fH7-0,025	10	12	17	21	21	21	25,5
Max. swing top jaws mm	170	230	290	345	410	410	560
Maximum draw bar pull kN	16	25	40	60	60	60	95
Max. total clamping force approx. kN	36	75	110	135	160	160	220
Max. admissible speed min^{-1}	7000	6300	5000	4500	3500	3500	2000
Moment of inertia J kgm^2	0,011	0,038	0,09	0,22	0,8	0,8	1,88
Weight without jaws approx. kg	5,5	12	18	29	53	50	100

KFD-HE 3-jaw, universal draw tube-connector, serration 90°





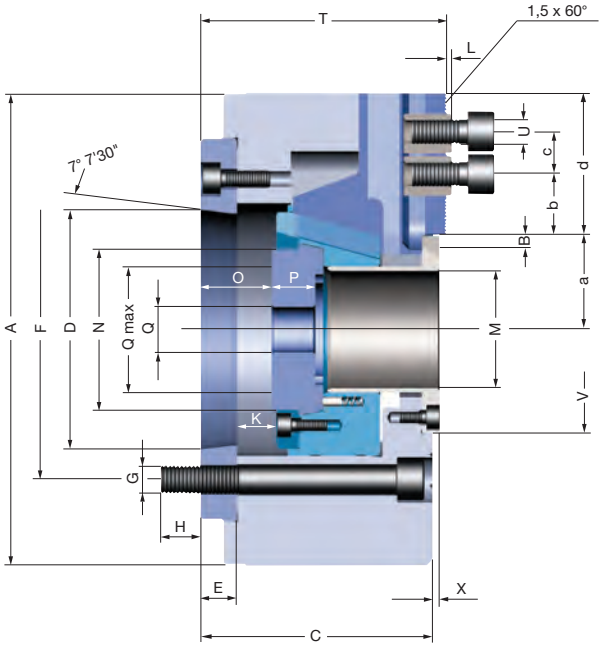
Tool group C 15
Type 440-90 **3 jaw** power chuck **KFD-HE, serration 60°, with pre-machined draw tube-connector**
Adaptor recess, mounting dimensions to **DIN 6353**

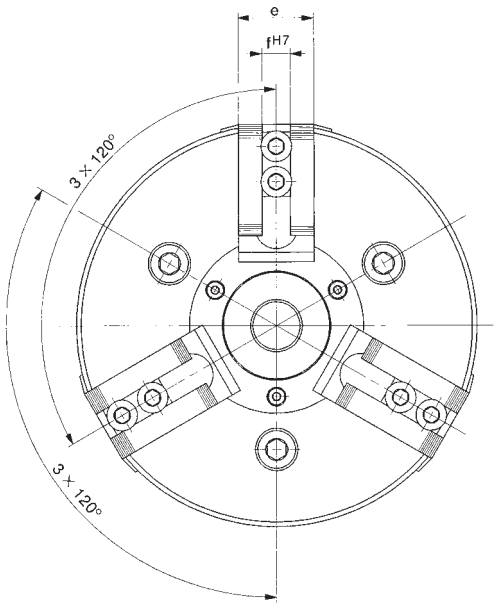
Item no.	156844 ●	154808 ●	154390 ●	154391 ●	154392 ●	154812 ●	154830 ●
Size	110	130	170	210	254	315	315
number of jaws	3	3	3	3	3	3	3
A	110	130	170	210	254	315	315
Jaw travel B	2,7	2,7	3,4	4,3	5,1	5,3	5,3
C	58,5	60	82	93	101	104	114
DH6	85	110	140	170	220	220	300
E	4	4	6	6	6	6	6
F	70,6	82,6	104,8	133,4	171,4	171,4	235
G	3 x M 10	3 x M 10	3 x M 10	3 x M 12	3 x M 16	3 x M 16	3 x M 20
H	16	15	15	19	23	24	28
Wedge stroke K	10	10	14	16	19	23	23
L	2,9	2,9	3,2	3,2	3,2	3,2	3,2
Through-hole M	26	33	43	52	75	91	121
N	38	45	57	66	94	108	143
O min.	-6,5	-9	-2,6	-0,7	-10,3	-14,8	-9,4
O max.	3,5	1	11,4	15,3	8,7	8,2	13,6
P	10	20	19	20,5	28	32	26
Q	Ø 10	Ø 12	Ø 20	Ø 30	Ø 45	Ø 50	Ø 60
Q max.	M 34 x 1,5	M 40 x 1,5	M 53 x 1,5	M 60 x 2	M 85 x 2	M 100 x 2	M 130 x 2
T	59,5	61	82	93	101	110	114
U	M 8	M 8	M 10	M 12	M 12	M 16	M 16
$V^{H7}_{-0,05}$	56	60	74	92	125	135	170
X	3	3	3	3	3	3	3
a min.	20,3	23,8	34,8	37,7	50,9	56	72,7
a max.	23	26,5	38	42	56	61,3	77,5
b min.	7	7	4,5	9	8	12	12
c min.	14	14	20	25	30	30	30
d	32	38,5	47	63	71	96	80
e	25	25	32	40	50	50	50
fH7-0,025	10	10	12	14	16	21	21
Max. swing top jaws mm	170	170	230	290	345	410	410
Maximum draw bar pull kN	11	16	25	40	60	60	60
Max. total clamping force approx. kN	25	36	75	110	135	160	160
Max. admissible speed min^{-1}	8000	7000	6300	5000	4500	3500	3500
Moment of inertia J kgm^2	0,005	0,011	0,038	0,9	0,22	0,8	0,8
Weight without jaws approx. kg	3,4	5,5	12	18	29	53	50

Interchangeable with Kitagawa B-200A

● from stock ■ 4 - 6 weeks ▲ on request

KFD-HE 3-jaw, universal draw tube-connector, serration 90°





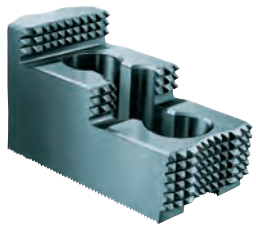
Tool group C15
Type 440-92 **3 jaw** power chuck
KFD-HE, serration 60°, with pre-machined draw tube-connector
Short taper mount for **ISO 702-1**
(DIN 55026/55021)

Item no.	154809 ■	154393 ■	154394 ●	154395 ■	154813 ■	154832 ■
Size	130	170	210	254	315	315
number of jaws	3	3	3	3	3	3
A	130	170	210	254	315	315
Jaw travel B	2,7	3,4	4,3	5,1	5,3	5,3
C	67,5	90,6	103,2	112,8	121,8	127,4
Short taper D	4 (DIN 55026)	5	6	8	8	11
E	11,5	15	16	17,8	17,8	19,4
F	82,6	104,8	133,4	171,4	171,4	235
G	3 x M 10	3 x M 10	3 x M 12	3 x M 16	3 x M 16	3 x M 20
H	13	15	18	23	24	29
Wedge stroke K	10	14	16	19	23	23
L	2,9	3,2	3,2	3,2	3,2	3,2
Through-hole M	33	43	52	75	91	121
N	45	57	66	94	108	143
O min.	2,5	12	15,5	7,5	3	10
O max.	12,5	26	31,5	26,5	26	33
P	20	19	20,5	28	32	26
Q	Ø 12	Ø 20	Ø 30	Ø 45	Ø 50	Ø 60
Q max.	M 40 x 1,5	M 53 x 2	M 60 x 2	M 85 x 2	M 100 x 2	M 130 x 2
T	72,5	96,6	109,2	118,8	127,8	133,4
U	M 8	M 10	M 12	M 12	M 16	M 16
$V^{H7}_{-0,05}$	60	74	92	125	135	170
X	3	3	3	3	3	3
a min.	23,8	34,8	37,7	50,9	56	72,2
a max.	26,5	38	42	56	61,3	77,5
b min.	7	4,5	7	8	12	12
c min.	14	20	25	30	30	30
d	38,5	47	63	71	96	80
e	25	32	40	50	50	50
fH7-0,025	10	12	14	16	21	21
Max. swing top jaws mm	170	230	290	345	410	410
Maximum draw bar pull kN	16	25	40	60	60	60
Max. total clamping force approx. kN	36	75	110	135	160	160
Max. admissible speed min^{-1}	7000	6300	5000	4500	3500	3500
Moment of inertia J kgm^2	0,011	0,038	0,9	0,22	0,8	0,8
Weight without jaws approx. kg	5,5	12	18	29	53	50

Interchangeable with Kitagawa B-200A

Jaws KFD-HE

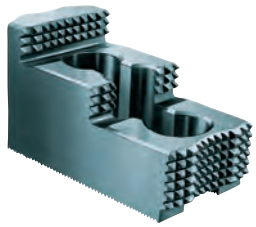
Tool group C 21
Type 543/538 **Reversible top jaws, 3-jaw set, hardened**
Serration 90°- material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
156446 ●	130	54	27,5	23	1/16”x 90°
046404 ●	130	56	37,5	26	1/16”x 90°
118522 ●	200	75	49	36	1/16”x 90°
046414 ●	250/315	103,5	58	50	1/16”x 90°
037531 ●	400	135	65	68	3/32”x 90°

Hardened jaws, supplied as supplement or as spares, must be ground on the chuck.

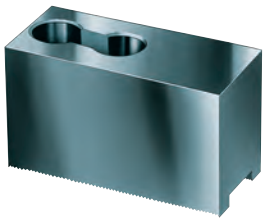
Tool group C 21
Type 543-**31Reversible top jaws, 3-jaw set, hardened**
Serration 60°- material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
154814 ●	130	54	27,5	23	1,5 x 60°
154674 ●	170	66	36	34,7	1,5 x 60°
154676 ●	210	81	49	36	1,5 x 60°
154678 ●	254	99,5	54	44,5	1,5 x 60°
154816 ●	315	103	55,5	50	1,5 x 60°

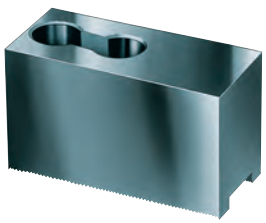
Hardened jaws, supplied as supplement or as spares, must be ground on the chuck.

Tool group C 21
Type 543/538 **Soft top jaws, 3-jaw set, can be hardened**
Serration 90°- material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
156452 ●	130	54	29	23	1/16”x 90°
046403 ●	130	55	38	26,5	1/16”x 90°
133153 ●	200	75	53	36,5	1/16”x 90°
133154 ●	250	95	54,5	45	1/16”x 90°
133156 ●	400	130	80	50	3/32”x 90°

Tool group C 21
Type 543-32 **Soft top jaws, 3-jaw set, can be hardened**
Serration 60°- material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
154863 ●	130/170	54	29	23	1,5 x 60°
154865 ●	170	72	43	30,5	1,5 x 60°
154867 ●	210	95	45,5	35	1,5 x 60°
154869 ●	254	110	45	50	1,5 x 60°
154871 ●	315	130	55,5	50	1,5 x 60°

● from stock ■ 4 - 6 weeks ▲ on request

Jaws KFD-HE

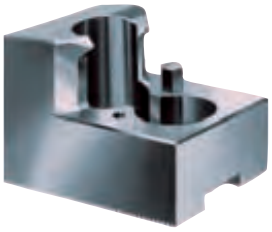
Tool group C 21
Type 543-33 **Claw-type jaws**, 1 piece, **hardened**
Serration 60° - width of the groove **12**

Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
156025 ■	170	67	45	53
156027 ■	170	65	45	46
156029 ■	170	55	45	40
161189 ■	170	55	45	24

Tool group C 21
Type 543-33 **Claw-type jaws**, 1 piece, **hardened**
Serration 60° - width of the groove **16**

Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
156099 ●	254	95	50	80
156101 ●	254	75	50	60
156103 ●	254	60	50	43
156105 ●	254	70	50	37

Tool group C 21
Type 544-50 **Claw-type jaws**, 1 piece, **hardened**
Serration 90° - width of the groove **17**



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
137031 ●	200	67	45	53
137032 ●	200	65	45	46
137039 ●	200	55	45	40
137034 ●	200	50	45	31
137035 ●	200	55	45	27
137036 ●	200	65	45	19
137037 ●	200	65	45	26
137038 ●	200	55	45	24
137033 ●	200	55	45	39

Tool group C 21
Type 544-50 **Claw-type jaws**, 1 piece, **hardened**
Serration 90° - width of the groove **21**

Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
137041 ●	250/315	95	50	80
137042 ●	250/315	75	50	60
137043 ●	250/315	60	50	43
137044 ●	250/315	70	50	37
137045 ●	250/315	95	50	25
137046 ●	250/315	80	50	30

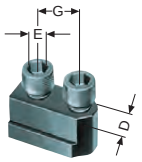
Tool group C 21
Type 544-50 **Claw-type jaws**, 1 piece, **hardened**
Serration 90° - width of the groove **25,5**

Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
137051 ●	400	130	65	113
137052 ●	400	90	65	67
137053 ●	400	100	65	45
137054 ●	400	130	65	33

Accessories KFD-HE

Tool group C 15

Type 538-00 **T-nuts**
without screw, for SV $^{1}/_{16}$" **x 90°**

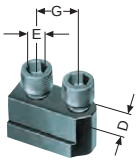


Item no.	Chuck Size	Contents of delivery	D	E	G
154033 ●	130	piece	10	M8	14
343234 ●	170	piece	12	M8	2x15
157569[1] ●	210	piece	17	M12	-
135767[1] ●	254/315	piece	21	M16	25
241676[1] ●	400	piece	25,5	M20	-

[1] single T-nut

Tool group C 15

Type 440-90 **T-nuts**
without screw, for SV **1,5" x 60°**



Item no.	Chuck Size	Contents of delivery	D	E	G
154033 ●	130	piece	10	M8	14
154651 ●	170	piece	12	M10	20
154659 ●	210	piece	14	M12	25
154672 ●	254	piece	16	M12	30
155219 ●	315	piece	21	M16	30

Tool group C 15

Type 0040-Y **Mounting screws**

Item no.	Size	Contents of delivery	Thread	Length
248149[2] ●	130	piece	M8	20
233058 ●	130	piece	M8x20	20
227692 ●	200	piece	M12x25	25
229157 ●	250/315	piece	M16	30
233047 ●	400	piece	M20x40	40

Socket head cap screw to DIN 912, 12.9
[2] two pieces necessary

Tool group C 15

Type 0040-Y **Mounting screws**

Item no.	Size	Contents of delivery	Thread	Length
248149[2] ●	130	piece	M8	20
216588[2] ●	170	piece	M10	25
233030 ●	210/254/315	piece	M12x30	30
216569[2] ●	400	piece	M16	40

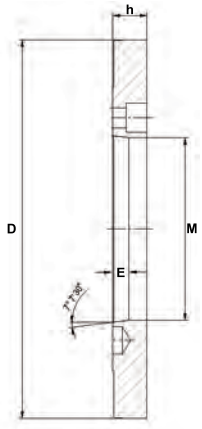
Socket head cap screw to DIN 912, 12.9
[2] two pieces necessary

Tool group C15

Type 1028 **Special grease** F80 for **lathe chucks**
for lubrication and conservation of chucking power

Item no.	Design	Contents
308555 ●	Cartridge	0,5 kg
028975 ●	Tin	1 kg

Tool group A09
Type 619-30 Short-taper adapter plate ISO 702-1 (DIN 55026/55021) - ASA B 5.9 (without mounting bolts)
finished on machine side, faced on chuck side, especially

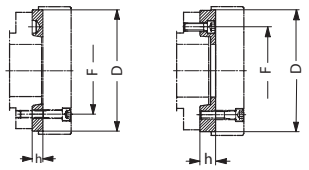


Id.-Nr.	Spindle nose size	h	E	M	D
144933 ▲	3	18	40	40	125
145296 ▲	4	18	40	40	125
145328 ▲	3	18	40	40	160
145342 ▲	4	18	40	40	160
145343 ▲	5	21	50	50	160
145344 ▲	4	21	50	50	200
145345 ▲	5	21	50	50	200
145346 ▲	6	27	50	50	200
145347 ▲	4	27	63	63	250
145348 ▲	5	27	63	63	250
145349 ▲	6	27	63	63	250
145350 ▲	8	27	63	63	250
145351 ▲	5	36	63	63	315
145352 ▲	6	36	63	63	315
145353 ▲	8	36	63	63	315
145354 ▲	11	36	63	63	315
145355 ▲	6	40	63	63	400
145356 ▲	8	40	63	63	400
145357 ▲	11	40	63	63	400
145358 ▲	15	40	63	63	400
145359 ▲	8	42	80	80	500
145360 ▲	11	42	80	80	500
145364 ▲	15	42	80	80	500

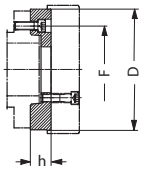
● from stock ■ 4 - 6 weeks ▲ on request

Accessories KFD-HE

Type 594-32 Intermediate adaptor plates
with cylindrical centre mount DIN 6353 for three-jaw chucks
Mounting from front to ISO 702-1 (DIN 55026/55021) and ASA B 5.9 A1/A2 with metric mounting bolts



Design I Design II

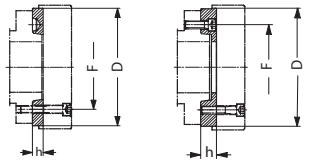


Design III

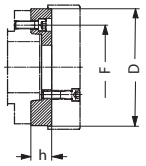
Id.-Nr.	Spindle nose size	Size	Design	h	F	D
145125[1] ●	4	160	II	18	82,6	140
145153 ●	5	175	I	15	104,8	140
145127 ●	5	200	II	21	104,8	170
145129 ●	6	160	III	35	133,4	140
145155 ●	6	200	I	16	133,4	170
145131 ●	6	250	II	27	133,4	220
145135 ●	8	200	III	39	171,4	170
145157 ●	8	250	I	18	171,4	220
145139 ●	8	315	II	38	171,4	300
145143 ●	11	250	III	48	235	220
145159 ●	11	315	I	19	235	300
145149 ●	15	400	III	58	330,2	300

All fastening parts are included
Intermediate adaptors for two- and four-jaw-design on request
[1] DIN 55021 on request

Tool group C 15
Type 594-35 Intermediate adaptor plates
with cylindrical centre mount DIN 6353 for three-jaw chucks
Mounting from front to ASA B 5.9 A1/A2 with inch threaded mounting bolts



Design I Design II

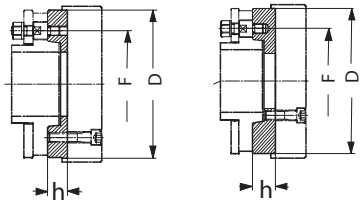


Design III

Id.-Nr.	Spindle nose size	Size	Design	h	F	D
145191 ■	4	160	II	18	82,6	140
145192 ■	5	200	II	21	104,8	170
145193 ■	6	160	II	35	133,4	140
145194 ■	6	250	II	27	133,4	220
145196 ■	8	315	II	39	171,4	300
145198 ■	8	315	II	38	171,4	300
145200 ■	11	250	III	48	235	220
145203 ■	15	400	III	58	330,2	300

All fastening parts are included
Intermediate adaptors for two- and four-jaw-design on request

Tool group C 15
Type 594-33 Intermediate adaptor plates
with cylindrical centre mount DIN 6353 for three-jaw chucks
Bayonet fixing to ISO 702-3 (DIN 55027)/ DIN 55022

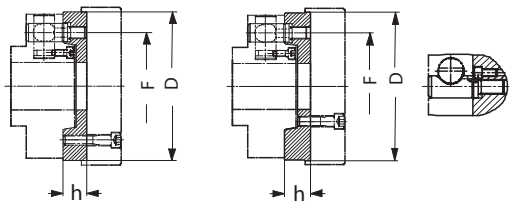


Design II Design III

Id.-Nr.	Spindle nose size	Size	Design	h	F	D
145208 ■	4	160	II	18	82,6	140
145236 ■	5	160	II	21	104,8	140
145210 ■	5	200	II	21	104,8	170
145212 ■	6	160	III	35	133,4	140
145240 ■	6	200	II	22	133,4	170
145214 ■	6	250/315	II	27	133,4	220
145218 ■	8	200	III	39	171,4	170
145242 ■	8	250	II	30	171,4	220
145222 ■	8	315	II	38	171,4	300
145226 ■	11	250	III	48	235	220
145246 ■	11	315	II	36	235	300
145230 ■	11	400/500	II	40	235	380
145232 ■	15	400	III	58	330,2	300

All fastening parts are included
Intermediate adaptors for two- and four-jaw-design on request

Tool group C 15
Type 594-36 Intermediate adaptor plates
with cylindrical centre mount DIN 6353 for three-jaw chucks
Camlock fixing to DIN 55029/ASA B 5.9 D1



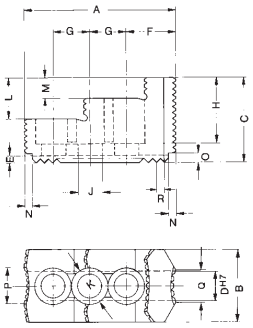
Design II Design III

Id.-Nr.	Spindle nose size	Size	Design	h	F	D
145252 ■	4	160	II	28	82,6	140
145280 ■	5	160	II	30	104,8	140
145254 ■	5	200	II	30	104,8	170
145256 ■	6	160	III	43	133,4	140
145284 ■	6	200	II	35	133,4	170
145258 ■	6	250	II	35	133,4	220
145262 ■	8	200	II	46	171,4	170
145286 ■	8	250	II	38	171,4	220
145264 ■	8	315/400	II	38	171,4	300
145270 ■	11	250	III	53	235	220
145290 ■	11	315	II	45	235	300
145276 ■	15	400	III	58	330,2	300

All fastening parts are included
Intermediate adaptors for two- and four-jaw-design on request

Jaw dimensions KFD-HE

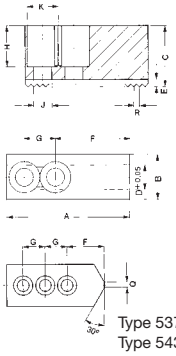
Reversible top jaws UB, hardened, serration 90°, material 16MnCr5



Chuck size	130	170	210	250	315	400
Type	543-21	537-02	538-03	538-04	538-05	538-07
Item no. 2-jaw	**-**	**046545**	**046429**	**118521**	**046435**	**046447**
Item no. 3-jaw	**156446**	**046544**	**046408**	**118522**	**046414**	**037531**
Item no. 4-jaw	**-**	**046546**	**046456**	**118523**	**046462**	**046474**
A	54	56	68	75	103,5	135
B	23	26	34,7	36	50	68
C	27,5	37,5	45	49	58	65
D^{H7}	10	10	17	17	21	25,5
E	4	3,5	5	5	5	5
F	13	10	17	21,5	33,5	48
G	14	12 1)	19	19	25	31
H	19	29	33,5	37,5	45	48
J	8,4	6,4	13	13	17	21
K	13,5	10,4	19	19	25	31
L	-	20	20	24	28	-
M	10	10	10	12	14	26
N	3	4	5	6	6	6,5
O	3	4	7	7,5	6,5	5,5
P	-	5	10	18	24,5	34
Q	6	5	5	7	22,5	40
R	1/16"x90°	1/16"x90°	1/16"x90°	1/16"x90°	1/16"x90°	3/32"x90°
Weight/jaw kg	0,110	0,130	0,350	0,460	1,130	2,000

1) 4 mounting holes

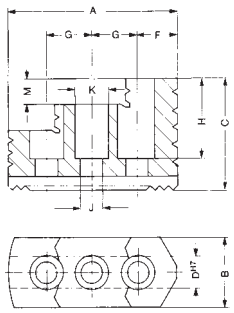
Soft top jaws AB, serration 90°, material 16MnCr5



Type 537-02
Type 543-22

Chuck size	130	170	210	250/315	400
Type	537-02	538-02	538-04	538-05	538-07
Item no. 2-jaw	**-**	**045795**	**133148**	**133149**	**133151**
Item no. 3-jaw	**156452**	**046403**	**133153**	**133154**	**133156**
Item no. 4-jaw	**-**	**046451**	**133158**	**133159**	**133161**
A	54	55	75	95	130
B	23	26,5	36,5	45	50
C	29	38	53	54,5	80
D	10	12	17	21	25,5
E	4	3,5	5	5	5
F	28	31	44	55	79
G	14	15	19	25	31
H	20	28	43	42,5	60
J	8,4	8,4	13	17	21
K	13,5	13,5	19	25	31
Q	-	-	-	-	-
R	1/16"x90°	1/16"x90°	1/16"x90°	1/16"x90°	3/32"x90°
Weight/jaw kg	0,220	0,320	0,880	1,400	3,100

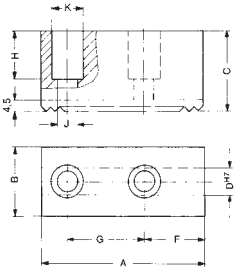
Reversible top jaws UB, serration 60°, material 16MnCr5



Chuck size	130	170	210	254	315
Type	543-31	543-31	543-31	543-31	543-31
Item no. 3-jaw	**154814 1)**	**154674 1)**	**154676**	**154678**	**154816 1)**
A	54	66	81	99,5	103
B	23	34,7	36	44,5	50
C	27,5	36	49	54	55,5
D	10	12	14	16	21
F	13	12,5	17,5	25,5	22,5
G	14	20	25	30	30
H	19	23	36,5	38,5	34
J	8,4	11	13	13	17
K	13,5	17	19	19	25
Serration	1,5 x 60°	1,5 x 60°	1,5 x 60°	1,5 x 60°	1,5 x 60°
Weight/jaw kg	0,16	0,3	0,6	1,2	1,5

1) one step only

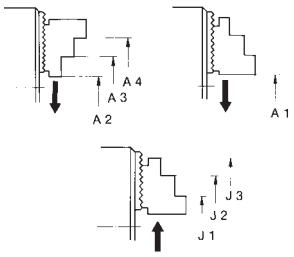
Soft top jaws AB, serration 60°, material 16MnCr5



Chuck size	130	170	210	254	315
Type	543-32	543-32	543-32	543-32	543-32
Item no. 3-jaw	**154863**	**154865**	**154867**	**154869**	**154871**
A	54	72	95	110	130
B	23	32,5	35	50	50
C	29	40	45,5	45	55,5
D	10	12	14	16	21
F	28	37	46	50	52
G	14	20	25	30	30
H	20,5	27	33	29	34
J	8,4	11	13	13	17
K	13,5	17	19	19	25
Serration	1,5 x 60°	1,5 x 60°	1,5 x 60°	1,5 x 60°	1,5 x 60°
Weight/jaw kg	0,25	0,5	0,9	1,7	1,9

Chucking capacities KFD-HE

Chucking capacities with reversible top jaws UB



Chuck size		130	170	210	254	315	400
with reversible jaws 1/16" x 90°	Type	543-21	538-02	538-04	538-05	538-05	538-07
	Jaw position						
External chucking	A1	5-73	13-83	19-108	25-134	57-189	40-214
	A2	-	-	36-128	48-162	50-217	86-260
	A3	71-130	80-150	94-182	130-226	134-297	-
	A4	-	120-192	145-234	210-272	212-332	290-464
Internal chucking	J1	54-119	63-130	78-156	80-190	70-233	106-280
	J2	-	102-173	128-209	156-261	146-313	-
	J3	-	154-210	181-263	246-338	236-393	310-484

Chuck size		130	170	210	254	315
with reversible jaws 1,5 x 60°	Type	543-31	543-31	543-31	543-31	543-31
	Jaw position					
External chucking	A1	5-73	17-100	19-111	25-130	28-190
	A2	-	-	-	-	-
	A3	71-130	97-174	82-170	124-219	-
	A4	-	-	133-224	170-265	170-317
Internal chucking	J1	54-119	74-154	63-160	84-197	116-271
	J2	-	-	112-213	129-244	-
	J3	-	-	170-273	211-328	-

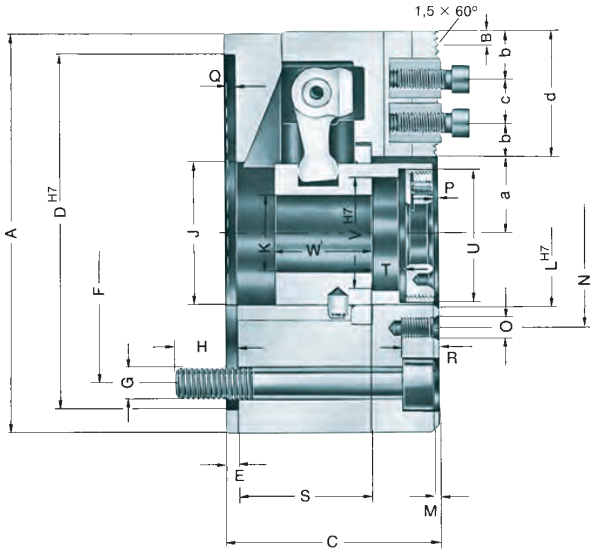
Notes

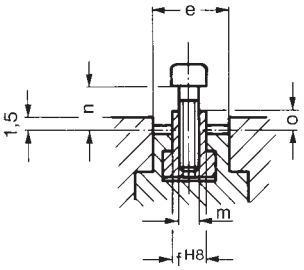
Power-operated angle lever chucks KFM / KFG

Technical features:

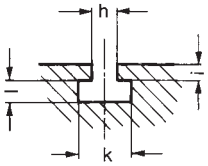
- Large jaw strokes due to angle lever system
- Large through-hole
- Made of steel
- All moving parts hardened and ground
- Large guiding ways for the base jaws
- Favorable leverage
- Jaw ways lubricated by means of cenveniently accessible grease nipples at the axes of the levers
- T-slots in chuck body
- Used in conjunction with RÖHM actuating cylinders with safety device SZS, OVS, LHS-L, LVS, EHS and EVS the power chucks KFM / KFG meet the requirements of the German Employers' Insurance Association
- Designs: **KFM** (medium jaw movement), **KFG** (long jaw movement)
- Scope of delivery: Chuck and jaw mounting screws, wrenches, T-nuts, 2 keys for the draw sleeve. Please order top jaws separately.

KFM 3-Jaw, larger jaw movement, serration 60°



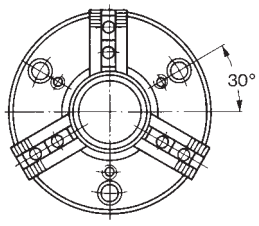


Serration base jaw

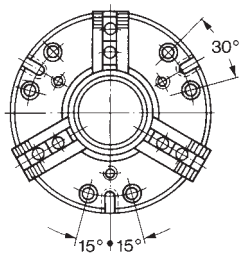


Clamping groove from KFM 215

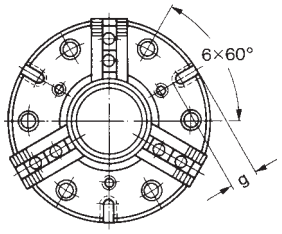
Tool group C 15
Type 531-05 **3 jaw** lever-type power chucks **KFM**, **larger jaw movement**, with **serration 60°** **cylindrical centre mount**



KFM 130+160



KFM 215+280

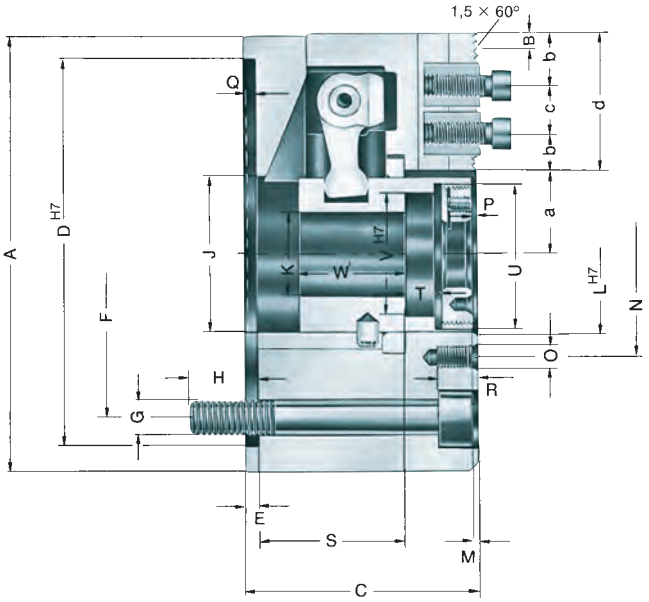


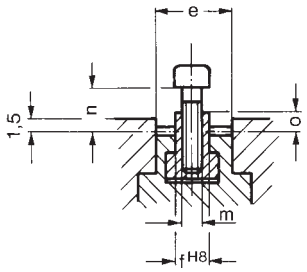
KFM 350

Item no.	020616 ▲	020617 ▲	020618 ▲	020619 ▲	020620 ▲
Size	130	160	215	280	350
Number of jaws	3	3	3	3	3
A	130	160	215	280	350
Jaw travel B	5,5	6	10	10	15
C	63	69,5	90,5	101	126
DH7	110	140	190	255	320
E	4,2	4,2	4,2	5,7	5,7
F	82,6	104,8	133,4	133,4	235
G	3xM10	3xM10	6xM12	6xM12	6xM20
H	17	20	25	25	35
J	46	61	74	102	135
K	25,3	40,5	45,5	66,5	90,5
LH7	50	66	80	105	140
M	2,5	2,5	2,5	2,5	2,5
N	58	76	90	120	156
O	M5	M6	M8	M8	M 10
P	2,6	1	1,4	0,5	5,5
Q	3,3	-	3,6	3,2	5,2
R	10	13	15	15	20
S min.	16,7	25,3	25,4	28,8	31,8
S max.	36,7	45,3	50,4	63,8	76,8
T	8	8	12	18	22
U	M40x1,25	M54x1,25	M65x1,25	M90x1,25	M112x1,5
VH7	36	50	62	87	109
W	20	23	29	32	37
a min.	24,25	32	39,5	53	69,5
a max.	29,75	38	49,5	63	84,5
b	7	8	10	13	14
c min.	14	16	20	26	28
c max.	24	29	43	56	70
d	38	45	63	82	98
e	27	28	35	45	50
fH8	11	11	14	20	21
g	-	-	35	63	83
h	-	-	16	16	22
i	-	-	10	10	15
k	-	-	24	24	35
l	-	-	10	10	17
m	M8	M8	M10	M12	M16
n	7	7,5	8,5	13	15
o	1,5	1,5	1,5	2,5	3
Max. swing top jaws mm	190	216	285	365	470
Maximum draw bar pull kN	7,5	24	33,5	43	52
Max. total clamping force approx. kN	16,5	48	51	90	93
Max. admissible speed min^{-1}	3950	5000	3150	2650	1850
Moment of inertia J kgm^2	0,011	0,028	0,11	0,38	1,17
Weight without jaws approx. kg	5	8	17	37	71,5
Actuating cylinder hydraulic SZS	27/63	37/72	46/102	67/120	86/213
Actuating cylinder hydraulic OVS	85	105	130	150	150

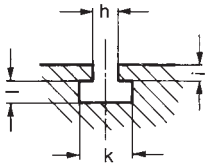
● from stock ■ 4 - 6 weeks ▲ on request

KFM 2-Jaw, larger jaw movement, serration 60°



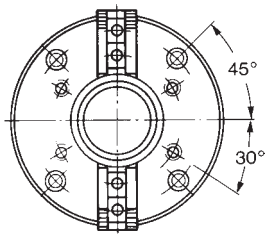


Serration base jaw

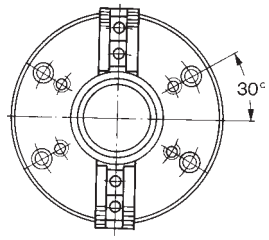


Clamping groove from KFM 215

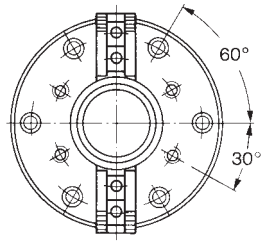
Tool group C 15
Type 521-05 **2 jaw** lever-type power chucks **KFM**, **medium jaw movement**, with **serration 60°** **cylindrical centre mount**



KFM 130+160+280



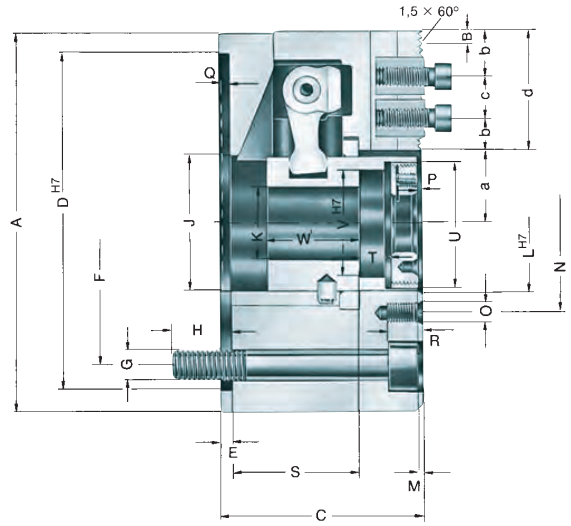
KFM 215

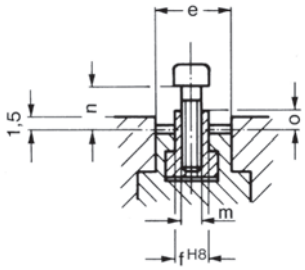


KFM 350

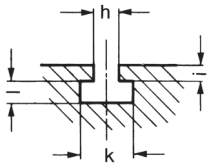
Item no.	020641 ▲	020642 ▲	020643 ▲	020644 ▲	020645 ▲
Size	130	160	215	280	350
Number of jaws	2	2	2	2	2
A	130	160	215	280	350
Jaw travel B	5,5	6	10	10	15
C	63	69,5	90,5	101	126
DH7	110	140	190	255	320
E	4,2	4,2	4,2	5,7	5,7
F	82,6	104,8	133,4	133,4	235
G	4xM10	4xM10	6xM12	4xM12	6xM20
H	17	20	25	25	35
J	46	61	74	102	135
K	25,3	40,5	45,5	66,5	90,5
LH7	50	66	80	105	140
M	2,5	2,5	2,5	2,5	2,5
N	58	76	90	90	156
O	M5	M6	M8	M8	M 10
P	2,6	1	1,4	0,5	5,5
Q	3,3	-	3,6	3,2	5,2
R	10	13	15	15	20
S min.	16,7	25,3	25,4	28,8	31,8
S max.	36,7	45,3	50,4	63,8	76,8
T	8	8	12	18	22
U	M40x1,25	M54x1,25	M65x1,25	M90x1,25	M112x1,5
V H7	36	50	62	87	109
W	20	23	29	32	37
a min.	24,25	32	39,5	53	69,5
a max.	29,75	38	49,5	63	84,5
b	7	8	10	13	14
c min.	14	16	20	26	28
c max.	24	29	43	56	70
d	38	45	63	82	98
e	27	28	35	45	50
fH8	11	11	14	20	21
g	-	-	35	63	83
h	-	-	16	16	22
i	-	-	10	10	15
k	-	-	24	24	35
l	-	-	10	10	17
m	M8	M 8	M10	M12	M16
n	7	7,5	8,5	13	15
o	1,5	1,5	1,5	2,5	3
Max. swing top jaws mm	190	216	285	365	470
Maximum draw bar pull kN	5	16	22,5	29	35
Max. total clamping force approx. kN	11	32	34	60	62
Max. admissible speed min^{-1}	3950	5000	3150	2650	1850
Actuating cylinder hydraulic SZS	27/63	37/72	46/102	67/120	86/213
Actuating cylinder hydraulic OVS	85	105	130	150	150

KFG 3-jaw, large jaw movement, serration 60°



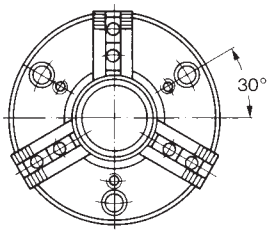


Serration base jaw

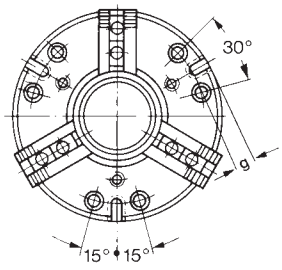


Clamping groove from KFG 215

Tool group C 15
Type 532-05 **3 jaw** lever-type power chucks **KFG**, **large jaw movement**, with **serration 60°** **cylindrical centre mount**



KFG 160

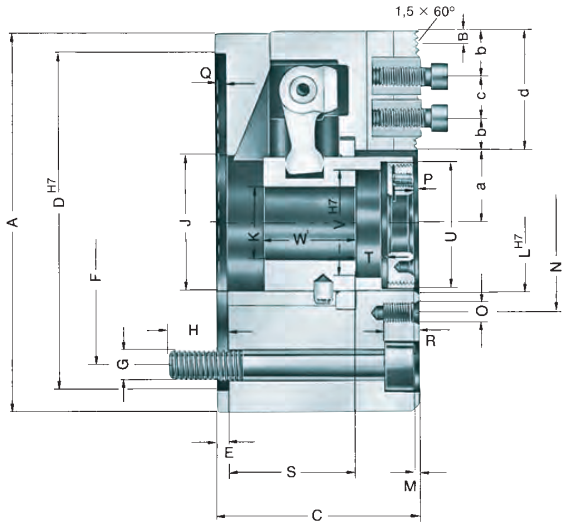


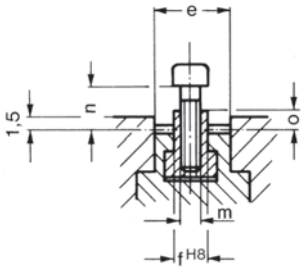
KFG 215 – 350

Item no.	020666 ▲	020667 ▲	020668 ▲	020669 ▲
Size	160	215	280	350
Number of jaws	3	3	3	3
A	160	215	280	350
Jaw travel B	16	20	25	25
C	79	92	116,2	134,7
DH7	140	190	255	320
E	4,2	4,2	5,7	5,7
F	104,8	133,4	133,4	171,4
G	3xM10	6xM12	6xM12	6xM16
H	20	25	25	35
J	54	74	102	135
K	26	45,5	66,5	90,5
LH7	66	80	105	140
M	2,5	2,5	2,5	2,5
N	76	90	120	156
O	M6	M 8	M 8	M 10
P	14	16,5	18,7	13,1
Q	3,2	3,7	3,2	4,1
R	13	15	15	20
S min.	19,8	25,3	28,8	32,9
S max.	39,8	50,3	63,8	77,9
T	8	12	18	22
U	M46x1,25	M65x1,25	M90x1,25	M112x1,5
V H7	43	62	87	109
W	23	29	32	37
a min.	23	31,5	47,5	69,5
a max.	39	51,5	72,5	94,5
b	8	10	13	14
c min.	16	20	26	28
c max.	41	46	54	65
d	57	66	80	93
e	28	35	45	50
fH8	11	14	20	21
g	-	35	63	73,5
h	-	16	16	22
i	-	10	10	15
k	-	24	24	35
l	-	10	10	17
m	M8	M10	M12	M16
n	7,5	8,5	13	15
o	1,5	1,5	2,5	3
Max. swing top jaws mm	242	295	380	480
Maximum draw bar pull kN	24	33,9	43	52
Max. total clamping force approx. kN	21	30	42	66
Max. admissible speed min^{-1}	3400	2700	1950	1800
Moment of inertia J kgm^2	0,031	0,11	0,425	1,22
Weight without jaws approx. kg	9,3	17	41	75
Actuating cylinder hydraulic SZS	27/63	46/102	67/120	86/213
Actuating cylinder hydraulic OVS	105	130	150	150

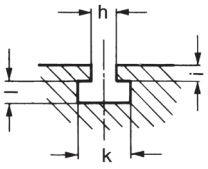
● from stock ■ 4 - 6 weeks ▲ on request

KFG 2-jaw, large jaw movement, serration 60°



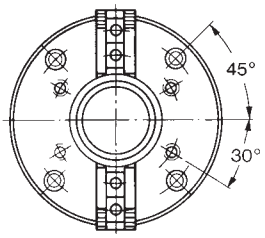


Serration base jaw

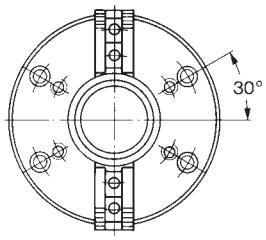


Clamping groove from KFG 215

Tool group C 15
Type 522-05 **2 jaw** lever-type power chucks **KFG**, **large jaw movement**, with **serration 60°** **cylindrical centre mount**



KFG 160 + 280 + 350

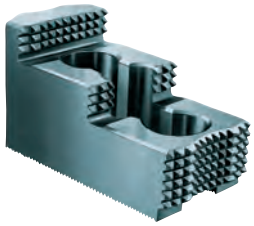


KFG 215

Item no.	020686 ▲	020687 ▲	020688 ▲	020689 ▲
Size	160	215	280	350
Number of jaws	2	2	2	2
A	160	215	280	350
Jaw travel B	16	20	25	25
C	79	92	116,2	134,7
DH7	140	190	255	320
E	4,2	4,2	5,7	5,7
F	104,8	133,4	133,4	171,4
G	4xM10	4xM12	4xM12	4xM16
H	20	25	25	35
J	54	74	102	135
K	26	45,5	66,5	90,5
LH7	66	80	105	140
M	2,5	2,5	2,5	2,5
N	76	90	120	156
O	M6	M 8	M 8	M 10
P	14	16,5	18,7	13,1
Q	3,2	3,7	3,2	4,1
R	13	15	15	20
S min.	19,8	25,3	28,8	32,9
S max.	39,8	50,3	63,8	77,9
T	8	12	18	22
U	M46x1,25	M65x1,25	M90x1,25	M122x1,5
V H7	43	62	87	109
W	23	29	32	37
a min.	23	31,5	47,5	69,5
a max.	39	51,5	72,5	94,5
b	8	10	13	14
c min.	16	20	26	28
c max.	41	46	54	65
d	57	66	80	93
e	28	35	45	50
fH8	11	14	20	21
g	-	35	63	73,5
h	-	16	16	22
i	-	10	10	15
k	-	24	24	35
l	-	10	10	17
m	M8	M 10	M12	M16
n	7,5	8,5	13	15
o	1,5	1,5	2,5	3
Max. swing top jaws mm	242	295	380	480
Maximum draw bar pull kN	16	22,5	29	35
Max. total clamping force approx. kN	14	20	28	44
Max. admissible speed min^{-1}	3400	2700	1950	1800
Actuating cylinder hydraulic SZS	27/63	46/102	67/120	86/213
Actuating cylinder hydraulic OVS	85	105	130	130

Jaws KFM / KFG

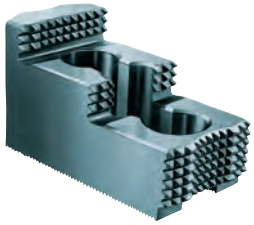
Tool group C 21
Type 530 **Reversible top jaws, 2-jaw set, hardened**
Serration 60°- material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
046431 ■	160	62	37,5	26	1,5 x 60°
046433 ■	215	81	52,5	36	1,5 x 60°
046437 ■	280	96	54	44,5	1,5 x 60°
046443 ■	350	112	61	49,5	1,5 x 60°

[1] Near the serration reduced to 34 mm
Reversible top jaws: ground to finished size at surcharge

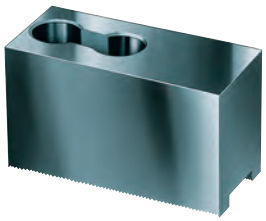
Tool group C 21
Type 530 **Reversible top jaws, 3-jaw set, hardened**
Serration 60°- material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
046410 ●	160	62	37,5	26	1,5 x 60°
046412 ■	215	81	52,5	36	1,5 x 60°
046416 ●	280	96	54	44,5	1,5 x 60°
046422 ●	350	112	61	49,5	1,5 x 60°

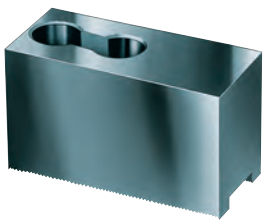
[1] Near the serration reduced to 34 mm
[2] Reversible top jaws: ground to finished size at surcharge

Tool group C 21
Type 530 **Soft top jaws, 2-jaw set, can be hardened**
Serration 60°- material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
046430 ■	160	66,7	43	30,5	1,5 x 60°
046432 ■	215	88,9	53	36,5	1,5 x 60°
046436 ■	280	88,9	54,5	45	1,5 x 60°
046442 ■	350	120	80	50	1,5 x 60°

Tool group C 21
Type 530 **Soft top jaws, 3-jaw set, can be hardened**
Serration 60°- material: 16 MnCr 5



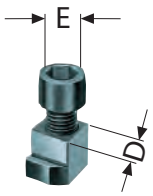
Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
046409 ●	160	66,7	43	30,5	1,5 x 60°
046411 ●	215	88,9	53	36,5	1,5 x 60°
046415 ●	280	88,9	54,5	45	1,5 x 60°
046421 ●	350	120	80	50	1,5 x 60°

● from stock ■ 4 - 6 weeks ▲ on request

Accessories KFM / KFG

Tool group C 15

Type 530-05 **T-nuts**
without screw



Item no.	Chuck Size	Contents of delivery	D	E
029874 ●	160	piece	11	M8
028329 ●	215	piece	14	M10
009744 ▲	280	piece	20	M12
031051 ▲	350	piece	21	M16

Tool group C 15

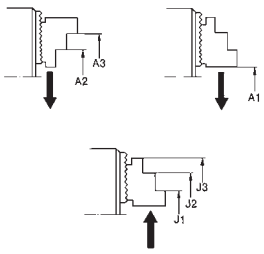
Type 0040-Y **Mounting screws**

Item no.	Size	Contents of delivery	Thread	Length
340015 ●	130/160	piece	M8	18
216594 ●	215	piece	M10	20
233030 ●	210/254/315	piece	M12x30	30
220564 ●	350	piece	M16x35	35

Socket head cap screw to DIN 912, 12.9

Chucking capacities KFM / KFG

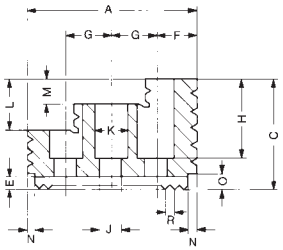
Chucking capacities with reversible top jaws UB

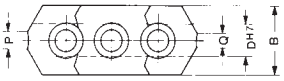


Chuck size		160	215	280	350
with reversible jaws	Type	530-04	530-07	530-09	530-12
	Jaw position				
External chucking	A1	5-115	5-136	11-185	50-248
	A2	58-175	81-220	123-295	159-354
	A3	92-208	132-272	190-363	242-438
Internal chucking	J1	52-159	61-186	70-238	108-301
	J2	85-193	109-238	133-305	189-385
	J3	129-240	167-298	202-378	274-472

Jaw dimensions KFM / KFG

Reversible top jaws UB,
hardened, serration 60°,
material 16MnCr5



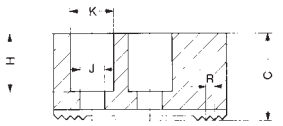


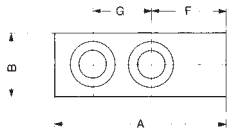
Chuck size	130	160	215	280	350
Type	530-03	530-05	530-07	530-09	530-12
Item no. 2-jaw	**045798**	**046431**	**046433**	**046437**	**046443**
Item no. 3-jaw	**046406**	**046410**	**046412**	**046416**	**046422**
A	56	62	81	96	112
B	26	26	36 [1]	44,5	49,5
C	37,5	37,5	52,5	54	61
D	11	11	14	20	21
E	3,5	3,5	5	5	5,5
F	13,5	17,5	25	30	27
G	16,5	16,5	21	26	33
H	29	29	41	41	47,5
J	8,4	8,4	10,5	13	17
K	13,5	13,5	16,5	19	25
L	20	20	24	24	30
M	10	10	12	12	15
N	4	4	5	5	6,5
O	4	4	7	7	7
P	5	5	10	10	13
Q	5	5	5	5	13
R	1,5 x 60°	1,5 x 60°	1,5 x 60°	1,5 x 60°	1,5 x 60°
Weight/jaw kg	0,165	0,215	0,600	0,750	1,550

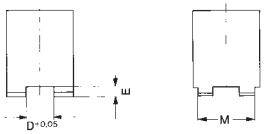
[1] Near the serration reduced to 34 mm
[2] Serration 90°

Reversible top jaws: ground to finished size at surcharge

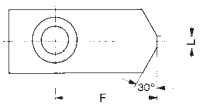
Soft top jaws AB,
material 16MnCr5







AB 530-04 and 530-07



AB 530-02

Chuck size	130	160	215	280	350
Type	530-03	530-05	530-07	530-09	530-12
Item no. 2-jaw	**045797**	**046430**	**046432**	**046436**	**046442**
Item no. 3-jaw	**046405**	**046409**	**046411**	**046415**	**046421**
A	53	66,7	88,9	88,9	120
B	26,5	30,5	36,5	45	50
C	38	43	53	54,5	80
D	11	11	14	20	21
E	3,5	3,5	5	5	5
F	29	30	45	45	67
G	15	20	26	26	28
H	28	33	41	42,5	67
J	8,4	8,4	10,5	13	17
K	13,5	13,5	16,5	19	25
L	-	-	-	-	-
M	-	27	34	-	-
R	1,5 x 60°	1,5 x 60°	1,5 x 60°	1,5 x 60°	1,5 x 60°
Weight/jaw kg	0,320	0,550	1,125	1,400	3,125

[1] Serration 90°

Notes

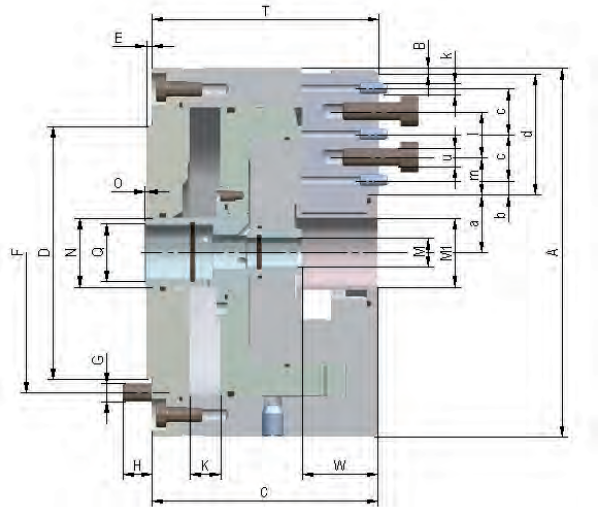
PKF

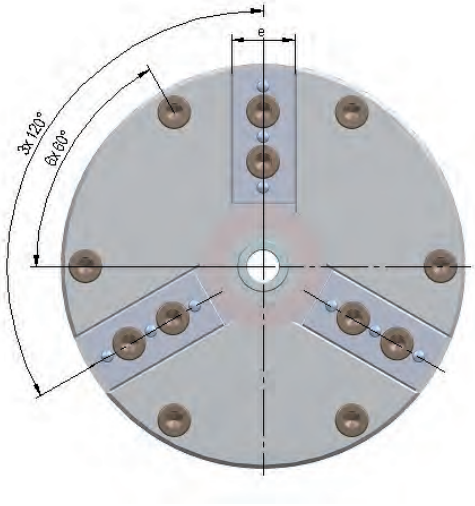
Technical features:

- Precision-wedge system
- Radial and axial true running accuracy within 0.003 mm (3 micron)
- Integrated pneumatic actuation
- Low on maintenance because of oil mist lubrication
- The special design of the piston with force transmission on both sides, particular to the RÖHM KFD-HS principle, guarantees a very high chucking precision and an extremely long service life
- The wide range of operating pressure from 2 to 10 bar allows an optimal adjusting of the chucking power, e. g. for the deformation-free chucking of thin-walled liners and rings
- Self-locking, high safety in the event of a chucking energy failure
- RÖHM offers a complete equipment with an air supply tube and a versatile jaw range
- Sizes 100-200 with passage for coolant supply.
- Used in conjunction with RÖHM actuating cylinders with safety device SZS, OVS, LHS-L, LVS, EHS and EVS the power chucks PKF meet the requirements of the German Employers' Insurance Association

Note:
Air supply tube, service unit, top jaws, control valves, to be ordered separetely.

PKF





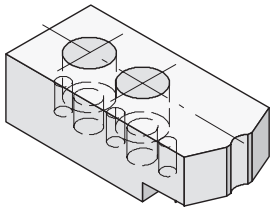
Tool group C 15
Type 586-00 High-precision pneumatic-operated lathe chuck **PKF**,
concentricity 0,003,
repetitive clamping accuracy 0,0015 with **through-hole**,
pneumatic operated, with **integrated pneumatic chucking piston**,
clamping accurancy in the micron range

Item no.	153705 ■	153706 ■	153707 ■	153708 ■	153709 ■	153710 ■
Size	80	100	100	150	150	200
A	79,5	102	102	151	151	202
Jaw travel B	0,75	0,75	1,5	0,75	1,5	1,5
C	39	52,5	62,5	52,5	62,5	85,5
D-0,01	50,8	82,55	82,55	124,97	124,97	167,64
E	1,5	1,5	1,5	1,5	1,5	3,2
F	69,9	88,9	88,9	135,9	135,9	182,9
G	3 x 120° M5	M5	M5	M6	M6	M10
H	5,5	8	8	9	9	16
Wedge stroke K	4,25	4,25	8,5	4,25	8,5	8,5
M	-	3,2	3,2	3,2	3,2	3,2
M_1	-	19	19	25,4	25,4	25,4
N	-	19	19	19	19	19
O min.	-	0,5	0,5	0,5	0,5	0,5
O max.	-	4,75	9	4,75	9	9
Q	3/8”	5/8”	5/8”	5/8”	5/8”	5/8”
W	-	19	19	19	19	35
T	39,3	52,8	62,8	52,8	62,3	85,9
a min.	15,5	16,75	16	22,75	22	21,9
a max.	16,25	17,5	17,5	23,5	23,5	23,4
b	5,1	3,9	3,9	14,9	14,9	4,5
c	12,7	2 x 12,7	2 x 12,7	2 x 12,7	2 x 12,7	2 x 31,75
d	23,5	33,5	33,5	52	52	76,1
e	13	16	16	24	24	32
k	1/8”	1/8”	1/8”	1/8”	1/8”	1/4”
l	-	12,7	12,7	3 x 12,7	3 x 12,7	31,75
m	11,5	10,25	10,25	8,55	8,55	20,375
u	M5	2 x M5	2 x M5	4 x M5	4 x M5	M10
Operating pressure bar	2-10	2-10	2-10	2-10	2-10	2-10
Area A_1 clamping cm^2	29,3	47,4	47,4	100	100	185,0
Area A_2 releasing cm^2	15,2	28,9	28,9	69	69	111,5
Total clamping force at 8 bar kN	8	13	13	27	27	31,5
Max. admissible speed at 8 bar min^{-1}	5500	5500	5500	4000	4000	3000
Moment of inertia J kgm^2	0,0008	0,0029	0,0029	0,015	0,015	0,08
Weight kg	1	2,3	2,3	5,5	5,5	16

Higher speed on request

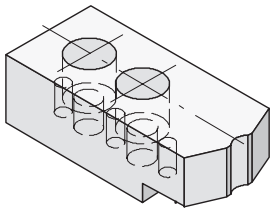
Jaws PKF

Tool group C 21
Type 586-00 **Soft top jaws**
Steel design set, jaw set



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
153817 ■	80	38	16	16
153818 ■	100	49	25	18,4
153819 ■	150	74	30	26,5
153820 ■	200	95	46	34,7

Tool group C 21
Type 586-00 **Soft top jaws**
Aluminium design, jaw set

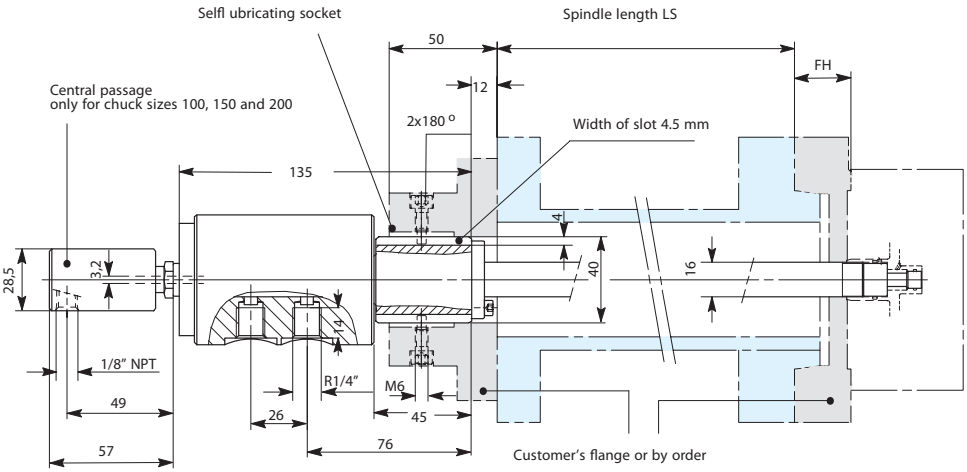


Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
153821 ■	80	38	16	16
153822 ■	100	49	25	18,4
153823 ■	150	74	30	26,5
153824 ■	200	95	46	34,7

Accessories PKF

Air supply tube

Air supply tube 3/8” and 5/8”
Type 586-80
Max. speeds = 10 000 min-1
Central through-hole for air and coolant.
Max. air pressure = 10 bar



Ordering indications for air supply tube:
Chuck size + spindle length LS + height of flange FH

● from stock ■ 4 - 6 weeks ▲ on request

Accessories PKF

Tool group C 15
Type 592-38
Air-operated control LSG R1/4 **up to 10 bar**, for air-operated power chucks

Id.-Nr.	Width	Height	Depth	Control voltage	Conn. thread	Weigth approx. kg
437107 ■	370	350	140	24 V - 50 Hz	R 3/8“ Innengewinde	6,4

Other voltages on request

Tool group C 15
Type 592-51 **Service unit** for air operated control
This unit consists of:
Separator and filtre CKS-08/10 and lubricator CL-08/10

Id.-Nr.	Width	Height	Depth
216084 ■	130	240	102

Max. flow Qn 33m3/h at 6 bar

Tool group C 15
Type 592-32 **Manually operated air control valve LHV**
2-position with safety control lever

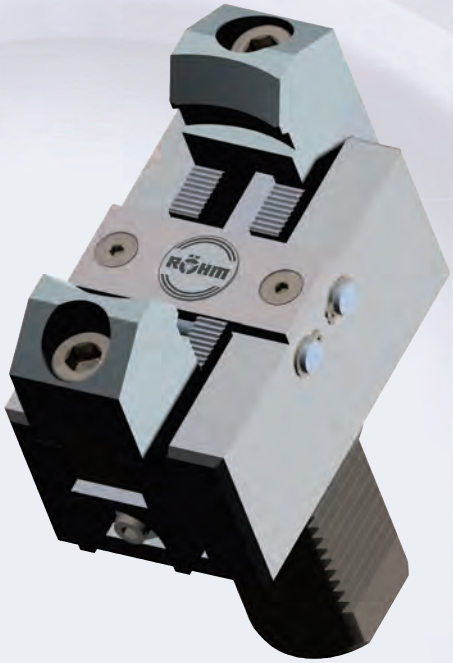
Id.-Nr.	Width	Height	Depth	Conn. thread internal	Conn. thread external
418224 ●	66,5	64	38	R ¼ “	M 16 x 1,5

Tool group C 15
Type 592-04 **Air shut-off valve**

Id.-Nr.	Width	Height	Depth	Conn. thread
021237 ▲	51	55	30	R 1/4” internal

Accessories: 2 screw unions pipe thread 1/4”, Id.-Nr. 8096

Gripper chuck GF



Technical features:

- 2-jaw gripper chuck
- For moving and positioning bars and tubes
- Ideally suited for the use of turrets
- Automatic retraction of the jaws after positioning process
- Clamping force via disk spring package
- With interchangeable cylindrical shank

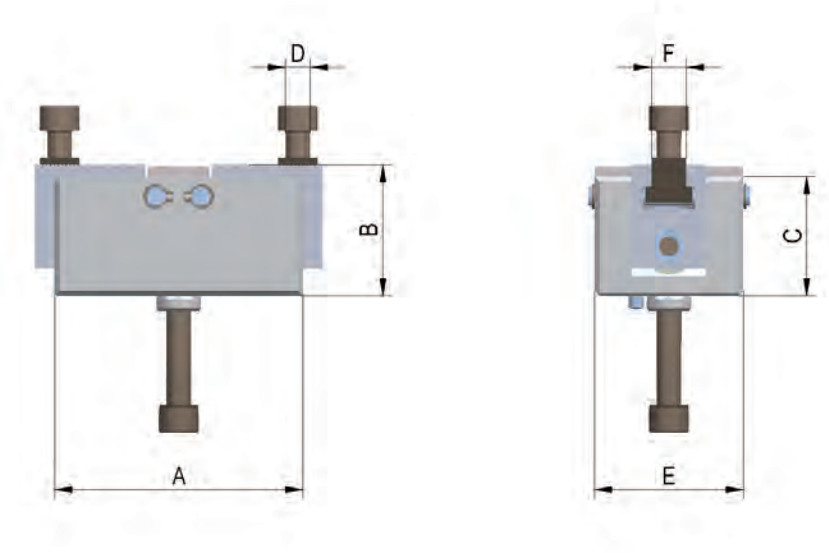
These gripper chucks are mainly used for moving and positioning bars and tubes.

Function:

To grip the workpiece, the gripper chuck is moved against the chucked round stock, usually by means of the toolholder provided on the machine. The 30° approach angle chamfer causes the jaws to be positively forced outward until the workpiece diameter is reached and the work is gripped on the outside diameter.
The gripping force is produced by a floating disk spring package acting on the jaws. The workholding chuck opens to release the round stock which has been gripped by the bar puller and moved into the predetermined position. In this position, the work is chucked again by the workholding chuck while the bar puller is simply pulled off. The jaws are automatically pushed inward by the disk spring package to return them to their initial position.
The interchangeable cylindrical shank meets to DIN 69880.

The top jaws have a slight inward inclination, when the chuck is opened. In this position, the serrations have to be positioned (with respect to the workpiece) that the distance between the gripping surfaces of the jaws is 2-3 mm smaller than the workpiece.

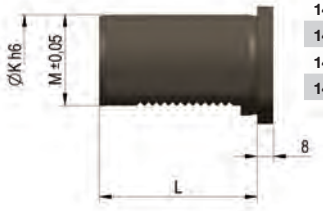
GF for cylindrical shank DIN 69880



Tool group C 15
Type 546-00 2-jaw gripper chucks
GF for cylindrical shank **DIN 69880**
Chucks without shank, without jaws

Item no.	Size	A	B	C	D	E	F^{H7}	H (Stroke)	U	Clamping force min. kN	Clamping force max. kN
141077 ●	80	80	50,8	46	M8	50	12	3	M8	1,3	1,7
141078 ●	100	100	52,8	48	M 10	60	14	4	M 10	2	2,7
141079 ●	125	125	72,8	67	M 10	65	14	4	M 10	5,3	6

Tool group C 15
Type 546-30 **Cylindrical shank DIN 69880**



Item no.	Initial size	Kh6	L	M±0,05
359619 ●	20	20	32	18
156806 ●	25	25	48	23,5
141080 ●	30	30	55	27
141081 ●	40	40	63	36
141082 ●	50	50	78	45
141083 ●	60	60	94	55

Jaws GF

Tool group C 21
Type 546-70 **Clamping jaws**

Item no.	Chuck Size	Contents of delivery	Jaw length	Jaw height	Jaw width
141084 ●	80	Satz	28	26	28
141085 ●	100/125	Satz	30	34	30
141086 ●	100/125	Satz	40	42	30

Overview

Quick jaw change, high accuracy and high chucking power

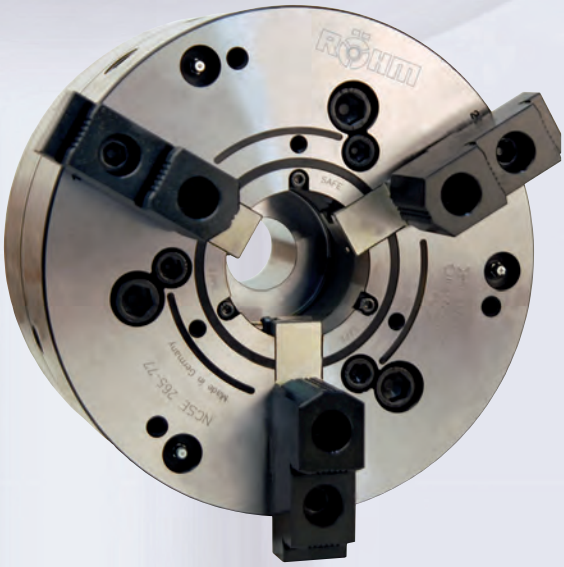
Design principle of the quick-acting jaw change system
On DURO-NC chucks, all jaws are unlocked centrally and simultaneously by turning a pin. The jaws can then be readily relocated, reversed or changed without impairing the workholding accuracy of the chuck.
The jaws are locked, also centrally, by turning the locking pin back to its initial position.
The RÖHM quick-acting jaw change system requires no additional piston stroke to disengage the chucking piston.
The jaw actuating wedges remain fully engaged at all times.

DURO-NC **from page 6098**

Wedge system
Central jaw unlocking
Angle serrated jaws
3-jaw design

Function:

Scan QR-Code and watch the productvideo DURO-NC on youtube!



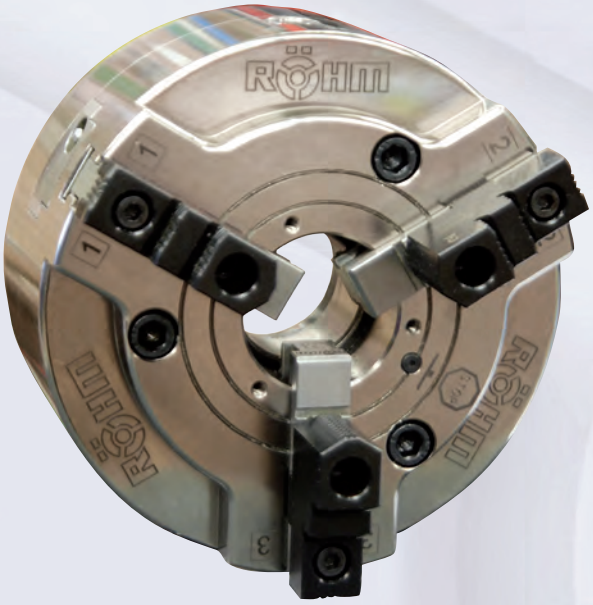
DURO-NCSE **from page 6112**

Wedge system
With individual jaw locking
Straight theet jaws
3-jaw design
On request: DURO-NCSE-B with widened base jaws, for the use of normal KFD jaws with serration

Function:

Scan QR-Code and watch the productvideo DURO-NCSE on youtube!

DURO-NCSE AW / DURO-NCSE Flex



DURO-NCSE AW **on request**

- Optimally suited for the use of power driven tools
- Due to the free area on the front of the chuck reduced interference contour
- Properties of the chuck like DURO-NCSE

DURO-NCSE Flex **on request**

- Quick-acting change system for mandrels, collet chucks and face drivers
- Clamping tool change without changing the complete chuck
- Properties of the chuck like DURO-NCSE

Base chuck

Attachment mandrel

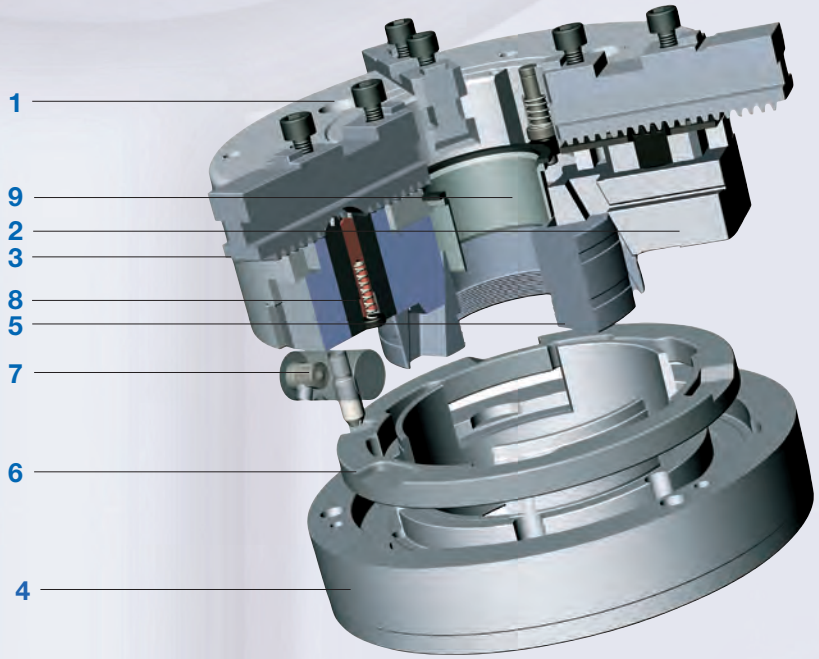
Attachment collet chuck

Attachment face driver

DURO-NC

Technical features:

- Central jaw unlocking for moving, changing and turning of jaws
- High workholding accuracy and gripping force
- Chucking power transmitted by means of the proven wedge system
- Light-weight jaws minimize the loss of gripping power at high speeds
- For high speeds
- The jaws assemblies are identical with those of the manually operated DURO chucks
- Made of steel, all wearing parts hardened and ground
- Used in conjunction with RÖHM actuating cylinders with safety device SZS, OVS, LHS-L, LVS, EHS and EVS the power chucks DUO-NC meet the requirements of the German Employers' Insurance Association
- The safety key can only be removed when the jaws are locked. This safety key, in conjunction with the key switch integrated in the machine, additionally prevents an unintentional start of the machine spindle when the jaws are unlocked



Components

1. Body
2. Guide jaw
3. Base jaw
4. Adaptor plate
5. Piston
6. Adjusting ring
7. Turnable bolt
8. Rack
9. Protective bush

Accessories:

Chuck and jaw mounting screws, safety key, assembly wrench, base jaws.

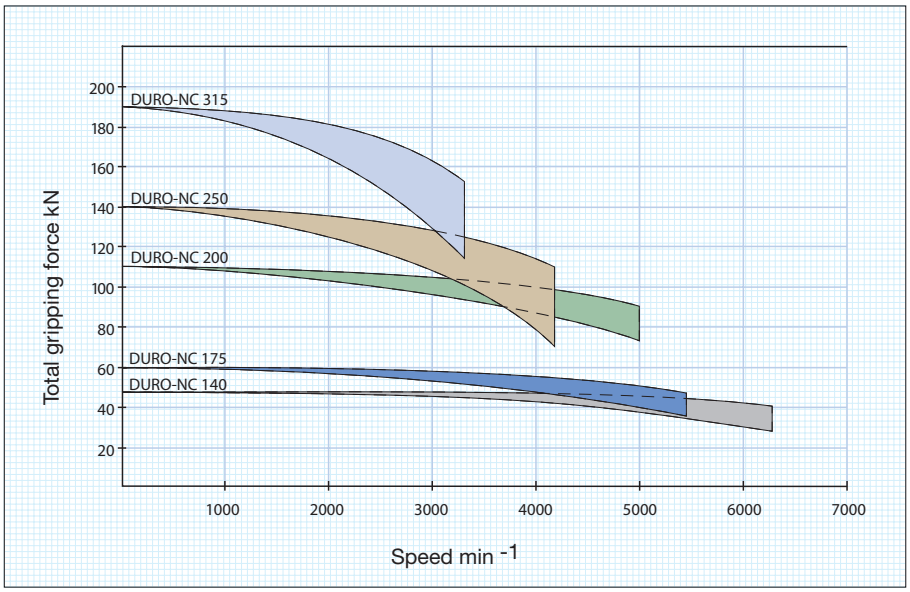
Accessories DURO-NC

Gripping force / speed diagrams

The loss of gripping force was determined experimentally on a chuck with matched UB top jaws. It is largely independent of the initial gripping force at zero speed.

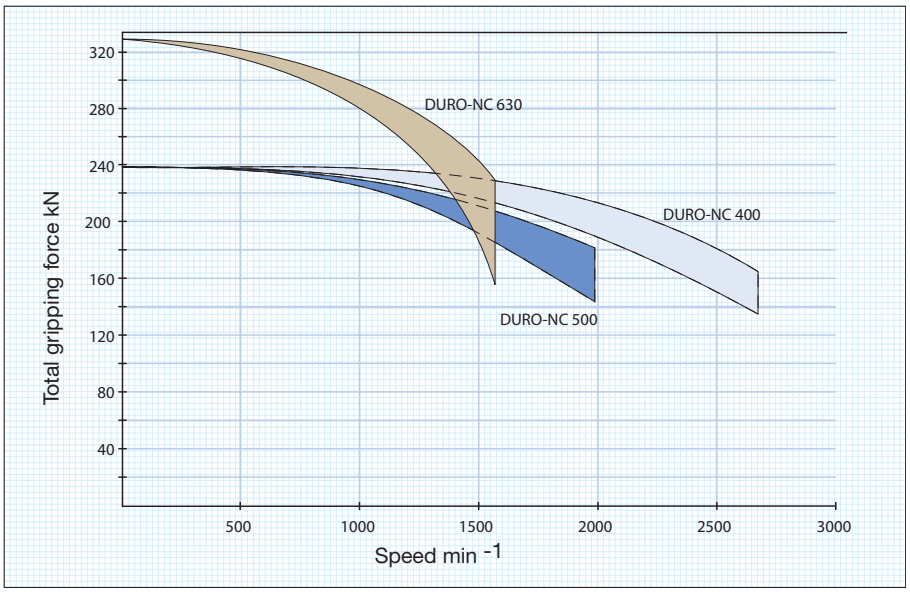
Upper curve: min. centrifugal force of top jaw

Lower curve: max. centrifugal force of top jaw

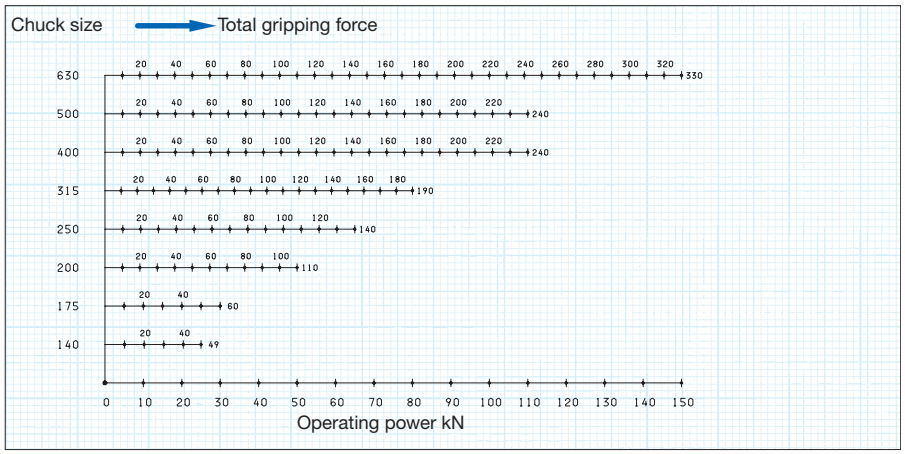


To obtain the specified gripping forces, the chuck must be in a perfect condition and lubricated with F 80 lubricant recommended by Röhm. Measuring point near chuck face.

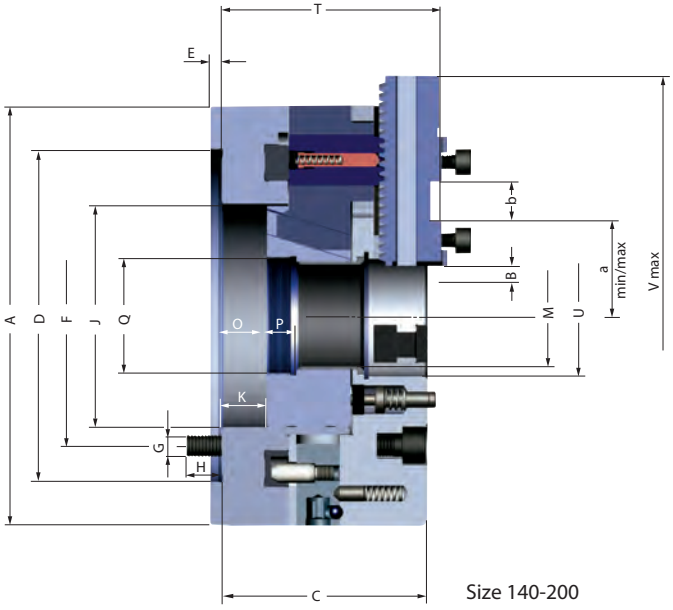
Example: For a DURO-NC chuck size 250 and an applied operating power of 40 kN, the total gripping force is approx. 92 kN.



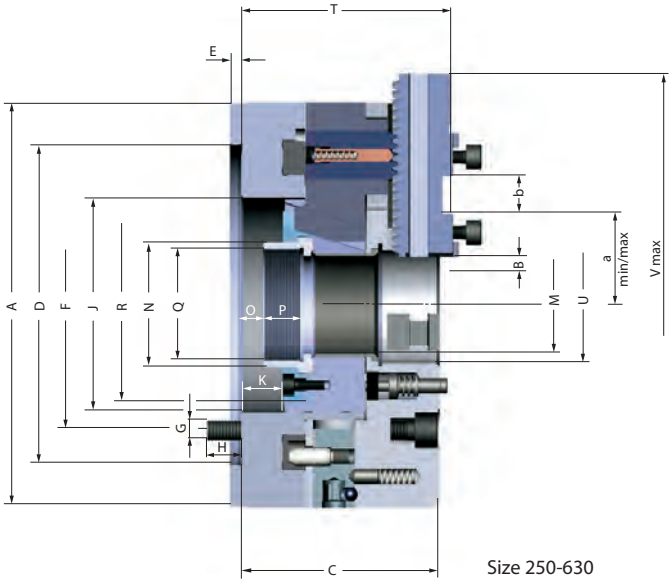
Gripping force/operating power diagram



DURO-NC

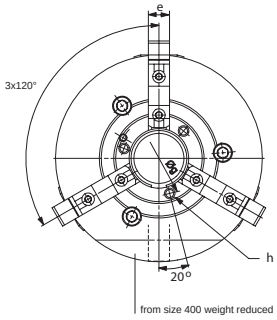


Size 140-200



Size 250-630

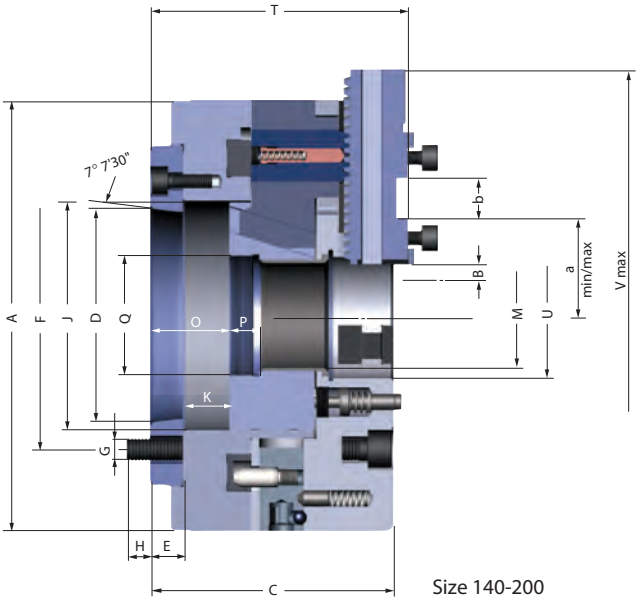
Tool group C 15
Type 503-10 **3 jaws** power chuck **DURO-NC**,
with **quick jaw change systems**, **central jaw unlocking**, **angle-serrated**
Adaptor recess, mounting dimensions to **DIN 6353**



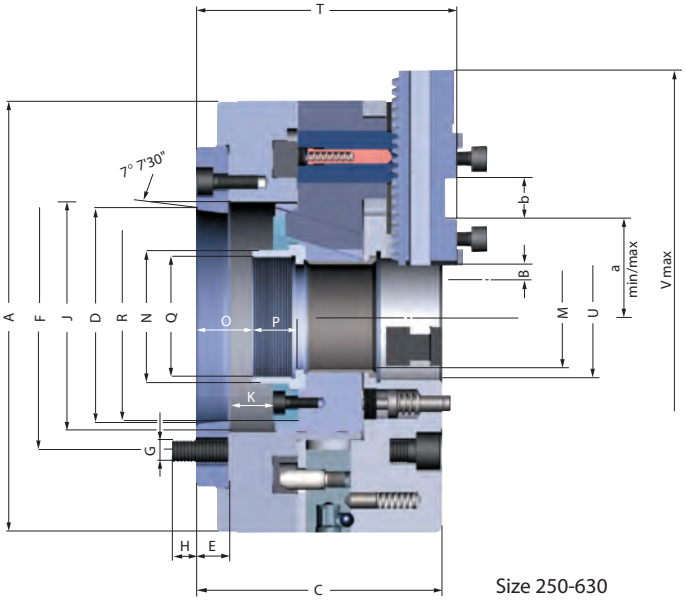
Item no.	159455 ●	159456 ●	159457 ●	159458 ●	159459 ●	159460 ●	159461 ■	159462 ▲
Size	140	175	200	250	315	400	500	630
A	145	175	215	260	320	400	500	630
Jaw travel B	4,9	6,7	7	7	8,25	10,1	11,5	11,5
C	83	99	105	126	152	149	149	169
Mount D^{H6}	120	140	170	220	300	380	380	380
E	6	6	6	6	6	6	6	6
F	104,8	104,8	133,4	171,4	235	330,2	330,2	330,2
G	3 x M 10	3 x M 10	3 x M 12	3 x M 16	3 x M 20	3 x M 24	3 x M 24	6 x M 24
H	18	15	18	21	29	35	35	36
J	80	88	114	147	173	210	210	286
Wedge stroke K	16	22	23	27	33	46	46	46
M	35	43	52	72	91	108	108	140
N	-	-	-	-	-	124	124	160
O min.	0,5	0	0	0	0	-61	-61	-41
O max.	16,5	22	23	27	33	-15	-15	5
P	9	10	15	15	19	35	35	25
Q	M 45 x 1,5	M 50 x 1,5	M 60 x 1,5	M 80 x 1,5	M 100 x 2	M 115 x 2	M 115 x 2	M 148 x 2
R	-	-	-	130	160	169	169	219
T	89	105	112	134	160,6	158,6	158,6	185
U	40	50	62	81	103	120	120	192
V max.	181	236	294	351	423	523	570	771
a min.	31,4	33,2	35,5	42,8	52,3	67,1	73,5	86,8
a max.	53,2	62,3	79,5	91,1	115,7	135,5	159	206,1
b	18	18	20	20	26	30	30	40
e	18	20	22	26	32	45	45	65
Ø g	54	64	76	93	120	140	140	210
h	M 5 x 8	M 6 x 10	M 6 x 10	M 6 x 10	M 6 x 10	M 8 x 12	M 8 x 12	M 8 x 12
Maximum draw bar pull kN	25	30	50	65	80	110	110	150
Max. total clamping force approx. kN	49	60	110	140	190	240	240	330
Max. admissible speed min^{-1}	6300	5300	5000	4300	3200	2700	2000	1500
Moment of inertia J kgm^2	0,029	0,068	0,162	0,39	1,08	2,5	5	15,4
Weight without jaws approx. kg	11	18	28	46	85	126	185	310

● from stock ■ 4 - 6 weeks ▲ on request

DURO-NC

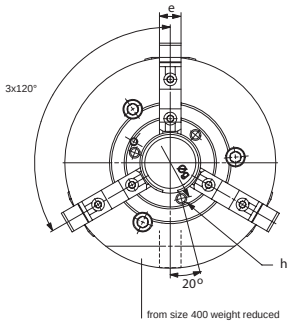


Size 140-200



Size 250-630

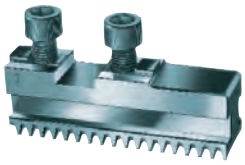
Tool group C 15
Type 503-12 **3 jaw** power chuck **DURO-NC**,
with **quick jaw change system**, **central jaw unlocking, angle-serrated**
Short taper mount for **ISO 702-1** (DIN 55026/55021)



Item no.	159463 ■	159464 ■	159465 ■	159466 ■	159467 ■	159468 ■	159469 ▲	159470 ▲
Size	140	175	200	250	315	400	500	630
A	145	175	215	260	320	400	500	630
Jaw travel B	4,9	6,6	7	7	8,25	10,1	11,5	11,5
C	97,6	113,6	121,2	143,8	171,4	189	189	209
Short taper D (KK)	5	5	6	8	11	11	11	15
E	14,6	14,6	16,2	17,8	19,4	40	40	40
F	104,8	104,8	133,4	171,4	235	235	235	330,2
G	3 x M 10	3 x M 10	3 x M 12	3 x M 16	3 x M 20	6 x M 20	6 x M 20	6 x M 24
H	18	15	17	23	30	31,5	31	34,5
J	80	88	114	147	173	210	210	286
Wedge stroke K	16	22	23	27	33	46	46	46
M	35	43	52	72	91	108	108	140
N	-	-	-	-	-	124	124	160
O min.	15,1	14,6	16,2	17,8	19,4	-21	-21	-1
O max.	31,1	36,6	39,2	44,8	52,4	25	25	45
P	9	10	15	15	19	35	35	25
Q	M 45 x 1,5	M 50 x 1,5	M 60 x 1,5	M 80 x 1,5	M 100 x 2	M 115 x 2	M 115 x 2	M 148 x 2
R	-	-	-	130	160	169	169	219
T	103,6	119,6	128,2	151,8	180	198,6	198,6	225
U	40	50	62	81	103	120	120	192
V max.	181	236	294	351	423	523	570	771
a min.	31,4	33,2	35,5	42,8	52,3	67,1	73,5	86,8
a max.	53,2	62,3	79,5	91,1	115,7	135,5	159	206,1
b	18	18	20	20	26	30	30	40
e	18	20	22	26	32	45	45	65
Ø g	54	64	76	93	120	140	140	210
h	M 5 x 8	M 6 x 10	M 6 x 10	M 6 x 10	M 6 x 10	M 8 x 12	M 8 x 12	M 8 x 12
Maximum draw bar pull kN	25	30	50	65	80	110	110	150
Max. total clamping force approx. kN	49	60	110	140	190	240	240	330
Max. admissible speed min^{-1}	6300	5300	5000	4300	3200	2700	2000	1500
Moment of inertia J kgm^2	0,031	0,073	0,167	0,42	1,15	3	6,6	16,4
Weight without jaws approx. kg	12	19	29	50	90	150	210	330

Jaws DURO-NC

Tool group A28
Type 002 **Base jaw GB**, set with mounting bolts



Item no.	Chuck Size	Number of jaws	Contents of delivery	Jaw length	Jaw width
140636 ●	140	3	set	62	18
094004 ●	175	3	set	74	20
094005 ●	200	3	set	90	22
094006 ●	250	3	set	110	26
094007 ●	315	3	set	125	32
094044 ●	400/500	3	set	160	45
140194 ●	630	3	set	230	65

Tool group A28
Type 002 **Unstepped top jaw AB**, set
standard design, soft, material 16MnCr5

Item no.	Chuck Size	Number of jaws	Contents of delivery	Jaw length	Jaw height	Jaw width
094008 ●	140/175	3	set	85	36,5	20,3
094009 ●	200	3	set	105	40	22
094010 ●	250	3	set	125	50	30,4
094011 ●	315	3	set	145	50	34,3
094046 ●	400/500	3	set	180	73	50,5
140716 ●	630	3	set	260	102	68

Tool group A28
Type 003 **Reversible top jaw UB**, set
hardened

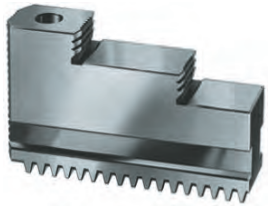
Item no.	Chuck Size	Number of jaws	Contents of delivery	Jaw length	Jaw height	Jaw width
094012 ●	140/175	3	set	61,5	32,5	20,4
094013 ●	200	3	set	70,5	38	24,4
094014 ●	250	3	set	92	50	34,4
094015 ●	315	3	set	107	56	35,7
094045 ●	400/500	3	set	130	72	50,4
140715 ●	630	3	Satz	185	102	68

Hardened jaws, supplied as supplement or as spares, must be ground on the chuck.
In case of a subsequent jaw delivery please return the chuck.

Tool group A28
Type 000 **Unstepped Jaw BL**, set
unstepped, soft, material 16MnCr5

Item no.	Chuck Size	Number of jaws	Contents of delivery	Jaw length	Jaw height	Jaw width
626158 ●	140	3	set	70,5	41,5	18
241699 ●	175	3	set	84,4	45	20
249678 ●	200	3	set	98,4	60	22
249679 ●	250	3	set	118,7	70	26
249680 ●	315	3	set	136,6	79	32
249681 ●	400/500	3	set	173,6	93	45

Tool group A28
Type 000 **One-piece jaw EB**, set; hardened



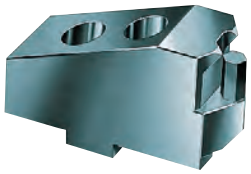
Item no.	Chuck Size	Number of jaws	Contents of delivery	Jaw length	Jaw height	Jaw width
140764 ●	140	3	set	62	49,5	18
094000 ●	175	3	set	77,7	45	20
094001 ●	200	3	set	94,7	60	22
094002 ●	250	3	set	114	70	26
094003 ●	315	3	set	130	79	32
094043 ●	400/500	3	set	167	93	45

Stepped and hardened jaws, supplied as supplement or as spares, must be ground on the chuck.
In case of a subsequent jaw delivery please return the chuck.

For the complete range of clamping jaws visit our website www.spannbacken.biz

Jaws DURO-NC

Tool group C 21
Type 544-00 **reversible claw-type top jaws**, **standard design**, tongue and groove, **small clamping range**, 1 piece hardened

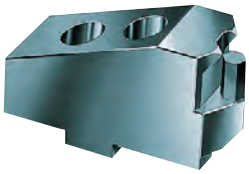


Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
137060 ●	140/175	66	37,5	24
137119 ●	400/500	124	62	50
151289 ■	630	144	78	70

Tool group C 21
Type 544-00 **reversible claw-type top jaws**, **standard design**; tongue and groove, **large clamping range**, 1 piece, hardened

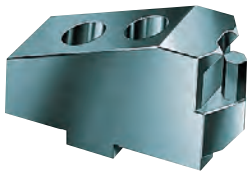
Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
137061 ●	140/175	66	37,5	20
137064 ●	200	81	43	24
137108 ●	250	90	55	34
137114 ●	315	100	62	34
137120 ●	400/500	124	62	50

Tool group C 21
Type 544-00 **reversible claw-type top jaws**, **standard design**; tongue and groove, **middle sized clamping range**, 1 piece, hardened



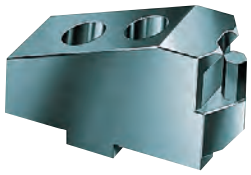
Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
137062 ●	140/175	56	37,5	20
137065 ●	200	66	43	24
137109 ●	250	72	55	34
137115 ●	315	86	62	34
137121 ●	400/500	100	62	50

Tool group C 21
Type 544-05 **reversible claw-type top jaws**, **large design**; tongue and groove, **small clamping range**, 1 piece, hardened



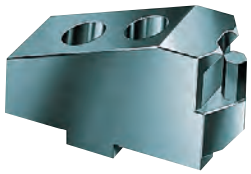
Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
137066 ●	200	79	43	34
137110 ●	250	80	55	50
137116 ●	315	93	62	50

Tool group C 21
Type 544-05 **reversible claw-type top jaws**, **large design** tongue and groove, **large clamping range**, 1 piece, hardened



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
137067 ●	200	81	43	34
137111 ●	250	90	55	50
137117 ●	315	106	62	50

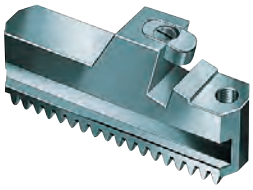
Tool group C 21
Type 544-05 **reversible claw-type top jaws**, **large design** tongue and groove, **middle sized clamping range**, 1 piece, hardened



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
137068 ●	200	66	43	34
137112 ●	250	72	55	50
137118 ●	315	86	62	50

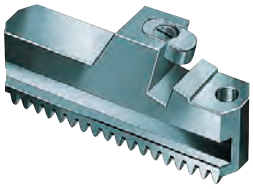
Jaws DURO-NC

Tool group C 21
Type 545-00 **Draw-down jaws**, without clamping inserts **diagonally toothing**, 1 piece, without clamping inserts



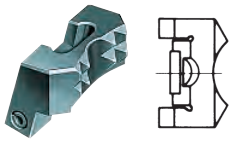
Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
151030 ●	140	63	41,5	18
141037 ●	175	84,4	43,5	20
141039 ●	200	98,4	47,5	22
141041 ●	250	118,7	58,5	26
141043 ●	315	136,4	63,9	32
141045 ●	400/500	173,6	73,4	45

Tool group C 21
Type 545-00 **Draw-down jaws**, **additional clamping range**, for interchangeable clamping inserts **diagonally toothing**, 1 piece, without clamping inserts



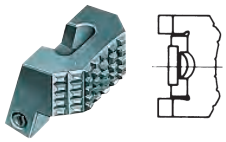
Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
151031 ●	140	63	41,5	18
141038 ●	175	84,4	43,5	20
141040 ●	200	98,4	47,5	22
141042 ●	250	118,7	58,5	26
141044 ●	315	136,4	63,9	32
141046 ●	400	173,6	73,4	45
141048 ●	500	173,6	73,4	45

Tool group C 15
Type 545-60 **Interchangeable clamping inserts**, 1 piece **with claws**



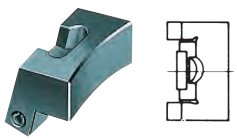
Item no.	Chuck Size
151029 ●	140
141049 ●	175/200
141052 ●	250/315
141055 ●	400/500/630

Tool group C 15
Type 545-70 **Interchangeable clamping inserts**, 1 piece **with serrated toothing**



Item no.	Chuck Size
151039 ●	140
141050 ●	175/200
141053 ●	250/315
141056 ●	400/500

Tool group C 15
Type 545-80 **Interchangeable clamping inserts**, 1 piece **with heat treatable surface**



Item no.	Chuck Size
151040 ●	140
141051 ●	175/200
141054 ●	250/315
141057 ●	400/500

● from stock ■ 4 - 6 weeks ▲ on request

Accessories DURO-NC

Tool group C 15

Type 0040-Y **Mounting screws**

Item no.	Size	Contents of delivery	Thread
200182 ●	140/175/200	piece	M8x1x22
200183 ●	250	piece	M12x1,5x30
202402 ●	315	piece	M12x1,5x35
227618 ●	400/500	piece	M16x1,5x40
249388 ●	630	piece	M20x50

Socket head cap screw to DIN 912, 12.9

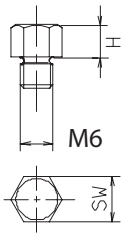
Tool group C 15

Type 1028 **Special grease** F80 for **lathe chucks**
for lubrication and conservation of chucking power

Item no.	Design	Contents
308555 ●	Cartridge	0,5 kg
028975 ●	Tin	1 kg

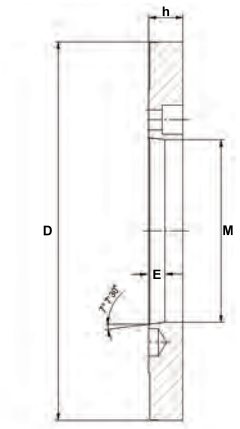
Tool group C 15

Type 544-00 **Changeable workpiece rests**
(in different lengths)



Item no.	H	M	Key-width SW
289188 ●	5	M6	9
138950 ●	10	M6	9
725581 ●	15	M6	9

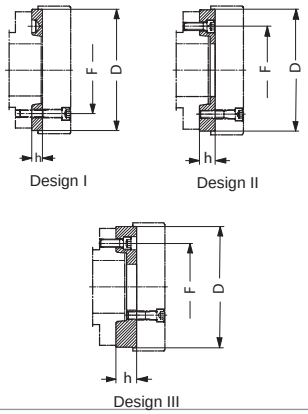
Tool group A09
Type 619-30 **Short-taper adapter plate ISO 702-1** (DIN 55026/55021) - **ASA B 5.9** (without mounting bolts)
finished on machine side, faced on chuck side, especially



Id.-Nr.	Spindle nose size	h	E	M	D
144933 ▲	3	18	40	40	125
145296 ▲	4	18	40	40	125
145328 ▲	3	18	40	40	160
145342 ▲	4	18	40	40	160
145343 ▲	5	21	50	50	160
145344 ▲	4	21	50	50	200
145345 ▲	5	21	50	50	200
145346 ▲	6	27	50	50	200
145347 ▲	4	27	63	63	250
145348 ▲	5	27	63	63	250
145349 ▲	6	27	63	63	250
145350 ▲	8	27	63	63	250
145351 ▲	5	36	63	63	315
145352 ▲	6	36	63	63	315
145353 ▲	8	36	63	63	315
145354 ▲	11	36	63	63	315
145355 ▲	6	40	63	63	400
145356 ▲	8	40	63	63	400
145357 ▲	11	40	63	63	400
145358 ▲	15	40	63	63	400
145359 ▲	8	42	80	80	500
145360 ▲	11	42	80	80	500
145364 ▲	15	42	80	80	500

Accessories DURO-NC

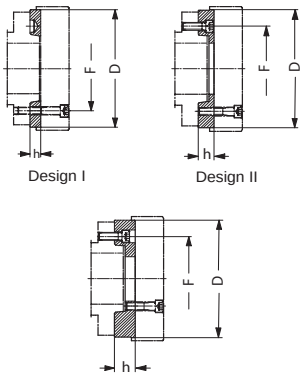
Type 594-32 Intermediate adaptor plates
with cylindrical centre mount DIN 6353 for three-jaw chucks
Mounting from front to ISO 702-1 (DIN 55026/55021) and ASA B 5.9 A1/A2 with metric mounting bolts



Id.-Nr.	Spindle nose size	Size	Design	h	F	D
159878 ●	5	140	I	15	104,8	120
145153 ●	5	175	I	15	104,8	140
145297 ●	6	175	III	35	133,4	140
145155 ●	6	200	I	16	133,4	170
145131 ●	6	250	II	27	133,4	220
145135 ●	8	200	III	39	171,4	170
145157 ●	8	250	I	18	171,4	220
145139 ●	8	315	II	38	171,4	300
1049147 ●	8	400	II	56	171,4	380
145143 ●	11	250	III	48	235	220
145159 ●	11	315	I	19	235	300
145147 ●	11	400	II	40	235	380
145161 ●	15	400/500/630	I	21	330,2	380

All fastening parts are included
Intermediate adaptors for two- and four-jaw-design on request

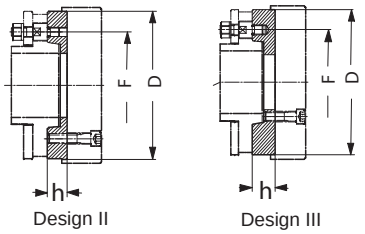
Tool group C 15
Type 594-35 Intermediate adaptor plates
with cylindrical centre mount DIN 6353 for three-jaw chucks
Mounting from front to ASA B 5.9 A1/A2 with inch threaded mounting bolts



Id.-Nr.	Spindle nose size	Size	Design	h	F	D
159878 ●	5	140	I	15	104,8	120
145153 ●	5	175	I	15	104,8	140
145301 ■	6	175	III	35	133,4	140
145155 ●	6	200	I	16	133,4	170
145194 ■	6	250	II	27	133,4	220
145196 ■	8	315	II	39	171,4	300
145157 ●	8	250	I	18	171,4	220
145198 ■	8	315	II	38	171,4	300
145200 ■	11	250	III	48	235	220
145159 ●	11	315	I	19	235	300
145202 ■	11	400/500	II	40	235	380
145161 ●	15	400/500/630	I	21	330,2	380

All fastening parts are included
Intermediate adaptors for two- and four-jaw-design on request

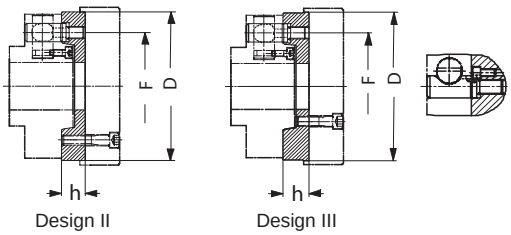
Tool group C 15
Type 594-33 Intermediate adaptor plates
with cylindrical centre mount DIN 6353 for three-jaw chucks
Bayonet fixing to ISO 702-3 (DIN 55027)/ DIN 55022



Id.-Nr.	Spindle nose size	Size	Design	h	F	D
145238 ●	5	175	II	21	104,8	140
145303 ●	6	175	III	35	133,4	140
145240 ■	6	200	II	22	133,4	170
145214 ■	6	250/315	II	27	133,4	220
145218 ■	8	200	III	39	171,4	170
145242 ■	8	250	II	30	171,4	220
145222 ■	8	315	II	38	171,4	300
145226 ■	11	250	III	48	235	220
145246 ■	11	315	II	36	235	300
145230 ■	11	400/500	II	40	235	380
145248 ■	15	400/500	II	40	330,2	380
145250 ■	15	630	I	40	330,2	380

All fastening parts are included
Intermediate adaptors for two- and four-jaw-design on request

Tool group C 15
Type 594-36 Intermediate adaptor plates
with cylindrical centre mount DIN 6353 for three-jaw chucks
Camlock fixing to DIN 55029/ASA B 5.9 D1



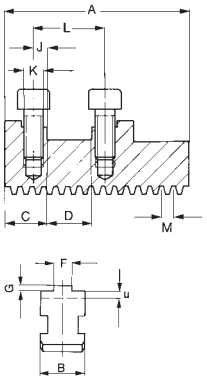
Id.-Nr.	Spindle nose size	Size	Design	h	F	D
145282 ■	5	175	II	30	104,8	140
145594 ■	6	175	III	43	133,4	140
145284 ■	6	200	II	35	133,4	170
145258 ■	6	250	II	35	133,4	220
145262 ■	8	200	II	46	171,4	170
145286 ■	8	250	II	38	171,4	220
145266 ■	8	315	II	38	171,4	300
145270 ■	11	250	III	53	235	220
145290 ■	11	315	II	45	235	300
145274 ■	11	400/500	II	45	235	380
145292 ■	15	400/500	II	50	330,2	380
145294 ■	15	630	I	50	330,2	380

All fastening parts are included
Intermediate adaptors for two- and four-jaw-design on request

● from stock ■ 4 - 6 weeks ▲ on request

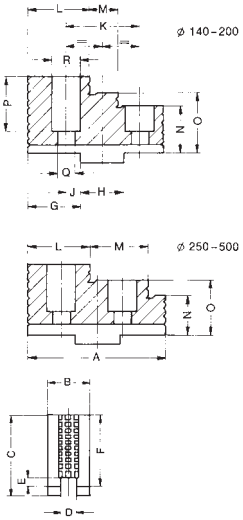
Jaw dimensions DURO-NC

Base jaw GB with screws



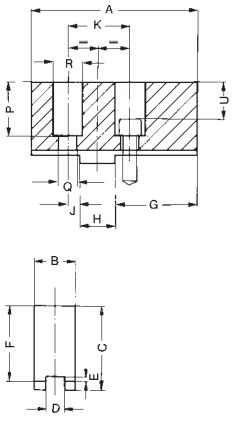
Chuck-size	140	160/175	200	250	315	400/500	630
Type	503-80	002-20	002-25	002-30	002-35	002-40	002-50
Id.-Nr. 3-jaw	**140636**	**094004**	**094005**	**094006**	**094007**	**094044**	**140194**
A	56	74	90	110	125	160	230
B	18	20	22	26	32	45	65
C	19	19	23	26	30	35	52
D^{H6}	18	18	20	20	26	30	40
E	5	5	5,5	5,5	6,5	7,5	9
F	8	8	10	12	12	18	24
G	2,5	2,5	3	3	3	4	4
J	7	7	10	10	14	15	21
K	M8x1	M8x1	M8x1	M12x1,5	M12x1,5	M16x1,5	M20
L	32	32	40	40	54	60	82
M	3,63	4,84	4,89	6,03	7,05	8,55	8,53
Weight/set kg	0,43	0,8	1,1	2,1	3,2	7	17

Reversible top jaws UB, hardened



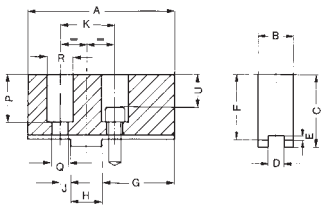
Chuck-size	140/160/175	200	250	315	400/500	630
Type	003-20	003-25	003-30	003-35	003-40	003-50
Id.-Nr. 3-jaw	**094012**	**094013**	**094014**	**094015**	**094045**	**140715**
A	61,5	70,35	92	107	130	185
B	20,4	24,4	34,4	37,5	50,4	68
C	37	43	55	62	79	110
D	8	10	12	12	18	24
E	3	3,5	3,5	3,5	4,5	4,5
F	32,5	38	50	56	72	102
G	22,5	25,5	30	35,5	41,4	59
H	18	20	20	26	30	40
J	7	10	10	14	15	21
K	32	40	40	54	60	82
L	26,5	28,5	41	40	51	80
M	13	14	40,5	54	71	80
N	17,5	18	22	26	32	42
O	25	28	36	41	52	72
P	23,5	29	39	40	57	82
Q	9	9	14	14	18	22
R	15	15	20	20	26	33
Weight/set kg	0,6	1,0	2,4	3,4	7,6	19

Soft top jaws AB, material 16MnCr5



Chuck-size	140/160/175	200	250	315	400/500	630
Type	002-20	002-25	002-30	002-35	002-40	002-50
Id.-Nr. 3-jaw	**094008**	**094009**	**094010**	**094011**	**094046**	**140716**
A	85	105	125	145	180	260
B	20,3	22	30,4	34,3	50,5	68
C	41	45	55	56	80	110
D	8	10	12	12	18	24
E	3	3,5	3,5	3,5	4,5	4,5
F	36,5	40	50	50	73	102
G	42	50	70	74	100	150
H	18	20	20	26	30	40
J	7	10	10	14	15	21
K	32	40	40	54	60	82
P	27,5	31	39	34	58	83
Q	9	9	14	14	18	22
R	15	15	20	20	26	33
U	19,5	23	27	22	42	63
Weight/set kg	1,3	2,2	4,5	6,8	13,5	40

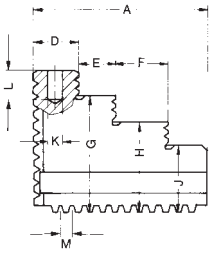
Soft top jaws AB, larger design, material 16MnCr5

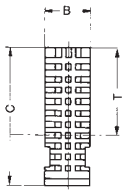


Chuck-size	140/160/175	200	250	315		
Type	000-20	002-25	002-30	002-35		
Id.-Nr. 3-jaw	**137055**	**137056**	**137057**	**137058**		
A	85	105	125	145		
B	24,4	34,4	50,4	50,4		
C	47	56	80	80		
Weight/set kg	1,8	4,2	10,05	11,5		

Jaw dimensions DURO-NC

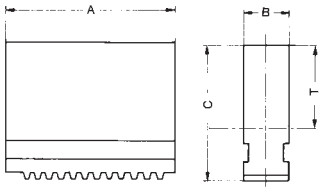
One-piece reversible jaws EB





Chuck size	140	160/175	200	250	315	400/500	
Type	503-80	000-20	000-25	000-30	000-35	000-40	
Item no. 3-jaw	**140764**	**094000**	**094001**	**094002**	**094003**	**0940043**	
A	62	77,7	94,7	114	130	167	
B	18	20	22	26	32	45	
C	49,5	45	60	70	79	93	
D	16,6	20,6	23	41,5	40,2	50,6	
E	15,9	18,9	19,5	40,3	54	71	
F	18	22	28	-	-	-	
G	42	37,5	50	56	64	73	
H	34,5	30	40	-	-	-	
J	27	22,5	30	42	49	53	
K	7	8	10	13	13	20	
L	16	16	15	19,5	19,5	30	
M	3,63	4,84	4,89	6,03	7,05	8,55	
T	29	24	35	41	44,5	54	
Weight/set kg	1,2	1,5	1,9	3,4	5,5	11	

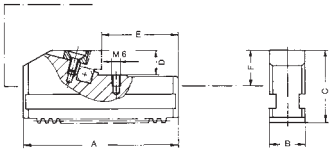
Soft one-piece jaws BL, material 16MnCr5

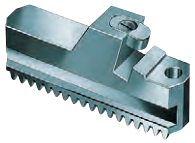


Chuck size	140	160/175	200	250	315	400/500	
Type	503-80	000-20	000-25	000-30	000-35	000-40	
Item no. 3-jaw	**626158**	**241699**	**249678**	**249679**	**249680**	**249681**	
A	70,5	84,5	98,4	118,7	136,6	173,6	
B	18	20	22	26	32	45	
C	41,5	45	60	70	79	93	
T	21	24	35	41	44,5	54	
Weight/set kg	1,3	1,5	2,7	4,4	7,2	15	

Draw-down jaws NB for interchangeable clamping inserts (jaw without insert)

Chuck front side

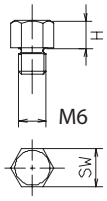




Chuck size	140	160/175	200	250	315	400	500
Type	545-00	545-00	545-00	545-00	545-00	545-00	545-00
Item no. piece	**151030**	**141037**	**141039**	**141041**	**141043**	**141045**	**141045**
A	63	84,4	98,4	118,7	136,4	173,6	173,6
B	18	20	22	26	32	45	45
C	41,5	43,5	47,5	58,5	63,9	73,4	73,4
D	15	15	15	20	20	25	25
E	10,5	11	12	12	12	12	12
F	22,5	22,5	22,5	29,5	29,5	34,3	34,3
Capacities external	40-85	29-80	34-112	38-133	43-170	48-185	48-250
Capacities internal	124-168	162-205	190-263	235-325	275-398	360-490	354-556

Draw-down jaws NB for interchangeable clamping inserts (jaw without insert)
Jaws for further clamping ranges

Accessories: Changeable workpiece rests (in different lengths)



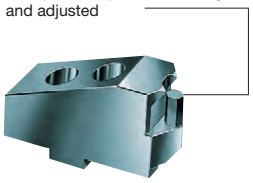
Chuck size	140	160/175	200	250	315	400	500
Type	545-00	545-00	545-00	545-00	545-00	545-00	545-00
Item no. Piece	**151031**	**141038**	**141040**	**141042**	**141044**	**141046**	**141048**
E	31,5	32	48	58	72	77	110
Capacities external	80-125	70-120	104-185	128-225	160-290	175-316	240-450
Capacities internal	85-126	120-164	120-192	145-236	158-278	230-362	162-360

	2		
Item no.	**289188**	**138950**	**725581**
M	M6		
H	5	10	15
SW	9		

Jaw dimensions DURO-NC

Reversible claw-type top jaws KB, Standard design

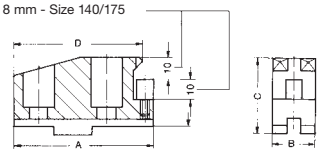
Workpiece stop, can be changed and adjusted



Chuck size	140	175	400	500	630
Jaw design	Type 544-00 Standard design				
Item no. Piece	**137060**		**137119**		**151289**
A	66		124		144
B	24		50		70
C	37,5		62		78
D	17		39		61
Capacities external	115-158	115-209	-	-	230-655
Capacities internal	50-84	50-136	100-350	100-410	185-610

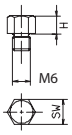
Jaws for further clamping ranges

8 mm - Size 140/175



Chuck size	140	175	200	250	315	400	500
Jaw design	Type 544-00 Standard design						
Item no. Piece	**137061**		**137064**	**137108**	**137114**	**137120**	
A	66		81	90	100	124	
B	20		24	34	34	50	
C	37,5		43	55	62	62	
D	61		71	78	90	112	
Capacities external	24-60	24-110	40-130	50-185	50-222	50-270	50-335
Capacities internal	142-182	142-236	166-288	180-350	212-410	280-515	280-580

Accessories: Changeable workpiece rests (in different lengths)

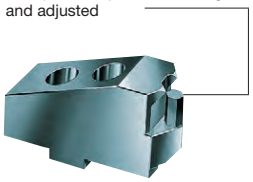


Id.-Nr.	289188	138950	725581
M	M6		
H	5	10	15
SW	9		

Chuck size	140	175	200	250	315	400	500
Jaw design	Type 544-00 Standard design						
Item no. Piece	**137062**		**137065**	**137109**	**137115**	**137121**	
A	56		66	72	86	100	
B	20		24	34	34	50	
C	37,5		43	55	62	62	
D	29		38,5	38	42	48	
Capacities external	74-118	47-170	76-200	94-260	120-320	165-400	165-465
Capacities internal	80-130	80-176	98-224	104-272	116-315	155-395	155-455

Reversible claw-type top jaws KB, large design

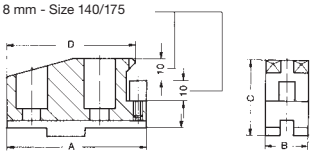
Workpiece stop, can be changed and adjusted



Chuck size	200	250	315
Jaw design	Type 544-05 Large design		
Item no. Piece	**137066**	**137110**	**137116**
A	79	80	93
B	34	50	50
C	43	55	62
D	29,5	29	30
Capacities external	-	-	-
Capacities internal	72-185	70-235	80-275

Jaws for further clamping ranges

8 mm - Size 140/175

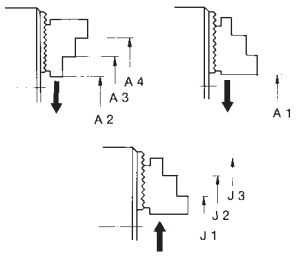


Chuck size	200	250	315
Jaw design	Type 544-05 Large design		
Item no. Piece	**137067**	**137111**	**137117**
A	81	90	100
B	34	50	50
C	43	55	62
D	71	78	90
Capacities external	40-130	50-185	50-222
Capacities internal	166-288	180-350	212-410

Chuck size	200	250	315
Jaw design	Type 544-05 Large design		
Item no. Piece	**137068**	**137112**	**137118**
A	66	72	86
B	34	50	50
C	43	55	62
D	38,5	38	42
Capacities external	76-200	94-260	120-320
Capacities internal	98-224	104-272	116-315

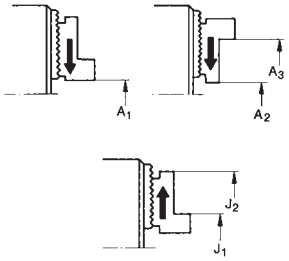
Chucking capacities DURO-NC

Chucking capacities with reversible top jaws UB



Chuck size		140	160	175	200	250	315	400	500	630
with reversible jaws	Type	003-20	003-20	003-20	003-25	003-30	003-35	003-40	003-40	003-50
	Jaw position									
External chucking	A1	10-58	5-51	5-60	5-65	8-93	30-125	55-156	45-230	42-468
	A2	14-62	45-94	45-103	58-118	-	-	-	-	-
	A3	57-105	89-138	89-147	114-174	82-168	93-210	119-260	122-326	112-487
	A4	89-131	115-164	115-173	142-202	163-249	201-317	260-401	264-470	275-650
Internal chucking	J1	65-112	67-108	67-117	71-126	99-178	120-207	155-260	155-460	195-615
	J2	91-138	93-135	93-144	99-154	178-257	207-313	260-400	265-600	355-780
	J3	133-182	135-177	135-186	154-209	-	-	-	-	-

1) Shallow design chuck



Chuck size		1000	1250	1400	1600
with reversible jaws	Type	538-09	538-09	538-09	538-09
	Jaw position				
External chucking	A1	100-640	100-890	100-1040	100-1240
	A2	180-720	180-970	180-1120	180-1320
	A3	450-1000	450-1250	450-1400	450-1600
Internal chucking	J1	200-750	200-1000	200-1150	200-1350
	J2	480-1030	480-1280	480-1430	480-1630

Notes

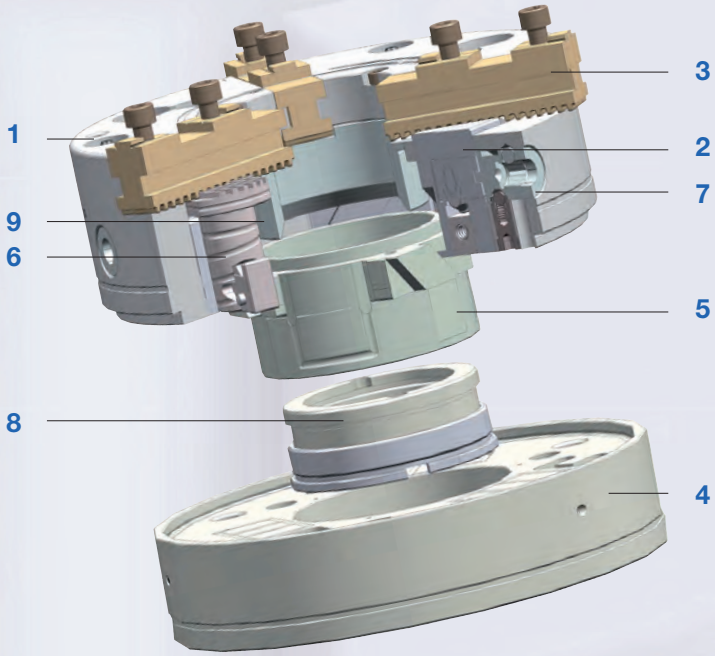
DURO-NCSE

Quick-acting jaw change system with individual jaw unlocking

The individual locking arrangement means that handling is particularly easy with special large jaw pads when the workpiece requires them: Push key till stop, then turn in arrow direction

Technical features:

- Individual jaw unlocking for moving, changing and turning of jaws
- High workholding accuracy and gripping force
- Power transmission via taper bar system
- Low loss of clamping forces due to low jaw weight and stabilisation of taper bars in chuck body
- For very high speed
- Made of steel, all wearing parts hardened and ground
- All parts completely case hardened
- Base jaw guide lubricated
- The toothing of the wedge bar always is in full contact with the jaw
- Used in conjunction with RÖHM actuating cylinders with safety device SZS, OVS, LHS-L, LVS, EHS and EVS the power chucks DURO-NCSE meet the requirements of the German Employers' Insurance Association
- The safety key can only be removed when the jaws are locked. This safety key, in conjunction with the key switch integrated in the machine, additionally prevents an unintentional start of the machine spindle when the jaws are unlocked.



Components DURO-NCSE

1. Body
2. Wedge bar
3. Base jaw
4. Adaptor plate
5. Piston
6. Locking bolt
7. Turnable bolt
8. Turnable adaptor
9. Guiding sleeve

Scope of delivery:

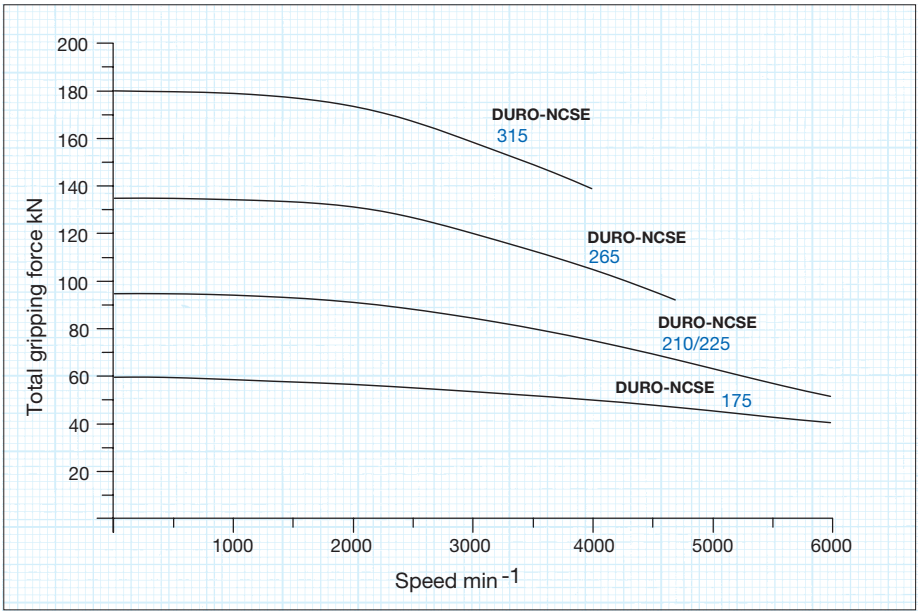
Chuck and jaw mounting screws, safety key, assembly wrench, base jaws.

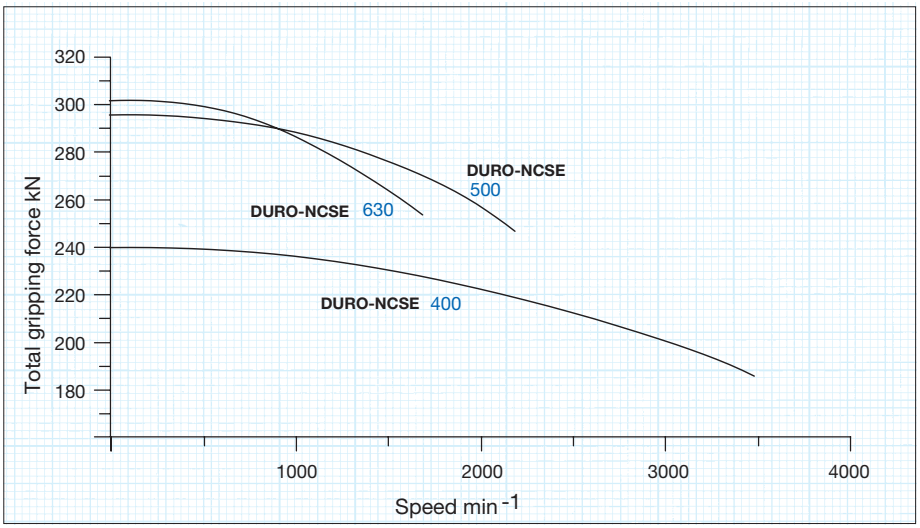
DURO-NCSE

Gripping force / speed diagram

The loss of gripping force was determined experimentally on a chuck with matched UB top jaws. It is largely independent of the initial gripping force at zero speed.

curve:
max. centrifugal force of top jaw

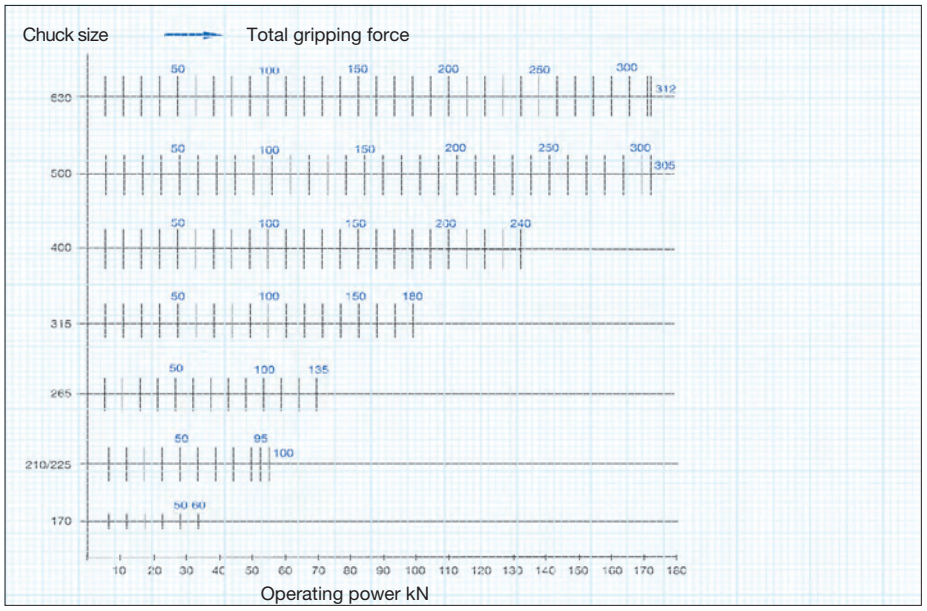




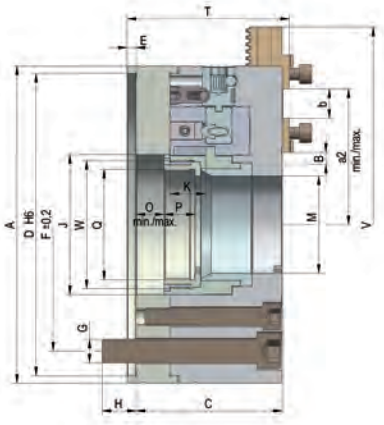
To obtain the specified gripping forces, the chuck must be in a perfect condition and lubricated with F 80 lubricant recommended by Röhm. Measuring point near chuck face.

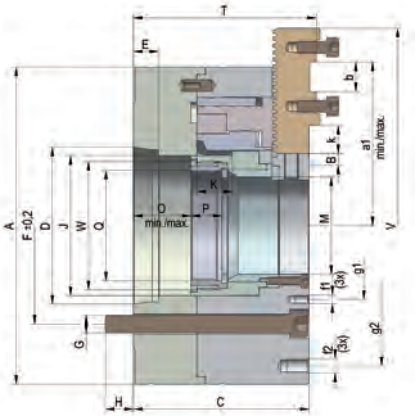
Example: For a DURO-NC chuck size 250 and an applied operating power of 40 kN, the total gripping force is approx. 92 kN.

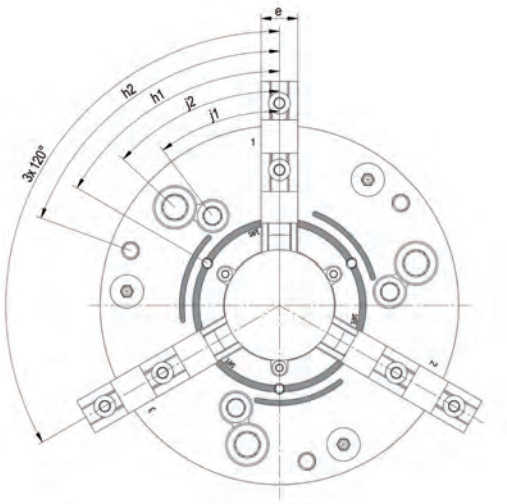
Gripping force/operating power diagram



DURO-NCSE with base jaws, individual jaw unlocking, straight teeth





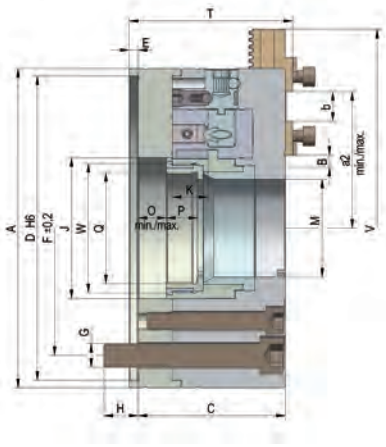


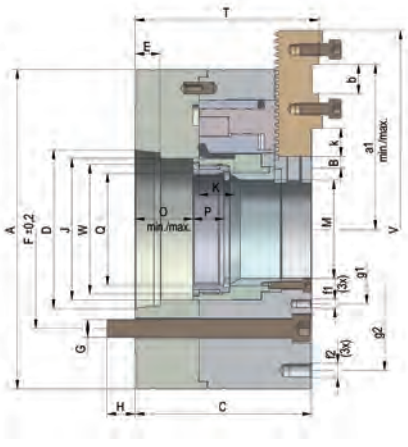
Tool group C 15
Type 523-50 (ZA) / -60 (KK)
3 jaw power-chucks
DURO-NCSE,
quick-acting jaw change system,
with **individual jaw unlocking**,
with **straight teeth**
adaptor recess
DIN 6353 / short taper mount
ISO 702-1 (DIN 55026/55021)

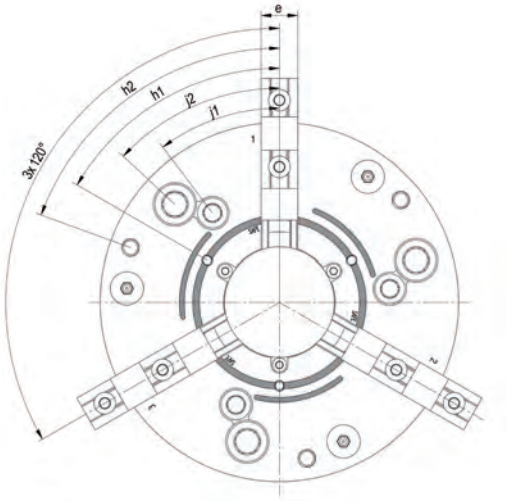
Item no.	438403 ●	438404 ■	438405 ■	438406 ●	438407 ■	438408 ■	438409 ●	438410 ■	438411 ■	438412 ●	438413 ●	438414 ■	438415 ●
Size	170	170	170	210	210	210	225	225	225	265	265	265	265
Toothing	4,712	4,712	4,712	4,712	4,712	4,712	4,712	4,712	4,712	5,498	5,498	5,498	5,498
A	170	170	170	210	210	210	225	225	225	265	265	265	265
Jaw travel B	5,6	5,6	5,6	6,3	6,3	6,3	6,3	6,3	6,3	8,8	8,8	8,8	8,8
C	87	99	101	101	115	117	101	115	117	128	128	136	138
D	ZA 140	KK 5	KK 6	ZA 170	KK 6	KK 8	ZA 170	KK 6	KK 8	ZA 170	ZA 220	KK 6	KK 8
E	6	16	17	6	17	19	6	17	19	6	6	17	19
F	104,8	104,8	133,4	133,4	133,4	171,4	133,4	133,4	171,4	133,4	171,4	133,4	171,4
G	M10	M10	M12	M12	M12	M16	M12	M12	M16	M12	M16	M12	M16
H	19	17	21	17	18	24	17	18	24	21	25	17	24
J	70	70	70	85	85	85	100	100	100	108	108	108	108
Wedge stroke K	18	18	18	20	20	20	20	20	20	28	28	28	28
M	45	45	45	52	52	52	68	68	68	77	77	77	77
O min.	2	14	16	2	15	17	2	15	17	1	1	15	17
O max.	20	32	34	22	39	41	22	39	41	29	29	43	45
P	17	17	17	21	21	21	21	21	21	22	22	22	22
Q	M52x1,5	M52x1,5	M52x1,5	M60x1,5	M60x1,5	M60x1,5	M78x1,5	M78x1,5	M78x1,5	M87x1,5	M87x1,5	M87x1,5	M87x1,5
T	93,7	105,7	107,7	105,9	119,9	121,9	105,9	119,9	121,9	130,5	130,5	144,5	146,5
V max.	183,5	183,5	183,5	250	250	250	266	266	266	313	313	313	313
W	M64x1,5	M64x1,5	M64x1,5	M75x1,5	M75x1,5	M75x1,5	M92x2	M92x2	M92x2	M98x1,5	M98x1,5	M98x1,5	M98x1,5
a min.	58,1	58,1	58,1	78,1	78,1	78,1	76,8	76,8	76,8	95,9	95,9	95,9	95,9
a max.	72,2	72,2	72,2	101,7	101,7	101,7	109,8	109,8	109,8	128,9	128,9	128,9	128,9
a 2 min.	49,1	49,1	49,1	59,1	59,1	59,1	57,7	57,7	57,7	64,8	64,8	64,8	64,8
a 2 max.	63,2	63,2	63,2	82,7	82,7	82,7	90,7	90,7	90,7	97,8	97,8	97,8	97,8
Index adjustment	3 (x4,712 =14,1)	3 (x4,712 =14,1)	3 (x4,712 =14,1)	5 (x4,712 =23,6)	5 (x4,712 =23,6)	5 (x4,712 =23,6)	7 (x4,712 =33)	7 (x4,712 =33)	7 (x4,712 =33)	6 (x5,5 =33)	6 (x5,5 =33)	6 (x5,5 =33)	6 (x5,5 =33)
b	18	18	18	20	20	20	20	20	20	20	20	20	20
e	20	20	20	22	22	22	22	22	22	26	26	26	26
f1	M6 /10	M6 /10	M6 /10	M6 /10	M6 /10	M6 /10	M6 /10	M6 /10	M6 /10	M8 /15	M8 /15	M8 /15	M8 /15
f2	M8 /15	M8 /15	M8 /15	M10 /15	M10 /15	M10 /15	M10 /15	M10 /15	M10 /15	M10 /15	M10 /15	M10 /15	M10 /15
g1	75	75	75	94	94	94	100	100	100	124	124	124	124
g2	142	142	142	190	190	190	205	205	205	220	220	220	220
h1	60°	60°	60°	60°	60°	60°	60°	60°	60°	60°	60°	60°	60°
h_2	35°	35°	35°	70°	70°	70°	70°	70°	70°	77°	77°	77°	77°
j1	40°	40°	40°	39°	39°	39°	39°	39°	39°	30°	30°	30°	30°
j2	50,5°	50,5°	50,5°	49°	49°	49°	49°	49°	49°	40°	40°	40°	40°
k	9	9	9	19	19	19	19	19	19	32	32	32	32
Maximum draw bar pull kN	33	33	33	52	52	52	52	52	52	73	73	73	73
Max. total clamping force approx. kN	60	60	60	95	95	95	95	95	95	135	135	135	135
Max. admissible speed min^{-1}	6300	6300	6300	6000	6000	6000	5500	5500	5500	4700	4700	4700	4700
Moment of inertia J kgm^2	0,07	0,07	0,07	0,155	0,155	0,155	0,235	0,235	0,235	0,46	0,46	0,46	0,46
Weight without jaws approx. kg	17	17	18	27	28	28	33	33	34	44	44	47	49

● from stock ■ 4 - 6 weeks ▲ on request

DURO-NCSE with base jaws, individual jaw unlocking, straight teeth







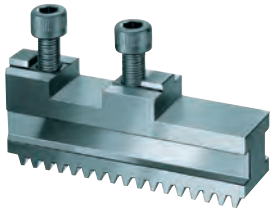
Tool group C 15
Type 523-50 (ZA) / -60 (KK)
3 jaw power-chucks
DURO-NCSE, **quick-acting jaw change system,**
with **individual jaw unlocking**,
with **straight teeth**
adaptor recess
DIN 6353 / short taper mount
ISO 702-1 (DIN 55026/55021)

Item no.	438366 ●	438367 ●	438368 ■	438369 ■	438370 ●	438371 ●	438372 ■	438373 ■	438374 ▲	438375 ▲	438376 ▲	438377 ▲	438378 ▲
Size	315	315	315	315	400	400	400	400	500	500	500	630	630
Toothing	5,498	5,498	5,498	5,498	5,498	5,498	5,498	5,498	7	7	7	7	7
A	315	315	315	315	400	400	400	400	500	500	500	630	630
Jaw travel B	9,1	9,1	9,1	9,1	9,8	9,8	9,8	9,8	11,4	11,4	11,4	12,6	12,6
C	130	130	146	148	138	138	156	157	162	180	181	179,5	198,5
D	ZA 220	ZA 300	KK 8	KK 11	ZA 300	ZA 380	KK 11	KK 15	ZA 380	KK 11	KK 15	ZA 520	KK 15
E	6	6	19	21	8	8	21	23	8	21	23	8	23
F	171,4	235	171,4	235	235	330,2	235	330,2	330,2	235	330,2	463,6	330,2
G	M16	M20	M16	M20	M20	M24	M20	M24	M24	M20	M24	M24	M24
H	27	27	26	24	26	36,5	28	37,5	36	30	37	36	37
J	140	140	140	140	175,5	175,5	175,5	175,5	207	207	207	235	235
Wedge stroke K	28	28	28	28	30	30	30	30	35	35	35	40	40
M	104	104	104	104	128	128	128	128	155	155	155	167	167
O min.	1,5	1,5	17,5	19,5	1,5	1,5	19,5	20,5	1,5	19,5	20,5	1,5	20,5
O max.	29,5	29,5	45,5	47,5	31,5	31,5	49,5	50,5	36,5	54,5	55,5	41,5	60,5
P	25	25	25	25	29	29	29	29	29	29	29	35	35
Q	M112x2	M112x1,5	M112x1,5	M112x1,5	M138x2	M138,2x2	M138x2	M138x2	M165x2	M165x2	M165x2	M180x2	M180x2
T	139	139	155	157	147	147	165	166	172	190	191	189,5	208,5
V max.	351	351	351	351	424	424	424	424	524	524	524	643	643
W	M130x1,5	M130x1,5	M130x1,5	M130x1,5	M160x2	M160x2	M160x2	M160x2	M188x2	M188x2	M188x2	M215x2	M215x2
a min.	110,4	110,4	110,4	110,4	115,5	115,5	115,5	115,5	155,9	155,9	155,9	194,4	194,4
a max.	159,9	159,9	159,9	159,9	181,5	181,5	181,5	181,5	225,9	225,9	225,9	285,4	285,4
a 2 min.	66,4	66,4	66,4	66,4	76,5	76,5	76,5	76,5	94,9	94,9	94,9	94,4	94,4
a 2 max.	115,9	115,9	115,9	115,9	142,5	142,5	142,5	142,5	164,9	164,9	164,9	185,4	185,4
Index adjustment	9 (x5,5 =49,5)	9 (x5,5 =49,5)	9 (x5,5 =49,5)	9 (x5,5 =49,5)	12 (x5,5 =66)	12 (x5,5 =66)	12 (x5,5 =66)	12 (x5,5 =66)	10 (x7 =70)	10 (x7 =70)	10 (x7 =70)	13 (x7=91)	13 (x7=91)
b	20	20	20	20	26	26	26	26	30	30	30	30	30
e	32	32	32	32	32	32	32	32	45	45	45	45	45
f1	M8/15	M8/15	M8/15	M8/15	M8/15	M8/15	M8/15	M8/15	M8/16	M8/16	M8/16	M8/16	M8/16
f2	M12/20	M12/20	M12/20	M12/20	M16/20	M16/20	M16/20	M16/20	M20/37	M20/37	M20/37	M16/30	M16/30
g1	140	140	140	140	170	170	170	170	200	200	200	245	245
g2	268	238	268	268	330,2	330,2	330,2	330,2	420	420	420	520	520
h1	60°	60°	60°	60°	60°	60°	60°	60°	60°	60°	60°	60°	60°
h_2	77°	77°	77°	77°	70°	70°	70°	70°	77°	77°	77°	47°	47°
j1	40°	40°	40°	40°	42,5°	42,5°	42,5°	42,5°	30°	30°	30°	45°	45°
j2	45°	45°	45°	45°	45°	45°	45°	45°	45°	45°	45°	60°	60°
k	43	43	43	43	39	39	39	39	57	57	57	97	97
Maximum draw bar pull kN	100	100	100	100	133	133	133	133	173	173	173	173	173
Max. total clamping force approx. kN	180	180	180	180	240	240	240	240	305	305	305	312	312
Max. admissible speed min^{-1}	4000	4000	4000	4000	3500	3500	3500	3500	2200	2200	2200	1700	1700
Moment of inertia J kgm^2	0,96	0,96	0,96	0,96	2,67	2,67	2,67	2,67	16,1	16,1	16,1	22,8	22,8
Weight without jaws approx. kg	66	66	69	70	110	110	118	121	216	233	235	393	430

Balancing quality G 6,3 according to DIN 1940

Jaws DURO-NCSE

Tool group C 21
Type 574-11 **Base jaws**, 3-**jaw-set**, **hardened straight toothing**, with cylindrical screws DIN 912-12.9



Item no.	Chuck Size	Jaw length	Jaw width
463548 ●	170	65	20
463549 ●	210	85	22
463550 ●	225/265	104	26
463551 ●	315	115	32
463552 ●	400	125	32
463553 ■	500	160	45
463554 ■	630	200	45

Tool group A 36
Type 530 **Reversible top jaws, 3-jaw set, hardened tongue and groove**, for **external and internal chucking**
material: 16 MnCr 5

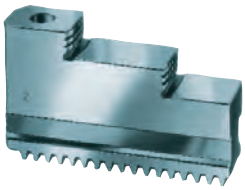
Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
094012 ●	170	61,5	32,5	20,4
094013 ●	210	70,5	38	24,4
094014 ●	225/265/315	92	50	34,4
094015 ●	400	107	56	35,7
094045 ●	500/630	130	72	50,4

Stepped and hardened jaws, supplied as supplement or as spares, must be ground on the chuck.

Tool group A28
Type 002 **Unstepped top jaw AB**, set
standard design, soft,
material 16MnCr5

Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
094008 ●	170	85	36,5	20,3
094009 ●	210	105	40	22
094010 ●	225/265/315	125	50	30,4
094011 ●	400	145	50	34,3
094046 ●	500/630	180	73	50,5

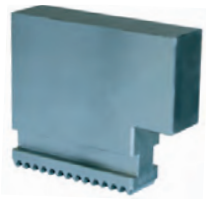
Tool group C 21
Type 574-27 **One-piece reversible jaws**, **3-jaw set**, **hardened straight toothing**
material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
463555 ●	170	58	44	20
463556 ●	210	75	51	22
463557 ●	225/265	90	60	26
463558 ●	315	117	66	32
463559 ●	400	137	70	32
463560 ■	500	176	93	45

Hardened jaws, supplied as supplement or as spares, must be ground on the chuck.

Tool group C 21
Type 574-37 **Soft one-piece jaws**, **3-jaw set**, **can be hardened straight toothing, guidance hardened and ground**
material: 16 MnCr 5

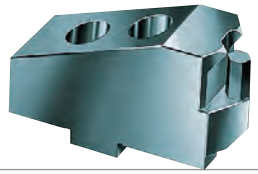


Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
463562 ●	170	65	55	20
463563 ●	210	84	65	22
463564 ●	225/265	99	84	26
463565 ●	315	121	90	32
463566 ●	400	148	100	32
463567 ■	500	175	124	45
463568 ■	630	230	134	45

● from stock ■ 4 - 6 weeks ▲ on request

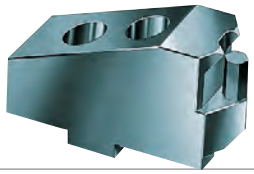
Jaws DURO-NCSE

Tool group C 21
Type 544-00 **reversible claw-type top jaws**, **standard design** tongue and groove, **small clamping range**, 1 piece hardened



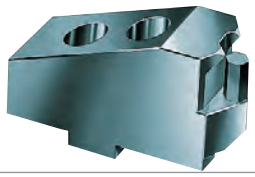
Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
137060 ●	140/175	66	37,5	24
137119 ●	400/500	124	62	50

Tool group C 21
Type 544-00 **reversible claw-type top jaws**, **standard design** tongue and groove, **large clamping range**, 1 piece, hardened



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
137061 ●	140/175	66	37,5	20
137064 ●	200	81	43	24
137108 ●	250	90	55	34
137114 ●	315	100	62	34
137120 ●	400/500	124	62	50

Tool group C 21
Type 544-00 **reversible claw-type top jaws**, **standard design** tongue and groove, **middle sized clamping range**, 1 piece, hardened



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
137062 ●	140/175	56	37,5	20
137065 ●	200	66	43	24
137109 ●	250	72	55	34
137115 ●	315	86	62	34
137121 ●	400/500	100	62	50

Tool group C 21
Type 544-05 **reversible claw-type top jaws**, **large design** tongue and groove, **small clamping range**, 1 piece, hardened

Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
137066 ●	200	79	43	34
137110 ●	250	80	55	50
137116 ●	315	93	62	50

Tool group C 21
Type 544-05 **reversible claw-type top jaws**, **large design** tongue and groove, **large clamping range**, 1 piece, hardened

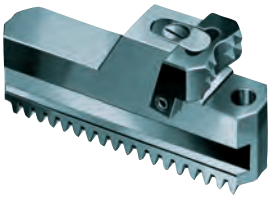
Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
137067 ●	200	81	43	34
137111 ●	250	90	55	50
137117 ●	315	106	62	50

Tool group C 21
Type 544-05 **reversible claw-type top jaws**, **large design** tongue and groove, **middle sized clamping range**, 1 piece, hardened

Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
137068 ●	200	66	43	34
137112 ●	250	72	55	50
137118 ●	315	86	62	50

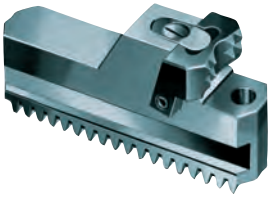
Jaws DURO-NCSE

Tool group C 21
Type 545-30 **Draw-down jaws**, for interchangeable clamping inserts
straight toothing, 1 piece, without clamping inserts



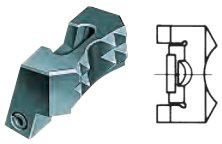
Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
485522 ●	170	65	43	20
485524 ●	210	85	47	22
485526 ●	225/265	104	58	26
485528 ●	315	115	63	32
485530 ●	400	125	63	32
485532 ■	500	160	81	45

Tool group C 21
Type 545-30 **Draw-down jaws, additional clamping range**, for interchangeable clamping inserts
straight toothing, 1 piece, without clamping inserts



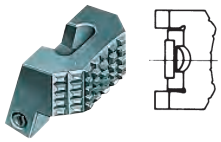
Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
485523 ●	170	72	43	20
485525 ●	210	95	47	22
485527 ●	225/265	104	58	26
485529 ●	315	123	63	32
485531 ●	400	134	63	32
485533 ■	500	160	81	45

Tool group C 15
Type 545-60 **Interchangeable clamping inserts**, 1 piece
with claws



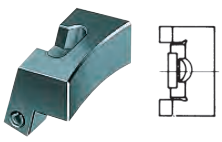
Item no.	Chuck Size
141049 ●	175/200
141052 ●	250/315
141055 ●	400/500/630

Tool group C 15
Type 545-70 **Interchangeable clamping inserts**, 1 piece
with serrated toothing



Item no.	Chuck Size
141050 ●	175/200
141053 ●	250/315
141056 ●	400/500

Tool group C 15
Type 545-80 **Interchangeable clamping inserts**, 1 piece
with heat treatable surface



Item no.	Chuck Size
141051 ●	175/200
141054 ●	250/315
141057 ●	400/500

For the complete range of clamping jaws visit our website www.spannbacken.biz

● from stock ■ 4 - 6 weeks ▲ on request

Accessories DURO-NCSE

Tool group C 15

Type 0040-Y **Mounting screws**

Item no.	Size	Contents of delivery	Thread
233058 ●	130	piece	M8x20
233030 ●	210/254/315	piece	M12x30
216569[2] ●	400	piece	M16

Socket head cap screw to DIN 912, 12.9
[2] two pieces necessary
[1] three pieces necessary

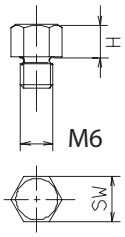
Tool group C 15

Type 1028 **Special grease** F80 for **lathe chucks**
for lubrication and conservation of chucking power

Item no.	Design	Contents
308555 ●	Cartridge	0,5 kg
028975 ●	Tin	1 kg

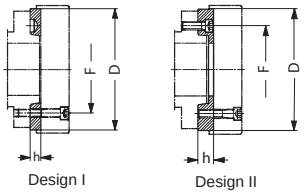
Tool group C 15

Type 544-00 **Changeable workpiece rests** (in different lengths)



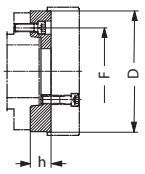
Item no.	H	M	Key-width SW
289188 ●	5	M6	9
138950 ●	10	M6	9
725581 ●	15	M6	9

Type 594-32 Intermediate adaptor plates
with cylindrical centre mount DIN 6353 for three-jaw chucks
Mounting from front to ISO 702-1 (DIN 55026/55021) and ASA B 5.9 A1/A2 with metric mounting bolts



Design I

Design II

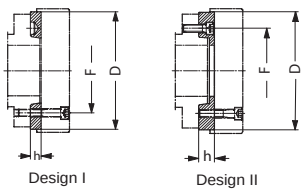


Design III

Id.-Nr.	Spindle nose size	Size	Design	h	F	D
159878 ●	5	140	I	15	104,8	120
145153 ●	5	175	I	15	104,8	140
145297 ●	6	175	III	35	133,4	140
145155 ●	6	200	I	16	133,4	170
145131 ●	6	250	II	27	133,4	220
145135 ●	8	200	III	39	171,4	170
145157 ●	8	250	I	18	171,4	220
145139 ●	8	315	II	38	171,4	300
1049147 ●	8	400	II	56	171,4	380
145143 ●	11	250	III	48	235	220
145159 ●	11	315	I	19	235	300
145147 ●	11	400	II	40	235	380
145161 ●	15	400/500/630	I	21	330,2	380

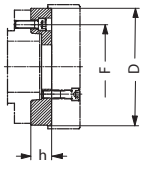
All fastening parts are included
Intermediate adaptors for two- and four-jaw-design on request

Tool group C 15
Type 594-35 Intermediate adaptor plates
with cylindrical centre mount DIN 6353 for three-jaw chucks
Mounting from front to ASA B 5.9 A1/A2 with inch threaded mounting bolts



Design I

Design II



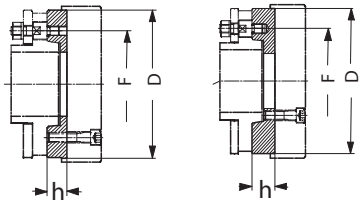
Design III

Id.-Nr.	Spindle nose size	Size	Design	h	F	D
159878 ●	5	140	I	15	104,8	120
145153 ●	5	175	I	15	104,8	140
145301 ■	6	175	III	35	133,4	140
145155 ●	6	200	I	16	133,4	170
145194 ■	6	250	II	27	133,4	220
145196 ■	8	315	II	39	171,4	300
145157 ●	8	250	I	18	171,4	220
145198 ■	8	315	II	38	171,4	300
145200 ■	11	250	III	48	235	220
145159 ●	11	315	I	19	235	300
145202 ■	11	400/500	II	40	235	380
145161 ●	15	400/500/630	I	21	330,2	380

All fastening parts are included
Intermediate adaptors for two- and four-jaw-design on request

Accessories DURO-NCSE

Tool group C 15
Type 594-33 Intermediate adaptor plates
with cylindrical centre mount DIN 6353 for three-jaw chucks
Bayonet fixing to ISO 702-3 (DIN 55027)/ DIN 55022

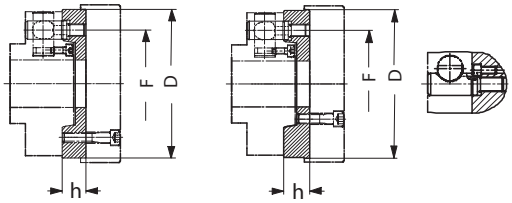


Design II Design III

Id.-Nr.	Spindle nose size	Size	Design	h	F	D
145238 ●	5	175	II	21	104,8	140
145303 ●	6	175	III	35	133,4	140
145240 ■	6	200	II	22	133,4	170
145214 ■	6	250/315	II	27	133,4	220
145218 ■	8	200	III	39	171,4	170
145242 ■	8	250	II	30	171,4	220
145222 ■	8	315	II	38	171,4	300
145226 ■	11	250	III	48	235	220
145246 ■	11	315	II	36	235	300
145230 ■	11	400/500	II	40	235	380
145248 ■	15	400/500	II	40	330,2	380
145250 ■	15	630	I	40	330,2	380

All fastening parts are included
Intermediate adaptors for two- and four-jaw-design on request

Tool group C 15
Type 594-36 Intermediate adaptor plates
with cylindrical centre mount DIN 6353 for three-jaw chucks
Camlock fixing to DIN 55029/ASA B 5.9 D1

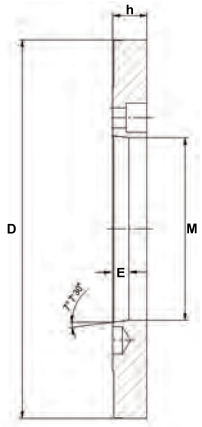


Design II Design III

Id.-Nr.	Spindle nose size	Size	Design	h	F	D
145282 ■	5	175	II	30	104,8	140
145594 ■	6	175	III	43	133,4	140
145284 ■	6	200	II	35	133,4	170
145258 ■	6	250	II	35	133,4	220
145262 ■	8	200	II	46	171,4	170
145286 ■	8	250	II	38	171,4	220
145266 ■	8	315	II	38	171,4	300
145270 ■	11	250	III	53	235	220
145290 ■	11	315	II	45	235	300
145274 ■	11	400/500	II	45	235	380
145292 ■	15	400/500	II	50	330,2	380
145294 ■	15	630	I	50	330,2	380

All fastening parts are included
Intermediate adaptors for two- and four-jaw-design on request

Tool group A09
Type 619-30 **Short-taper adapter plate ISO 702-1** (DIN 55026/55021) - **ASA B 5.9** (without mounting bolts)
finished on machine side, faced on chuck side, especially

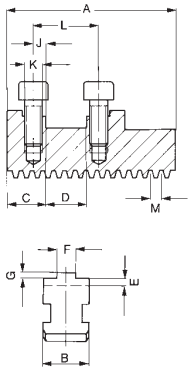


Id.-Nr.	Spindle nose size	h	E	M	D
144933 ▲	3	18	40	40	125
145296 ▲	4	18	40	40	125
145328 ▲	3	18	40	40	160
145342 ▲	4	18	40	40	160
145343 ▲	5	21	50	50	160
145344 ▲	4	21	50	50	200
145345 ▲	5	21	50	50	200
145346 ▲	6	27	50	50	200
145347 ▲	4	27	63	63	250
145348 ▲	5	27	63	63	250
145349 ▲	6	27	63	63	250
145350 ▲	8	27	63	63	250
145351 ▲	5	36	63	63	315
145352 ▲	6	36	63	63	315
145353 ▲	8	36	63	63	315
145354 ▲	11	36	63	63	315
145355 ▲	6	40	63	63	400
145356 ▲	8	40	63	63	400
145357 ▲	11	40	63	63	400
145358 ▲	15	40	63	63	400
145359 ▲	8	42	80	80	500
145360 ▲	11	42	80	80	500
145364 ▲	15	42	80	80	500

● from stock ■ 4 - 6 weeks ▲ on request

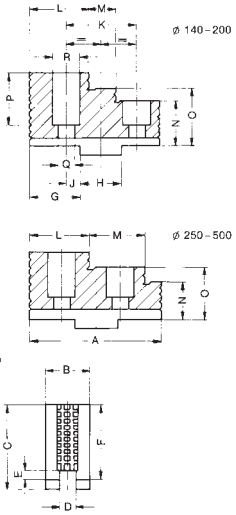
Jaw dimensions DURO-NCSE

Base jaw GB, with screws



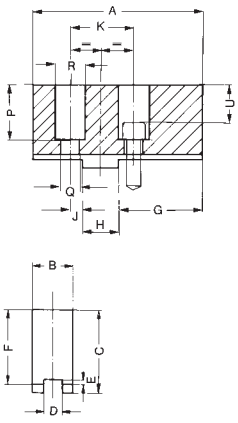
Chuck size	170	210/225	265	315	400	500	630
Type	574-11	574-11	574-11	574-11	574-11	574-11	574-11
Item no. 3-jaw	**463548**	**463549**	**463550**	**463551**	**463552**	**463553**	**463554**
A	65	85	104	115	125	160	200
B	20	22	26	32	32	45	45
C	19	23	26	26	30	35	35
DH7	18	20	20	20	26	30	30
E	5	4,5	5,5	6	6	9	9
F	8	10	12	12	12	16	18
G	2,5	2,5	3	3	3	4	4
J	7	10	10	10	14	15	15
K	M8	M8	M12	M12	M12	M16	M16
L	32	40	40	40	54	60	60
M	4,712	4,712	5,498	5,498	5,498	7	7
Weight/set kg	0,7	1,0	1,8	2,7	3,0	7,1	9

Reversible top jaws UB,
hardened



Chuck size	170	210/225	265	315	400	500	630
Typ	003-20	003-25	003-30	003-30	003-35	003-40	003-40
Item no. 3-jaw	**094012**	**094013**	**094014**	**094014**	**094015**	**094045**	**094045**
A	61,5	70,35	92	92	107	130	130
B	20,4	24,4	34,4	34,4	37,5	50,4	50,4
C	37	43	55	55	62	79	79
D	8	10	12	12	12	18	18
E	3	3,5	3,5	3,5	3,5	4,5	4,5
F	32,5	38	50	50	56	72	72
G	22,5	25,5	30	30	35,5	41,4	41,4
H	18	20	20	20	26	30	30
J	7	10	10	10	14	15	15
K	32	40	40	40	54	60	60
L	26,5	28,5	41	41	40	51	51
M	13	14	40,5	40,5	54	71	71
N	17,5	18	22	22	26	32	32
O	25	28	36	36	41	52	52
P	23,5	29	39	39	40	57	57
Q	9	9	14	14	14	18	18
R	15	15	20	20	20	26	26
Weight/set kg	0,6	1,0	2,4	2,4	3,4	7,6	7,6

Soft top jaws AB,
material 16MnCr5



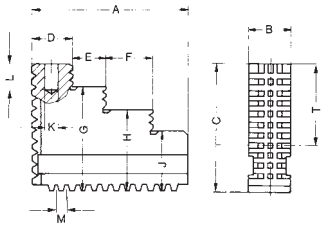
Chuck size	170	210/225	265	315	400	500	630
Typ	002-20	002-25	002-30	002-30	002-35	002-40	002-40
Item no. 3-jaw	**094008**	**094009**	**094010**	**094010**	**094011**	**094046**	**094046**
A	85	105	125	125	145	180	180
B	20,3	22	30,4	30,4	34,3	50,5	50,5
C	41	45	55	55	56	80	80
D	8	10	12	12	12	18	18
E	3	3,5	3,5	3,5	3,5	4,5	4,5
F	36,5	40	50	50	50	73	73
G	42	50	70	70	74	100	100
H	18	20	20	20	26	30	30
J	7	10	10	10	14	15	15
K	32	40	40	40	54	60	60
P	27,5	31	39	39	34	58	58
Q	9	9	14	14	14	18	18
R	15	15	20	20	20	26	26
U	19,5	23	27	27	22	42	42
Weight/set kg	1,3	2,2	4,5	4,5	6,8	13,2	13,2

Soft top jaws AB,
larger design,
material 16MnCr5

Chuck size	170	210/225	215	315	400
Typ	002-20	002-25	002-30	002-30	002-35
Item no. 3-jaw	**137055**	**137056**	**137057**	**137057**	**137058**
A	85	105	125	125	145
B	24,4	34,4	50,4	50,4	50,4
C	47	56	80	80	80
Weight/set kg	1,8	4,2	10,0	10,0	11,5

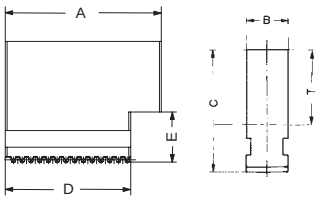
Jaw dimensions DURO-NCSE

Reversible one-piece jaws EB



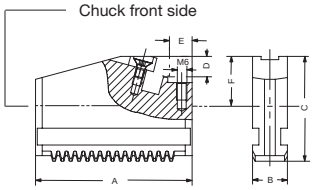
Chuck size	170	210/225	265	315	400	500/630
Type	574-27	574-27	574-27	574-27	574-27	574-27
Item no. 3-jaw	**463555**	**463556**	**463557**	**463558**	**463559**	**463560**
A	58	75	90	117	137	176
B	20	22	26	32	32	45
C	44	51	60	66	70	93
G	37	43	50	56	59	73
H	30	35	40	46	48	-
J	23	27	30	36	37	53
M	4,712	4,712	5,498	5,498	5,498	7
T	23	26	31	32	36	46
Weight/set kg	0,6	1,3	2,0	3,4	4,4	11,7

Soft one-piece jaws BL,
material 16MnCr5



Chuck size	170	210/225	265	315	400	500	630
Typ	574-37	574-37	574-37	574-37	574-37	574-37	574-37
Item no. 3-jaw	**463562**	**463563**	**463564**	**463565**	**463566**	**463567**	**463568**
A	65	84	99	121	148	175	230
B	20	22	26	32	32	45	45
C	55	65	84	90	100	124	134
D	56	67,5	77	93	120	154	200
E	25	27	36	41	41	54	54
T	33	38	53	54	64	77	87
Weight/set kg	1,3	2,2	4,3	6,7	9,2	20,5	29,2

Draw-down jaws NBG,
Straight toothing, for inter-changeable clamping inserts (jaw without insert)



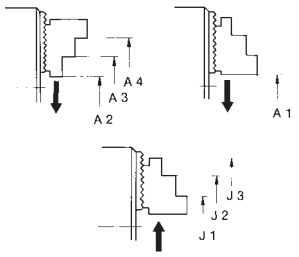
Chuck size	170	210	225	265	315	400	500
Jaw design				Typ 545-30			
Item no. Piece	**485522**	**485524**	**485524**	**485526**	**485528**	**485530**	**485532**
A	65	85	85	104	115	125	160
B	20	22	22	26	32	32	45
C	43	47	47	58	63	63	81
D	15	15	15	20	20	20	20
E	11	12	12	12	12	12	12
F	22,5	22,5	22,5	29,5	29,5	29,5	34
Capacities external	38-71	38-102	36-118	45-124	42-164	50-190	67-217
Capacities internal	125-160	170-223	168-239	207-289	234-344	252-397	346-500
Max. swing	197	251	287	306	374	425	524

Draw-down jaws NBG,
for interchangeable clamping inserts (jaw without insert) Jaws for further clamping ranges

Chuck size	170	210	225	265	315	400	500
Jaw design				Typ 549-30			
Item no. Piece	**485523**	**485525**	**485525**	**485527**	**485529**	**485531**	**485533**
A	72	95	95	104	123	134	160
E	30	45	45	50,5	61,5	67	96
Capacities external	78-110	113-168	111-184	123-202	146-262	160-305	230-384
Capacities internal	98-122	114-166	112-182	131-214	136-245	140-285	180-332
Max. swing	197	271	287	306	390	443	524

Chucking capacities DURO-NCSE

Chucking capacities with reversible top jaws UB

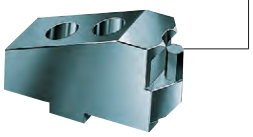


Chuck size		170	210	225	265	315	400	500	630
	Jaw position								
External chucking	A1	8-41	18-71	16-87	23-102	25-163	28-240	30-304	30-425
	A2	32-65	56-109	54-125	-	-	-	-	-
	A3	77-116	113-166	111-182	72-153	111-213	98-243	54-290	55-407
	A4	103-132	142-195	140-211	153-234	193-295	206-351	195-430	195-549
Internal chucking	J1	65-96	103-156	101-172	105-185	143-245	85-230	133-408	133-525
	J2	91-122	158-211	156-227	185-266	225-327	192-337	233-548	272-667
		134-166	198-250	196-266	-	-	-	-	-

Jaw dimensions DURO-NCSE

Reversible claw-type top jaws KB, standard design

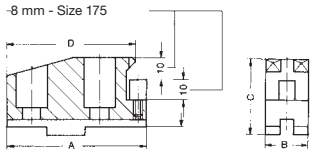
Workpiece stop, can be changed and adjusted



Chuck size	170	500	630
Jaw design	Type 544-00 Standard design		
Item no. Piece	**137060**	**137119**	**137119**
A	66	124	124
B	24	50	50
C	37,5	62	62
D	17	39	39
Capacities external	130-159	314-477	390-584
Capacities internal	53-84	101-249	101-290

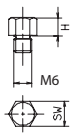
Jaws for further clamping ranges

8 mm - Size 175



Chuck size	170	210	225	265	315	400	500	630
Jaw design	Type 544-00 Standard design							
Item no. Piece	**137061**	**137064**	**137064**	**137108**	**137114**	**137114**	**137120**	**137120**
A	66	81	81	90	90	100	124	124
B	20	24	24	34	34	34	50	50
C	37,5	43	43	55	55	62	62	62
D	61	71	71	78	78	90	112	112
Capacities external	25-56	41-103	39-119	53-152	48-214	53-237	143-294	216-411
Capacities internal	136-188	181-255	179-271	85-238	136-300	240-435	268-420	265-460

Accessories: Interchangeable workpiece stop (different lengths

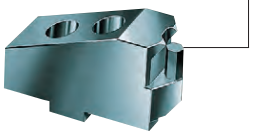


Id.-Nr.	289188	138950	725581
M	M6		
H	5	10	15
SW	9		

Chuck size	170	210	225	265	315	400	500	630
Jaw design	Type 544-00 Standard design							
Item no. Piece	**137062**	**137065**	**137065**	**137109**	**137109**	**137115**	**137121**	**137121**
A	56	66	66	72	72	86	100	100
B	20	24	24	34	34	34	50	50
C	37,5	43	43	55	55	62	62	62
D	29	38,5	38,5	38	38	42	48	48
Capacities external	68-120	94-168	92-184	77-230	127-292	172-333	270-422	345-540
Capacities internal	93-126	116-200	114-216	85-238	136-300	168-329	142-293	139-333

Reversible claw-type top jaws KB, large design

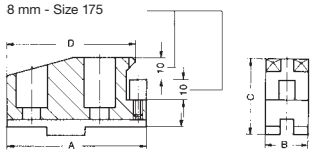
Workpiece stop, can be changed and adjusted



Chuck size	210	225	265	315	400
Jaw design	Type 544-05 Large design				
Item no. Piece	**137066**	**137066**	**137110**	**137110**	**137116**
A	79	79	80	80	93
B	34	34	50	50	50
C	43	43	55	55	62
D	29,5	29,5	29	29	30
Capacities external	-	-	-	-	-
Capacities internal	90-151	88-167	73-203	80-264	130-291

Jaws for further clamping ranges

8 mm - Size 175



Chuck size	210	225	265	315	400
Jaw design	Type 544-05 Large design				
Item no. Piece	**137067**	**137067**	**137111**	**137111**	**137117**
A	81	81	90	90	106
B	34	34	50	50	50
C	43	43	55	55	62
D	71	71	78	78	90
Capacities external	41-103	39-119	53-152	64-214	76-237
Capacities internal	181-255	179-271	163-322	222-384	168-425

Chuck size	210	225	265	315	400
Jaw design	Type 544-05 Large design				
Item no. Piece	**137068**	**137068**	**137112**	**137112**	**137118**
A	66	66	72	72	86
B	34	34	50	50	50
C	43	43	55	55	62
D	38,5	38,5	38	38	42
Capacities external	94-168	92-184	77-230	127-292	172-333
Capacities internal	116-200	114-216	85-238	136-300	168-329

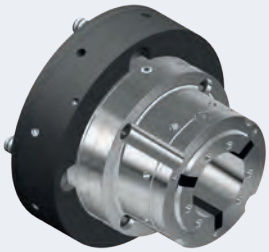
Overview

KZF **from page 6125**

Clamping by pressure sleeve
With quick-acting bayonet catch
For dead lenth collets or with segment collets

KZZF **from page 6128**

Clamping by axial tightening
With pull-down effect
With quick-acting bayonet catch
For dead length collets or with segment collets



KZZT **from page 6132**

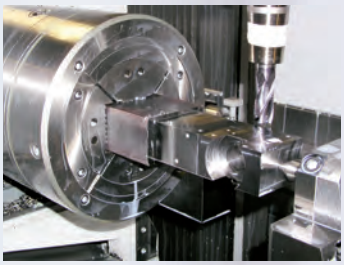
Clamping by axial tightening
With pull-down effect
For top grip clamping jaw

KZZT-A **from page 6134**

Clamping by axial tightening
With pull-down effect
With work stop
For „top grip“ clamping jaw

KZZT-AF **from page 6136**

Clamping by pressure piece
Without axial movement of the clamping jaw
With work stop
For „top grip“ clamping jaw



KZZT-F **from page 6140**

Clamping by pressure piece
Without axial movement of the clamping jaw
For non-circular or rightangular workpieces
For „top grip“ clamping jaw

KZF-S **from page 6141**

Clamping by axial tightening
With pull-down effect
For collets with bayonet catch

KZF - cap nut with locking screw

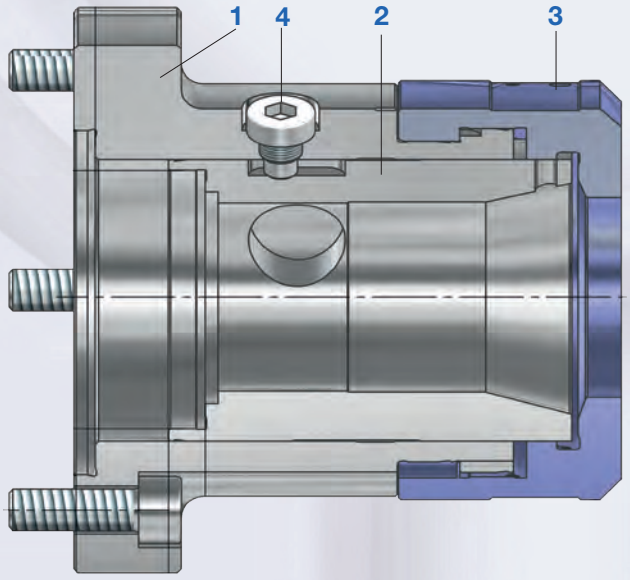
1. Body
2. Clamping sleeve for steel and segment collets. For twinclamping with segment collets a suitable clamping sleeve is available.
3. Bayonet catch
4. Locking screw

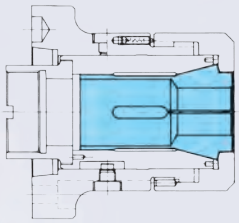
- Adapter must be ordered seperatly. To fit the draw-tube and glued in the pressure sleeve
- Special accessory, not included in the scope of delivery. Workpiece locator, can only be used in conjunction with segment collets

  Order separately: Socket head cap screws or studs with locknut to DIN 55027

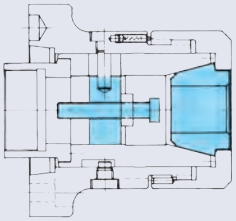
Technical features:

- Rapid action bayonet catch helps save time when changing collets
- Equipped either with DIN 6343 dead length collets or with segment collets
- Adjustable workpiece stop mountable when using segment collets
- All moving parts are made of high qualitity material, hardened and ground
- Ideally suited for the machining of bars
- Profiles can also be chucked with the appropriate collets
- Used in conjunction with RÖHM actuating cylinders with safety device SZS, OVS, LHS-L, LVS, EHS and EVS the power chucks KZF meet the requirements of the German Employers' Insurance Association



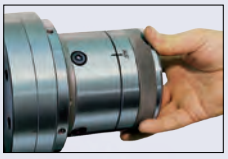


Hollow-center clamping with steel collet to DIN 6343

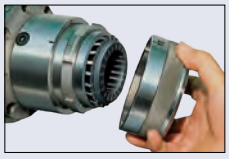


Clamping with collet and longitudinal workstop

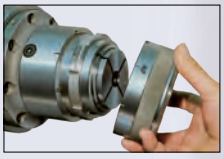
Press:
Press chuck cover with its entire surface 2 mm against machine spindle



Rotate:
Rotate chuck cover at 45o till the mark "Auf" (open) coincides with the mark on the chuck



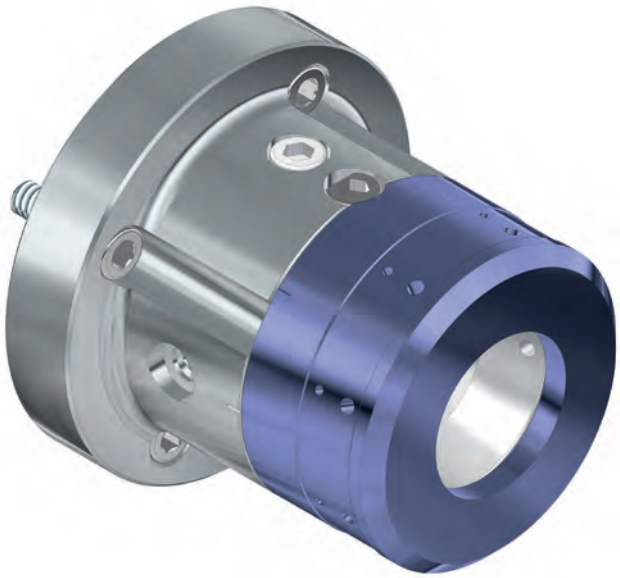
Remove:
Remove chuck cover
Remove collet

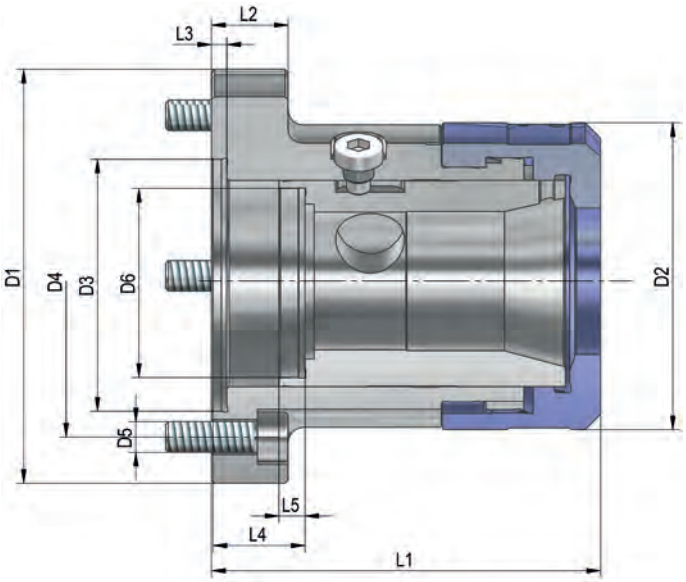


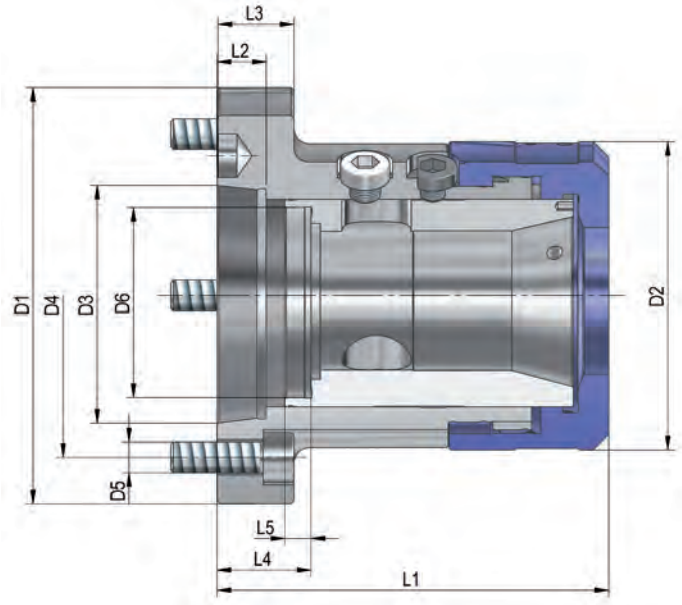
Change:
Insert new collet Lock cover analog to the description above

Bayonet-System:
The chuck cover can be placed on the chuck at any 90 degree

KZF







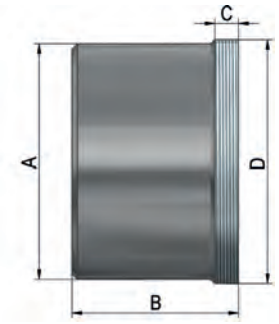
Tool group C 15
Type 508-11/508-31
power-operated collet chuck KZF, with **quick-acting bayonet catch,** without collet
cylindrical centre mount/ short taper mount
draw tube-connector available on request

Item no.	439989 ●	439990 ■	439991 ●	439992 ●	439993 ●	439994 ●	439995 ●	439996 ●	439997 ●	439998 ■
Size	40	40	40	40	60	60	60	60	80	80
Mount	Z-140	Z-88	KK 5	KK 6	Z-115	Z-170	KK 6	KK 8	Z-130	KK 8
D1	160	135	170	170	157	190	210	210	187	210
D2	100	100	100	100	122	122	122	122	150	150
D3	140	88	82,563	106,375	115	170	106,375	139,719	130	139,719
D4	104,8	115	104,8	133,4	136	133,4	133,4	171,4	166	171,4
D5	4xM10	6xM8	4xM10	4xM12	8xM8	6xM12	4xM12	4xM16	8xM8	4xM16
D6	M66x1,5	M66x1,5	M66x1,5	M66x1,5	M88x1,5	M88x1,5	M88x1,5	M88x1,5	M88x1,5	M114x1,5
L1	116	116	127	128	132	132	144	146	156	170
L2	25	25	25	25	25	25	25	25	30	30
L3	5	5	16	18	5	5	18	22	5	22
L4 min.	16	16	32	33	16	16	33	35	17	36
L4 max.	8,5	8,5	24,5	25,5	8,5	8,5	25,5	27,5	9,5	28,5
L5	8,5	8,5	8,5	8,5	8,5	8,5	8,5	8,5	12,5	12,5
Total stroke mm	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5
Maximum draw bar pull kN	25	25	25	25	30	30	30	30	35	35
Total clamping force kN	50	50	50	50	60	60	60	60	70	70
Adm. speed min^{-1}	8000	8000	8000	8000	5000	5000	5000	5000	4000	4000
Chucking capacity mm	2-42	2-42	2-42	2-42	4-60	4-60	4-60	4-60	20-80	20-80
Moment of inertia J kgm^2	0,029	0,029	0,029	0,029	0,038	0,038	0,038	0,038	0,108	0,108
Weight without collet kg	7,1	5,3	7,5	7,5	9,2	9,2	10,2	14	17,5	18

● from stock ■ 4 - 6 weeks ▲ on request

Accessories KZF

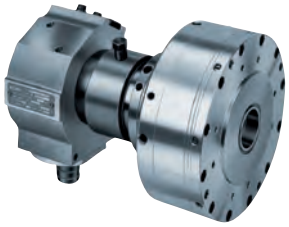
Tool group C 15
Type 508-00 **Connecting piece** for collet chuck KZF



Item no.	Size	A	B	C	D
683648 ●	40	62	60	8,5	M66x1,5
683649 ●	60	85	60	8,5	M88x1,5
683652 ●	80	100	60	12,5	M114x1,5

Matching cylinders

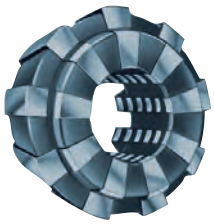
SZS



LHS-L

Größe		KZF	40/Z 140	40/Z 88	60/Z 115	60/Z 170	80/Z 130	40/5	40/6	60/6	60/8	80/8
SZS	hydraulisch	Typ 559-10	46/103	46/103	67/150	67/150	86/200	46/103	46/103	67/150	67/150	86/200
LHS-L	pneumatisch	Typ 565-10	42/289	42/289	62/438	62/438	-	42/289	42/289	62/438	62/438	-

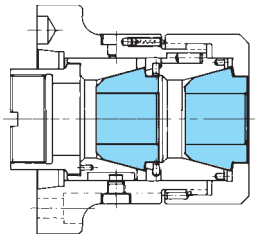
Matching collets



Chuck size	Collets DIN 6343					
	Type		Clamping capacity			Tolerance
KZF 40	8206-E	DIN 6343	● 2-42	⬢ 6-36	■ 6-29	+0,2 -0,3
KZF 60	2-42	6-36	6-29	+0,2	7-42	+0,2 -0,3
KZF 80	7037-E	DIN 6343 193 E	20-80	18-69	15-56	+0,2 -0,3

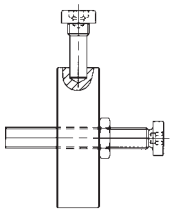
Chuck size	Segment-collets DIN 6343		
	Type	Clamping capacity	Tolerance
KZF 40	Series R 36	8-42	2±0,3
KZF 60	Series R 52	19-61	2±0,3
KZF 80	-	-	-

Clamping sleeves for double collets for KZF



The clamping sleeves for double collets apply to any of the normal Roehm KZF collet chucks.
Advantage: the twin clamping of bars results in a secure and vibrationfree gripping contact.
Available for sizes 40 and 60 only.

Workstop for KZF



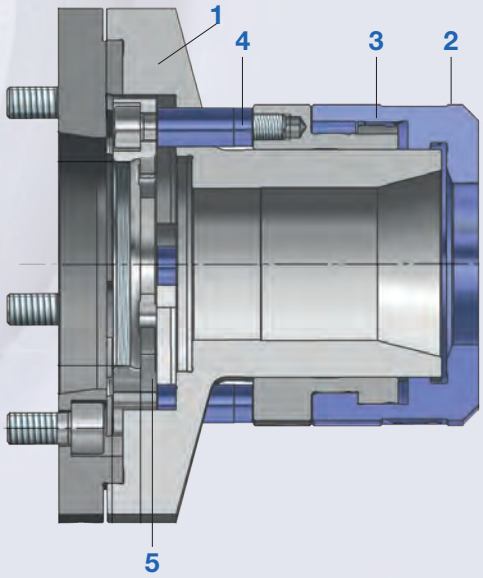
The use of a workstop in the KZF is possible, if a segment collet is inserted.

● from stock ■ 4 - 6 weeks ▲ on request

KZZF - cap nut with locking screw

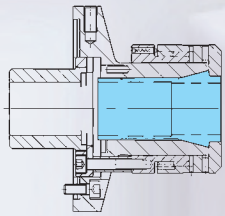
Technical features:

- Rapid action bayonet catch that helps save time when changing collets
- With draw-down effect
- Mainly for chucking bar work on NC/CNC lathes
- Equipped either with dead length collets or with segment collets.
- Used in conjunction with RÖHM actuating cylinders with safety device SZS, OVS, LHS-L, LVS, EHS and EVS the power chucks KZZF meet the requirements of the German Employers' Insurance Association

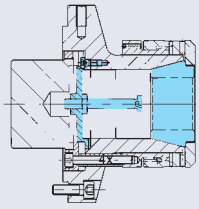


1. Body
2. Bayonet catch
3. Draw sleeve
4. Spacer
5. Draw ring

- Adapter must be ordered seperatly. To fit the draw-tube and glued in the pressure sleeve
- Special accessory, not included in the scope of delivery. Workpiece locator Order separately: Socket head cap screws or studs with locknut to DIN 55027.

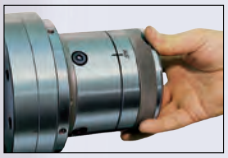


Hollow-center clamping with steel collet to DIN 6343



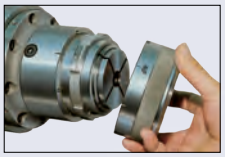
Clamping with collet and longitudinal workstop

Press:
Press chuck cover with its entire surface 2 mm against machine spindle



Rotate:
Rotate chuck cover at 45o till the mark "Auf" (open) coincides with the mark on the chuck

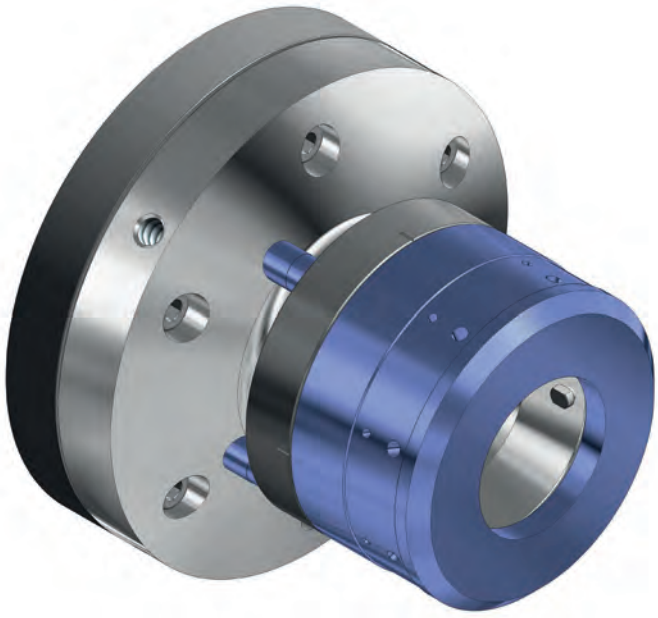
Remove:
Remove chuck cover
Remove collet

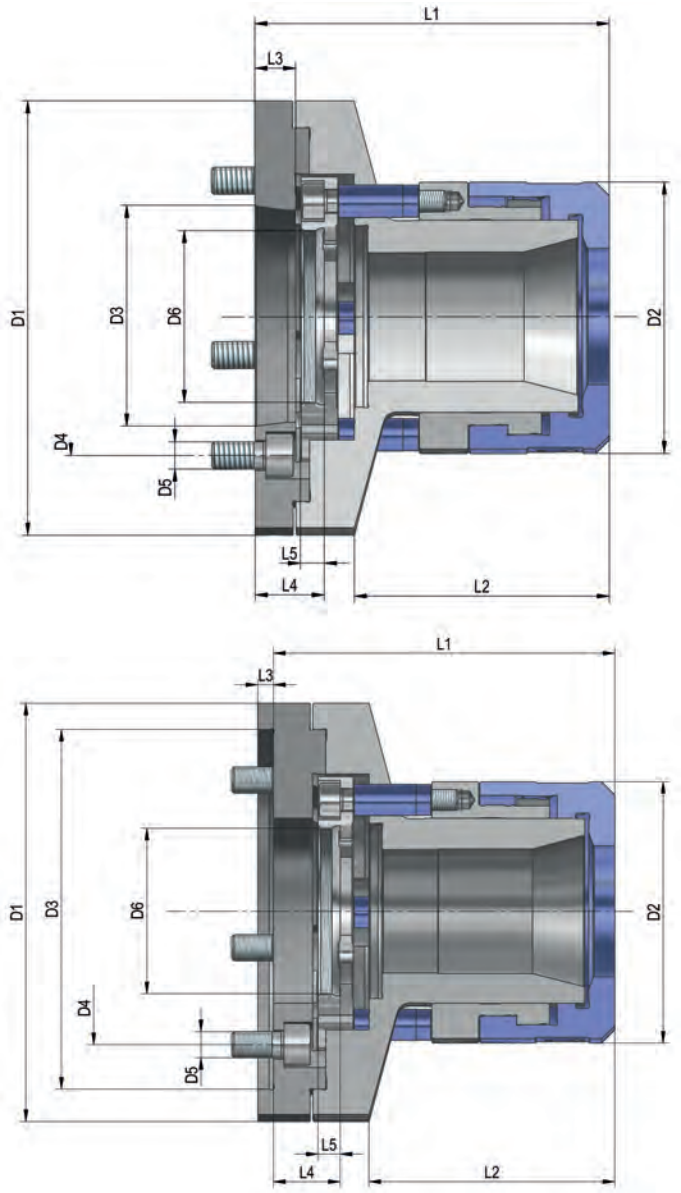


Change:
Insert new collet Lock cover analog to the description above

Bayonet-System:
The chuck cover can be placed on the chuck at any 90 degree

KZZF - cap nut with locking screw





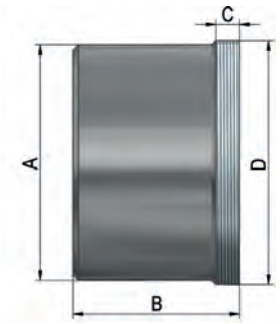
Tool group C 15
Type 508-61 Power-operated collet chuck **KZZF**,
with pull-down effect against workstop,
with **quick-acting bayonet catch**, without collet
draw tube-connector available on request

Item no.	439978 ●	439979 ●	439980 ●	439981 ●	439982 ●	439983 ●	439984 ●	439985 ●	439986 ●	439987 ●	439988 ●
Size	40	40	40	40	60	60	60	60	80	80	80
Mount	KK 5	KK 6	Z-88	Z-140	KK 6	KK 8	Z-115	Z-170	KK 8	Z-170	Z-220
D1	160	160	160	160	190	190	190	190	210	210	210
D2	100	100	100	100	125	125	125	125	150	150	150
D3	82,563	106,375	88	140	106,375	139,719	115	170	139,719	170	220
D4	104,8	133,4	115	104,8	133,4	171,4	133,4	171,4	171,4	171,4	171,4
D5	4xM10	4xM12	6xM8	4xM10	4xM12	4xM16	8xM8	6xM12	4xM16	4xM16	4xM16
D6	M66x1,5	M66x1,5	M66x1,5	M66x1,5	M88x1,5	M88x1,5	M88x1,5	M88x1,5	M114x1,5	M114x1,5	M114x1,5
L1	130,5	135,5	124,5	130,5	145,5	151,5	139,5	147,5	182	182	182
L2	94	94	94	94	96	96	96	96	120	120	120
L3	16	18	6	6	18	22	6	6	22	6	6
L4 min.	31,5	30	21	27	29,5	35,5	23,5	31,5	38	38	38
L4 max.	24	22,5	13,5	19,5	22	28	16	24	31,5	31,5	31,5
L5	8,5	8,5	8,5	8,5	8,5	8,5	8,5	8,5	8,5	8,5	8,5
Total stroke mm	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5
Maximum draw bar pull kN	25	25	25	25	30	30	30	30	35	35	35
Total clamping force kN	50	50	50	50	60	60	60	60	70	70	70
Adm. speed min^{-1}	8000	8000	8000	8000	5000	5000	5000	5000	4000	4000	4000
Chucking capacity mm	2-42	2-42	2-42	2-42	4-60	4-60	40-60	4-60	20-80	20-80	20-80
Moment of inertia J kgm^2	0,018	0,018	0,018	0,018	0,044	0,044	0,044	0,044	0,085	0,085	0,085
Weight without collet kg	8	8	8	8	13	13	13	13	19	19	19

● from stock ■ 4 - 6 weeks ▲ on request

Accessories KZZF

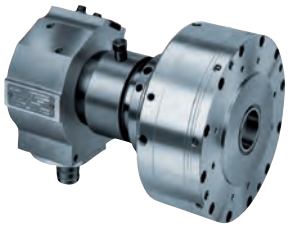
Tool group C 15
Type 508-00 **Connecting piece** for collet chuck KZZF



Item no.	Size	A	B	C	D
683648 ●	40	62	60	8,5	M66x1,5
683649 ●	60	85	60	8,5	M88x1,5
683652 ●	80	100	60	12,5	M114x1,5

Matching cylinders

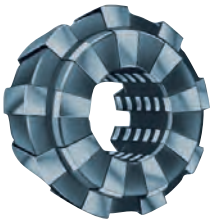
SZS



LHS-L

Size		KZZF	40	60	80	40	60	80
SZS	hydraulical	Typ 559-10	46/103	67/150	86/200	46/103	67/150	86/200
LHS-L	pneumatical	Typ 565-10	42/289	62/438	-	42/289	62/438	-

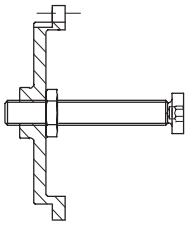
Matching collets



Chuck size	Collets DIN 6343					
	Type		Clamping capacity			Tolerance
KZZF 40	8206-E	DIN 6343 173 E	● 2-42	⬢ 6-36	■ 6-29	+0,2 -0,3
KZZF 60	8207-E	DIN 6343 185 E	4-60	8-52	7-42	+0,2 -0,3
KZZF 80	7037-E	DIN 6343 193 E	20-80	18-69	15-56	+0,2 -0,3

Chuck size	Segment-collets DIN 6343		
	Type	Clamping capacity	Tolerance
KZZF 40	Series R 36	8-42	2±0,3
KZZF 60	Series R 52	19-61	2±0,3
KZZF 80	-	-	-

Workstop for KZZF



In the KZZF the use of a workstop is possible in any combination with both Typees of collets: DIN 6343 and segment collets

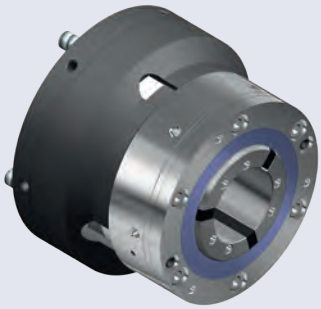
KZZT / KZZT-A / KZZT-AF

KZZT

- Clamping via pull-down
- With draw-down effect
- With a full through-hole for bar work
- Used in conjunction with RÖHM actuating cylinders with safety device SZS, OVS, LHS-L, LVS, EHS and EVS the power-operated pulling collet chucks meet the requirements of the German Employers' Insurance Association

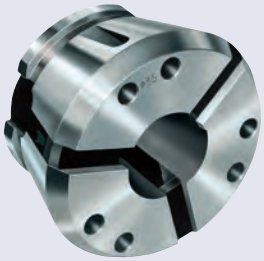
KZZT-A

- Clamping via pull-down
- With draw-down effect
- With a full through-hole for bar work plus a rigid axial stop for chuck parts.
- An additional workpiece support emerges by pulling the component tough against the axial stop while clamping
- Perfect with short clamped workpieces
- The adaption for the axial stop can vary (changes possible)

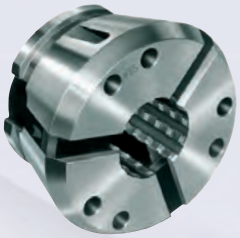


KZZT-AF

- Clamping via trust piece
- No axial movement of clamping jaw
- Clamping principle: The thrust piece is pushed over the fixed Top Grip clamping jaw.
- The fixed jaw ensures a lesser stiffness than achieved with the traction chucks KZZT/ KZZT-A
- Type with fixed clamping jaw for through as well as stop clamping



smooth design

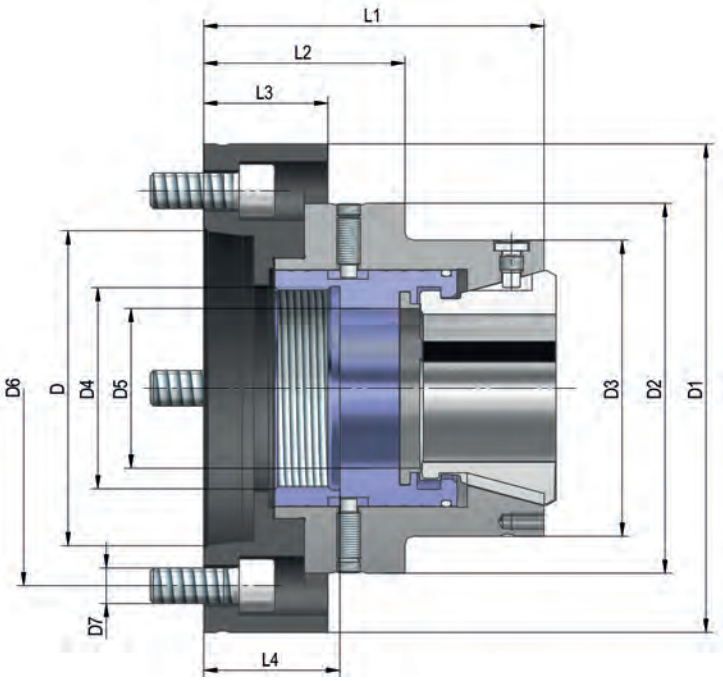


design with
transverse grooves

Top grip clamping jaw for KZZT / KZZT-A / KZZT-AF

- High-quality rubber-steel segment clamping jaw
- Exchangeable vulcanisate on request
- Highest clamping forces and rigidity
- Clamping tolerances ± 0,5 mm
- Application field:
  - turning, milling and grinding
  - for bar work and for chucking work.
- Simple retooling with manual or pneumatic changing fixture (not included in the scope of delivery)
- Special designs on request

KZZT short taper mount

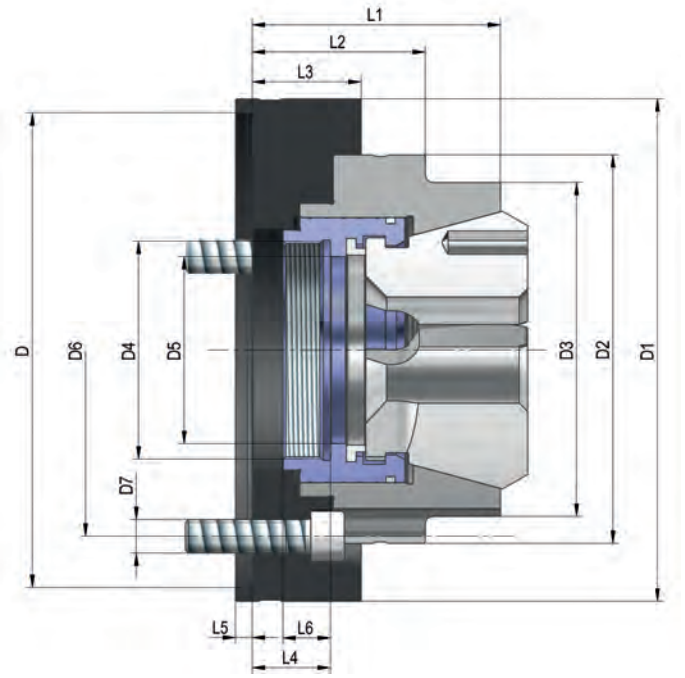


Tool group C 15
Type 508-71 Power operated collet chuck **KZZT**, with **full through hole**
Short taper mount

Item no.	432360 ●	429587 ●	429588 ●	432709 ●	432710 ●	439942 ●	429594 ●	439943 ●	432361 ●	432362 ▲	432363 ▲
Size	32	42	42	52	52	65	65	65	80	100	120
Mount D	KK5	KK5	KK6	KK5	KK6	KK5	KK6	KK8	KK8	KK8	KK8
D1	140	140	165	140	165	150	165	205	205	215	240
D2	111	125	125	125	125	-	140	150	180	201	230
D3	75	100	100	100	100	120	120	120	160	-	-
D4	M48x1,5	M68x1,5	M68x1,5	M68x1,5	M68x1,5	M78x1,5	M78x1,5	M78x1,5	M94x1,5	M114x1,5	M132x1,5
D5	34	44	44	54	54	67	67	67	82	102	122
D6	104,8	104,8	133,4	171,4	104,8	104,8	133,4	171,4	171,4	171,4	171,4
D7	4xM10	4xM10	4xM12	4xM10	4xM12	4xM10	4xM12	4xM16	4xM16	4xM16	4xM16
L1	88	90	90	115	115	125	95	145	125	125	135
L2	68	68	68	68	68	68	68	68	64	-	65
L3	40	40	40	42	42	60	45	70	54	54	-
L4 min.	34	35,5	35,5	44	44	31,5	31	31,5	52	41	46
L4 max.	39,5	41,5	41,5	49,5	49,5	36	36	36	56,5	49	53,5
Total stroke mm	5,5	6	6	5,5	5,5	4,5	5	4,5	4,5	8	7,5
Maximum draw bar pull kN	25	35	35	40	40	45	45	45	50	65	70
Total clamping force kN	60	70	70	80	80	90	90	90	100	130	140
Adm. speed min^{-1}	8000	7000	7000	6500	6500	6000	6000	6000	5500	5000	4000
Clamping range	4-32	4-42	4-42	4-52	4-52	4-65	4-65	4-65	5-80	16-100	62-120

● from stock ■ 4 - 6 weeks ▲ on request

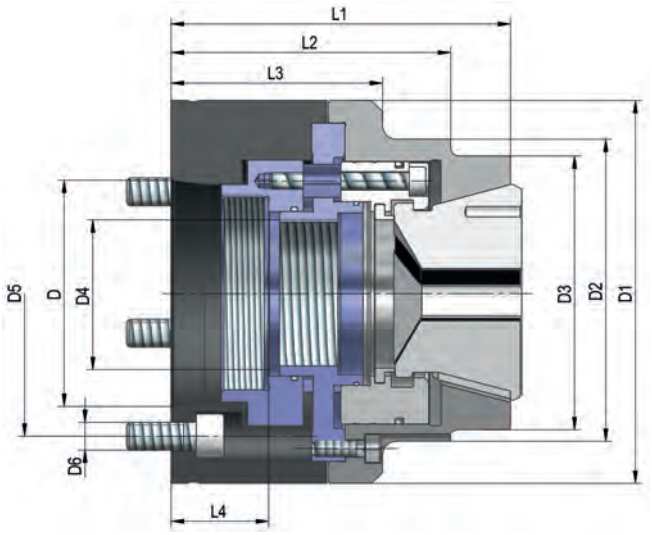
KZZT cylindrical centre mount



Tool group C 15
Type 508-72 Power operated collet chuck **KZZT**, with **full through hole cylindrical centre mount**

Item no.	439944 ●	439945 ●	439946 ●	439947 ●	439948 ●	439949 ●	439950 ●	439951 ●	439952 ▲	439953 ▲
Size	32	42	42	52	52	65	65	80	100	120
Mount D	140	140	170	140	170	140	170	220	220	220
D1	150	150	180	150	180	150	180	230	230	230
D2	115	125	125	125	125	140	140	210	210	210
D3	75	100	100	100	100	120	120	-	-	-
D4	M48x1,5	M68x1,5	M68x1,5	M68x1,5	M68x1,5	M78x1,5	M78x1,5	M94x1,5	M114x1,5	M132x1,5
D5	34	44	44	54	54	67	67	82	102	122
D6	104,8	104,8	133,4	104,8	133,4	104,8	133,4	171,4	171,4	171,4
D7	4xM10	4xM10	4xM12	4xM10	4xM12	4xM10	4xM12	4xM16	4xM16	4xM16
L1	80	82	82	105	105	85	85	115	115	125
L2	72	68	68	68	68	68	68	-	-	-
L3	40	40	40	42	42	45	45	54	54	54
L4 min.	31,5	37	37	44	44	31,5	31,5	52	41	46
L4 max.	37	41,5	41,5	48,5	48,5	36	36	56,5	49	53,5
L5	6	6	6	6	6	6	6	6	6	6
Total stroke mm	5,5	4,5	4,5	4,5	4,5	4,5	4,5	4,5	8	6
Maximum draw bar pull kN	25	35	35	40	40	45	45	50	65	70
Total clamping force kN	60	70	70	80	80	90	90	100	130	140
Adm. speed min^{-1}	8000	7000	7000	6500	6500	6000	6000	5500	5000	4000
Clamping range	4-32	4-42	4-42	4-52	4-52	4-65	4-65	5-80	16-100	62-120

KZZT-A short taper mount



Scan QR-Code and watch the product-video of the collet chuck KZZT-A on Youtube!

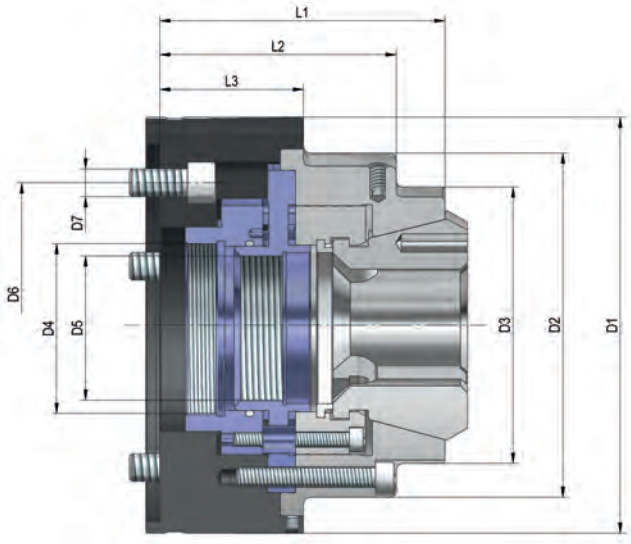
Tool group C 15
Type 508-73
Power operated collet chuck
KZZT-A,
with **full through hole** and **rigid axial stop**
Short taper mount

Item no.	432364 ■	429590 ■	429591 ■	432711 ■	432712 ■	439954 ■	429598 ■	439955 ■	432365 ■	432366 ▲	432367 ▲
Size	32	42	42	52	52	65	65	65	80	100	120
Mount D	KK5	KK5	KK6	KK5	KK6	KK5	KK6	KK8	KK8	KK8	KK8
D1	140	140	165	140	165	140	165	205	210	225	270
D2	114	125	125	140	140	-	149	150	160	206	260
D3	-	100	100	100	100	120	120	120	140	195	210
D4	M48x1,5	M68x1,5	M68x1,5	M72x1,5	M72x1,5	M78x1,5	M78x1,5	M78x1,5	M94x1,5	M114x1,5	M132x1,5
D5	M34x1	M42x1	M42x1	M54x1,5	M54x1,5	M66x1	M66x1	M66x1	M82x1,5	105x1,5	125x1,5
D6	104,8	104,8	133,4	104,8	133,4	104,8	133,4	171,4	171,4	171,4	171,4
D7	4xM10	4xM10	4xM12	4xM10	4xM12	4xM10	4xM12	4xM16	4xM16	4xM16	4xM16
L1	117	120	120	122	122	125	129	145	145	157	165
L2	-	106	106	111	111	68	115	68	129	132	140
L3	63	67,5	67,5	56	56	60	58	70	80	82	90
L4 min.	-	39,5	39,5	37	33,5	31,5	31,5	31,5	44	47	48
L4 max.	-	45,5	45,5	42,5	39	36	37	36	49	52,5	53,5
Total stroke mm	6	6	6	5,5	5,5	4,5	5,5	4,5	5	5,5	5,5
Maximum draw bar pull kN	25	35	35	40	40	45	45	45	50	65	70
Total clamping force kN	60	70	70	80	80	90	90	90	100	130	140
Adm. speed min^{-1}	8000	7000	7000	6500	6500	6000	6000	6000	5500	5000	4000
Clamping range	4-32	4-42	4-42	4-52	4-52	4-65	4-65	4-65	5-80	16-100	62-120

The adaption for the axial-stop can be varied (changes possible).

● from stock ■ 4 - 6 weeks ▲ on request

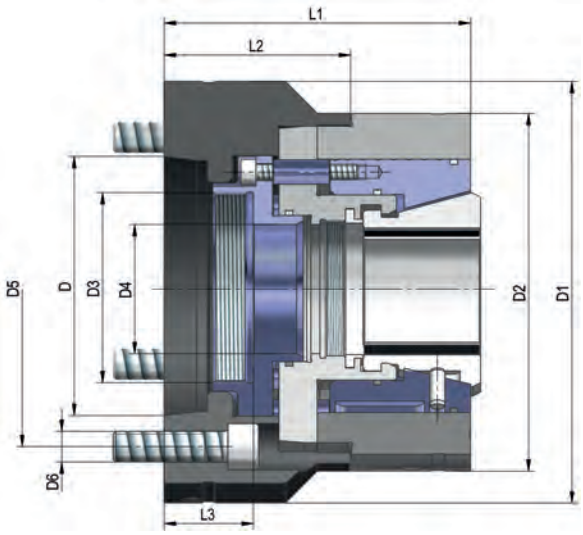
KZZT-A cylindrical centre mount



Tool group C 15
Type 508-74
Power operated collet chuck
KZZT-A,
with **full through hole** and **rigid axial stop**,
cylindrical centre mount

Item no.	439956 ■	439957 ■	439958 ■	439959 ■	439960 ■	439961 ■	439962 ■	439963 ■	439964 ▲	439965 ▲
Size	32	42	42	52	52	65	65	80	100	120
Mount D	140	140	170	140	170	140	170	220	220	220
D1	150	150	180	150	180	180	180	230	230	230
D2	115	125	125	125	125	149	149	210	210	210
D3	75	100	100	100	100	120	120	-	-	-
D4	M48x1,5	M68x1,5	M68x1,5	M68x1,5	M68x1,5	M78x1,5	M78x1,5	M94x1,5	M114x1,5	M132x1,5
D5	M34x1	M42x1	M42x1	M54x1,5	M54x1,5	M66x1	M66x1	M82x1,5	M105x1,5	M125x1,5
D6	104,8	104,8	133,4	104,8	133,4	104,8	133,4	171,4	171,4	171,4
D7	4xM10	4xM10	4xM12	4xM10	4xM12	4xM10	4xM12	4xM16	4xM16	4xM16
L1	102	107	106	105	107	107	105	125	145	155
L2	60	94	94	94	94	94	94	-	-	-
L3	-	54	54	54	54	54	54	54	54	54
L4 min.	26	22	22	22	22	22	22	34	37,5	41
L4 max.	31,5	26,5	26,5	26,5	26,5	26,5	26,5	38,5	45	47
L5	6	6	6	6	6	6	6	6	6	6
Total stroke mm	5,5	4,5	4,5	4,5	4,5	4,5	4,5	4,5	8	6
Maximum draw bar pull kN	25	35	35	40	40	45	45	50	65	70
Total clamping force kN	60	70	70	80	80	90	90	100	130	140
Adm. speed min^{-1}	8000	7000	7000	6500	6500	6000	6000	5500	5000	4000
Clamping range	4-32	4-42	4-42	4-52	4-52	4-65	4-65	5-80	16-100	62-120

KZZT-AF short taper mount

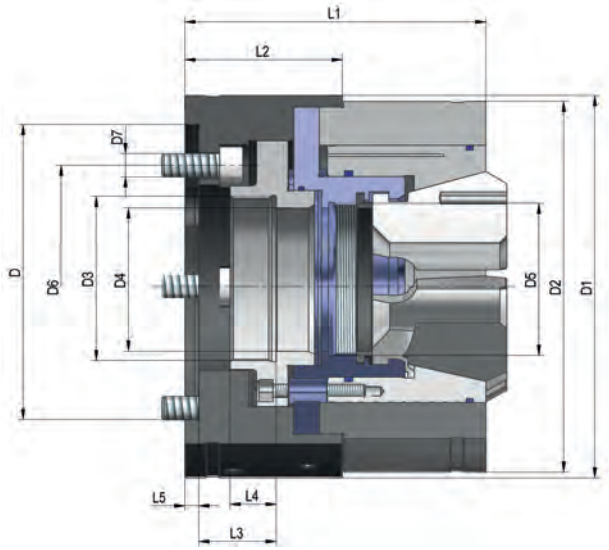


Tool group C 15
Type 508-75 Power operated collet chuck **KZZT-AF**, with **full through hole**, **rigid axial stop** and a fixed Top Grip **clamping jaw**
For through and stop clamping **short taper mount**

Item no.	432690 ■	432691 ■	432692 ■	432693 ■	432694 ■	439966 ■	432696 ■	439967 ■	432699 ■	432701 ▲	432702 ▲
Size	32	42	42	52	52	65	65	65	80	100	120
Mount D	KK5	KK5	KK6	KK5	KK6	5	KK6	8	KK8	KK8	KK8
D1	135	135	165	140	165	150	165	205	210	215	240
D2	135	135	135	140	140	160	160	160	175	215	240
D3	M52x1,5	M62x1,5	M62x1,5	M78x1,5	M78x1,5	M52x1,5	M90x1,5	M90x1,5	M92x1,5	M125x1,5	M132x1,5
D4 min.	4	4	4	4	4	5	5	5	5	42	42
D4 max.	34	44	44	54	54	67	67	67	82	102	122
D5	M34x1	M42x1	M42x1	M54x1,5	M54x1,5	M66x1	M66x1	M66x1	M82x1,5	M105x1,5	M125x1,5
D6	104,8	104,8	133,4	104,8	133,4	104,8	133,4	171,4	171,4	171,4	171,4
D7	4xM10	4xM10	4xM12	4xM10	4xM12	4xM10	4xM12	4xM16	4xM16	4xM16	4xM16
L1	118	120	120	120	120	125	130	145	145	170	180
L2	-	-	42	47	47	68	53	68	58	64	72
L3 min.	32,5	32,5	32,5	33	33	33	37	33	40	44,5	51
L3 max.	38,5	38,5	38,5	37,5	37,5	37,5	43	37,5	44,5	52,5	57
L4	17	17	17	20	20	20	20	20	24	24	24
L5	16	16	18	16	18	16	18	22	22	22	22
Total stroke mm	5,5	6	6	4,5	4,5	4,5	6	4,5	4,5	8	6
Maximum draw bar pull kN	25	35	35	40	40	45	45	45	50	65	70
Total clamping force kN	60	70	70	80	80	90	90	90	100	130	140
Adm. speed min^{-1}	8000	7000	7000	6500	6500	6000	6000	6000	5500	5000	4000
Clamping range	4-32	4-42	4-42	4-52	4-52	4-65	4-65	4-65	5-80	16-100	62-120

● from stock ■ 4 - 6 weeks ▲ on request

KZZT-AF cylindrical centre mount

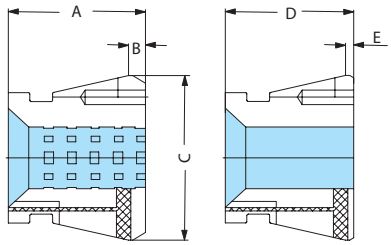


Tool group C 15
Type 508-76 Power operated collet chuck **KZZT-A**, with **full through hole** and **rigid axial stop**
Cylindrical centre mount

Item no.	439968 ■	439969 ■	439970 ■	439971 ■	439972 ■	439973 ■	439974 ■	439975 ■	439976 ▲	439977 ▲
Size	32	42	42	52	52	65	65	80	100	120
Mount D	140	140	170	140	170	140	170	220	220	220
D1	150	150	180	150	180	150	180	230	230	230
D2	115	125	125	125	125	140	140	210	210	210
D3	M48x1,5	M68x1,5	M68x1,5	M68x1,5	M68x1,5	M78x1,5	M78x1,5	M94x1,5	M114x1,5	M132x1,5
D4	34	44	44	54	54	67	67	82	102	122
D5	M34x1	M42x1	M42x1	M54x1,5	M54x1,5	M66x1	M66x1	M82x1,5	M105x1,5	M125x1,5
D6	104,8	104,8	133,4	104,8	133,4	104,8	133,4	171,4	171,4	171,4
D7	4xM10	4xM10	4xM12	4xM10	4xM12	4xM10	4xM12	4xM16	4xM16	4xM16
L1	80	82	82	105	105	85	85	115	115	125
L2	72	68	68	68	68	68	68	-	-	-
L3	40	40	40	42	42	45	45	54	54	54
L4 min.	31,5	37	37	44	44	31,5	31,5	52	41	46
L4 max.	37	41,5	41,5	48,5	48,5	36	36	56,5	49	53,5
L5	6	6	6	6	6	6	6	6	6	6
Total stroke mm	5,5	4,5	4,5	4,5	4,5	4,5	4,5	4,5	8	6
Maximum draw bar pull kN	25	35	35	40	40	45	45	50	65	70
Total clamping force kN	60	70	70	80	80	90	90	100	130	140
Adm. speed min^{-1}	8000	7000	7000	6500	6500	6000	6000	5500	5000	4000
Clamping range	4-32	4-42	4-42	4-52	4-52	4-65	4-65	5-80	16-100	62-120

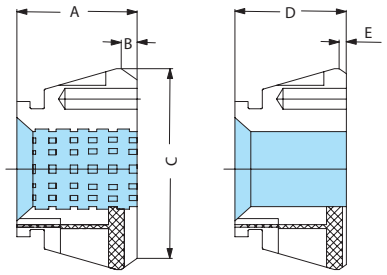
Top Grip clamping jaw for KZZT / KZZT-A / KZZT-AF

Clamping jaws Top grip with diameter rising at 0,5mm are available on stock. Other diameters are available in ca. 2 weeks.
Special clamping jaws with square bore and hexagon bore on request.



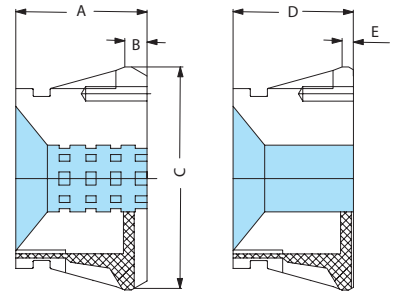
GT GTG

GT 32 GTG 32 GTW 32*	Bore	Design	A 47	B 6	C 57,7	D 44	E 3
			Clamping range			Clamping range	
	Round	Smooth Transverse grooves Axial, transv. grooves *self machining ∅	4-7 8-10 11-32 -			4-32 - - 5/10/20	
	Square	Smooth Transverse grooves	7 8-30			-	
	Hexagon	Smooth Transverse grooves	7 8-27			-	
Fixture for machining of the Top Grip clamping jaw Item no. 497314							



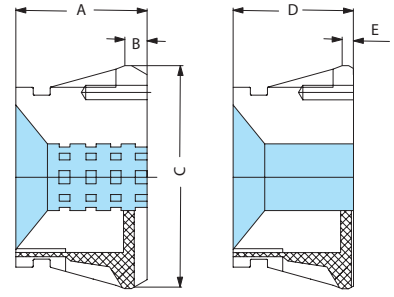
GT GTG

GT 42 GTG 42 GTW 42*	Bore	Design	A 47	B 9	C 79,3	D 42	E 4
			Clamping range			Clamping range	
	Round	Smooth Transverse grooves Axial, transv. grooves *self machining ∅	4-7 8-10 11-42 -			4-42 - - 5/15/30	
	Square	Smooth Transverse grooves	7 8-30			-	
	Hexagon	Smooth Transverse grooves	7 8-32 33-36			-	
Fixture for machining of the Top Grip clamping jaw Item no. 497315							



GT GTG

GT 52 GTG 52 GTW 52*	Bore	Design	A 46	B 3	C 79,2	D 46	E 3
			Clamping range			Clamping range	
	Round	Smooth Transverse grooves Axial, transv. grooves *self machining ∅	4-7 8-10 11-52 -			4-52 - - 8/15/30	
	Square	Smooth Transverse grooves	8-9 10-36			-	
	Hexagon	Smooth Transverse grooves	7-9 10-42 42-45			-	
Fixture for machining of the Top Grip clamping jaw Item no. 1053342							



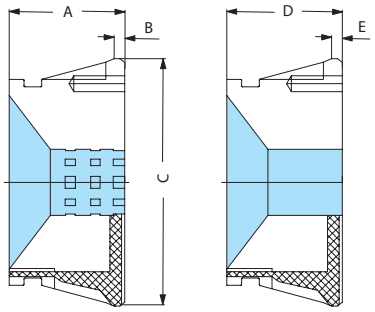
GT GTG

GT 65 GTG 65 GTW 65*	Bore	Design	A 58	B 9	C 99,5	D 53	E 4
			Clamping range			Clamping range	
	Round	Smooth Transverse grooves Axial, transv. grooves *self machining ∅	5-7 8-10 11-65 -			5-65 - - 8/20/40	
	Square	Smooth Transverse grooves	8-32 33-40 41-46			-	
	Hexagon	Smooth Transverse grooves	7-32 33-40 41-50 51-56			-	
Fixture for machining of the Top Grip clamping jaw Item no. 497316							

GT, extension, grooved bore, at size 80 first groove closed
GTG, reduced extension, smooth bore
Bores in 1 mm steps

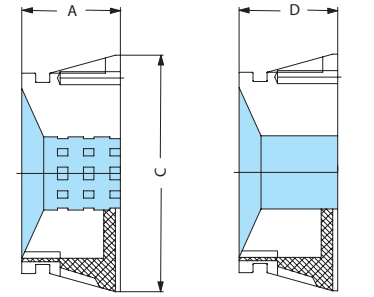
* face and bore soft

Top Grip clamping jaw / Changing fixture for KZZT / KZZT-A / KZZT-AF



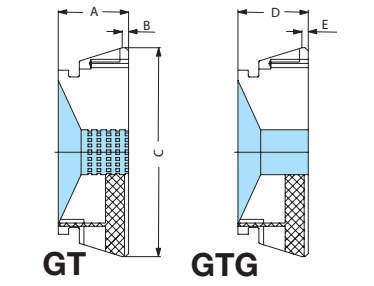
GT GTG

GT 80 GTG 80 GTW 80*	Bore	Design	A 53	B 4	C 114,5	D 53	E 4
			Clamping range			Clamping range	
	Round	Smooth Transverse grooves Axial, transv. grooves *self machining ∅	5-7 8-10 11-80 -			5-80 - - 20/40/60	
	Square	Transverse grooves	8-32 33-40 41-46 47-56			-	
	Hexagon	Transverse grooves	7-32 33-40 41-50 51-56 57-68			-	
Fixture for machining of the Top Grip clamping jaw Item no. 497317							



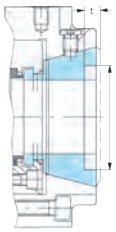
GT GTG

GT 100 GTG 100 GTW 100*	Bore	Design	A 59	B -	C 144,5	D 59	E -
			Clamping range			Clamping range	
	Round	Längs-und Querrillen *Zum Selbstausdrehen Ø	42-100			5-80 20/40/60	
	Square	Transverse grooves	50-60 61-70			-	
	Hexagon	Transverse grooves	50-60 61-70 71-86			-	
Fixture for machining of the Top Grip clamping jaw Item no. 497318							



GT GTG

GT 120 GTG 120 GTW 120*	Bore	Design	A 61	B 3	C 180	D 61	E 3
			Clamping range			Clamping range	
	Round	Längs-und Querrillen *Zum Selbstausdrehen Ø	65-120			70/90/100	
	Square	Transverse grooves	on request			-	
	Hexagon	Transverse grooves	on request			-	
Fixture for machining of the Top Grip clamping jaw Item no. 497319							



Top Grip clamping jaw, for short clamped workpieces

Size Through-hole	Clamping jaw Top Grip short design	max. clamp.-Ø depth t	Tensile force max. N	Speed max.* min-1
32	32	49x6,5	25000	8000
42	42	68x10	35000	7000
65	65	87x10	45000	6000
80	80	90x10	50000	5500
100	100	117,2x20	65000	5000
120	120	150x18	70000	3200

* Only valid for GTG-typed clamping heads

The manual changing fixture is the simplest method of clamping head changeover by changing the pins.

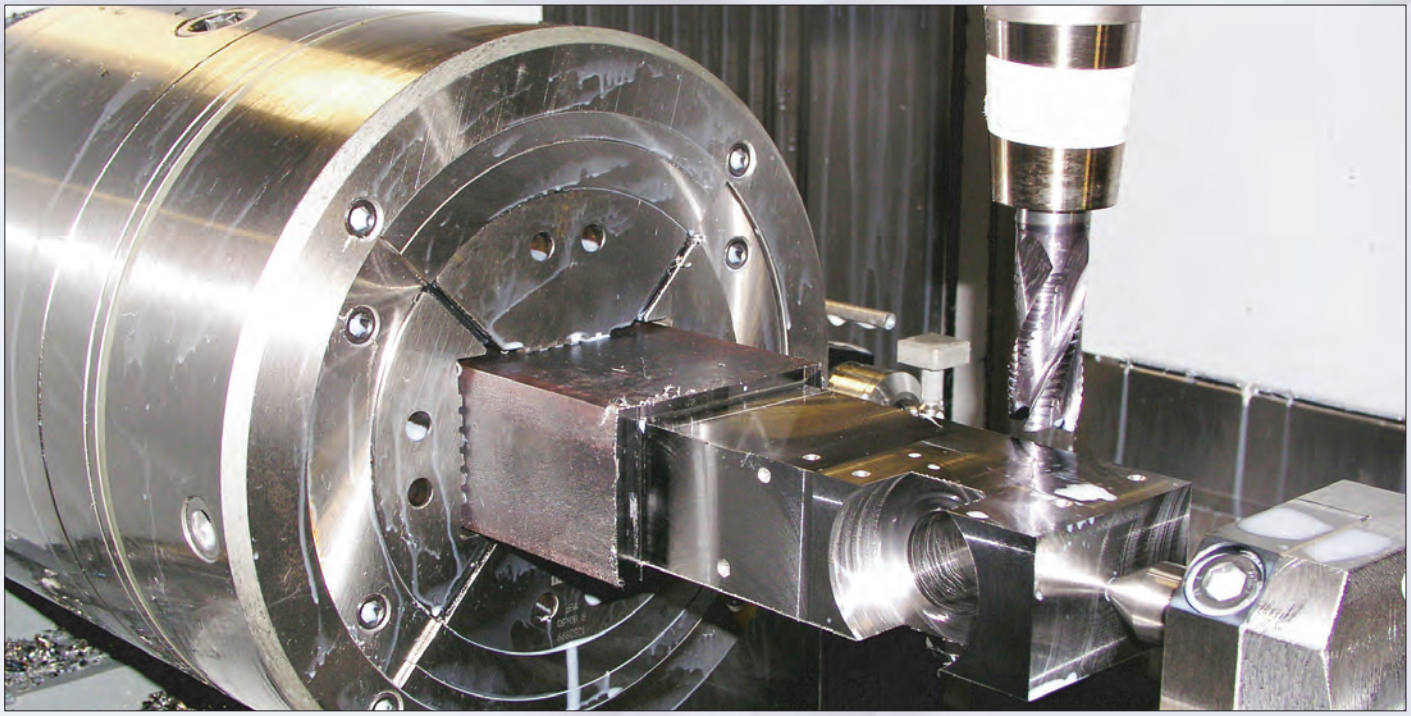
Pneumatic changing fixture with comfortable handle and integrated valve switch by changing the pins.

Changing fixture for pulling collets

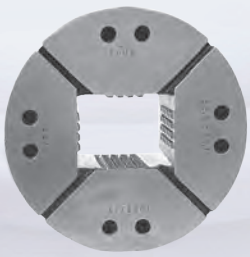
Size	Item	Type
32	435708	manually operated
32	431955	air operated
42/65	429677	manually operated
42/65	006898	air operated
52	1043300	manually operated
52	436285	air operated
80	437301	manually operated
80	001124	air operated
100	006352	air operated
120	006901	air operated

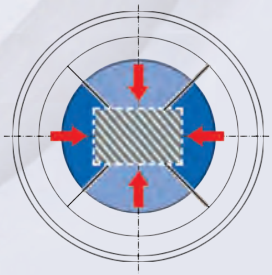
KZZT-F

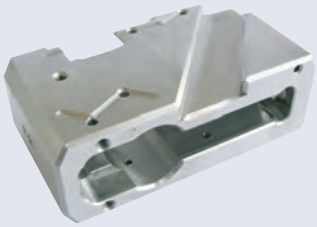
With passageway for profile bars, with spherical joint - clamping level compensation for a 2/2 centrical clamping mode

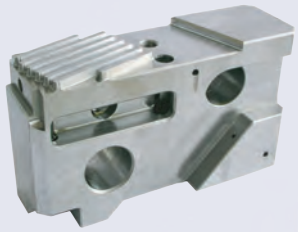


The KZZT-F, size 240 mm dia., has dynamical advantages when clamping non-circular or rightangular workpieces









Machining of complete workpiece

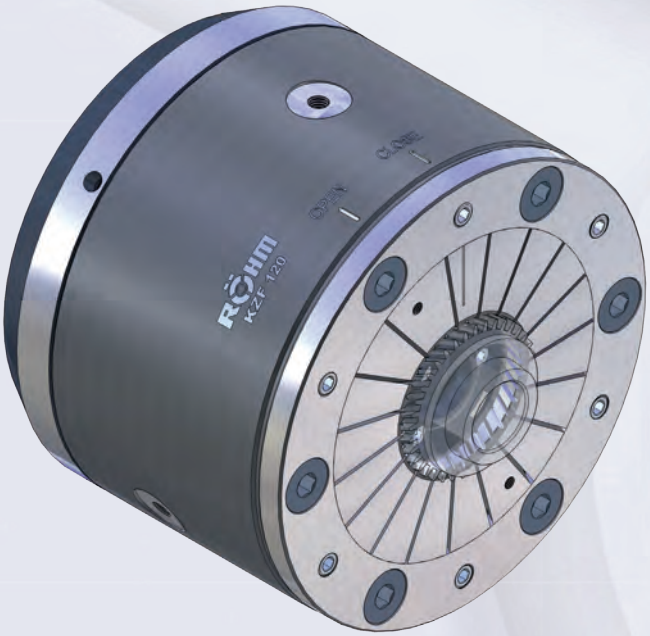
Waste loss reducting, practical and without additional efforts

- Clamping via trust piece
- No axial movement of clamping jaw
- For non-circular and rightangular workpieces
- For Top-Grip clamping jaws

The peculiar of this design is the fact that i. e. a right angled part with big tolerances up to +/- 1 mm of its X- and Y-axis will be clamped absolutely centrical in each of its profile axes. And this is managed by a single centrical actuation.

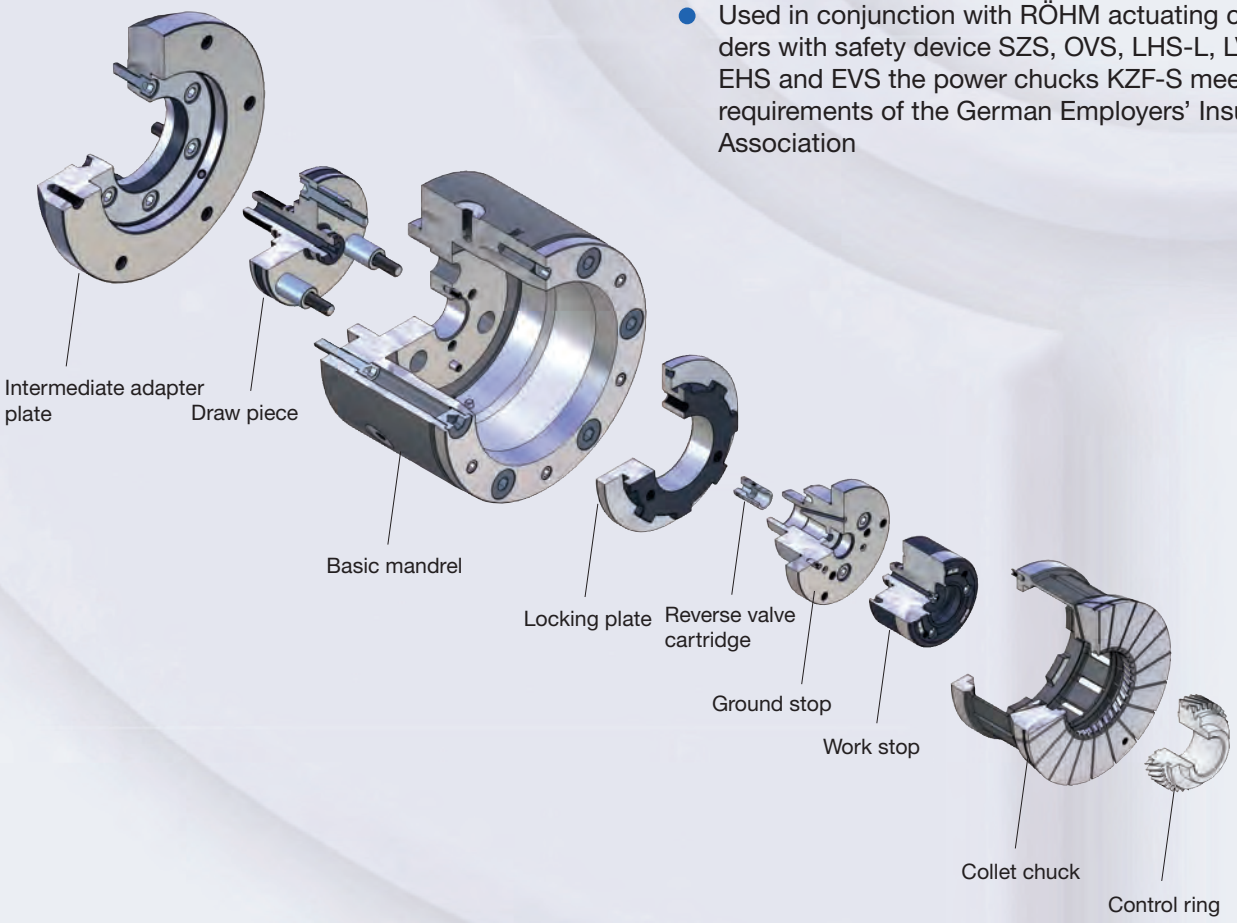
Did we arouse your interest? Please contact us!

KZF-S

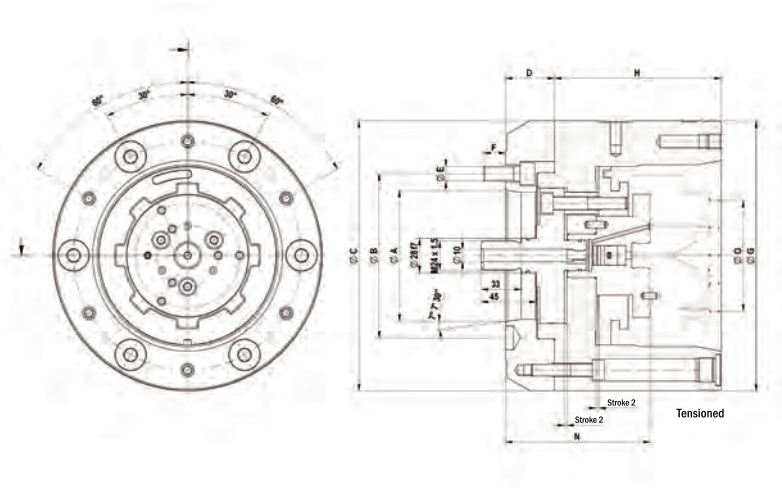


Technical features:

- Steady clamping by axial draw-in, the draw-in of the workpiece against the rigid work-stop takes place independently via the operation of the mandrel.
- Quick change of the clamping sleeves by the bayonet lock
- High axial- and radial accurancy,
- High repeating accurancy,
- Few loss of centrifugal force,
- Hardened low-wear construction,
- Integrated lubrication
- Sealed clamping system for low-maintenance working,
- Little weight and height due to compact design,
- For automatical charging,
- Prepared for the grommet of mediums (e.g. air or collant)
- Collet chucks for clamping in the toothing available
- Only external chucking
- Used in conjunction with RÖHM actuating cylinders with safety device SZS, OVS, LHS-L, LVS, EHS and EVS the power chucks KZF-S meet the requirements of the German Employers' Insurance Association



KZF-S



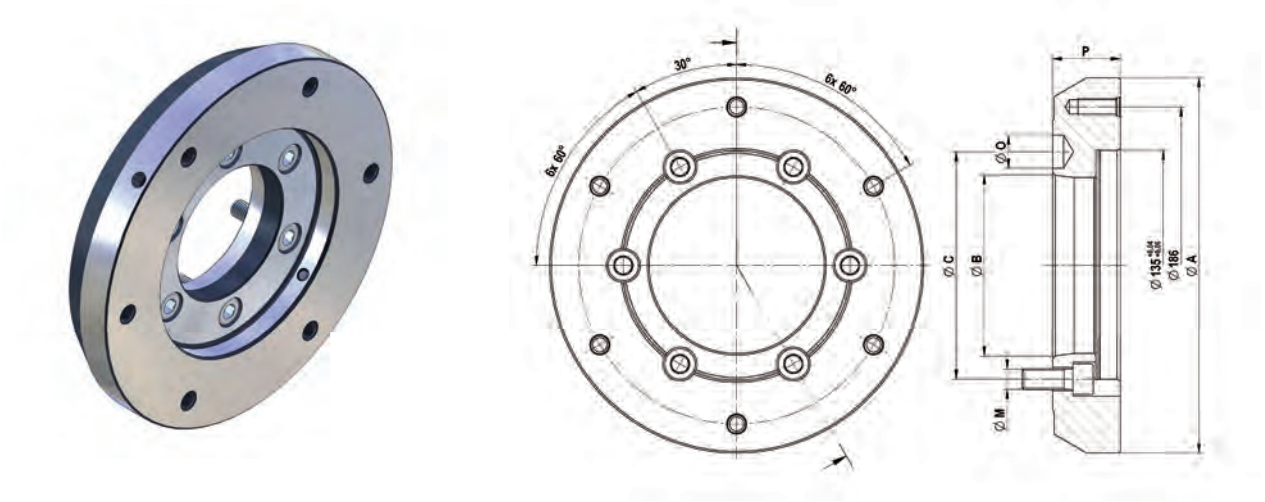
Tool group C 18
Type 267-10 Power operated collet chuck **KZF-S**; **for external clamping**

	KZF 80	KZF 120	KZF 180
Body collet	**1117832** ▲	**1117830** ▲	**1125403** ▲
Base bolt	**1117833** ▲	**1072101** ▲	**1125404** ▲
Draw piece	**1117837** ▲	**1117827** ▲	**1125408** ▲
Fastening plate	**1117835** ▲	**1072105** ▲	**1125406** ▲
Bolt spacer	**1117836** ▲	**1072103** ▲	**1072103** ▲
Ground stop for reverse valve cartridge	**1117839** ▲	**1072113** ▲	**1125410** ▲
Ground stop for ermeto pipe	**1117841** ▲	**1117824** ▲	**1125412** ▲
Reverse valve cartridge 1 Bar	**756641** ▲	**863134** ▲	**863134** ▲
Reverse valve cartridge 3 Bar	**843866** ▲	**889894** ▲	**889894** ▲
F Max, in daN	30	40	40
Speed max, min^{-1}	6000	5000	3500
Stroke	4	4	4
Clamping dia, min,	30	60	100
Clamping dia, max,	80	120	180
Expansion in Ø	1,4	1,4	1,4
Ø G	170	220	285
H	125	136	136

Info: kzf@roehm.biz

● from stock ■ 4 - 6 weeks ▲ on request

Accessories KZF-S



Tool group C 18
Type 267-20 **Intermediate flange ISO 702-1** (DIN 55028)

	A 05	A 05	A 05	A 06	A 06	A 08	A 08	A 08
Intermediate flange	**1117843** ■	**1072115** ■	**1117845** ■	**1072117** ■	**1125416** ■	**1117847** ■	**1072119** ■	**1125418** ■
For	KZF-S 80	KZF-S 80	KZF-S 81	KZF-S 120	KZF-S 180	KZF-S 82	KZF-S 120	KZF -S 180
Short-taper-Ø B	82,563	82,563	106,375	106,375	106,375	139,719	139,719	139,719
Short-taper pitch circle Ø C	104,8	104,8	133,4	133,4	133,4	171,4	171,4	171,4
Flange outer-Ø A	170	220	170	220	285	210	220	285
Ø D	105	135	105	135	200	105	135	200
Ø F	143	186	143	186	250	143	186	250
Ø O	16,3	16,3	19,45	19,45	19,45	24,2	24,2	24,2
Thread-Ø M	M10	M10	M12	M12	M12	M16	M16	M16
Total length flange P	35	40	35	40	45	35	40	45

Overview

KFD-N **from page 6145**

Wedge system

Actice pull-down by body and jaws

Only for external chucking

3-jaw design

Pull-down function:

After siting the jaws on the workpiece, the entire front part of the chuck is pulled back. The draw-bar pull exerted when the workpiece is clamped, draws it down onto the fixed milling bed. On releasing, built-in compression springs return the workpiece to start postition.

KBF-N **from page 6148**

Ball lock principle with wedge system

Active pull down by jaws

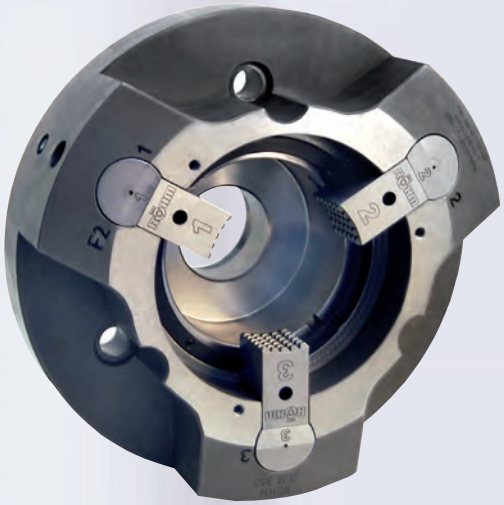
Oil bath lubrication, hermetically sealed

3-jaw design

Options: with fixed jaws or pendulum jaws

Pull-down function:

After siting the jaws on the workpiece, the jaws are pulled back. Thus this, the pull-down effect of the workpiece takes the axial stop.



ZFM **from page 6152**

Draw-bar system

Draw down effect through axial movement of draw rod studs

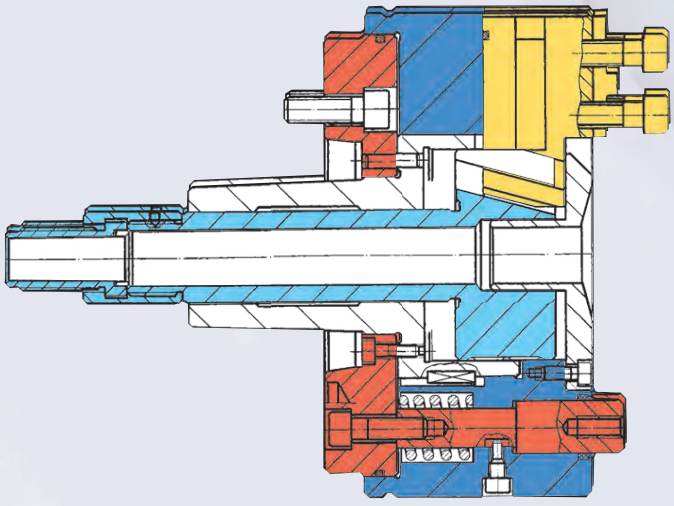
External gripping only

3-jaw design

KFD-N

Technical features:

- Wedge system
- Active draw-down via body and jaws
- High-accuracy chucking
- All-steel design; all working parts hardened and ground
- Long actuating-piston guideway
- Rugged, deep-seated support posts
- Rugged universal adapter for work seats included as attachment
- Used in conjunction with RÖHM actuating cylinders with safety device SZS, OVS, LHS-L, LVS, EHS and EVS the power chucks KFD-N meet the requirements of the German Employers' Insurance Association
- Only for external chucking

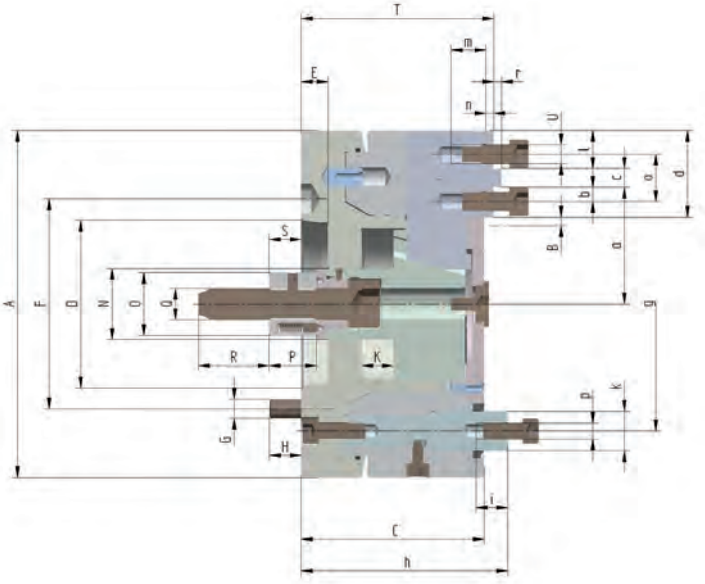


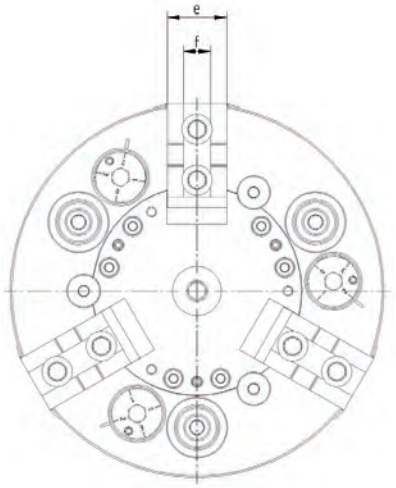
Wedge system with draw-down effect, with through-hole

With this design, workpieces can be chucked in perfect alignment.

Running errors due to jaw displacement and chuck body deformation, are thus eleminated. The draw-bar pull exerted when the workpiece is clamped, draws it down onto the fixed milling bed.
On releasing, built-in compression springs return the workpiece to start position. Work seats can be precisely secured to the support posts firmly attached to the mounting adapter.

KFD-N





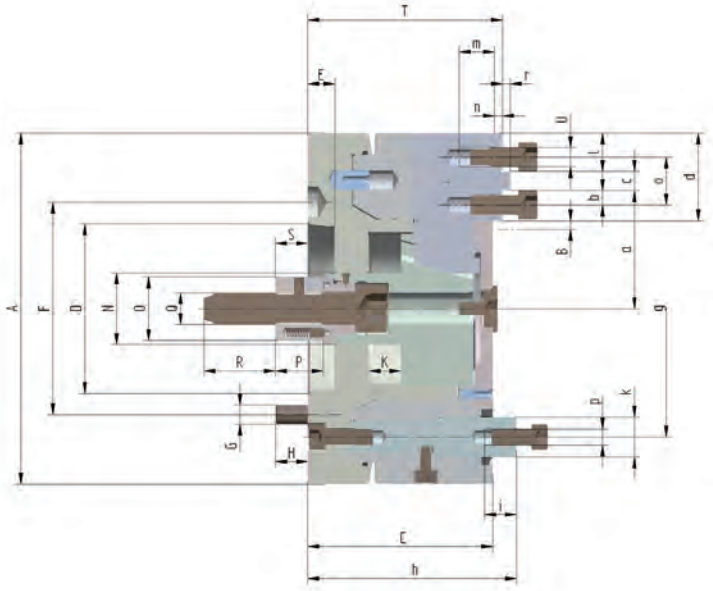
Tool group C 15
Type 441-12 **3 jaw** draw-down power chucks **KFD-N**, **only for external chucking**
Short taper mount **ISO 702-1 (DIN 55026)**

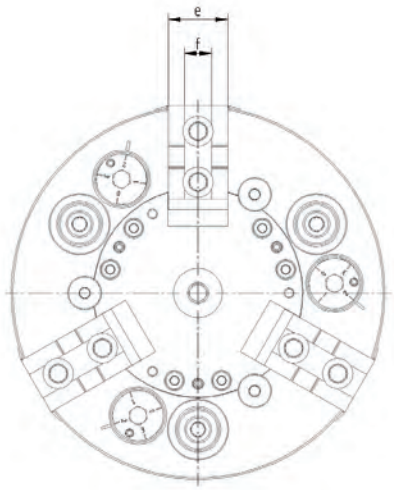
Item no.	155024 ■	155025 ■	155026 ■	150792 ■
Size	220	280	350	400
A	220	280	350	400
Jaw travel B	5,3	6,7	8	9,3
C min.	115,5	124,5	144,5	155,5
C max.	116	125	145	156
Short taper D	6	8	11	11
E	17	19	21	21
F	133,4	171,4	235	235
G	3 x M 12	3 x M 16	3 x M 20	3 x M 20
H	20	24	27	27
Wedge stroke K	20	25	30	35
N	45	55	60	60
O	40	46	46	46
P	30	30	30	30
Q	M 20	M 24	M 24	M 24
R	45	55	55	55
S min.	20	18	10	10
S max.	40	43	40	45
T min.	121,5	130,5	150,5	163,5
T max.	122	131	151	164
U	M 12 x 30	M 16 x 35	M 16 x 35	M 20 x 45
a min.	68,7	88,3	102	119,7
a max.	74	95	110	129
b	9	12	17	27,5
cg6	12	16	16	25
d	55	75	105	118
e	35	50	55	60
f^{H7}	16	20	20	25
g	161	200	230	260
h-0,1	131	140	158	171
i	20	19	22	26
k	25	32	32	45
l	36	45	65	71
m	22	27	26	34
n	5	5	5	6,8
o	30	40	50	80
p	M 10	M 12	M 12	M 16
Maximum draw bar pull kN	35	65	80	95
Max. total clamping force approx. kN	70	140	190	250
Max. admissible speed min^{-1}	4000	3200	2400	2200
Moment of inertia J kgm^2	0,2	0,54	1,5	2,8
Weight without jaws approx. kg	33	55	100	140
Soft top jaws (set) Id.-Nr.	**123430**	**123433**	**129849**	**772864**

Adapter plate for work seats on request

● from stock ■ 4 - 6 weeks ▲ on request

KFD-N

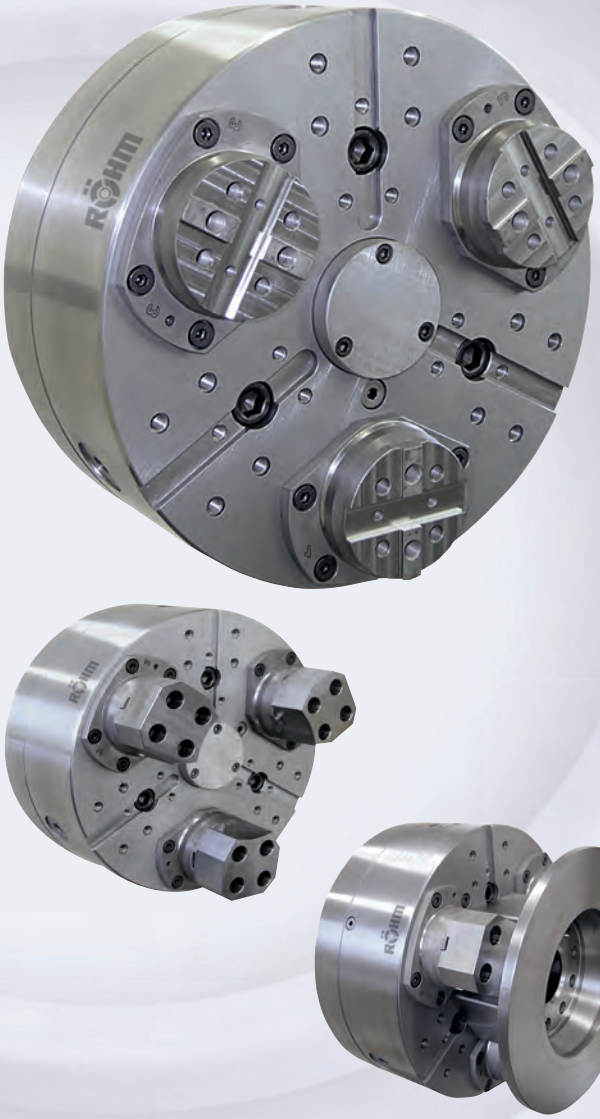




Tool group C 15
Type 441-60 **3 jaw** draw-down power chucks, **only for external chucking**
Short taper mount **ISO 702-1 (DIN 55026)**

Item no.	150793 ▲	150794 ▲	150795 ▲	150796 ▲
Size	500	500	630	800
A	500	500	630	800
Jaw travel B	9,3	9,3	10,5	10,5
C min.	155,5	155,5	193,5	209,5
C max.	156	156	195	211
Short taper D	11	15	15	15
E	21	23	23	23
F	235	330,2	330,2	330,2
G	6 x M 20	6 x M 24	6 x M 24	6 x M 24
H	30	35	35	35
Wedge stroke K	35	35	40	40
N	60	60	80	80
O	46	46	55	55
P	30	30	30	30
Q	M 24	M 24	M 30	M 30
R	55	55	85	85
S min.	10	10	2	18
S max.	45	45	42	58
T min.	163,5	163,5	201,5	218,5
T max.	164	164	203	220
U	M 20	M 20	M 20	M 20
a min.	158,2	158,2	195	237
a max.	167,5	167,5	205,5	247,5
b	60	60	90	130
cg6	25	25	25	25
d	168	168	219	305
e	60	60	70	70
f^{H7}	25	25	25	25
g	180	180	225	175
h-0,1	171	171	213	230
k	45	45	100	100
l	70	70	97	140
m	28	28	28	28
n	6	6	6	6
o	120	120	180	280
p	M 16	M 16	M 12	M 12
r	8	8	8	8
Maximum draw bar pull kN	110	110	130	130
Max. total clamping force approx. kN	280	280	320	320
Max. admissible speed min^{-1}	1800	1800	1200	800
Moment of inertia J kgm^2	6,8	6,8	20	60
Weight without jaws approx. kg	220	220	410	750

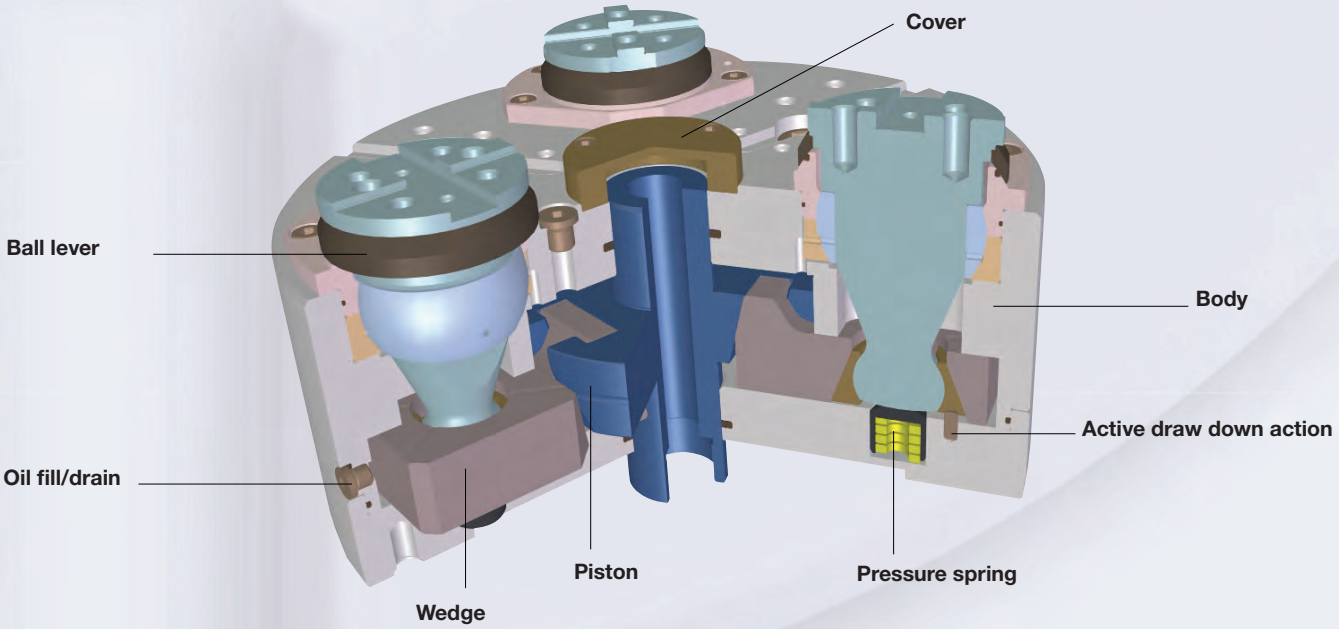
Ball lock draw-down chuck KBF-N



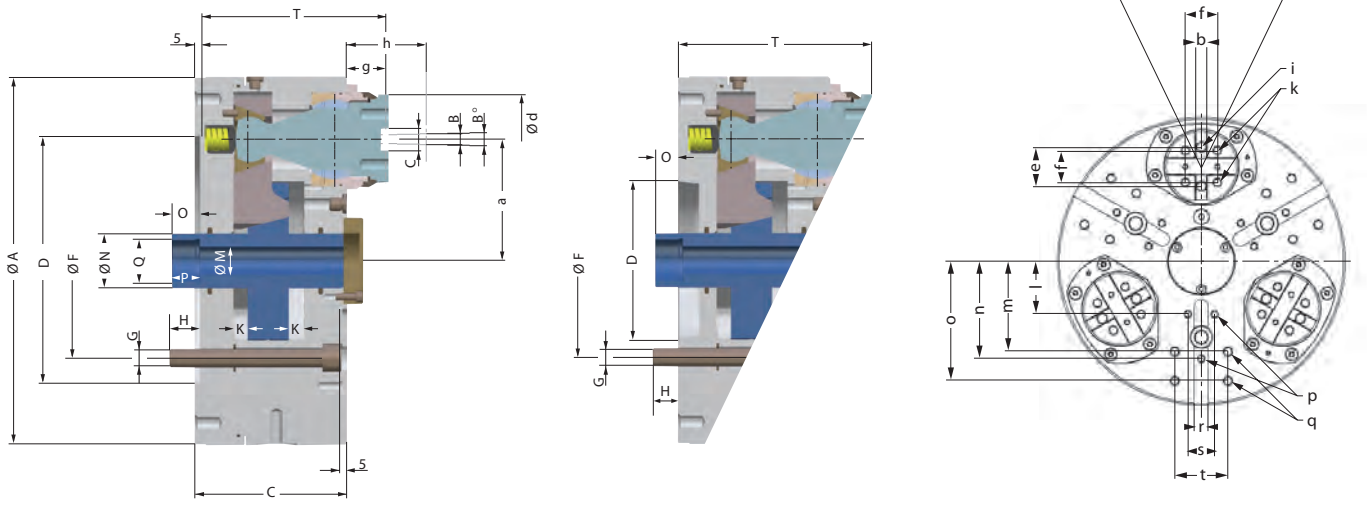
Technical features:

- Ball lock principle with wedge system
- Active draw-down via jaws
- With fixed jaws or with pendulum jaws
- Suitable for internal and external clamping
- Wear resistant due to large areas for power transmission
- Hermetically sealed against dirt and coolant
- The oil filling makes the chuck almost maintenance free at a constant performance
- Influences of the speed related centrifugal forces will be minimized by similar masses situated left and right of the ball levers which is leading to high speeds
- Used in conjunction with RÖHM actuating cylinders with safety device SZS, OVS, LHS-L, LVS, EHS and EVS the power chucks KBF-N meet the requirements of the German Employers' Insurance Association
- Alternative with floating ball levers for clamping rough and easy deformable workpieces at six clamping spots

Scan QR-Code an watch the productvideo KBF-N on Youtube!



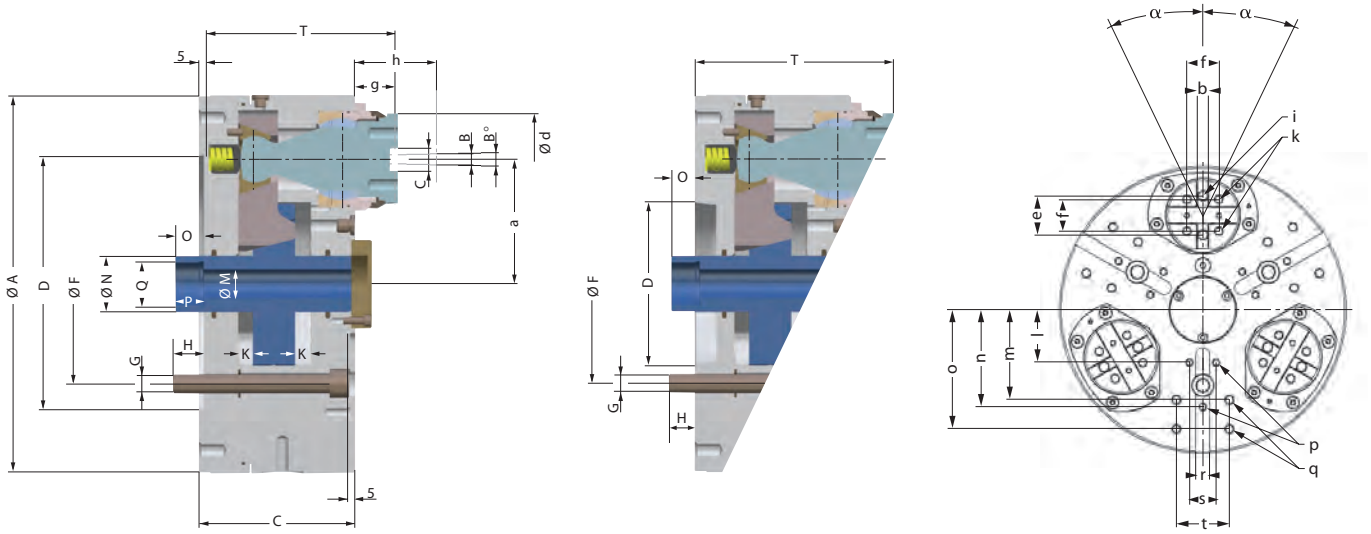
KBF-N



Tool group C 15
Type 582-10/582-30
Power-operated ball lock draw-down chuck **KBF-N**
with **fixed jaws or pendulum jaws** for **internal and external clamping**, with **pull down effect**, **hermetically sealed**, **oil filled**, **centrical clamping**
Adaptor recess **DIN 6353**

Item no.	168355 ■	168357 ▲	165635 ■	165769 ▲	165637 ■	165771 ▲	165639 ■	165773 ▲	168056 ■	168058 ▲
Size	170	170	200	200	250	250	315	315	400	400
Jaw design	Fixed jaws	Pendulum jaws	Fixed jaws	Pendulum jaws	Fixed jaws	Pendulum jaws	Fixed jaws	Pendulum jaws	Fixed jaws	Pendulum jaws
A	178	178	210	210	260	260	325	325	400	400
Jaw travel B	5,4	5,4	5,9	5,9	6,3	6,3	6,4	6,4	7,5	7,5
B°	5,2°	5,2°	4,9°	4,9°	4,4°	4,4°	4,5°	4,5°	4,7°	4,7°
C	94	94	111	111	135	135	135	135	148	148
D	ZA 140	ZA 140	ZA 170	ZA 170	ZA 220	ZA 220	ZA 220	ZA 220	ZA 300	ZA 300
F	104,8	104,8	133,4	133,4	171,4	171,4	171,4	171,4	235	235
G	3 x M10	3 x M10	3xM12	3xM12	3xM16	3xM16	3xM16	3xM16	3 x M20	3 x M20
H	15	15	17	17	22	22	22	22	30	30
Total wedge stroke K+K	21	21	25	25	25	25	25	25	30	30
M	14	14	14	14	18	18	25	25	52	52
Ng6	30	30	36	36	38	38	48	48	75	75
O min.	12,5	12,5	12,5	12,5	12,5	12,5	12,5	12,5	10	10
O max.	33,5	33,5	37,5	37,5	37,5	37,5	37,5	37,5	40	40
P	20	20	18	18	20	20	25	25	25	25
Q	M22 x 1,5	M22 x 1,5	M28x1,5	M28x1,5	M32x1,5	M32x1,5	M38x1,5	M38x1,5	M60 x 1,5	M60x 1,5
T	116	116	139	139	163	163	163	163	180	180
a	55	55	64	64	82	82	107	107	130	130
bh8	7,94	7,94	7,94	7,94	12,7	12,7	12,7	12,7	12,7	12,7
cH7	12,68	12,68	12,68	12,68	19,03	19,03	19,03	19,03	19,03	19,03
d	60	60	65	65	75	75	80	80	105	105
e	32	32	38	38	44,4	44,4	44,4	44,4	63,5	63,5
f	24	24	32	32	36	36	36	36	48	48
g	27	27	33	33	33	33	33	33	37	37
Reference height h	50	50	60	60	70	70	70	70	80	80
i	M10	M10	M12	M12	M12	M12	M12	M12	M16	M16
k	M8	M8	M10	M10	M10	M10	M10	M10	M12	M12
l	-	-	30	30	50	50	60	60	80	80
m	65	65	80	80	102	102	102	102	140	140
n	68	68	50	50	65	65	110	110	144	144
o	-	-	-	-	-	-	135	135	170	170
p	M6	M6	M6	M6	M8	M8	M8	M8	M10	M10
q	M8	M8	M8	M8	M10	M10	M10	M10	M12	M12
r	16	16	16	16	16	16	16	16	20	20
s	-	-	25	25	30	30	30	30	36	36
t	36	36	45	45	60	60	60	60	80	80
Floating angle α	5°	5°	5°	5°	3°	3°	3°	3°	3°	3°
Pull-down travel mm	0,3	0,3	0,3	0,3	0,3	0,3	0,3	0,3	0,3	0,3
Max. admissible speed min^{-1}	5000	5000	4500	4500	3800	3800	3000	3000	2200	2200
Maximum draw bar pull kN	18	18	30	30	40	40	45	45	50	50
Max. total clamping force kN	44	44	73	73	93	93	105	105	120	120
Weight approx. kg	18	18	30	30	55	55	80	80	130	130

KBF-N



Tool group C 15
Type 582-12/582-32
Power-operated ball lock draw-down chuck **KBF-N**
with **fixed jaws or pendulum jaws** for **internal and external clamping**, **hermetically sealed**, **oil filled**, **centrical clamping**
Short taper mount for **ISO 702-1** (DIN 55026/55021)

Item no.	168356 ■	168358 ▲	165636 ■	165770 ■	165638 ■	165772 ▲	165640 ■	165774 ■	168057 ■	168059 ▲
Size	170	170	200	200	250	250	315	315	400	400
Jaw design	Fixed jaws	Pendulum jaws	Fixed jaws	Pendulum jaws	Fixed jaws	Pendulum jaws	Fixed jaws	Pendulum jaws	Fixed jaws	Pendulum jaws
A	178	178	210	210	260	260	325	325	400	400
Jaw travel B	5,4	5,4	5,9	5,9	6,3	6,3	6,4	6,4	7,5	7,5
B°	5,2°	5,2°	4,9°	4,9°	4,4°	4,4°	4,5°	4,5°	4,7°	4,7°
C	94	94	111	111	135	135	135	135	148	148
D	KK 5	KK 5	KK 6	KK 6	KK 8	KK 8	KK 8	KK 8	KK 11	KK 11
F	104,8	104,8	133,4	133,4	171,4	171,4	171,4	171,4	235	235
G	3 x M10	3 x M10	3xM12	3xM12	3xM16	3xM16	3xM16	3xM16	3 x M20	3 x M20
H	15	15	17	17	22	22	22	22	30	30
Total wedge stroke K+K	21	21	25	25	25	25	25	25	30	30
M	14	14	14	14	18	18	25	25	52	52
Ng6	30	30	36	36	38	38	48	48	75	75
O min.	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5	5	5
O max.	28,5	28,5	32,5	32,5	32,5	32,5	32,5	32,5	35	35
P	20	20	18	18	20	20	25	25	25	25
Q	M22 x 1,5	M22 x 1,5	M28x1,5	M28x1,5	M32x1,5	M32x1,5	M38x1,5	M38x1,5	M60 x 1,5	M60 x 1,5
T	121	121	144	144	168	168	168	168	185	185
a	55	55	64	64	82	82	107	107	130	130
bh8	7,94	7,94	7,94	7,94	12,7	12,7	12,7	12,7	12,7	12,7
cH7	12,68	12,68	12,68	12,68	19,03	19,03	19,03	19,03	19,03	19,03
d	60	60	65	65	75	75	80	80	105	105
e	32	32	38	38	44,4	44,4	44,4	44,4	63,5	63,5
f	24	24	32	32	36	36	36	36	48	48
g	27	27	33	33	33	33	33	33	37	37
Reference height h	50	50	60	60	70	70	70	70	80	80
i	M10	M10	M12	M12	M12	M12	M12	M12	M16	M16
k	M8	M8	M10	M10	M10	M10	M10	M10	M12	M12
l	-	-	30	30	50	50	60	60	80	80
m	65	65	80	80	102	102	102	102	140	140
n	68	68	50	50	65	65	110	110	144	144
o	-	-	-	-	-	-	135	135	170	170
p	M6	M6	M6	M6	M8	M8	M8	M8	M10	M10
q	M8	M8	M8	M8	M10	M10	M10	M10	M12	M12
r	16	16	16	16	16	16	16	16	20	20
s	-	-	25	25	30	30	30	30	36	36
t	36	36	45	45	60	60	60	60	80	80
Floating angle α	5°	5°	5°	5°	3°	3°	3°	3°	3°	3°
Pull-down travel mm	0,3	0,3	0,3	0,3	0,3	0,3	0,3	0,3	0,3	0,3
Max. admissible speed min^{-1}	5000	5000	4500	4500	3800	3800	3000	3000	2200	2200
Maximum draw bar pull kN	18	18	30	30	40	40	45	45	50	50
Max. total clamping force kN	44	44	73	73	93	93	105	105	120	120
Weight approx. kg	18	18	30	30	55	55	80	80	130	130

● from stock ■ 4 - 6 weeks ▲ on request

Jaws KBF-N

Tool group C 21
Type 543-12 **Soft top jaws, 3-jaw set**
Tongue and groove, material: 16 MnCr 5

Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
168383 ■	170	70	26,5	60
165694 ■	200	80	31,5	65
165696 ■	250/315	90	41,5	75
168385 ■	400	125	46,5	105

Workpiece-specific top jaws can be placed on the cross-tenon interface of the ball levers. Six threaded bores are available for fastening.

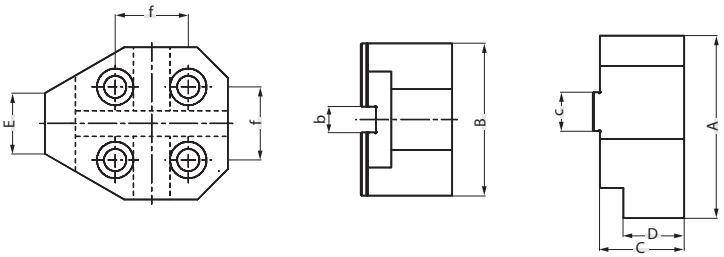
For exact clamping, it is advantageous to use soft top jaws. They are to be turned under clamping force to the desired clamping diameter. If these top jaws are still to be hardened, after hardening it is necessary to regrind them on the chuck.

For rough part clamping, hardened clamping inserts can be worked into the soft top jaws at the corresponding clamping diameter.

Special top jaws adapted to a specific workpiece can also be delivered upon request.

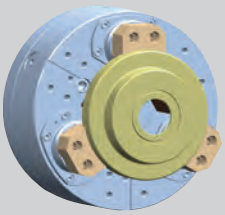
Soft top jaws for KBF-N

Chuck size	170	200	250	315	400
A	70	80	90	90	125
B	60	65	75	75	105
C	26,5	31,5	41,5	41,5	46,5
D	20	20	30	30	30
E	25	30	30	30	40
b H7	7,94	7,94	12,7	12,7	12,7
c h6	12,68	12,68	19,03	19,03	19,03
f	24	32	36	36	48

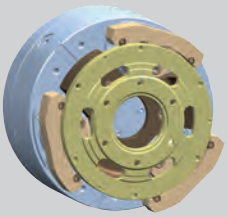


Examples for clamping jaws

Examples for applications:

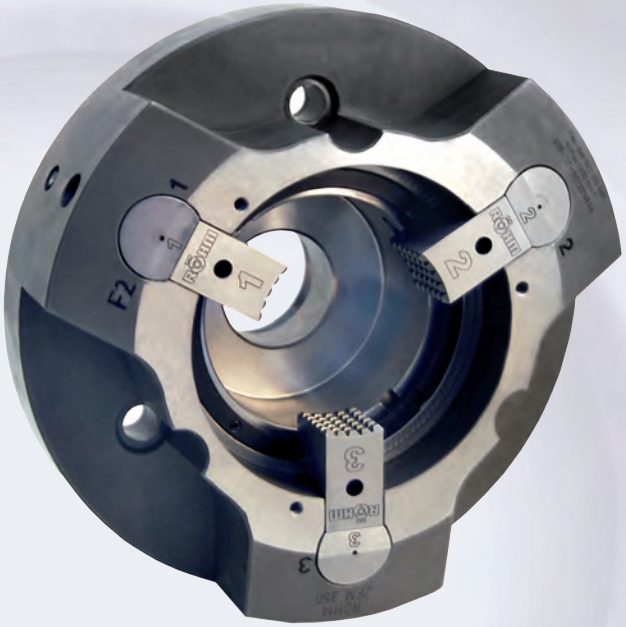


Fixed Jaws:
for exact clamping of flange Typee workpieces like wheel hubs, gears etc.



Pendulum Jaws:
for clamping of easy deformable rough parts such as clutch thrust plates or gear rings.

ZFM



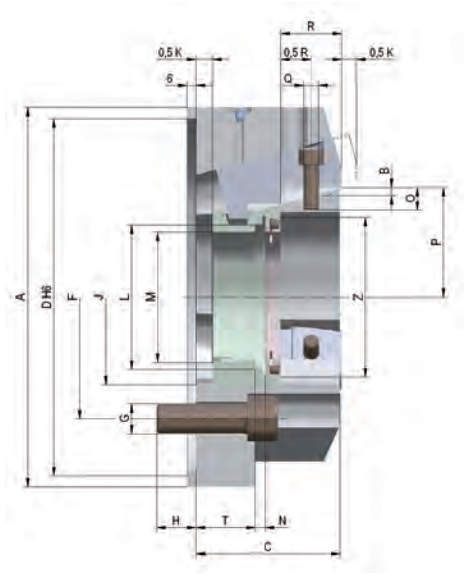
Technical features:

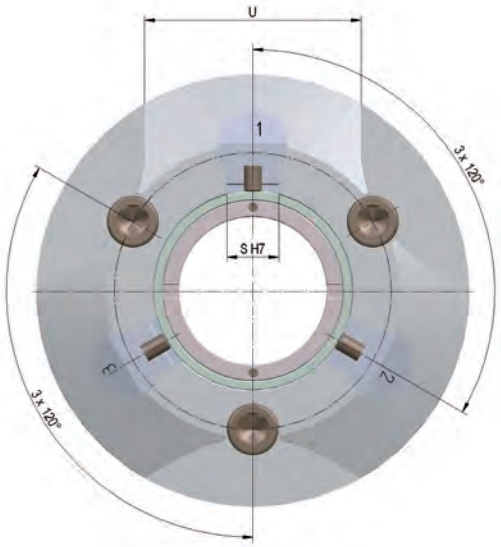
- Draw rod studs system
- Draw down effect through axial movement of draw rod studs
- Ideally suited for machining bar stock, pipes and shafts, as well as for flanges with draw down on workstop
- Power transmission direct from piston to draw rod studs
- Different chucking diameters thanks to interchangeable gripping inserts
- Gripping inserts hardened, adapted to suit the workpiece diameter.
- External gripping only
- Used in conjunction with RÖHM actuating cylinders with safety device SZS, OVS, LHS-L, LVS, EHS and EVS the power chucks ZFM meet the requirements of the German Employers' Insurance Association

Special designs:

E.g. power operated draw bar chuck ZFM, diameter 220 mm, with clamping inserts with chip flow grooves and threads, for work stops for clamping of aluminum flanges.

ZFM





Tool group C 15
Type 509-00
Power-operated draw bar chuck **ZFM**,
with gripping inserts cylindrical centre mount

Item no.	201979 ■	201980 ●	201981 ●	201982 ●	201983 ■	201984 ■
Size	130	160	200	250	315	350
A	130	160	200	250	315	350
Jaw travel B	5,3	5,3	5,3	5,3	5,3	5,3
C	75	75	82	95	105	105
DH6	115	145	185	235	235	300
F	92	100	140	160	200	240
G	3 x M 12	3 x M 12	3 x M 16	3 x M 20	3 x M 20	3 x M20
H	18	18	20	26	26	26
J	56	71	95	115	160	190
Wedge stroke K	20	20	20	20	20	20
L	38	52	72	95	136	160
M	32,5	45,5	65,5	85,5	125,5	150,5
N	7	7	7	7	7	7
O	12	12	15	15	15	15
P max.	40,65	48,15	64,65	74,65	101,65	116,65
P min.	35,35	42,85	59,35	69,35	96,35	111,35
Q	M 8	M 8	M 10	M 10	M 12	M 12
R	30	30	35	40	45	45
SH7	24	24	30	30	35	35
T max.	40	40	40	48	53	53
T min.	20	20	20	28	33	33
U	55	60	85	125	125	125
Z	M 48 x 1,25	M 62 x 1,25	M 85 x 1,25	M 105 x 1,25	M 150 x 1,25	M 175 x 1,25
Maximum draw bar pull kN	15	25	35	45	50	70
Max. total clamping force approx. kN	28	46	66	84	90	125
Max. admissible speed min^{-1}	8000	8000	6300	5500	4200	3500
Moment of inertia J kgm^2	0,012	0,026	0,072	0,183	0,508	0,760
Weight without jaw inserts approx. kg	5,5	7,5	13	21	35	42
Chucking capacity mm	0-30	0-40	4-70	24-80	30-130	60-160
Actuating cylinder hydraulic OVS	85	105	130	150	150	200

Jaws ZFM

Tool group C 21
Type 509 **Clamping Jaws, 3-jaw-set, prefabricated, can be hardened**
material: 16 MnCr 5

Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
210006 ▲	130	34,7	30	24
210007 ●	160	42,7	30	24
210008 ●	200	51,7	35	30
210009 ●	250	61,7	45	30
210010 ▲	315/350	85,7	45	35

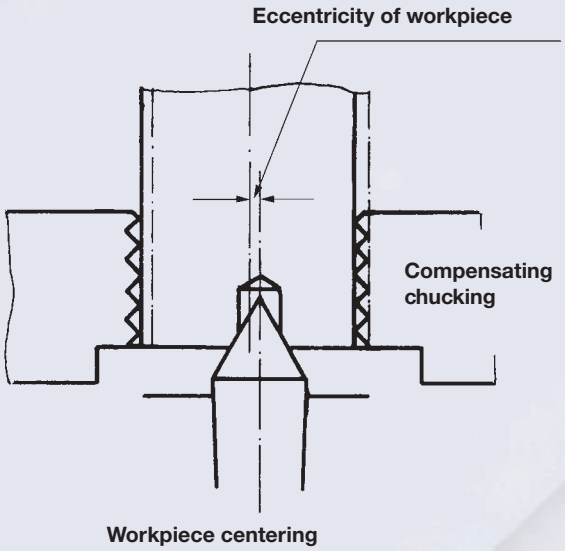
● from stock ■ 4 - 6 weeks ▲ on request

KFD-AF

Technical features:

- Wedge system
- The compensating action is provided by the radially floating chucking piston
- Easy converting for use as centering chuck via centering inserts possible
- Made of steel, all wear parts hardened and ground
- Especial sealed against coolant
- Base jaws lubricated
- Piston lubricated in self-centering mode
- High gripping force
- Used in conjunction with RÖHM actuating cylinders with safety device SZS, OVS, LHS-L, LVS, EHS and EVS the power chucks KFD-AF meet the requirements of the German Employers' Insurance Association

The workpiece is located by a center mounted in a housing and chucked by means of compensating jaws. The compensating action is provided by the radially floating chucking piston. This chuck can be readily converted for use as an ordinary self-centering chuck by simply changing the centering insert.



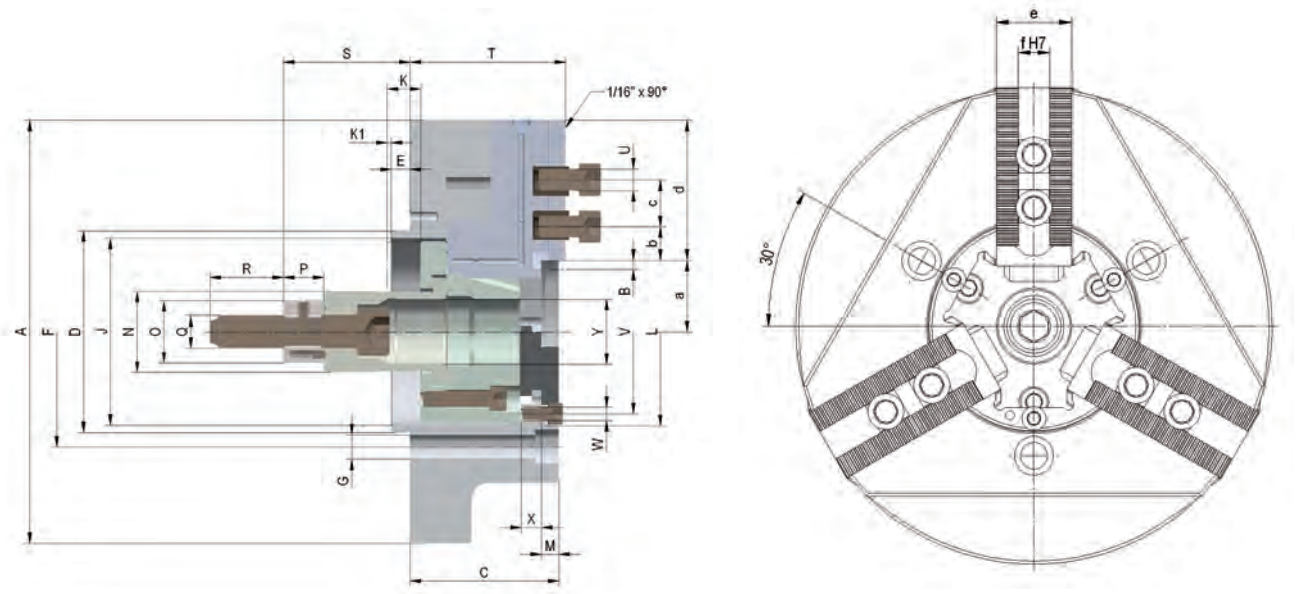
- **Interchangeable centering inserts:**
  - with spring-loaded center
  - with solid center
  - for self-centering chucking (no compensation)

- **Interchangeable mounting adapters:**
  - with centering shoulder
  - with short taper recess
  - with option for radial fine adjustment, upon request

Note:

When ordering please state size of power chuck, style of centre insert and adapter plate.

KFD-AF



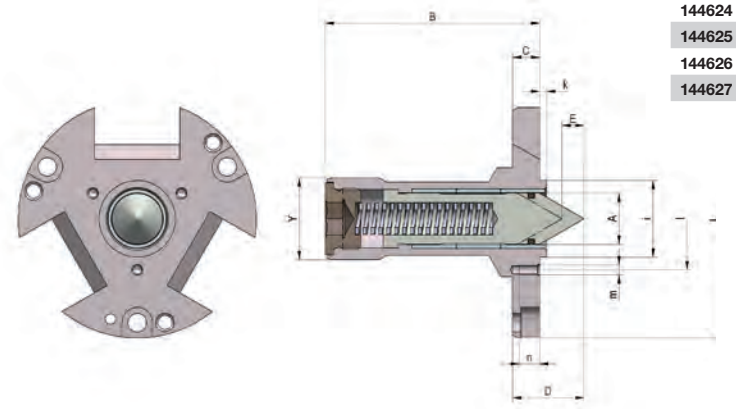
Tool group C 15
Typ 535-00 **3-jaw** compensation chucks **KFD-AF**, with **serration 90°**
Interchangeable centering insert and adaption mounting

Item no.	144620 ●	144621 ●	144622 ●	144623 ●
Size	160	200	250	315
A	160	200	250	315
Jaw travel B	4,8	5,6	6,7	6,7
C	78	85	93	111
Dk5	90	115	135	150
E	14	14	14	14
F	104,8	133,4	171,4	171,4
G	3 x ø 12	3 x ø 14	3 x ø 18	3 x ø 18
J	82	103	122	139
Wedge stroke K	18	21	25	25
K_1	2	2	3	3
LH6	90	95	120	140
M	10	11	13	13
Ng6	38	42	50	60
O	34	40	46	46
P	25	30	30	30
Q	M16	M20	M24	M24
R	40	45	55	55
S min.	56	75	94	94
S max.	74	96	119	119
T	82	90	98	116
U	M12	M12	M16	M16
V	72	80	102	102
W	3 x M8	3 x M8	3 x M10	3 x M10
X	12	15	15	15
YH6	32	32	38	48
a min.	27,2	34,4	40,3	46,3
a max.	32	40	47	53
b min.	8	8	10	10
c min.	19	19	25	25
c max.	37	49	64	90
d	48	60	78	104,5
e	35	40	50	50
f^{H7}	17	17	21	21
Maximum draw bar pull kN	25	36	50	65
Max. total clamping force approx. kN	50	72	110	150
Max. admissible speed min^{-1}	3500	3200	3000	2300
Compensation on Ø mm	3	3	4	4
Moment of inertia J kgm^2	0,04	0,1	0,218	0,744
Weight without jaws approx. kg	13	20	28	60
Actuating cylinder hydraulic OVS	105-150	105-200	150-200	150-200
Reversible top jaws (set) Id.-Nr.	**046408**	**118522**	**046414**	**046414**
Soft top jaws (set) Id.-Nr.	**133152**	**133153**	**133154**	**133154**

Advice: When ordering please state size of power chuck, style of center insert and adaptor plate
Dia. Ng6 has to be guided in spindle

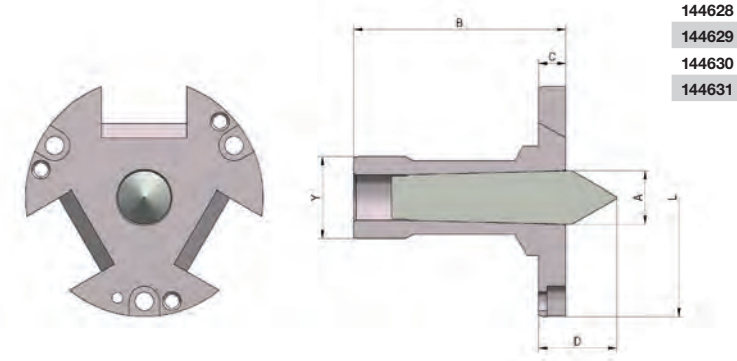
Centering inserts KFD-AF

Tool group C 15
Type 535-50 **Centering insert** with **spring-loaded centre**



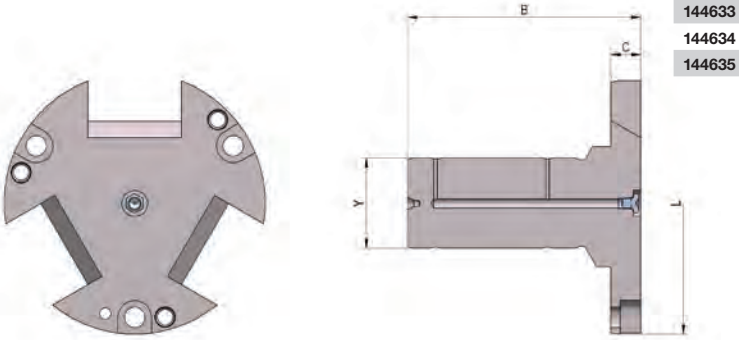
Item no.	Size	A	B	C	D	E	Lj6	i-0,05	k	Yg6	l	m	n
144624 ●	160	17,5	90	13	~30	6	90	30	4	32	40	M 5	8
144625 ●	200	20,5	91	14	~33	8	95	30	4	32	40	M 5	10
144626 ●	250	25,5	109	16	~38	10	120	40	4	38	50	M 5	10
144627 ●	315	30,5	125	16	~42	13	140	45	4	48	60	M 6	12

Tool group C 15
Type 535-51 **Centering insert** with **fixed centre**



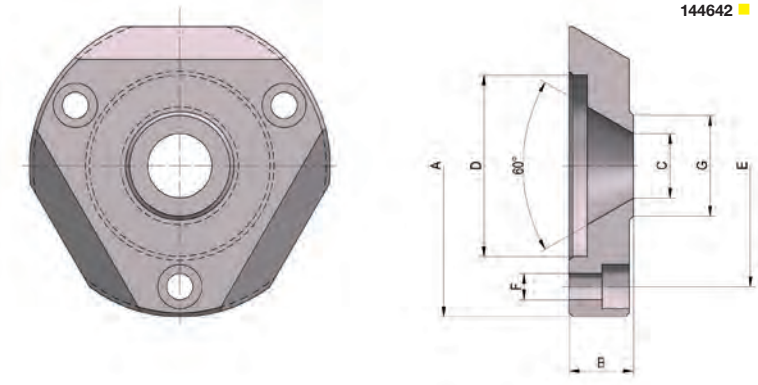
Item no.	Size	A	B	C	D	Lj6	Yg6
144628 ●	160	~18	90	13	~33	90	32
144629 ●	200	~18	91	14	~33	95	32
144630 ●	250	~24	109	16	~38	120	38
144631 ●	315	~32	125	16	~46	140	48

Tool group C 15
Type 535-52 **Centering insert** for **centric clamping**



Item no.	Size	B	C	Lj6	Yg6
144632 ■	160	90	13	90	32
144633 ■	200	91	14	95	32
144634 ■	250	109	16	120	38
144635 ■	315	125	16	140	48

Tool group C 15
Typ 535-60 **Workpiece stop**
for **small shafts**

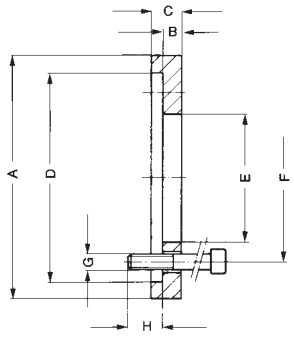


Item no.	Size	A	B	C	DH7	E	F	G
144640 ■	160/200	53	13	8	30	40	5,5	14
144641 ■	250	65	15	16	40	50	5,5	25
144642 ■	315	75	16	16	45	60	6,6	25

● from stock ■ 4 - 6 weeks ▲ on request

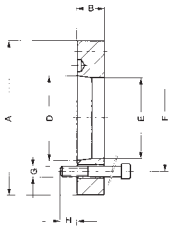
Accessories KFD-AF

Tool group C 15
Type 535-70 **Adapter plates** with cylindrical centre mount to **DIN 6353 complete** with mounting screws

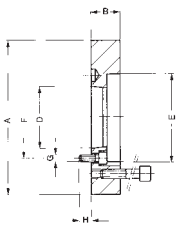


Id.-Nr.	Size	A	B	C	DH6	E^{H6}	F	G	H
144636 ●	160	160	16	22	140	90	104,8	3 x M 10	14
144637 ●	200	200	16	22	170	115	133,4	3 x M 12	16
144638 ●	250	250	17	23	220	135	171,4	3 x M 16	24
144639 ●	315	280	17	23	220	150	171,4	3 x M 16	24

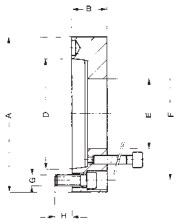
Tool group C 15
Type 535-72 **Adapter plates** with short taper mount **ISO 702-1** (DIN 55026/55021)
complete with mounting studs



Design I



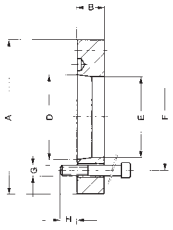
Design II



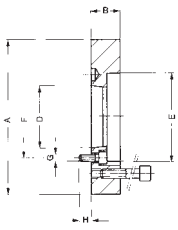
Design III

Id.-Nr.	Size	Design	A	B	D	E^{H6}	F	G	H
144643 ●	160/5	I	135	29	KK 5	90	104,8	3 x M10	15
144646 ●	160/6	III	165	30	KK 6	90	133,4	3 x M12	18
144649 ●	200/5	II	165	33	KK 5	115	104,8	3 x M10	14
144652 ●	200/6	I	165	30	KK 6	115	133,4	3 x M12	18
144655 ●	250/6	II	210	36	KK 6	135	133,4	3 x M12	18
144658 ●	250/8	I	210	33	KK 8	135	171,4	3 x M16	24
144661 ●	315/8	I	210	34	KK 8	150	171,4	3 x M16	25
144664 ●	315/11	III	280	46	KK 11	150	235	3 x M20	30

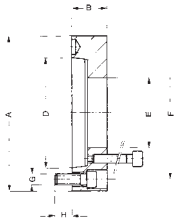
Tool group C 15
Type 535-73 **Adapter plates** with short taper mount **ISO 702-3** (DIN 55027) **/ DIN 55022**
complete with mounting studs



Design I



Design II

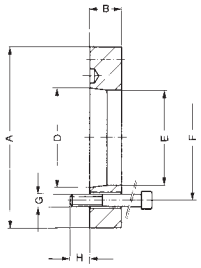


Design III

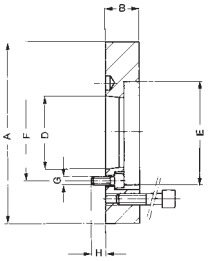
Id.-Nr.	Size	Design	A	B	D	E^{H6}	F	G
144644 ■	160/5	I	135	29	KK 5	90	104,8	Studs
144647 ■	160/6	III	165	30	KK 6	90	133,4	Studs
144650 ■	200/5	II	165	33	KK 5	115	104,8	Studs
144653 ■	200/6	I	165	30	KK 6	115	133,4	Studs
144656 ■	250/6	II	210	36	KK 6	135	133,4	Studs
144659 ■	250/8	I	210	33	KK 8	135	171,4	Studs
144662 ■	315/8	I	210	34	KK 8	150	171,4	Studs
144665 ■	315/11	III	280	46	KK 11	150	235	Studs

Accessories KFD-AF

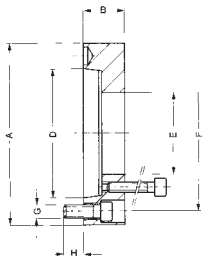
Tool group C 15
Type 535-74 **Adapter plates** with short taper mount **Camlock ASA B5.9D complete** with mounting screws



Design I



Design II



Design III

Id.-Nr.	Size	Design	A	B	D	E^{H6}	F	G
144645 ■	160/5	I	135	35	KK 5	90	104,8	Studs camlock
144648 ■	160/6	III	165	35	KK 6	90	133,4	Studs camlock
144651 ■	200/5	II	165	40	KK 5	115	104,8	Studs camlock
144654 ■	200/6	I	165	35	KK 6	115	133,4	Studs camlock
144657 ■	250/6	II	210	50	KK 6	135	133,4	Studs camlock
144660 ■	250/8	I	210	40	KK 8	135	171,4	Studs camlock
144663 ■	315/8	I	210	40	KK 8	150	171,4	Studs camlock
144666 ■	315/11	III	280	46	KK 11	150	235	Studs camlock

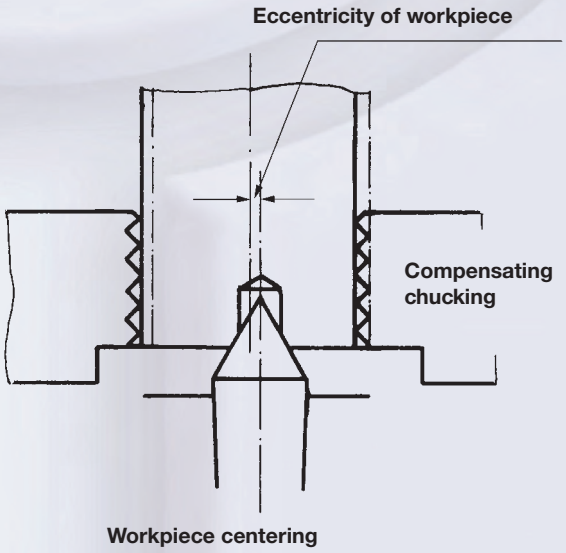
● from stock ■ 4 - 6 weeks ▲ on request

Notes

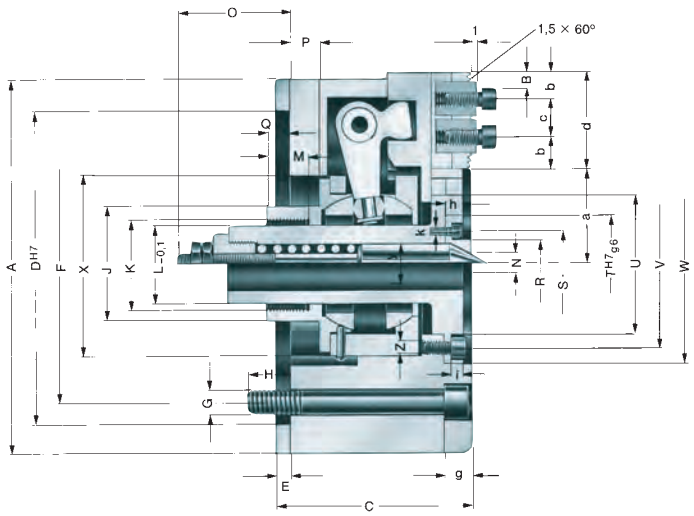
KFE

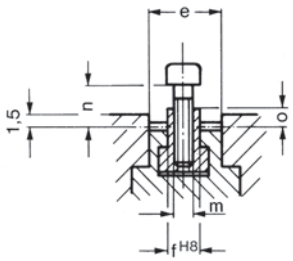
Techincal features

- Toggle joint lever system
- Compensation for eccentricities is accomplished by means of a universal ball joint.
- Large through-hole
- Made of steel
- All moving parts hardened and ground
- Large guiding ways for the base jaws
- Jaw ways lubricated by means of cenveniently accessible grease nipples at the axes of the levers
- T-slots in chuck body
- Used in conjunction with RÖHM actuating cylinders with safety device SZS, OVS, LHS-L, LVS, EHS and EVS the power chucks KFE meet the requirements of the German Employers' Insurance Association
- Scope of delivery: Chuck and jaw mounting screws, wrenches, T-nuts, without top jaws

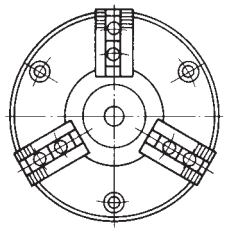


KFE

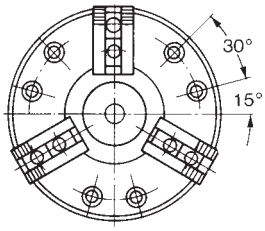




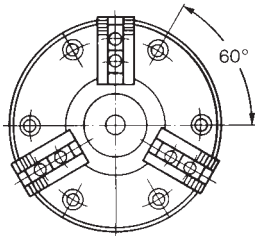
Tool group C 15
Type 534-50 **3 jaw** compensation chucks **KFE** with **spring load center**
Type 534-00 **3 jaw** compensation chucks **KFE** with **through-hole**, with **serration 60° cylindrical centre mount**



KFE 170



KFE 215 – 280



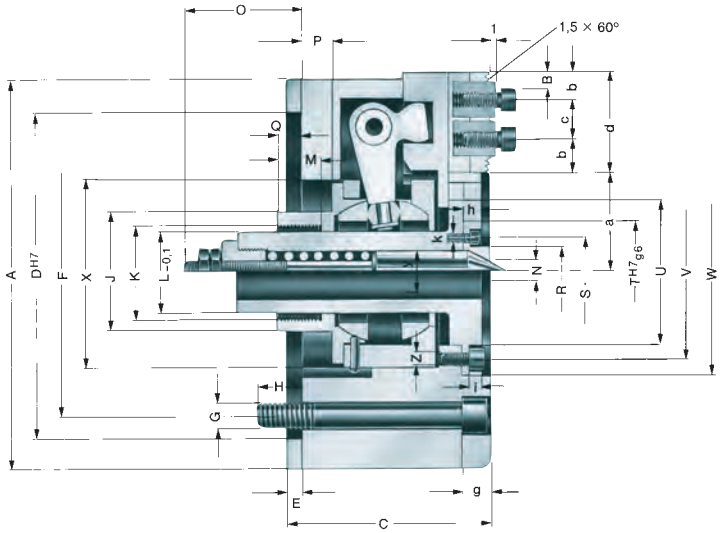
KFE 350

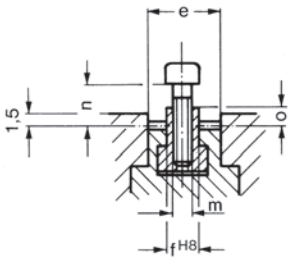
Item no.	020706 ▲	020710 ▲	020707 ▲	020711 ▲	0120091) ▲	0207121) ▲	020709 ▲	020713 ▲
Size	170	170	215	215	280	280	350	350
Design	Center	Through-hole	Center	Through-hole	Center	Through-hole	Center	Through-hole
A	170	170	215	215	280	280	350	350
Jaw travel B	5	5	10	10	12,5	12,5	15	15
Max. exc. on Ø	4	4	4	4	6	6	10	10
C	99	99	126,2	126,2	154,7	154,7	187,7	187,7
DH7	140	140	190	190	255	255	320	320
E	4	4	4,2	4,2	5,7	5,7	5,7	5,7
F	104,8	104,8	133,4	133,4	171,4	171,4	235	235
G	3xM10	3xM10	6xM12	6xM12	6xM16	6xM16	6xM20	6xM20
H	20	20	25	25	25	25	25	25
J	52	52	57	57	58,5	58,5	110	110
K	M45x1,5	M45x1,5	M50x1,5	M50x1,5	M50x1,5	M50x1,5	M90x1,5	M90x1,5
L-0,1	30	30	30	30	40	40	55	55
M	20	20	20	20	20	20	25	25
N	10	10	15	15	20	20	22	22
O	78	78	66	66	71	71	42	42
P	15	15	25	25	30	30	30	30
Q	8	8	-1,5	-1,5	-	-	3	3
R	30	30	35	35	60	60	60	60
S	46	46	54	54	75	75	95	95
TH7g6	56	56	68	68	90	90	115	115
U	65	65	82	82	110	110	150	150
V	74	74	97	97	124	124	170	170
W	86	86	112	112	142	142	191	191
X	78	78	102	102	124	124	162	162
YH7g6	24	24	25	25	34	34	30	30
Z	M 6	M6	M 8	M 8	M 8	M 8	M 10	M 10
a min.	37,5	37,5	45	45	61,75	61,75	82,5	82,5
a max.	42,5	42,5	55	55	74,25	74,25	97,5	97,5
b	8	8	10	10	13	13	14	14
c min.	16	16	20	20	26	26	28	28
c max.	29	29	37,5	37,5	46	46	62	62
d	45	45	57,5	57,5	72	72	90	90
e	28	28	35	35	45	45	50	50
fH8	11	11	14	14	20	20	21	21
g	10,5	10,5	11,5	11,5	12,5	12,5	15	15
h	6	6	8	8	10	10	12	12
i	7,5	7,5	8,5	8,5	9,5	9,5	12	12
k	M 5	M5	M 6	M 6	M 6	M 6	M 8	M 8
m	M 8	M 8	M 10	M 10	M 12	M 12	M 16	M 16
n	7,5	7,5	8,5	8,5	13	13	15	15
o	1,5	1,5	1,5	1,5	2,5	2,5	3	3
Max. swing top jaws mm	225	225	280	280	360	360	460	460
Maximum draw bar pull kN	24	24	35	35	43	43	52	52
Max. total clamping force approx. kN	44	44	50	50	60	60	60	60
Max. admissible speed min^{-1}	4400	4400	2900	2900	2050	2050	1400	1400
Moment of inertia J kgm^2	0,06	0,06	0,18	0,18	0,597	0,597	1,68	1,68
Weight without jaws approx. kg	15,5	15,5	29,5	29,5	61	61	110	110
Actuating cylinder hydraulic OVS	105	105	130	130	150	150	150	150

1) From contact surface to draw head = 10 mm inward

● from stock ■ 4 - 6 weeks ▲ on request

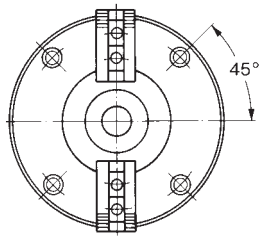
KFE



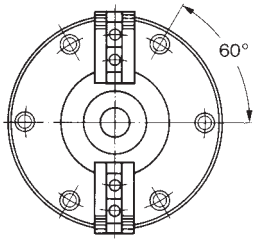


Serration base jaw

Tool group C 15
Type 524-50 **2 jaw** compensation chucks **KFE**
with **spring load center**
Type 524-00 **2 jaw** compensation chucks
with **through-hole**
with **serration 60°**
cylindrical centre mount



KFE 170 – 280



KFE 350

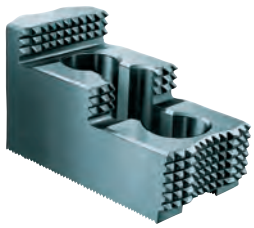
Item no.	020714 ▲	020718 ▲	020715 ▲	020719 ▲	0207161) ▲	0207201) ▲	020717 ▲	020721 ▲
Size	170	170	215	215	280	280	350	350
Design	Center	Through-hole	Center	Through-hole	Center	Through-hole	Center	Through-hole
A	170	170	215	215	280	280	350	350
Jaw travel B	5	5	10	10	12,5	12,5	15	15
Max. exc. on Ø	4	4	4	4	6	6	10	10
C	99	99	126,2	126,2	154,7	154,7	187,7	187,7
DH7	140	140	190	190	255	255	320	320
E	4	4	4,2	4,2	5,7	5,7	5,7	5,7
F	104,8	104,8	133,4	133,4	171,4	171,4	235	235
G	4xM10	4xM10	4xM12	4xM12	4xM16	4xM16	6xM20	6xM20
H	20	20	25	25	25	25	25	25
J	52	52	57	57	58,5	58,5	110	110
K	M45x1,5	M45x1,5	M50x1,5	M50x1,5	M50x1,5	M50x1,5	M90x1,5	M90x1,5
L-0,1	30	30	30	30	40	40	55	55
M	20	20	20	20	20	20	25	25
N	10	10	15	15	20	20	22	22
O	78	78	66	66	71	71	42	42
P	15	15	25	25	30	30	30	30
Q	8	8	-1,5	-1,5	-	-	3	3
R	30	30	35	35	60	60	60	60
S	46	46	54	54	75	75	95	95
TH7g6	56	56	68	68	90	90	115	115
U	65	65	82	82	110	110	150	150
V	74	74	97	97	124	124	170	170
W	86	86	112	112	142	142	191	191
X	78	78	102	102	124	124	162	162
YH7g6	24	24	25	25	34	34	30	30
Z	M 6	M6	M 8	M 8	M 8	M 8	M 10	M 10
a min.	37,5	37,5	45	45	61,75	61,75	82,5	82,5
a max.	42,5	42,5	55	55	74,25	74,25	97,5	97,5
b	8	8	10	10	13	13	14	14
c min.	16	16	20	20	26	26	28	28
c max.	29	29	37,5	37,5	46	46	62	62
d	45	45	57,5	57,5	72	72	90	90
e	28	28	35	35	45	45	50	50
fH8	11	11	14	14	20	20	21	21
g	10,5	10,5	11,5	11,5	12,5	12,5	15	15
h	6	6	8	8	10	10	12	12
i	7,5	7,5	8,5	8,5	9,5	9,5	12	12
k	M 5	M5	M 6	M 6	M 6	M 6	M 8	M 8
m	M 8	M 8	M 10	M 10	M 12	M 12	M 16	M 16
n	7,5	7,5	8,5	8,5	13	13	15	15
o	1,5	1,5	1,5	1,5	2,5	2,5	3	3
Max. swing top jaws mm	225	225	280	280	360	360	460	460
Maximum draw bar pull kN	16	16	22,5	22,5	29	29	35	35
Max. total clamping force approx. kN	29	29	33,5	33,5	40	40	40	40
Max. admissible speed min^{-1}	4400	4400	2900	2900	2050	2050	1400	1400
Moment of inertia J kgm^2	0,06	-	0,18	-	0,597	-	1,68	-
Weight without jaws approx. kg	15,5	-	29,5	-	61	-	110	-
Actuating cylinder hydraulic OVS	85	85	105	105	130	130	130	130

1) From contact surface to draw head = 10 mm inward

● from stock ■ 4 - 6 weeks ▲ on request

Jaws KFE

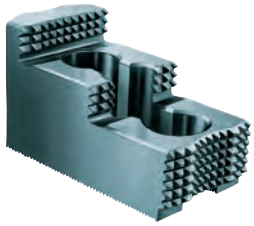
Tool group C 21
Type 530 **Reversible top jaws, 2-jaw set, hardened**
Serration 60°- material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
046431 ■	160	62	37,5	26	1,5 x 60°
046433 ■	215	81	52,5	36	1,5 x 60°
046437 ■	280	96	54	44,5	1,5 x 60°
046443 ■	350	112	61	49,5	1,5 x 60°

Near the serration reduced to 34 mm
Reversible top jaws: ground to finished size at surcharge

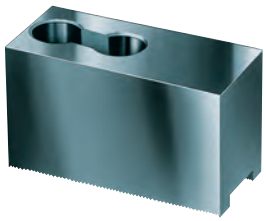
Tool group C 21
Type 530 **Reversible top jaws, 3-jaw set, hardened**
Serration 60°- material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
046410 ●	160	62	37,5	26	1,5 x 60°
046412 ■	215	81	52,5	36	1,5 x 60°
046416 ●	280	96	54	44,5	1,5 x 60°
046422 ●	350	112	61	49,5	1,5 x 60°

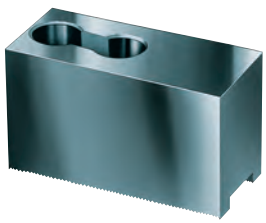
Near the serration reduced to 34 mm

Tool group C 21
Type 530 **Soft top jaws, 2-jaw set, can be hardened**
Serration 60°- material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
046430 ■	160	66,7	43	30,5	1,5 x 60°
046432 ■	215	88,9	53	36,5	1,5 x 60°
046436 ■	280	88,9	54,5	45	1,5 x 60°
046442 ■	350	120	80	50	1,5 x 60°

Tool group C 21
Type 530 **Soft top jaws, 3-jaw set, can be hardened**
Serration 60°- material: 16 MnCr 5



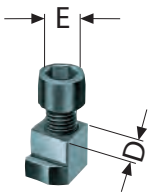
Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
046409 ●	160	66,7	43	30,5	1,5 x 60°
046411 ●	215	88,9	53	36,5	1,5 x 60°
046415 ●	280	88,9	54,5	45	1,5 x 60°
046421 ●	350	120	80	50	1,5 x 60°

For the complete range of clamping jaws visit our website www.spannbacken.biz

Accessories KFE

Tool group C 15

Type 530-05 **T-nuts** without screw



Item no.	Chuck Size	Contents of delivery	D	E
029874 ●	160	piece	11	M8
028329 ●	215	piece	14	M10
009744 ▲	280	piece	20	M12
031051 ▲	350	piece	21	M16

Tool group C 15

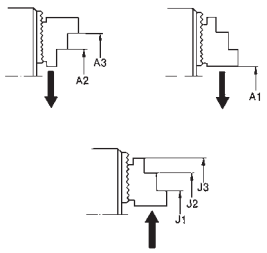
Type 0040-Y **Mounting screws**

Item no.	Size	Contents of delivery	Thread	Length
340015 ●	130/160	piece	M8	18
216594 ●	215	piece	M10	20
233030 ●	210/254/315	piece	M12x30	30
220564 ●	350	piece	M16x35	35

Socket head cap screw to DIN 912, 12.9

Chucking capacities KFE

Chucking capacities with reversible top jaws UB

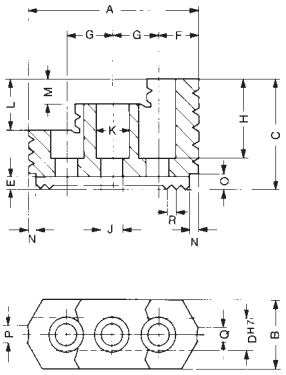


Chuck size		170	215	280	350
with reversible jaws	Type	530-04	530-07	530-09	530-12
	Jaw position				
External clamping	A1	24-102	20-125	39-173	75-248
	A2	84-161	107-210	151-282	182-354
	A3	119-195	145-263	218-348	267-438
Internal clamping	J1	70-146	74-176	95-225	132-301
	J2	104-180	124-228	161-292	213-385
	J3	148-226	182-288	231-364	298-473

● from stock ■ 4 - 6 weeks ▲ on request

Jaw dimensions KFE

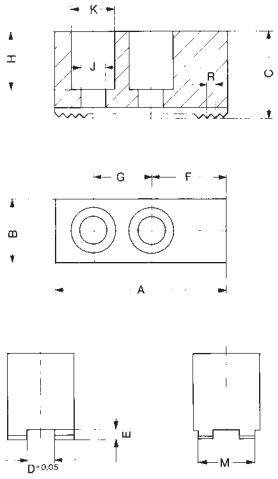
Reversible top jaws UB,
hardened, serration 60°,
material 16MnCr5



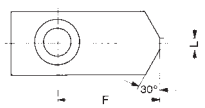
Chuck size	105	130	160/170	215	250	280	315	350
Type	530-02	530-03	530-05	530-07	530-09	530-09	530-11 [2]	530-12
Id.-Nr. 2-jaw	**046449**	**045798**	**046431**	**046433**	**046437**	**046437**	**-**	**046443**
Id.-Nr. 3-jaw	**046401**	**046406**	**046410**	**046412**	**046416**	**046416**	**046420**	**046422**
A	54	56	62	81	96	96	96	112
B	22	26	26	36 [1]	44,5	44,5	44,5	49,5
C	29,5	37,5	37,5	52,5	54	54	54	61
D	10	11	11	14	20	20	21	21
E	3,5	3,5	3,5	5	5	5	5,5	5,5
F	11	13,5	17,5	25	30	30	26	27
G	16	16,5	16,5	21	26	26	26	33
H	21	29	29	41	41	41	42,5	47,5
J	8,4	8,4	8,4	10,5	13	13	15	17
K	13,5	13,5	13,5	16,5	19	19	23	25
L	12	20	20	24	24	24	24	30
M	6	10	10	12	12	12	12	15
N	4	4	4	5	5	5	5	6,5
O	4	4	4	7	7	7	7	7
P	5	5	5	10	10	10	10	13
Q	5	5	5	5	5	5	5	13
R	1,5 x 60°	1,5 x 60°	1,5 x 60°	1,5 x 60°	1,5 x 60°	1,5 x 60°	1/16"x90°	1,5 x 60°
Weight/jaw kg	0,110	0,165	0,215	0,600	0,750	0,750	0,800	1,550

[1] Near the serration reduced to 34 mm
[2] serration 90°
Reversible top jaws: ground to finished size at surcharge

Soft top jaws AB,
material 16MnCr5



AB 530-04 und 530-07

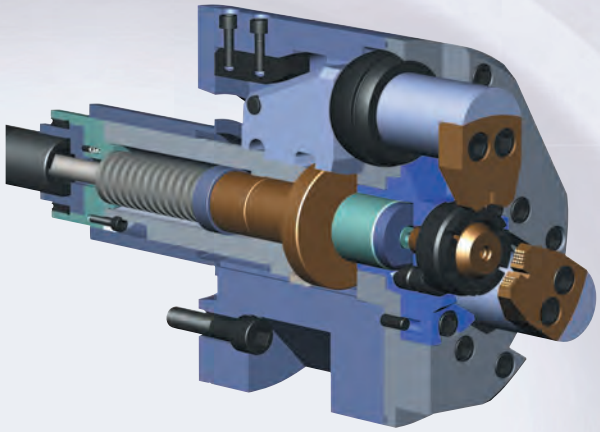


AB 530-02

Chuck size	105	130	160/170	215	250	280	315	350
Type	530-02	530-03	530-05	530-07	530-09	530-09	530-11 [1]	530-12
Id.-Nr. 2-jaw	**046448**	**045797**	**046430**	**046432**	**046436**	**046436**	**-**	**046442**
Id.-Nr. 3-jaw	**046400**	**046405**	**046409**	**046411**	**046415**	**046415**	**046419**	**046421**
A	53	53	66,7	88,9	88,9	88,9	120	120
B	22,5	26,5	30,5	36,5	45	45	50	50
C	30	38	43	53	54,5	54,5	80	80
D	10	11	11	14	20	20	21	21
E	3,5	3,5	3,5	5	5	5	5	5
F	29	29	30	45	45	45	67	67
G	15	15	20	26	26	26	28	28
H	20	28	33	41	42,5	42,5	67	67
J	8,4	8,4	8,4	10,5	13	13	17	17
K	13,5	13,5	13,5	16,5	19	19	25	25
L	3	-	-	-	-	-	-	-
M	-	-	27	34	-	-	-	-
R	1,5 x 60°	1,5 x 60°	1,5 x 60°	1,5 x 60°	1,5 x 60°	1,5 x 60°	1/16"x90°	1,5 x 60°
Weight/jaw kg	0,190	0,320	0,550	1,125	1,400	1,400	3,125	3,125

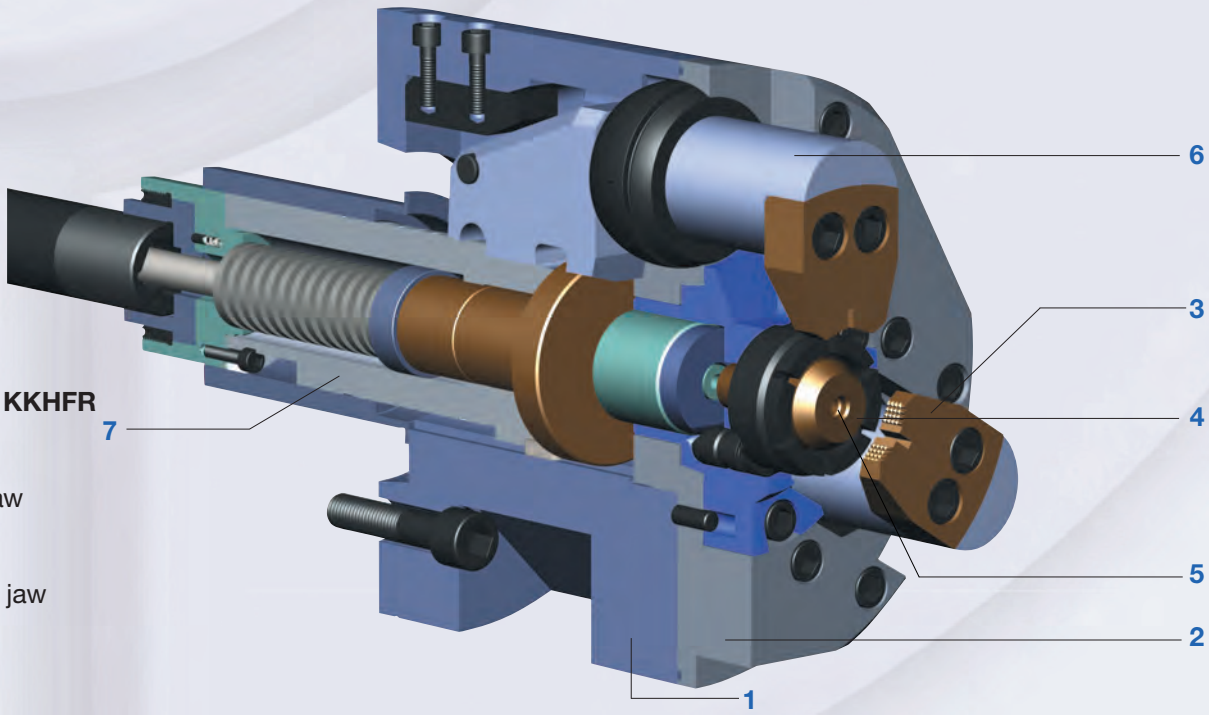
[1] serration 90°

KKHFR



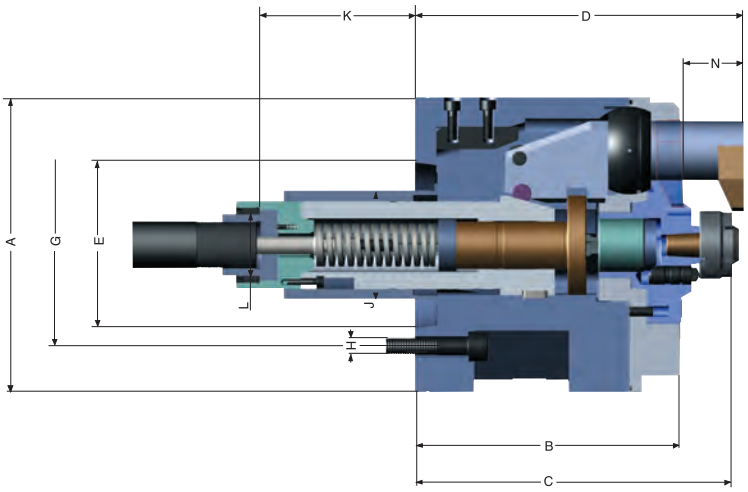
Technical features:

- With retractable jaws and face driver
- Ideally suited for the complete machining of workpieces
- For the finishing operation, the jaws are retracted, the workpiece is moved by the face driver
- Outside diameter can be finished on the full length of the shaft
- Large workpiece diameter range
- Easy change of jaws and face driver according to clamping diameter
- The chuck is actuated by means of the hydraulic dual piston cylinder if a power-operated face driver with rigid center is used or by means of the hydraulic closed center cylinder with extra long stroke if the face driver features a spring-loaded center.
- The chuck can be centrally lubricated via these cylinders with additional distributors.
- Used in conjunction with RÖHM actuating cylinders with safety device SZS, OVS, LHS-L, LVS, EHS and EVS the power chucks KKHFR meet the requirements of the German Employers' Insurance Association
- KKHFR chuck styles with compensating jaws are available on request.



Components KKHFR
1. Body
2. Cover
3. Clamping jaw
4. Face driver
5. Center
6. Retractable jaw
7. Piston

KKHFR

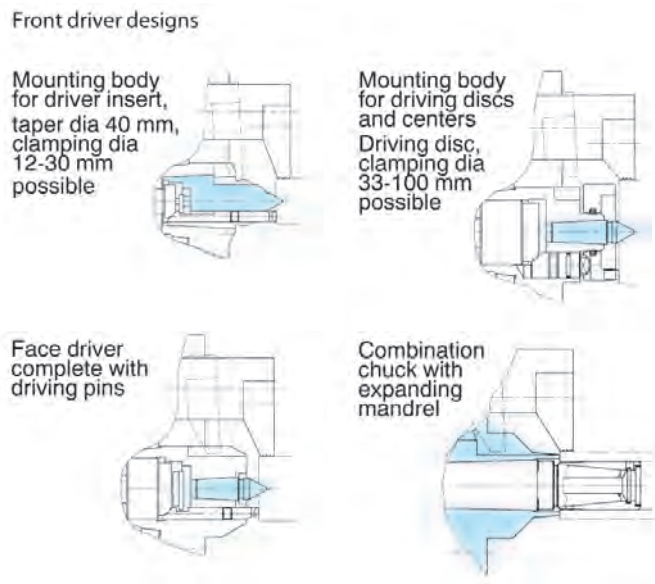


Tool group C 15
Type 514
Power-operated combinated chucks **KKHFR**,
with **retractable jaws**,
with **guide wedge**,
with **central lubrication**
Short taper mount for **ISO 702-1 (DIN 55026)**

Item no.	427601 ▲	428786 ▲	428222 ▲	425896 ▲	427016 ▲	425642 ▲	427550 ▲
Size	160	200	230	250	300	400	450
Short-taper	6/55026	6/55026	8/55026	8/55026	11/55026	11/55026	15/55026
A	165	205	230	250	300	400	450
B	170	200	233	225	244	285	325
C	204	231	278	266	292	335	395
D min.	175	203	235	226	251	293	358
D	213	243	290	278	306	348	410
E	106,375	106,375	139,719	139,719	196,869	196,869	285,775
G	133,4	133,4	171,4	171,4	235	235	330,2
H	3 x M 12	3 x M 12	3 x M 16	3 x M 16	6 x M 20	6 x M 20	6 x M 24
J	58	58	58,5	74	74	84	100
K min.	138	126	108	121	66	160	61
K max.	195	191	186	199	141	242	136
L	M 32 x 1,5	M 36 x 1,5	M 30 x 1,5	M 40 x 1,5	M 40 x 1,5	M 40 x 1,5	M 40 x 1,5
N	38	40	55	52	55	55	52
Maximum draw bar pull kN	26	38	45	75	80	78	70
Max. total clamping force approx. kN	37	65	75	100	120	130	120
Max. admissible speed min^{-1}	3500	4000	4000	3500	2500	1500	1500
Moment of inertia J kgm^2	0,076	0,19	0,42	0,79	1,35	4,9	7,9
Weight without jaws approx. kg	25	48	68	85	120	248	430
Matching cylinder OVUSHHD	105/60 58/10	105/60 65/15	120/80 78/10	160/80 78/10	160/80 80/10	160/80 80/10	160/80 75/10
Clamping capacity Ø	18-60	18-80	20-110	25-110	40-140	90-230	190-300
Face driver Ø	12-30	12-70	12-90	12-100	30-130	80-150	100-210

Power-operated combination chucks in special design on request

Front driver designs

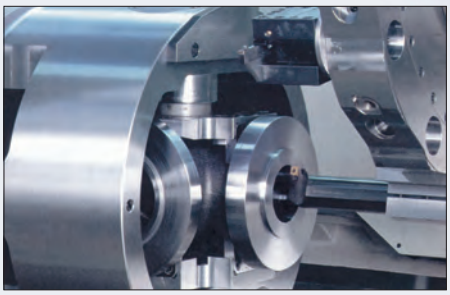


Overview

HSF **from page 6169**

Hydraulically operated indexing chuck

For machining workpieces with intersecting axes



HSFK **on request**

Hydraulically operated indexing chuck with angle correction

The correction pistons enable additional indexing movements of up to approx. 5°

KSFZ **on request**

Power operated indexing chucks

central chucking

Suitable for workpieces such as forgings and castings which require greater concentric compensation for diameter tolerances when chucking

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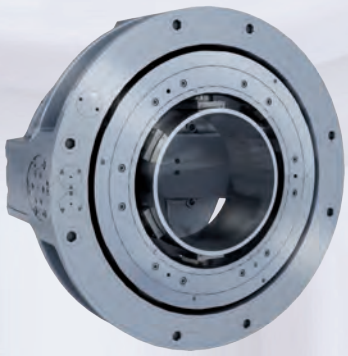


HSFZ **on request**

Hydraulically operated ring indexing chuck

3 jaws centrically clamping and 3 jaws clamping with compensation

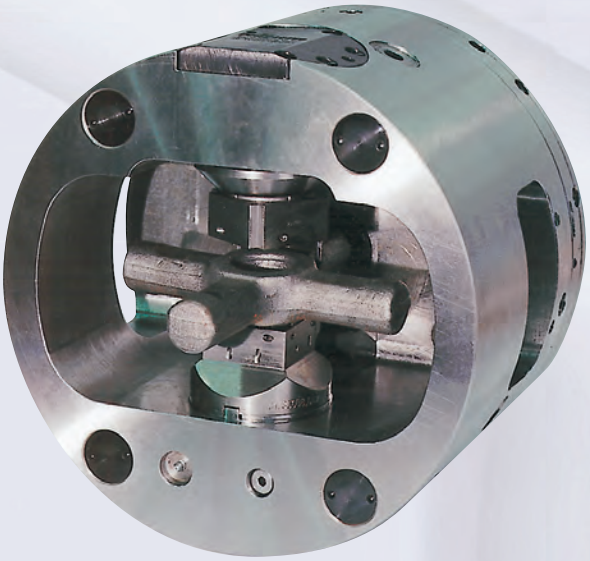
The chucking inserts can be equipped with several chucking points in order to prevent deformation of the workpiece

Ideally suited for machining large bells 7“ and more

Further information:

http://www.roehm.biz/energiesektor/

Hydraulically operated indexing chuck HSF



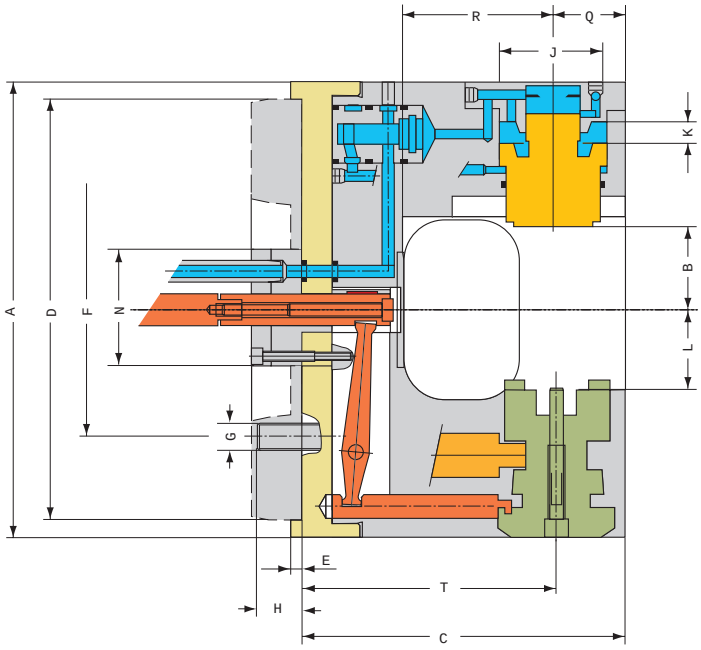
Technical features:

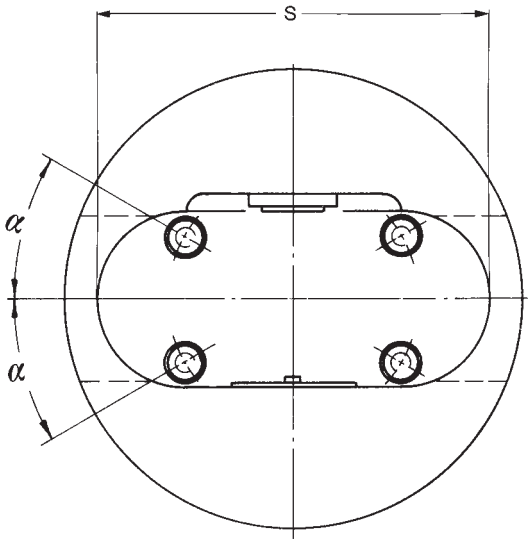
- For machining workpieces with intersecting axes
  Indexing axis aligned at 90° to axis of rotation
- Workpieces with intersecting axes can be machined in one chucking operation
- Oil distributor or a chucking cylinder is required for operating
- Equipped with one movable clamping jaw and one swivelling console jaw
- Supply via oil distributor at the end of the spindle via 5 respectively 6 hydraulic connections
- Used in conjunction with RÖHM actuating cylinders with safety device SZS, OVS, LHS-L, LVS, EHS and EVS the power chucks HSF meet the requirements of the German Employers' Insurance Association

The fully automatic operating sequence through the indexing positions with the machine spindle running means that these chucks are very successful in rationalising processes on relatively simple CNC lathes. The degree of rationalisation can be boosted still further by fitting an automatic workpiece handling system.

An oil distributor or a chucking cylinder is required for operating the indexing chuck. A control block integrated in the machine's hydraulic system is used for activating the chuck. Alternatively, a separate hydraulic power unit can be linked up to the machine electronically for use with existing machines.

Hydraulically operated indexing chuck HSF





Tool group C 15
Type 519-00 Hydraulically operated indexing chuck **HSF**
For machining workpieces with intersecting axes

Item no.	413172 ▲	413173 ▲	413174 ▲	413175 ▲	413176 ▲	413177 ▲	413178 ▲	413179 ▲
Size	200	230	250	315	400	500	630	800
A	200	230	250	315	400	500	630	800
B min.	30	40	32	57	92,5	120	160	220
B max.	44	54	49	80	119,5	154	205	275
C	157	175	195	245	280	328	405	460
DH6	185	185	210	220	300	380	380	380
E	5	6	6	6	6	6	8	8
F	104,8	133,4	133,4	171,4	235	330,2	330,2	330,2
G	M 10	M 12	M 12	M 16	M 20	M 24	M 24	M 24
H	16	20	22	25	30	35	35	40
J	50	55	70	85	100	115	125	145
Wedge stroke K	14	14	17	23	27	34	45	55
L	32	45	41	62	104	135	192	260
M	4	4	4	5	5	6	6	6
N	58	58	58	72	92	92	92	110
Q	32	35	45	50	60	68	75	90
R	80	90	105	135	160	200	260	300
S	170	195	210	260	340	410	530	620
T	125	140	155	195	220	260	330	375
α	30°	30°	30°	30°	30°	30°	60°	60°
Max. operating pressure bar	45	45	45	45	45	45	45	45
Max. clamping pressure bar	60	60	60	60	60	60	60	60
Max. total clamping force at 60 bar approx. kN	23	28	46	68	94	122	147	197
Maximum admissible speed[1] min^{-1}	4200	3700	3600	2600	2000	1500	1100	550
Moment of inertia J kgm^2	0,15	0,31	0,45	1,36	3,80	10	30,5	66
Weight without jaw inserts approx. kg	27	42	52	95	150	250	450	580

Matching chuck adaptor plate, oil distributors and hydraulic control units on request
[1] Depending on mass and center of gravity of the clamping inserts

● from stock ■ 4 - 6 weeks ▲ on request

KTF / HTF

Application area

Radial indexing chucks are ideally suited for rationally machining workpieces with one centric and one eccentric center of rotation (or several eccentric centers of rotation), like e.g. crank shafts, housings or pistons. Due to the indexing of the chuck, the center which is beeing machined is lying in the axis of rotation. Therefore workpieces can be machined without reclamping.

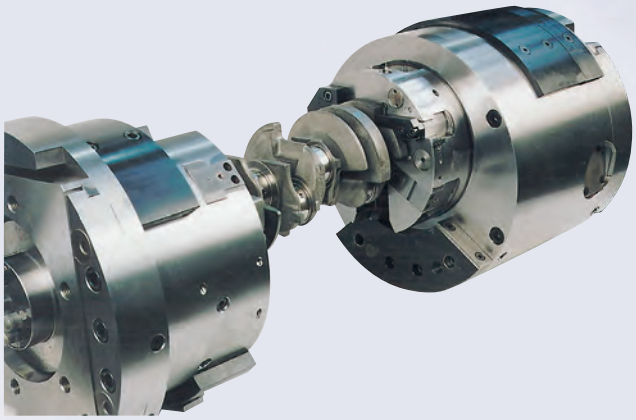
KTF **on request**

Power operated radial indexing chuck

Clamping and indexing via rotary piston cylinder with 4-fold oil distributor in combination with cardan rod

Indexing angle 180°

Eccentric dimensions constant or adjustable



HTF **on request**

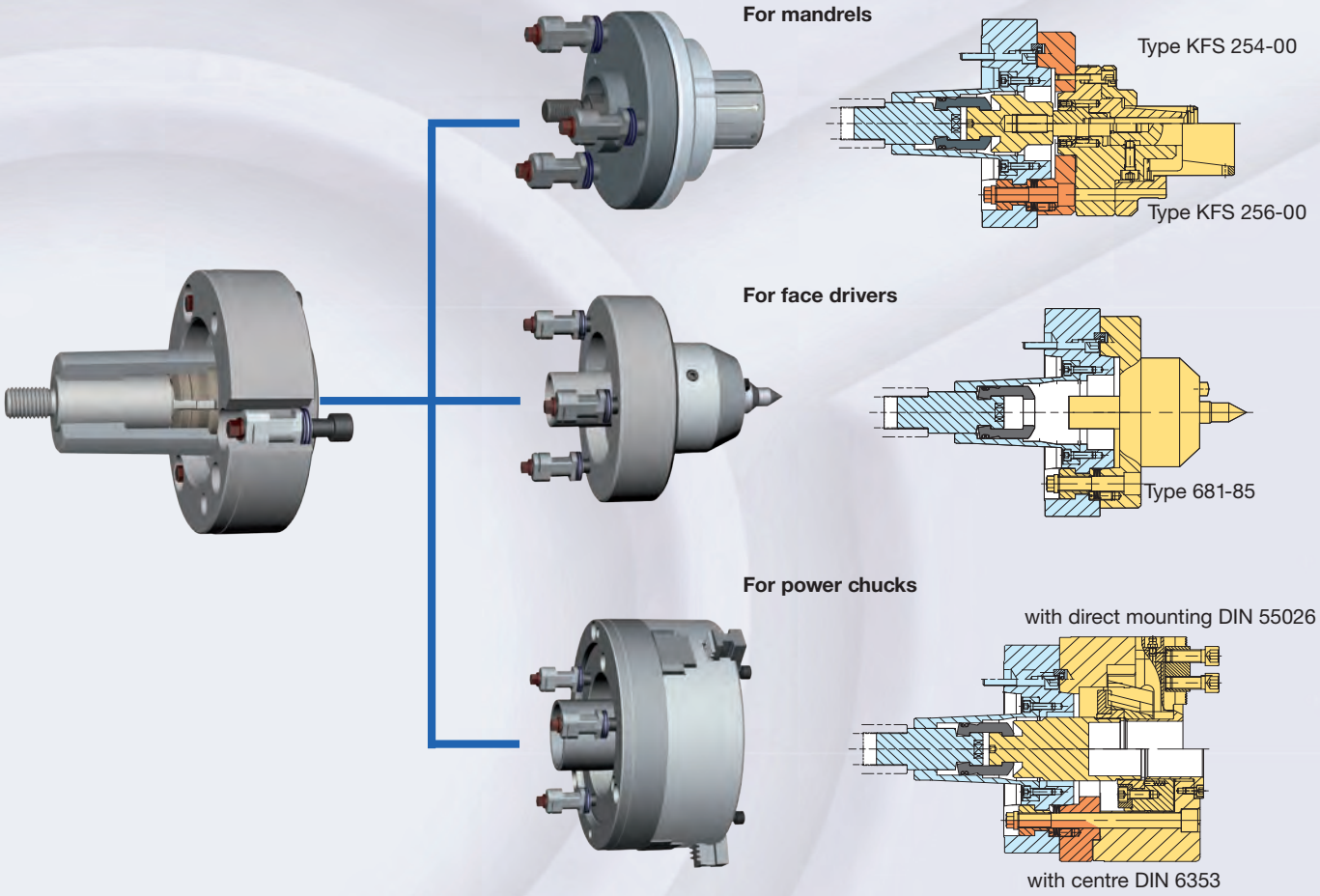
Hydraulically operated radial indexing chuck

Indexing via two hydraulically operated racks

Clamping via integrated hydraulic piston

Indexing angle 180°, 4x90°, 5x72°, 6x60°

RMS



Technical features:

- Short taper mounting for accurate holding and positioning of chucking tool
- Change accurate to within 0,005 mm
- Time required per change approx. 30 seconds
- Convenient handling
- Chucking tool locked by 3 bayonet nuts and a collet for connection to the draw tube adapter
- Bayonet nuts locked against rotation
- High chucking accuracy
- Actuating cylinder requires no additional equipment
- Travel monitored at actuating cylinder
- Central lubrication and/or pneumatic seating check on request
- Used in conjunction with RÖHM actuating cylinders with safety device SZS, OVS, LHS-L, LVS, EHS and EVS the RMS manual chucking tool quick change system meet the requirements of the German Employers' Insurance Association

Function

A tool carrier with an integrated force-transmitting collet is mounted on a lathe spindle. The chucking tool proper is secured to his tool carrier by means of quick-acting bolts with one half turn of the wrench.
The collet and the chucking tool are actuated by means of a safety cylinder at the spindle end with no need for any additional equipment.

Description of function:

The tool carrier with integrated collet and draw tube adapter with draw tube connection is secured to the spindle by means of 3 mounting screws.
Contact with the adapter of the chucking tool (e.g. mandrel, face driver, power chuck) closes the collet and connects the draw rod with the actuating element (e.g. piston).
The chucking tool is secured manually by means of 3 quick-acting bolts requiring no more than one half turn of the wrench each. The bayonet nut is locked against rotation by a system of parallel pins.
The reliability of this Type of fastening is equivalent to that of conventional systems.
The chucking tool is removed by reversing the above procedure.

RMS

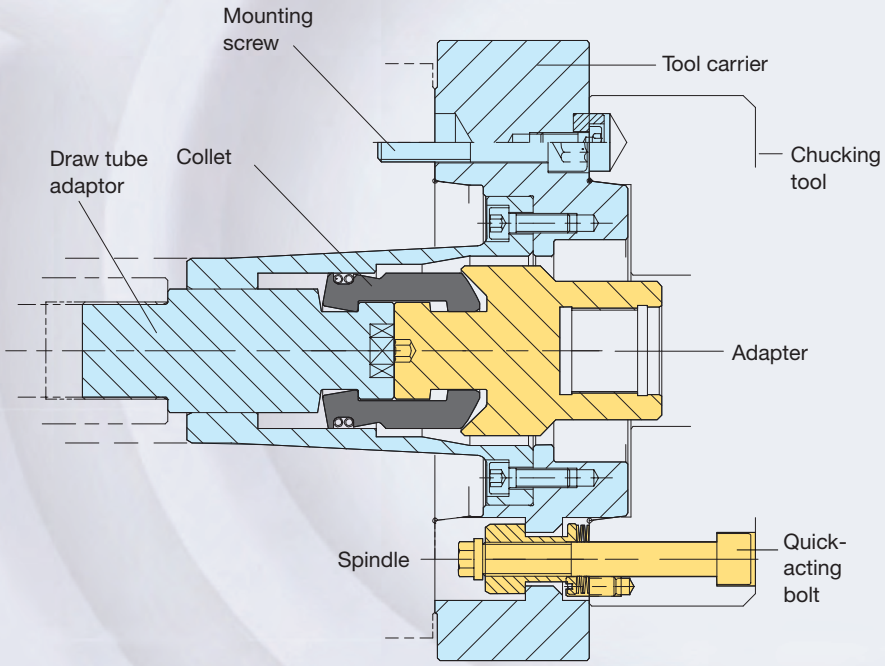
For manual chucking tool change

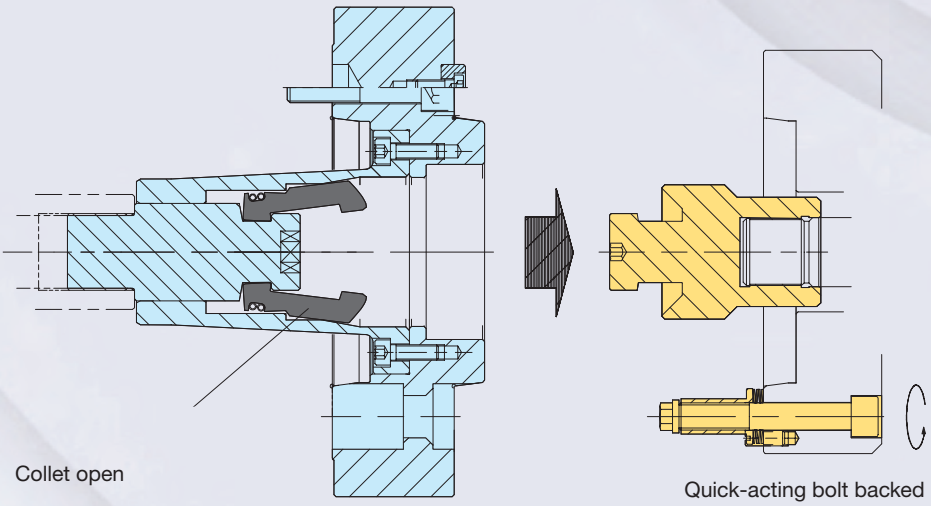
- Convenient chucking tool changes without the slightest sacrifice to safety.
- One and the same tool carrier can be used for virtually any Type of mandrel, face driver or power chuck as long as the connections are identical.

Design

Like the automatic and semi-automatic chucking tool change systems, the-manual change system allows a rising number of variants in diminishing batch sizes to be produced more economically. A standard cylinder can be used for actuation with no need for any additional equipment.

Not only mandrels, whose size must be changed frequently for reasons inherent in the design, but also chucking tools such as face drivers or power chucks can be interchanged both quickly and safely.





Collet open

Quick-acting bolt backed off 1/2 turn

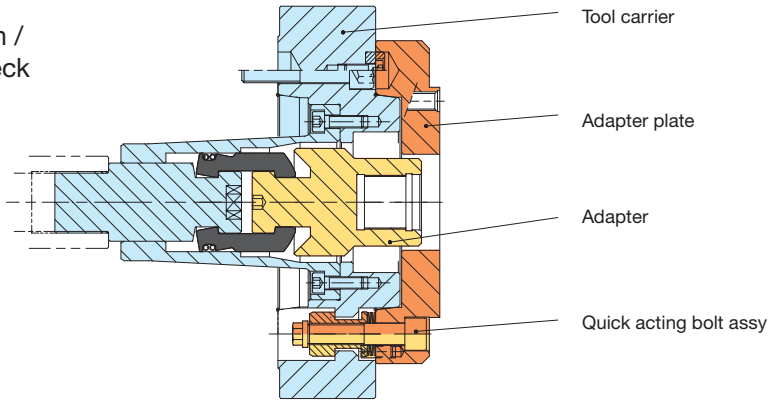
Changing the chucking tool

- Move actuating cylinder into forward position
- Back off quick-acting bolt 1/2 turn
- Remove chucking tool

RMS

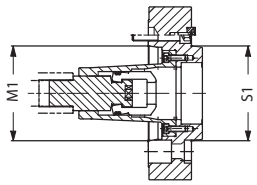
Mating dimensions

With central lubrication / pneumatic seating check (on request)

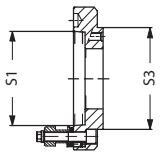


Tool carrier
With mounting to ISO 702-1 (DIN 55026).
No adapter for direct mounting. Just order quick acting bolt assy.
Rework on chucking tool neccessary.

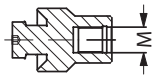
Adapter plate
With centre mounting to DIN 6353
With mounting to ISO 702-1 (DIN 55026) (on request)



for:
- Face drivers
- Power chucks (on request)



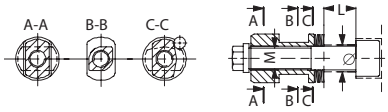
for:
- Power chucks



Matching Adapter on request

Chucking tool side S1 / ISO 702-1 (DIN 55026)		Machine side M1 (DIN 55026) A6	Machine side M1 (DIN 55026) A8	Chucking tool side S2 Ø 140	Chucking tool side S2 Ø 170	Chucking tool side S2 Ø 220
A6	A6	156670		156674	156675	156676
A8	A8		156671	156677	156678	156679

Quick acting bolt assy RMS-..SS

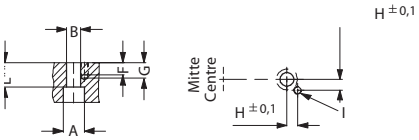


Größe	8	10	12	14	16	18	20
für Aufnahme DIN 55026		KK5	KK6		KK8		
Id.-Nr.	**156682**	**156683**	**156684**	**156685**	**156686**	**156687**	**156688**

The bolt must alays be matched to the chucking tool / adapter plate to be fastened.
e.g. RMS-12SS Item no.156684, L=20,44mm, Ø =12,5mm

When ordering please state!

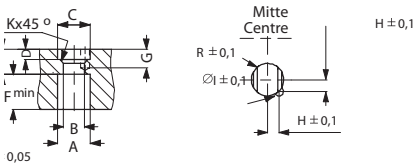
Mating dimensions for quick-acting bolt on adapter plate / Rework on chucking tool



RMS	A	B	F	G	H	I	L
08	14	8,5	8,5	11	7,25	M5	**
10	17	10,5	10	13	8,6	M6	**
12	19	12,5	13	17,5	10,3	M8	**
14	22	14,5	13	17,5	11,4	M8	**
16	25	16,5	17	22	13,6	M10	**
18	28	18,5	17	22	14,4	M10	**
20	31	20,5	17	22	16,2	M10	**

** Dimension "L" depends on the chucking tool used, but should at least be as long as dimension "B".

Mating dimensions for bayonet nut in tool carrier

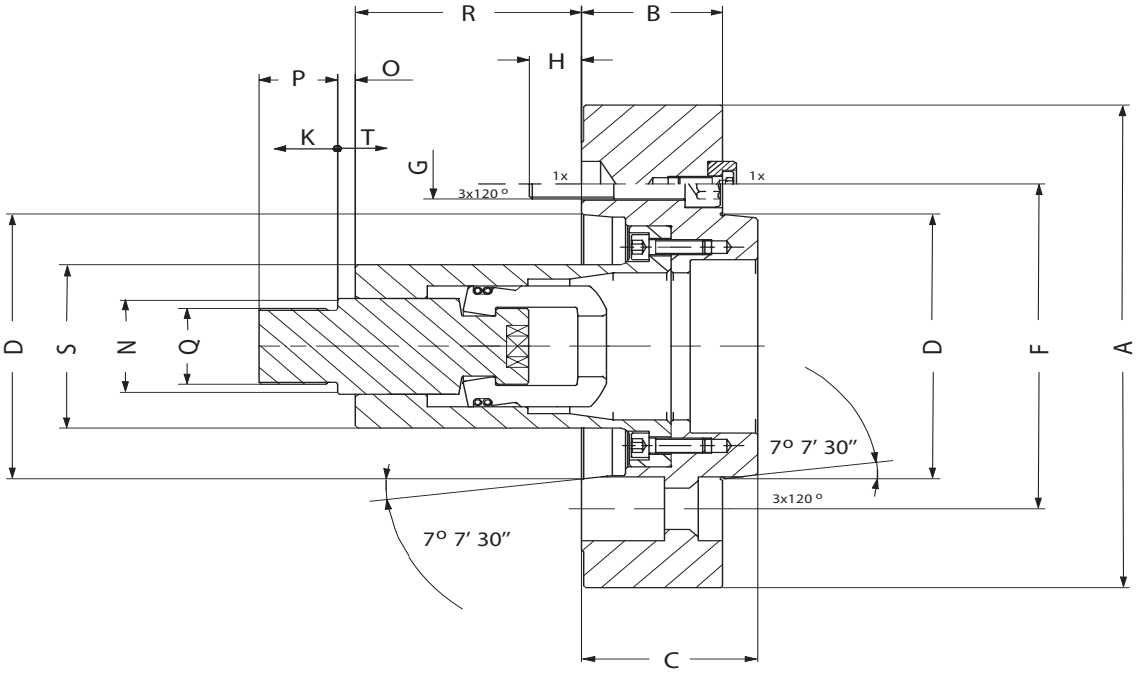


RMS	A	B	C	D	E	F	G	H	I	K	R
08	19	12,5	19	7	16,1	18,6	7,5	7,25	5,5	2	3
10	22,5	15	24	7,8	19,1	23	8	8,6	6,5	3	3
12	25,5	16,7	28,5	10,7	25,2	25,5	11	10,3	8,5	3	4
14	29,5	18,8	30	10,9	26,4	29,5	11	11,4	8,5	4	4
16	34	22	34	11,1	29,2	34,2	11	13,6	10,5	4	4
18	38,5	26	38,5	12,8	30,7	39,8	13	14,4	10,5	4	4
20	41	28	42	14,1	33,6	16,2	14	16,2	10,5	4	4

RMS

Dimensions

Tool carrier assy RMS-.. GA, compl. short taper DIN 55026

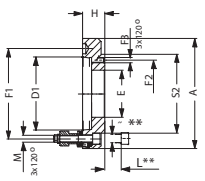


Typ 461	A5/A5	A6/A6	A8/A8
Id.-Nr.	**166946**	**156670**	**156671**
A	135	170	220
B	45	52	63,5
C	58	66	79,5
$D^{+0,015}$	82,563 (KK5)	106,375 (KK6)	139,719 (KK8)
F	104,8	133,4	171,4
G	M 10	M 12	M 16
H	16	17	24
K max.	20	27	34
N	30	36,5	51
O / O min.	10/5	8/3	8/1
O max.	30	35	42
P	30	30	30
Q	M 16	M 20	M 24
R	59	89	132
S	52	69	88
T	5	5	7
max. oper. power	15 kN	33 kN	52 kN
max. min^{-1}	5000	6000	5000

Further short-taper combinations on request!

Adapter plate assy RMS-./. F
Short taper ISO 702-1 (DIN 55026) /
Centre mounting DIN 6353

Item No.: I.e. RMS-A6/170 F, Item No. 156675
Short taper ISO 702-1 (DIN 55026) /
Short taper ISO 702-1 (DIN 55026) (on request)
** When ordering, please state:
L = ... mm; Ø = ... mm



Tool carrier A6	s2 = Ø 140	s2 = Ø 170	s2 = Ø 220
Id.-Nr.	**156674**	**156675****	**156676**
F2	Ø 104,8	Ø 133,4	Ø 171,4
F3	M 10, 3x120°		M 16, 3x120°
A	170	210	250
H	35	16	37
E	75	75	80

Tool carrier A8	s2 = Ø 140	s2 = Ø 170	s2 = Ø 220
Id.-Nr.	**156677**	**156678**	**156679****
F2	Ø 104,8	Ø 133,4	Ø 171,4
F3	M 10, 3x120°	M 12, 3x120°	
A	220	220	250
H	42	42	18
E	80	101	101

Notes

Overview

OVS **from page 6178**

Oil-operated cylinder without through-hole

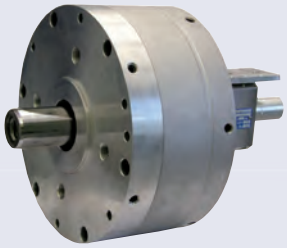
Options: with inductive stroke monitoring or inductive proximity switch

EVS **from page 6182**

Electrical cylinder without through-hole

Safe and energy efficient clamping

Reducing energy, costs and workpiece changing times



LVS **from page 6184**

Air-operated cylinder without through-hole

SZS **from page 6186**

Oil-operated cylinder with through-hole

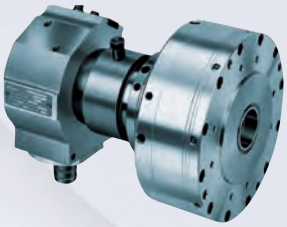
Options: 45 bar and 80 bar design, inductive stroke monitoring

EHS **from page 6190**

Electrical cylinder with through-hole

Safe and energy efficient clamping

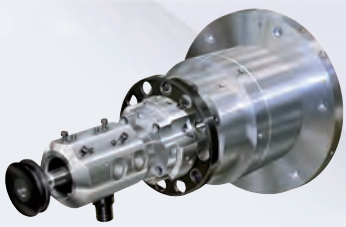
Reducing energy, costs and workpiece changing times



LHS-L **from page 6192**

Air-operated cylinder with through-hole

Options: inductive proximity switch



OVUSHH **from page 6194**

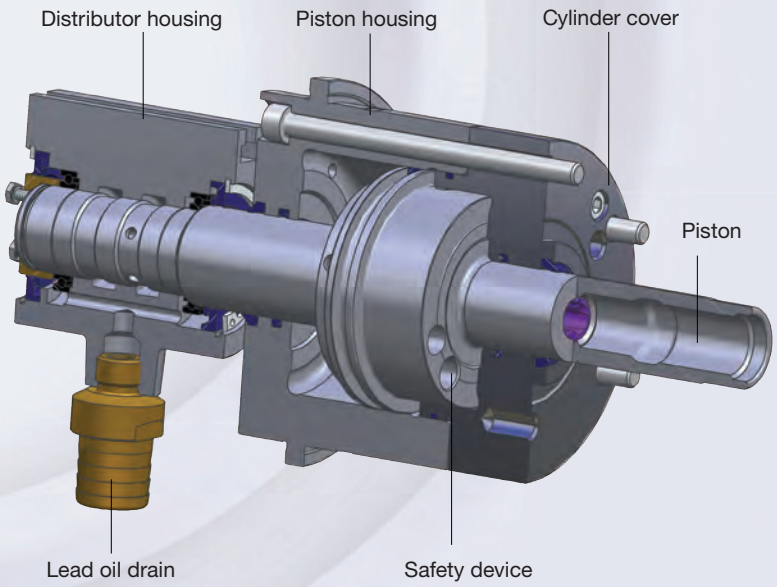
Oil-operated double piston cylinder

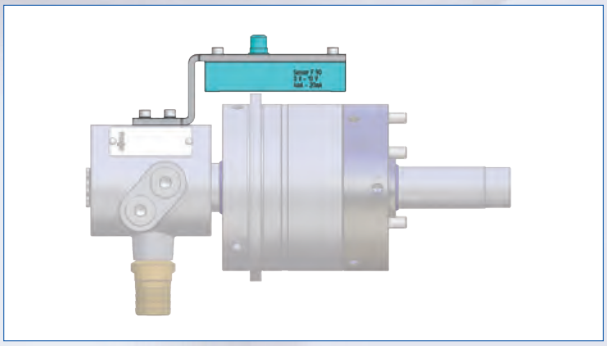
For power chucks with auxiliary functions (ejectors, retractable stops)

OVS

Technical features:

- Up to 80 bar
- Safety device
- Stroke monitor
- Minimum leakage
- Compact design, low mass moment of inertia
- Suitable for horizontal or vertical installation
- Additional connection for auxiliary functions, such as pneumatic contact monitoring, coolant supply, central lubrication etc., further rotating unions depending on operating condition on request





Stroke control with F 90:

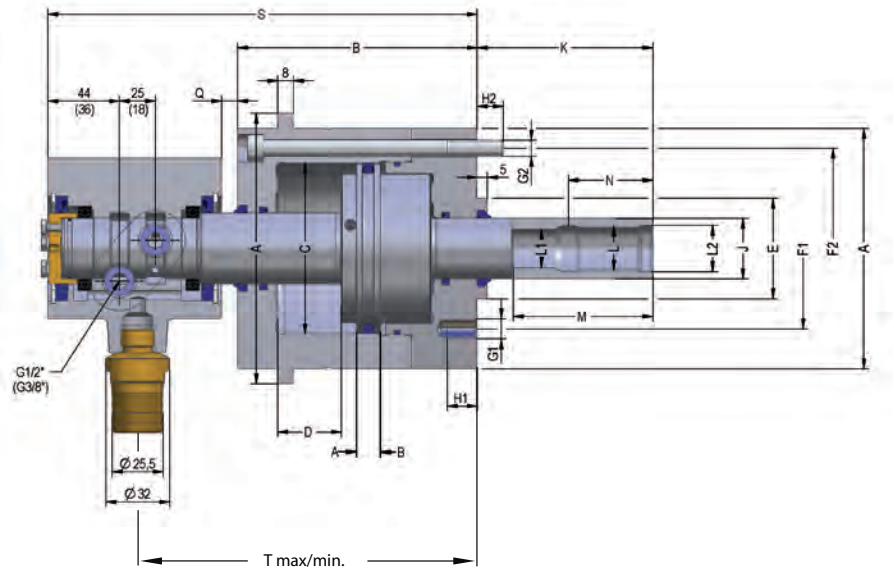
- High resolution and accuracy
- Minimal temperature drift
- Contactless
- Teaching mode
- Inductive principle of operation

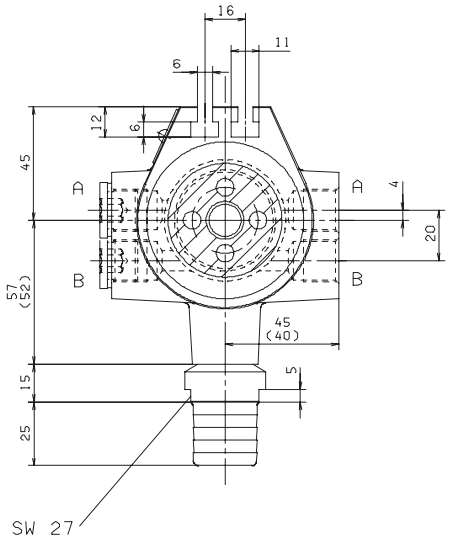
With high and low pressure chucking the change-over of the safety valve is guaranteed when:
chucking pressure : releasing pressure =< 5,5 : 1 (Size 85 - 130)
chucking pressure : releasing pressure =< 3,8 : 1 (Size 150 - 200)

Oil operated actuating cylinders without through-hole OVS available as basic model in steel design, also available with following options:

- Inductive stroke montoring (limit switch **not included** in scope of delivery)
- Linear stroke monitoring F 90 (F 90 system **included** in scope of delivery)

OVS



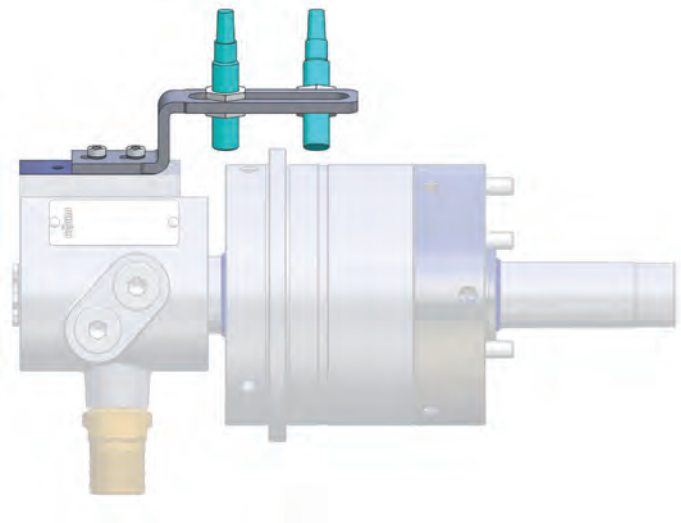


Tool group C 15
Type 453-05
Oil-operated actuating cylinders without through-hole **OVS**
Basic model,
with **safety device**,
up to 80 bar - **Steel design**
for high speeds, mounting from the rear, with central passage

With high and low pressure chucking the change-over of the safety valve is guaranteed when chucking pressure : releasing pressure ≤ 5,5 : 1 (size 85-130) / chucking pressure : releasing pressure ≤ 3,8 : 1 (size 150-200)

Item no.	438261 ●	438262 ●	438263 ●	438264 ■	438265 ■
Size	85	105	130	150	200
Design	steel	steel	steel	steel	steel
A	120	140	165	193	245
A1	135	155	180	208	260
B	120	120	120	147	164
C	85	105	130	150	200
D stroke	32	32	32	45	50
E_{h6}	50	50	80	95	125
F_1	80	80	105	145	170
F_2	100	120	145	170	220
G_1	M10 (3x120°)	M10 (4x90°)	M12 (4x90°)	M16 (4x90°)	M16 (6x60°)
G_2	M8 (6x60°)	M8 (6x60°)	M8 (8x45°)	M10 (8x45°)	M12 (8x45°)
H_1	15	15	18	24	29
H_2	13	13	13	14	19
J	30	32	42	50	70
K max.	88	88	82	98	108
K min.	56	56	50	53	58
L	M 22 x 1,5	M 22 x 1,5	M 30 x 2	M 36 x 2	M 48 x 2
L_1	19	19	26	30	42
L_2	23	23	32	38	50
M	70	70	88	105	125
Min. reach of draw bar N	43	43	65	78	90
Q max.	40	40	40	53	58
Q min.	8	8	8	8	8
S max.	252	247	247	307	329
S min.	220	215	215	262	279
T max.	202	202	202	250	272
T min.	170	170	170	205	222
Piston area **A** cm^2	47,1	77	116,8	160,8	298,2
Piston area **B** cm^2	49,7	78,6	118,9	157,1	275,7
Eff. draw bar pull (F=60 bar) kN	29,50	47	71,3	94	165,4
Max. admissible speed min^{-1}	8000	8000	5000	5500	4500
Volume for full double stroke l	0,31	0,5	0,775	1,43	2,87
Moment of inertia J kgm^2	0,018	0,03	0,066	0,142	0,36
Weight approx. kg	10	12,7	17,7	31,4	49
Suitable connecting flange for Duoflow Rotating Unions	**1022186**	**1022186**	**1022187**	**1022187**	**1022187**

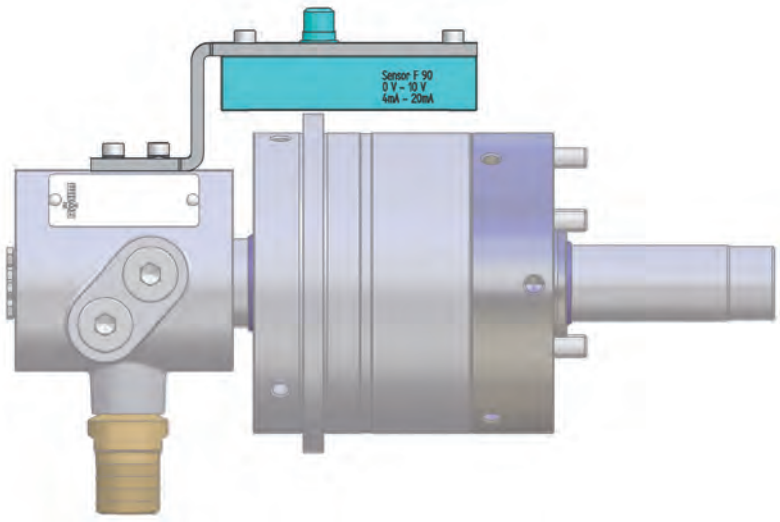
Stroke monitors



Tool group C 15
Type 453-05
OVS-stroke monitoring
by **inductive proximity switches**
(Limit switch not included)

Item no.	Size
1159712 ●	OVS 85
1159713 ●	OVS 105
1159714 ●	OVS 130
1159715 ●	OVS 150
1159716 ●	OVS 200

Cylinders must be ordered separately
External rotating union suitable



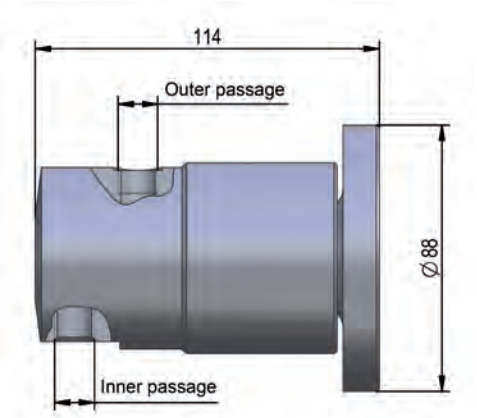
Tool group C 15
Type 453-05
OVS-stroke monitoring linear, inductive F90
(F90 system included)

Item no.	Size
1159707 ●	OVS 85
1159708 ●	OVS 105
1159709 ●	OVS 130
1159710 ●	OVS 150
1159711 ●	OVS 200

Cylinders must be ordered separately
External rotating union suitable

● from stock ■ 4 - 6 weeks ▲ on request

Accessories



Tool group C 15
Typ 4000-Y **2-Passage Rotating Unions**

Item no.	Inner Passage			Outer Passage		
	Connection	Media	Max. Pressure	Connection	Media	Max. Pressure
1118078 ■	1/4	Hydraulic Oil	100	1/4	Hydraulic Oil	30
1118079 ■	1/4	Hydraulic Oil	70	1/4	Air	10
1118080 ●	1/4	Coolant	70	1/4	Air	10
1118081 ■	3/8	Air	10	1/8	Air	10
1118082 ■	1/4	Air	10	1/4	Hydraulic Oil	40
1118083 ■	1/4	Air	10	1/4	Coolant	40

Optional: 1-Passage Rotating Union for OVS Size 85-105 Item No.: 600599
Optional: 1-Passage Rotating Union for OVS Size 130-150 Item No.: 326372
Optional: 1-Passage Rotating Union for OVS Size 200 Item No.: 611172
Connecting Flange complete for 2-Passage Rotating Union Size 85-105 Item No.: 1022186
Connecting Flange complete for 2-Passage Rotating Union Size 130-200 Item No.: 1022187

Overview power chucks - cylinders

OVS Size		85	105	130	150	200			
3-and 4-jaw chucks	**KFD**	85-125+140	130	160	160-250	200-1600			
	KFL			250	250-400	315-600			
	KFD-G	125+160	200	250	315	400			
	KFD-HS	110	110-175	200	250	315-500			
	DURO-NC/SE		140	160	175+200	250-630			
	KFD-HE		160	160+200	250	315+400			
	KFM	130	160	215	280+350				
	KFG		160	215	280+350				
	KFE		170	215	280+350				

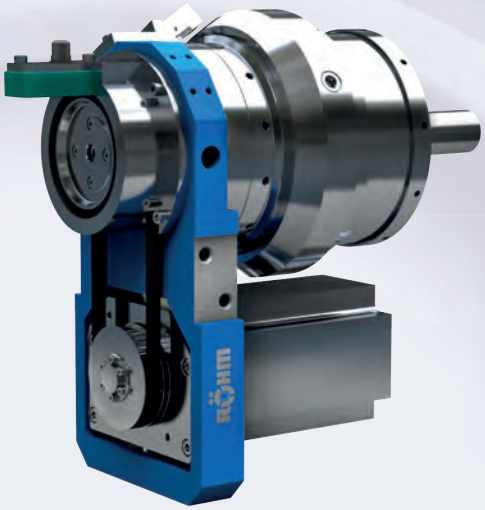
LVS Size		85	105	130	150	200	250	300	350
3-and 4-jaw chucks	**KFD**			85-125+140	85-125+140	130	160	200+250	250-315
	KFL						250	315+400	315-600
	DURO- NC/SE						160	200+250	250
	KFD-HE						160	200+250	300+400
	KFM			130		160	215	280	350
	KFG						160	215+280	350
	KFE						170	215+280	350

OVS Size		85	105	130	150	200			
2-jaw chucks	**KFD**	125-140	130+160	160+200	160-250	200-630			
	KFD-G	125+160	200	250	315	400			
	KFM	130	160	215	280+350				
	KFG	160	215	280+350					
	KFE	170	215	280+350					

LVS Size			105	130	150	200	250	300	350
2-jaw chucks	**KFD**		125	125+140	130	130+160	200	250+315	250-500
	KFD-G			125	160	200	250	250+315	315+400
	KFM			130		160	215	280	350
	KFG						160	215-350	
	KFE					170+215	280	350	

● from stock ■ 4 - 6 weeks ▲ on request

EVS



Electrical cylinder EVS for actuating chucks without through-hole. Especially suitable for safety and energy efficent clamping of work-pieces on lathes and grinding machines.

With through hole Ø 8mm for coolant or other media.

Max. clamping force: 50 kN

Scope of delivery:
Compact electrical cylinder including
- Servodrive with a load of 1,0 kW
- Complete sensor technology
- Mounting plate
- Control modul for easy connection by a bus-system into the numerical control
- Drive controller
- Software for control modul
- Lines from control modul to electrical cylinder

Sample calculation for energy savings with an electrical cylinder:

Energy consumption of an oil-operated clamping cylinder

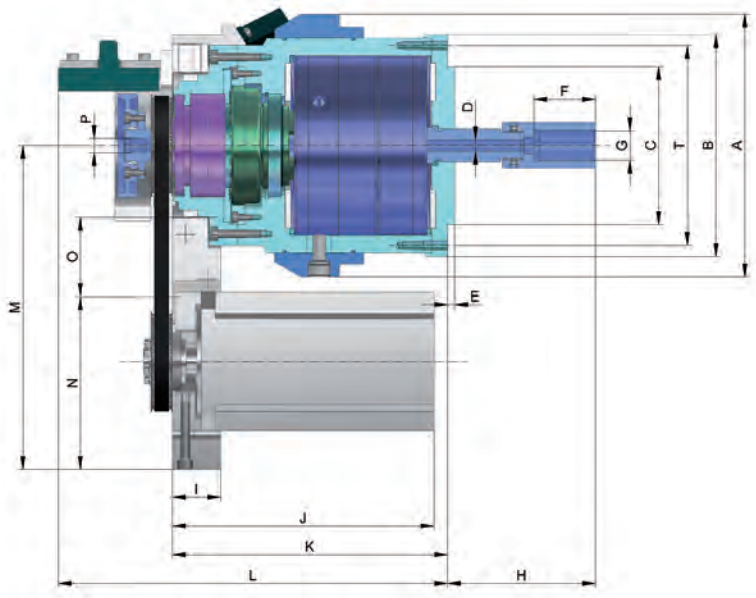
Output of hydraulic unit	1,5 kW
Power dissipation from cylinders:	0,9 kW
Total output of an oil-operated clamping cylinder:	2,4 kW
Energy consumption per year:	14.400 kWh

Energy consumption of an electrical cylinder:

Total output of the EHS	0,1 kW
Energy consumption per year:	600 kWh
Energy saving potential per year:	13.800 kWh

The above assumptions have been based on a standard manufacturing process in three-shift operation and may vary depending on the application involved. Where greater efficiency is achieved in the processing (e.g. by getting the best possible match between the cylinder and the process, or through shorter lift times), even more energy can be saved by indirect means.

EVS



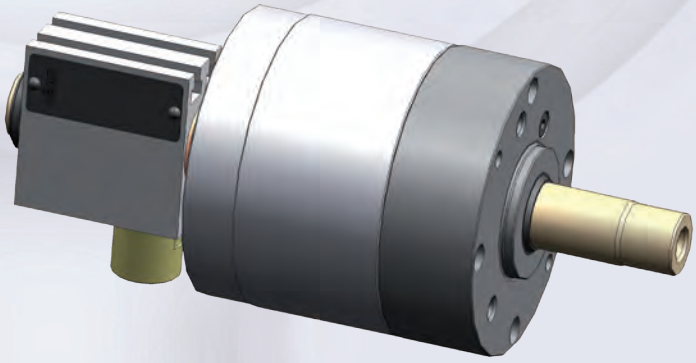
Tool group C 15
Type 444-01
Electrical cylinder without through-hole EVS with through-hole Ø 8mm for coolant or other media

Item no.		1203050 ▲
Max. pull force kN		50
Total stroke		32
External Ø	A	183
Ø	B	154,5
Ch6		110
Through-hole	D	8
E		43
G		M22x1,5
Stroke min/max	H	71 / 103
I		33,5
J		182
K		191,5
L		271
M		225
N		105
O		55
P		M10x1
Speed max. min^{-1}		6000
Weight approx. kg		32,8
Rotierende Masse kg		23,7
Moment of inertia kg/m^2		0,076

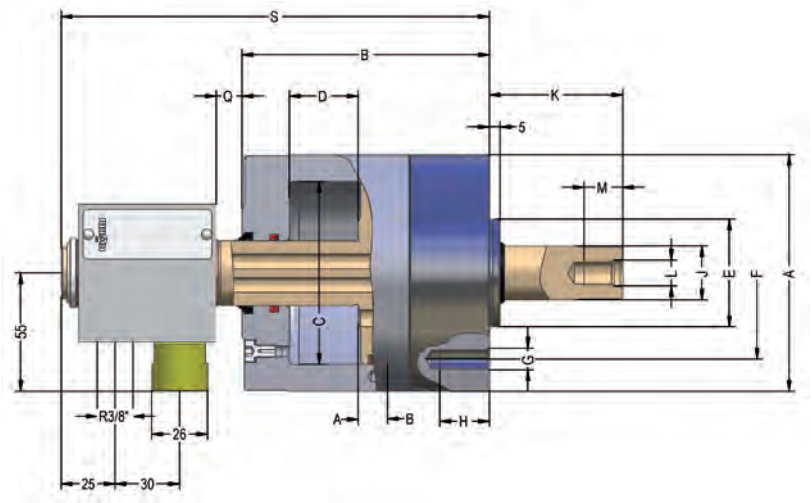
LVS

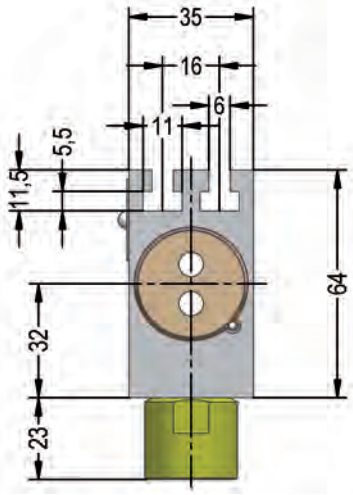
Technical features:

- Up to 10 bar
- Air operated cylinder up to max. 10 bar, 2 bar
- In case of a sudden decrease of pressure with cylinders LVS safety devices guarantee that the clamping pressure in the piston area will be maintained
- Stroke control by means of a single touch limit switch, inductive stroke monitoring, F 90 stroke monitoring system, attachment on the machine side
- The cylinders can also be actuated when rotating
- The max. admissible speed can be run continuously (100 % ED).
- On request: with central media feed-through



LVS up to 10 bar





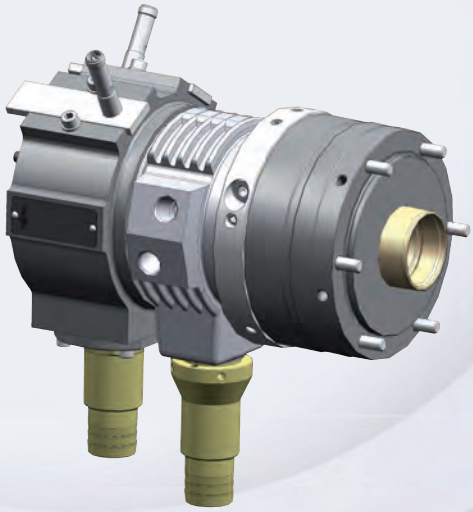
Tool group C 15
Type 555-60 LVS
Air-operated cylinders without through-hole
with safety device and stroke control

Item no.	096553 ●	096554 ●	096555 ●	096556 ●	096557 ●	096558 ●	096559 ●	096560 ●
Size	85	105	130	150	200	250	300	350
A	110	130	155	180	240	287	337	387
B	115	115	117	128	125	125	125	148
C	85	105	130	150	200	250	300	350
D stroke	32	32	32	32	32	32	32	45
E_{h6}	50	50	80	95	95	125	125	125
F	80	80	105	145	145	170	170	170
G	3 x M 10	3 x M 10	3x M 12	4 x M 16	4 x M 16	6 x M 16	6 x M 16	6 x M 16
H	23	23	27	35	35	35	35	35
J	25	25	25	25	35	35	35	35
K max.	62	88	79	74	87	87	82	82
K min.	30	56	47	42	55	55	50	37
L	M 12	M 12	M 16	M 16	M 24	M 24	M 24	M 24
M	18	18	24	24	36	36	36	36
Q max.	44	44	44	44	44	44	44	57
Q min.	12	12	12	12	12	12	12	12
S max.	231	231	233	244	241	241	241	277
S min.	199	199	201	212	209	209	209	232
Piston area **A** cm^2	49,7	79,5	125,7	169,6	307,1	483,8	699,8	955
Piston area **B** cm^2	51,8	81,7	127,8	171,8	304,5	481,5	697,2	952,5
Eff. draw bar pull (F=6 bar) kN	3	4,80	7,50	10	18	28,50	41,50	56,50
Max. admissible speed min^{-1}	5000	5000	5000	5000	4500	4000	3200	3200
Air consumption for full double stroke at 6 bar NL	2,8	4,6	6,5	7,5	12,5	18	26	50
Moment of inertia J kgm^2	0,007	0,009	0,03	0,06	0,09	0,10	0,237	0,45
Weight approx. kg	5,3	6,5	9	12,5	19,5	23	28,5	32,5

SZS

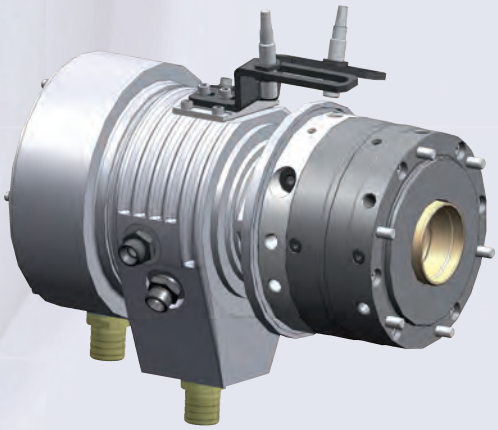
Technical features:

- Safety device
- Stroke monitor
- Pressure control valve
- Coolant collector
- Low energy dissipation
- Mounting from the rear
- The piston can also be actuated when the cylinder is rotating



Special salient features SZS 45 bar:

Short design, low mass

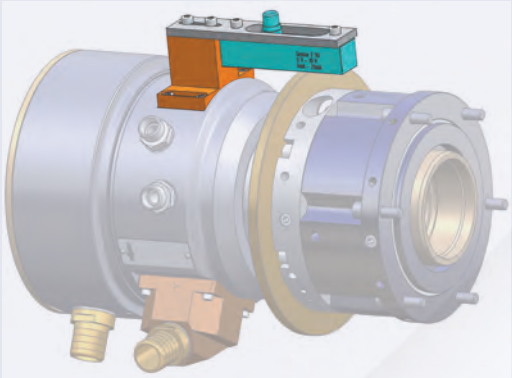


Special salient features SZS 80 bar:

Stroke monitor beyond coolant collector

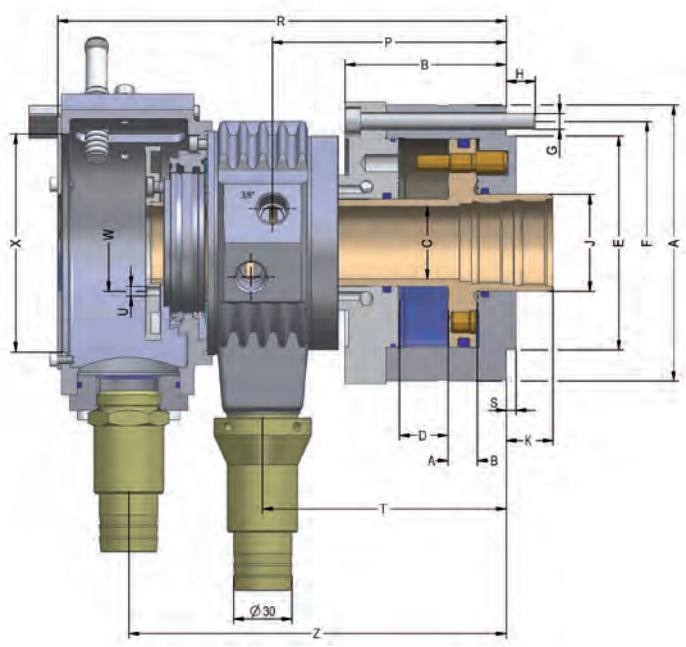
Optional stroke monitoring with F 90:

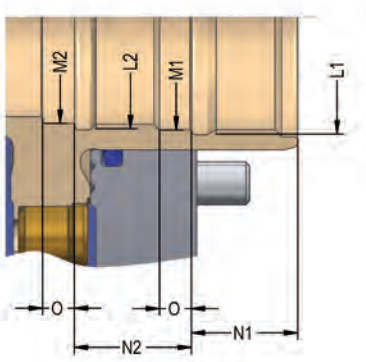
- High resolution
- Minimal temperature drift
- Contactless
- Teachable
- Inductive effect principle



RÖHM actuating cylinders meet the requirements laid down by the German Employer's Liability Insurance Association by their safety device and stroke control. For their operation we recommend to use hydraulic oil HLP 32 DIN 51525 (32 Centistokes at 40º C or 100º F).

SZS up to 45 bar, short design



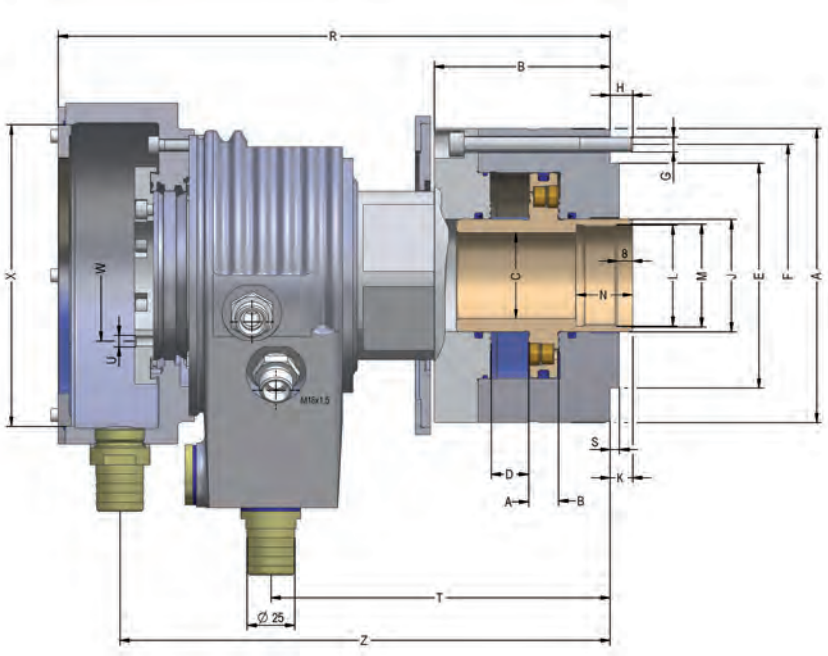


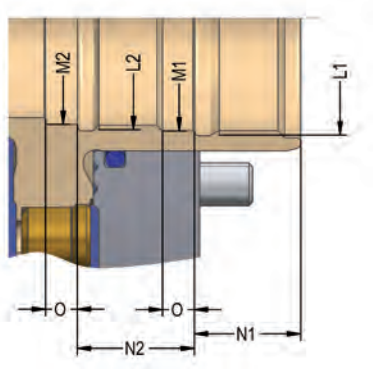
Tool group C 15
Type 559-00 Oil operated cylinders **SZS**
Basic model up **to 45 bar**, **short design**
for **high speeds**,
mounting from the rear,
with safety device,
stroke monitor,
pressure control valve and coolant collector

With high and low pressure chucking the change-over of the safety valve is guaranteed when chucking pressure : releasing pressure ≤ 5,5 : 1

Item no.	432764 ■	432765 ●	432766 ●	432767 ■	432768 ■	432769 ■	432770 ■	435766 ▲	433217 ▲
Size	37/70	46/103	52/130	67/150	77/170	86/200	95/225	110/250	127/325
A	142	162	182	197	212	228	245	264	295
B	83	83	83	94	94	104	104	104	127
C	37,5	46,5	52,5	67,5	77	86,5	95,5	110,5	127,5
D stroke	25	25	25	30	30	35	35	35	40
E_{h6}	110	130	140	160	160	180	210	210	250
F	125	147	165	180	185	210	227	240	270
G	6xM8	6xM8	6xM8	6xM10	6xM10	6xM10	6xM10	6xM10	6xM12
H	13	15	15	15	15	15	15	16	20
J	50	61	70	85	95	105	115	130	145
K max.	24	22	22	25	25	31	31	31	44
K min.	-1	-3	-3	-5	-5	-4	-4	-4	4
L_1	M44x1,5	M55x2	M60x1,5	M75x2	M85x2	M95x2	M105x2	M120x2	M135x2
L_2	M42x1,5	M50x1,5	M55x2	M72x1,5	M80x2	M90x2	M100x2	M115x2	-
M_1	42,5	52,5	57,5	72,5	82	92	102,5	117,5	132
M_2	40	47	52,5	69	77	87	97	112	-
N1	20	25	25	25	25	32	32	32	30
N2	22	25	28	28	28	30	30	30	-
O	6	6	6	6	6	6	6	6	6
P	120,5	120,5	120,5	138,5	138,5	155	159	166,3	196
R	231	231	231	269	269	292	302	321	355
S	5	5	5	8	8	8	8	8	5
T	125,75	125,75	125,75	142,75	142,75	159,25	163,25	171,5	201,5
U	4xM5	2xM6	2xM6	2xM6	2xM6	2xM6	2xM6	4xM6	2xM6
W	50	68	76	91	91	116	120	135	150
X	112	122	122	135	145	167	177	116	131
Z	195,5	195,5	195,5	225	226	249	259	275	307
Piston area **A** cm^2	74	109,8	142,4	164,5	184	212,6	243,5	267	337
Piston area **B** cm^2	70	103,5	131	152	170	197	226,2	247,4	325,7
Eff. draw bar pull (F=45 bar) kN	31	46	58	68	76	88	100	110	145
Max. admissible speed min^{-1}	8000	7000	6300	5500	5000	4500	4000	3500	3200
Oil leakage rate (30 bar 50° C - n max.) l/min^{-1}	2,5	3	3,5	4	4,5	5	5	5	6
Moment of inertia J kgm^2	0,02	0,03	0,045	0,07	0,13	0,17	0,3	0,35	0,58
Weight approx. kg	11	16	18	22	30	35	38	48	66

SZS up to 80 bar





Tool group C 15
Type 559-10 Oil operated cylinders **SZS**
Basic model
up to 80 bar
for **high speeds**,
mounting from the rear,
with safety device, stroke monitor, pressure control valve and coolant collector

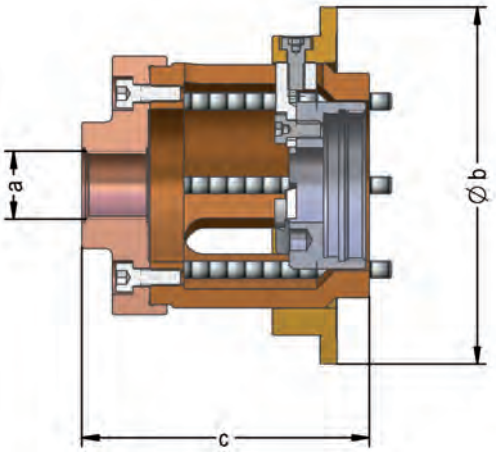
With high and low pressure chucking the change-over of the safety valve is guaranteed when chucking pressure : releasing pressure ≤ 5,5 : 1

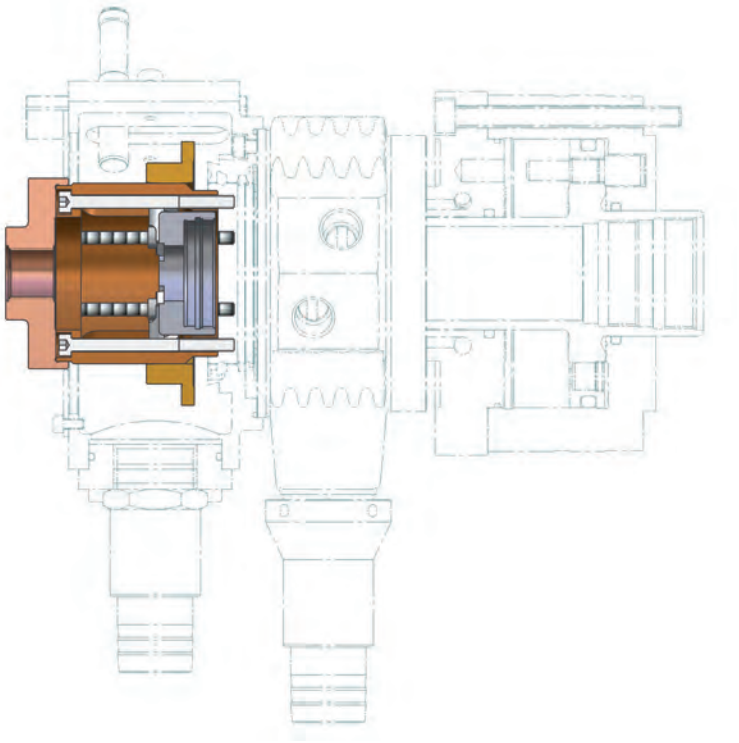
Item no.	432760 ■	432761 ■	432762 ■	432763 ▲
Size	46/67	67/86	92/110	104/132
A	157	177	203	245
B	94	95	110	135
C	46	67	92	104
D stroke	20	20	35	50
E_{h6}	120	125	155	180
F	140	160	185	225
G	6xM8	6xM8	6xM10	6xM10
H	12	12	15	15
J	60	85	115	125
K max.	12	12	25	25
K min.	-8	-8	-10	-25
L	M54x1,5	M74x1,5	M102x1,5	M116x2
M	55	76	103	117
N	30	40	40	40
P	180	185	215	245
R	295	310	355	400
S	5	5	5	5
T	181	187,5	215	250
U	6xM6	6xM6	6xM6	6xM6
W	70	85	115	125
X	160	180	200	210
Z	262	275	310	350
Piston area **A** cm^2	66,7	86,4	110	131
Piston area **B** cm^2	66,7	86,4	110	131
Eff. draw bar pull (F=60 bar) kN	40	51	66	78
Max. admissible speed min^{-1}	8000	6000	4000	3200
Oil leakage rate (60 bar 50° C - n max.) l/min^{-1}	2,5	3	4,0	4,5
Moment of inertia J kgm^2	0,048	0,078	0,23	0,35
Weight approx. kg	22	27	50	66

( ) Bracket values: Sizes 85 - 130

● from stock ■ 4 - 6 weeks ▲ on request

Accessories





Tool group Type 594-19 **longitudial stop**	**Item no.**	For	a	Ø b	c
	1106137 ▲	SZS 37/70	M20x1,5	105	84,5
	1106141 ▲	SZS 46/103	M20x1,5	110	84,5
	1106145 ▲	SZS 52/130	M20x1,5	115	84,5
	1091935 ▲	SZS 67/150	M20x1,5	130	89,5
	1106149 ▲	SZS 77/170	M20x1,5	140	89,5
	1106153 ▲	SZS 86/200	M20x1,5	162	94,5
	1106157 ▲	SZS 95/225	M20x1,5	172	94,5
	1106161 ▲	SZS 110/250	M20x1,5	200	98
	1106165 ▲	SZS 127/325	M20x1,5	230	99,5

EHS

Electrical cylinder EHS for actuating chucks with through-hole. Especially suitable for clamping bars with an outside diameter of up to 67 mm on lathes and grinding machines.

Max. clamping force: 68 kN

Scope of delivery:
Compact electrical cylinder
- Servodrive with a load of 1,0 kW
- Complete sensor technology
- Mounting plate
- Control modul for easy connection by a bus-system into the numerical control
- Drive controller
- Software for control modul
- Lines from control modul to electrical cylinder

Sample calculation for energy savings with an electrical cylinder:

Energy consumption of an oil-operated clamping cylinder

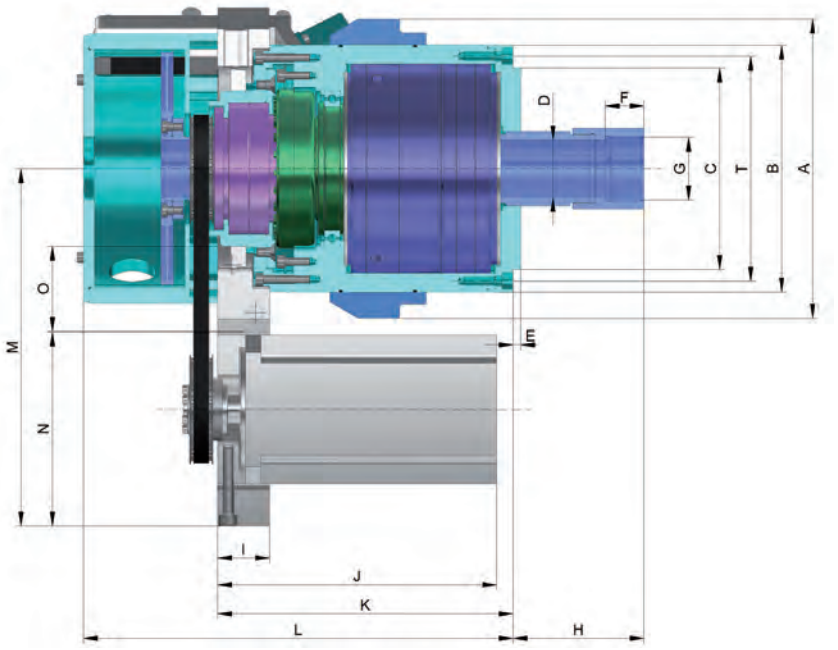
Output of hydraulic unit	1,5 kW
Power dissipation from cylinders:	0,9 kW
Total output of an oil-operated clamping cylinder:	2,4 kW
Energy consumption per year:	14.400 kWh

Energy consumption of an electrical cylinder:

Total output of the EHS	0,1 kW
Energy consumption per year:	600 kWh
Energy saving potential per year:	13.800 kWh

The above assumptions have been based on a standard manufacturing process in three-shift operation and may vary depending on the application involved. Where greater efficiency is achieved in the processing (e.g. by getting the best possible match between the cylinder and the process, or through shorter lift times), even more energy can be saved by indirect means.

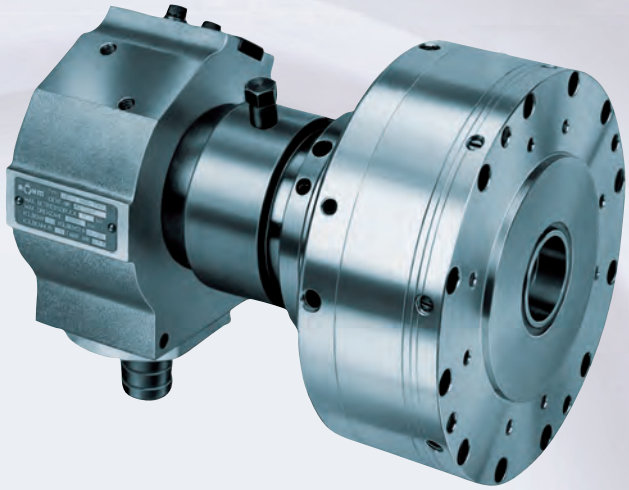
EHS



Tool group C 15
Type 444-00
Electrical cylinder with through-hole EHS

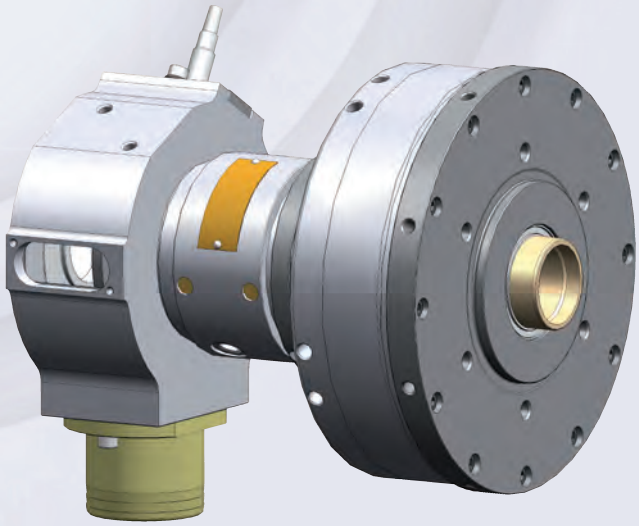
Item no.		1190795 ▲	1239541 ▲
Max. pull force kN		50	68
Total stroke		32	32
External Ø	A	193	255,5
Ø	B	159,3	209,8
Ch6		130	170
Through-hole	D	37	67
E		25	25
G		M42x1,5	M75x2
Stroke min/max	H	52,5 / 84,5	89 / 57
I		33,5	33,5
J		180	180
K		192,6	226,6
L		279,1	318,1
M		230	260
N		125	130
O		55	55
Speed max. min^{-1}		6000	6000
Weight approx. kg		36,9	70
Rotierende Masse kg		26,2	53
Moment of inertia kg/m^2		0,107	0,36

LHS-L



Technical features:

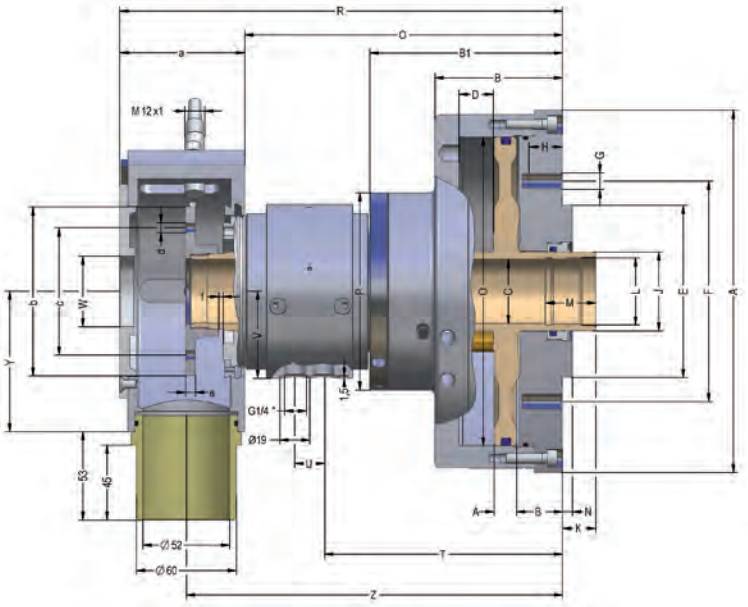
- In the case of an accidental pressure drop in the feed lines, the safety device maintains the chucking pressure in the cylinder.
- Stroke monitor
- Coolant collector
- Short design
- Actuation possible during rotation
- Due to large through-hole ideally suited for machining of bars
- Longitudinal location of workpiece toward the rear (swallowing) part of the workpiece
- As a rule through-hole cylinders can only be used for horizontal machining axes.

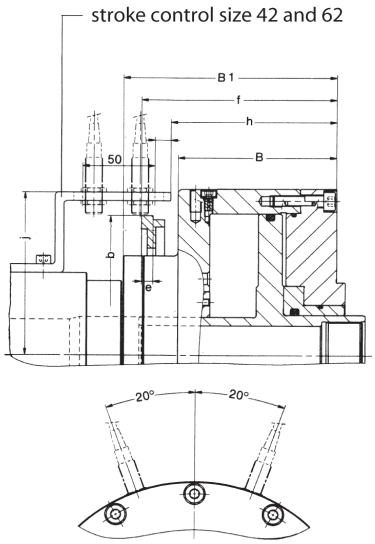


Accessories:
Connection for supply and drain hoses
Special accessories:
2 inductive proximity switches
Piece/Item no. 381551 (Opener)
or 2 inductive proximity switches
Piece/Item no. 202759 (Closer)

With tandem piston on request.

LHS-L

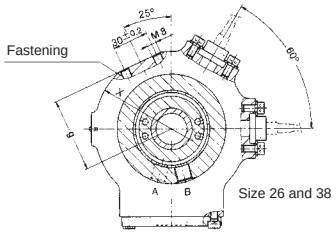




with tandem piston on request

Tool group C 15
Type 565-10 Air-operateed cylinders with through-hole **LHS-L**
with safety valve, stroke control and coolant collector, housing stationary - **1,5 to 8 bar** - can be actuated during rotation

With sizes 26 and 38 the coolant collector is centrally held by means of a holding device at the machine.
With high and low pressure chucking the change-over of the safety valve is guaranteed when chucking pressure : releasing pressure ≤ 2 : 1

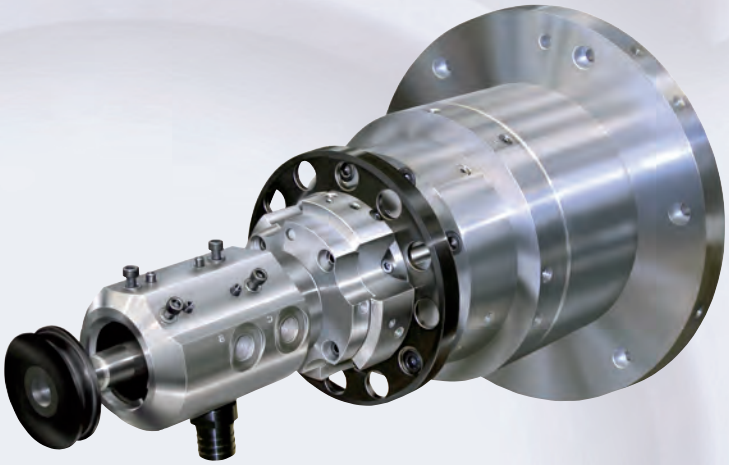


Item no.	417310 ■	417311 ■	417312 ■	417313 ▲
Size	26/190	38/251	42/289	62/438
A	187	215	235	285
B	76	78	109,7	109,7
B_1	110	110	147,5	147,5
C	26,2	38,2	42	62
D stroke	20	20	32	32
E-0,01	70	103	103	125
F	105	132	145	170
G	6 x M 8	6 x M 10	8 x M 8	8 x M 10
H	15	20	20	25
J	38	50	57	82
K max.	20	20	20	20
K min.	0	0	-12	-12
L	M 32 x 1,25	M 44 x 1,5	M 52 x 1,5	M 70 x 1,5
M	25	30	30	35
N	5	6	6	6
O	160	185	200	250
P	106	118	140	160
Q	197	198	263,7	263,7
R	275	273	337,7	342
S	210	211	283,5	283,5
T	141	140	188	188
U	23	23	28,5	28,5
V	46	52	60	70
W	42	42	51	70
X	130	151	151	161
Y	73,5	84	84	89
Z	233,5	233	297,7	300
a	78	75	74	80
b	77	101	197	217
c	61	76	-	-
d	4 x M 6	4 x M 6	-	-
e	7,5	7,5	8	8
f max.	22,5	22,5	135	135
f min.	2,5	2,5	167	167
g	62	72	-	-
h	-	-	114,7	114,7
j	-	-	115	125
Piston area **A** cm^2	189,7	249,1	288,6	438
Piston area **B** cm^2	190,9	251,4	291,3	447
Eff. draw bar pull (F=6 bar) kN	10,47	13,75	15,90	24,40
Max. admissible speed min^{-1}	6500	6500	4000	4000
Volume for full double stroke l	0,762	1	1,9	2,84
Moment of inertia J kgm^2	0,03	0,06	0,102	0,24
Weight approx. kg	11,8	16	25,5	36

The air actuating cylinders LVS are available on request

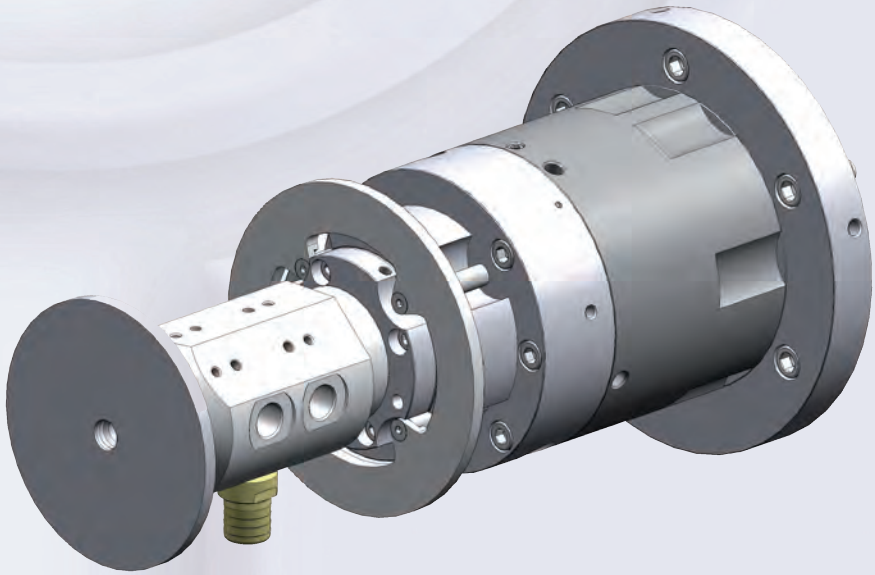
● from stock ■ 4 - 6 weeks ▲ on request

OVUSHH

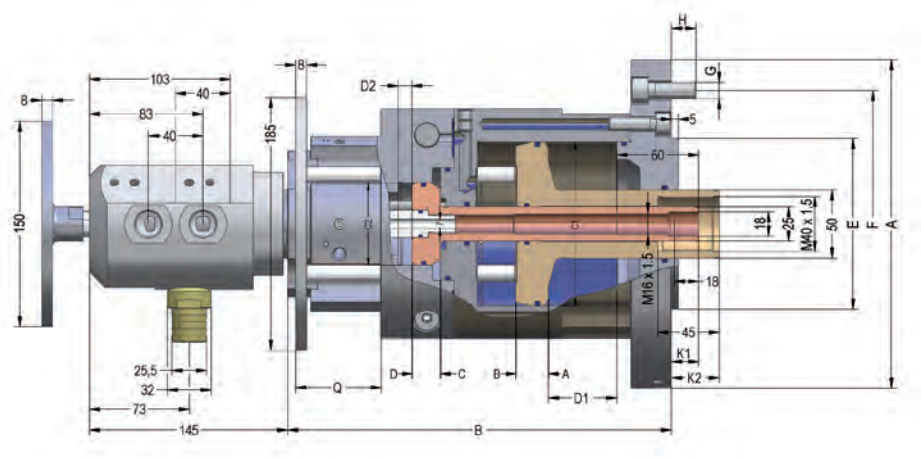


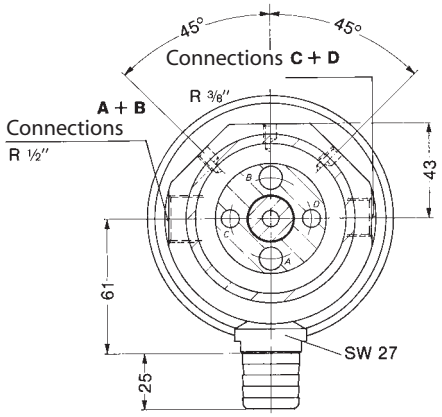
Technical features:

- For power chucks with additional function (ejectors, retractable dead centers, etc.)
- With four-way oil distributor
- A modular system permits the same basic cylinder to be offered with different strokes and piston areas and desired safety arrangement.
- If an additional connector head is attached to this cylinder, a further fluid (coolant, oil, air etc.) can be passed through the cylinder axis.
- As special construction: Dual piston cylinder with rotating piston for swivelling movement.
- Scope of delivery: Connections for supply and drain hoses (without touch limit switch, without inductive proximity switches).



OVUSHH



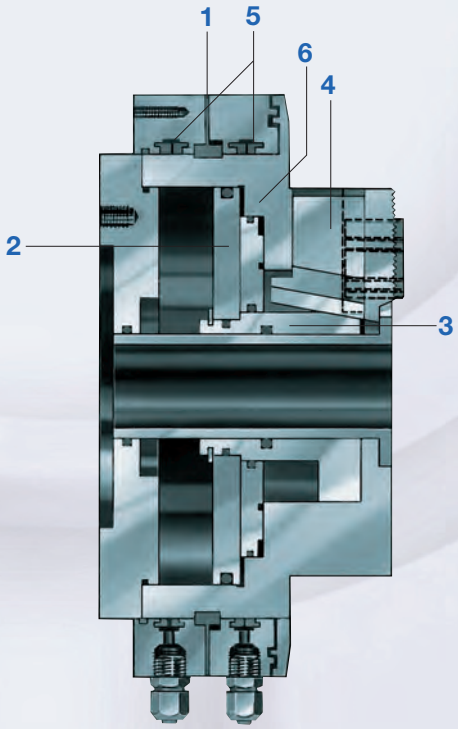


Tool group C 15
Type 455-12 Hydraulic double piston cylinders **OVUSHH with independent pistons**

Item no.	419724 ▲	419727 ▲	419725 ▲	419726 ▲
Size	120/80	120/80	140/80	160/80
A	168	168	188	208
B	248	278	248	248
Ø Piston 1 C_1	120	120	140	160
Ø Piston 2 (reduction possible down to 50mm) C_2	80	80	80	80
Stroke piston 1 (reduction possible down to approx. 10 mm) D_1	45	75	45	45
Stroke piston 2 (enlargement possible up to approx. 45 mm) D_2	8	8	8	8
K1 min.	40	10	40	40
K1 max.	85	85	85	85
K_2 min.	22	-8	22	22
K2 max.	30	0	30	30
Q min.	37	7	37	37
Q max.	82	82	82	82
Piston area Piston 1 **A** cm^2	93,5	93,5	134,5	181,4
Piston area Piston 1 **B** cm^2	103,7	103,7	144,5	191,6
Piston area Piston 2 **C** cm^2	45,4	45,4	45,4	45,4
Piston area Piston 2 **D** cm^2	46,1	46,1	46,1	46,1
Eff. draw bar pull (F=40 bar) 1 kN	38	38	56	74
Eff. draw bar pull (F=40 bar) 2 kN	18	18	18	18
Max. admissible speed min^{-1}	5000	5000	5000	5000
Volume for full double stroke 1 l	0,86	1,42	1,26	1,67
Volume for full double stroke 2 l	0,1	0,1	0,1	0,1
Moment of inertia J kgm^2	0,13	0,14	0,18	0,25
Weight approx. kg	42,2	44,7	46,5	51,3

The dimensions E, F, G and H are machine-based and have to be stated for the ordering.

LVE - with integrated cylinder



Technical features:

- Wedge system with integrated clamping cylinder
- Large through-hole
- Scope of delivery: Chuck and jaw mounting screws, T-nuts (without top jaws)
- Unobstructed bore throughout spindle thanks to omission of draw tube
- Self-contained
- High gripping force even at 6 bar
- Chucking and unchucking only while spindle is not rotating
- Suitable for machining flanges and bar stock and for chucking pipes
- Used in conjunction with RÖHM actuating cylinders with safety device SZS, OVS, LHS-L, LVS, EHS and EVS the power chucks LVE meet the requirements of the German Employers' Insurance Association

Technical features:

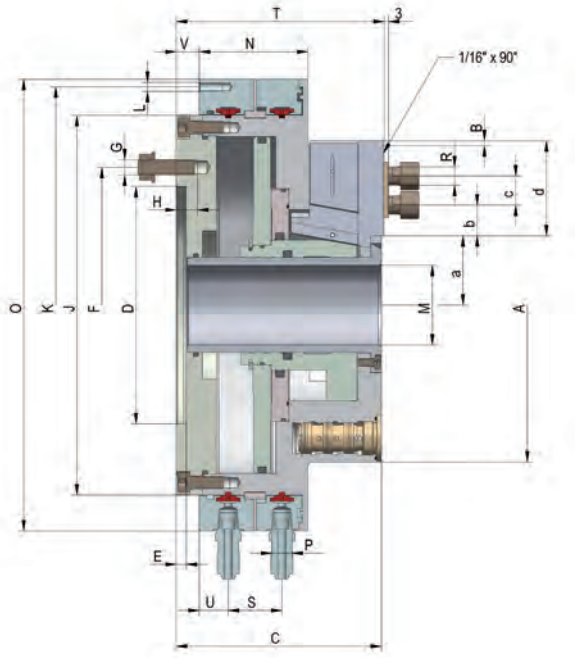
Compressed air is supplied to one of the piston spaces through the immobilezed floating ring **1** and the double non-return valve. The force acting on the pressure piston **2** is transmitted to the base jaws **4** by the chucking piston via the proven wedge system **3**. During chucking and unchucking, special seals **5** seal the floating ring **1** against the body **6**. On completion of the chucking operation, the chucking pressure is maintained by the nonreturn valve with no pressure existing in the supply lines. The seals rise by their elasticity and are not destroyed through the rotating chuck body.

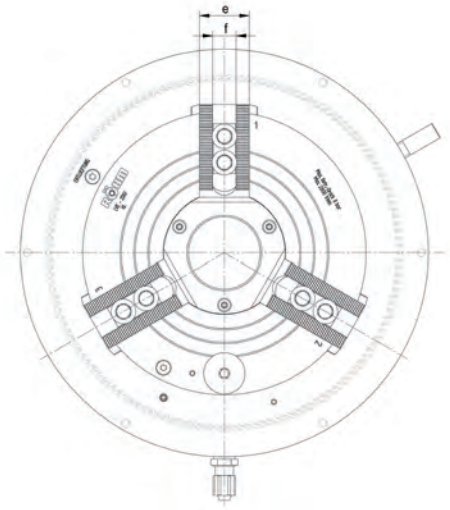
With the QR Code you have direct access to our product videos on Youtube.

Components:

1. Floating ring
2. Pressure piston
3. Wedge system
4. Base jaws
5. Special seals
6. Body

LVE up to 10 bar, with serration 90°, cylindrical centre mount



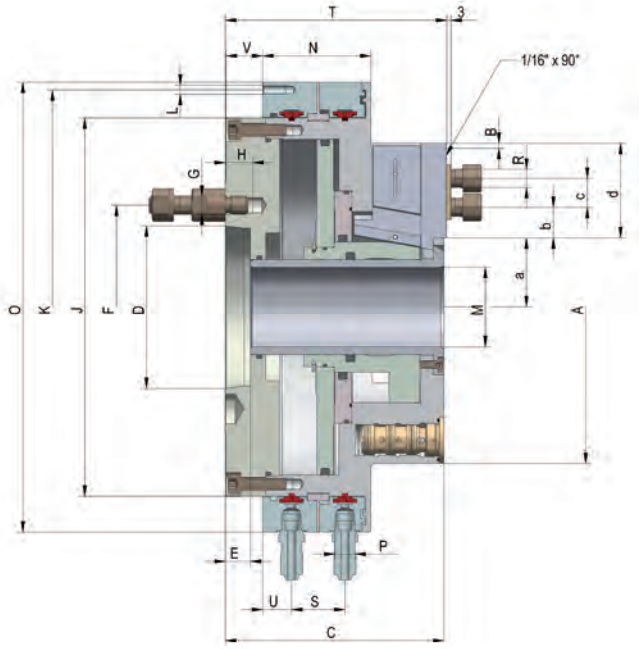


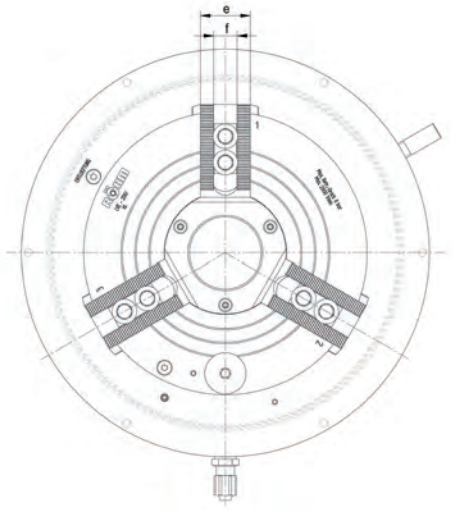
Tool group C 15
Type 525-00 **3-jaw** self-contained chucks **LVE**, with **through-hole**, **max. operating pressure 10 bar**, with **serration**
cylindrical centre mount

Item no.	420189 ●	420190 ●	420191 ●	420192 ●	420193 ●
Size	125	160	200	250	315
A	136	168	205	255	320
Jaw travel B	3	4,2	4,2	5	5
C	101,5	130,5	134	146	156,5
DH6	120	125	155	185	225
E	6	6,5	6,5	6,5	6,5
F	137	150	180	210	250
G	M 8	M 10	M 10	M 10	M 10
H	8	13	14	14	14
J	164	205	248	315	350
K	190	235	285	358	388
L	M 6	M 6	M 6	M 6	M 16
M	26	38	52	68	90
N	66,5	80,5	71	78,5	79,5
O	204	250	295	370	400
P	R 1/4"	R 1/4"	R 1/4"	R 1/4"	R 1/4"
R	M 8	M 8	M 12	M 16	M 6
S	32	41	35	37	36
T	103	131,5	134	147,5	158
U	20	20,7	19	19	18
V	-	4	15	15,5	25
a min.	24	31,8	41,2	50	61,5
a max.	27	36	45,4	55	66,5
b min.	10	10	13	15	14,5
b max.	21	19,5	35	43	64
c	min. 14 / max. 25	2 x 15	19	25	25
d	41	49,5	62	78	99
e	25	32	36	44	44
f^{h7}	12	12	17	21	21
Max. operating pressure bar	8	8	8	8	8
Min. operating pressure bar	2	2,5	2,5	2,5	2,5
Total clamping force at 6 bar kN	20	35	60	95	120
Max. admissible speed min^{-1}	4000	3500	2800	2200	1800
Moment of inertia J kgm^2	0,028	0,125	0,262	0,675	1,35
Air consumption/jaw travel at 6 bar NL	1,5	3,6	6,1	9,9	12,3
Weight without jaws approx. kg	13	25	36	57	85

A stationary fastening of the floating ring allows higher speeds

LVE up to 10 bar, with serration 90°, ISO 702-3





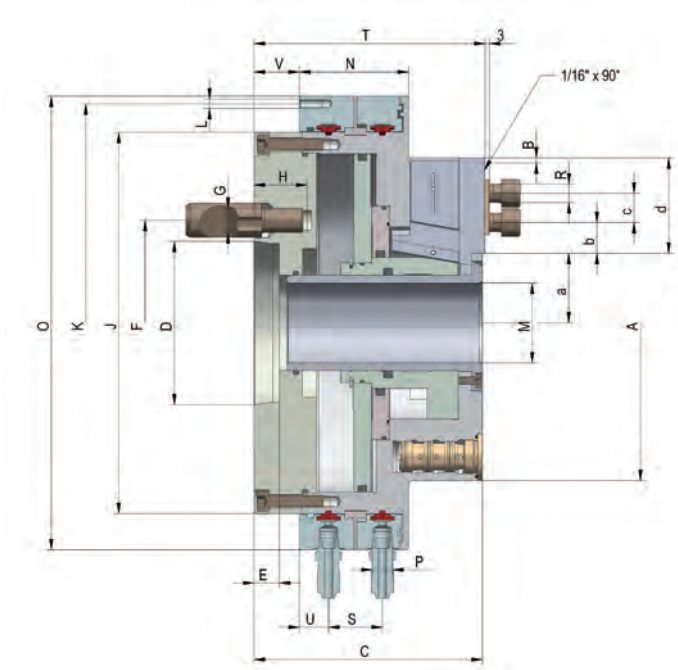
Tool group C 15
Type 525-03 **3-jaw** self-contained chucks **LVE**, with **through-hole**, **max. operating pressure 10 bar**, with **serration 90°** **Short taper mount ISO 702-3** (DIN 55027,studs and locknuts)

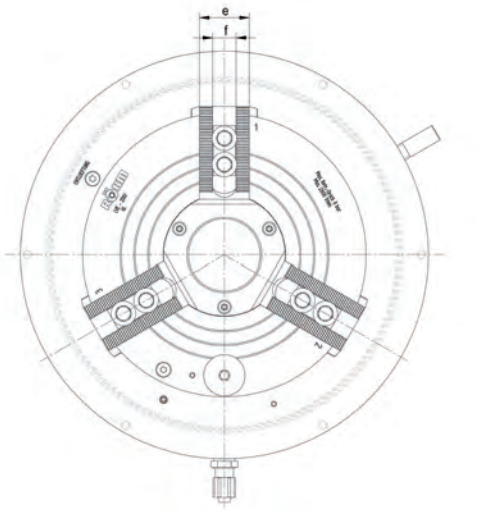
Item no.	421046 ■	421047 ■	421048 ■	421049 ■	421050 ■	421051 ■	421052 ■	421053 ■	421054 ■	421055 ■	421056 ■	421057 ■	421058 ■	421059 ■
Size	125	125	160	160	160	200	200	200	250	250	250	315	315	315
Short-taper	4	5	4	5	6	5	6	8	6	8	11	6	8	11
A	136	136	168	168	168	205	205	205	255	255	255	320	320	320
Jaw travel B	3	3	4,2	4,2	4,2	4,2	4,2	4,2	5	5	5	5	5	5
C	108,5	111	138	138	140	144	143,5	145,5	157	157	159	166	166	168
D	63,513	82,563	63,513	82,563	106,375	82,563	106,375	139,719	106,375	139,719	196,869	106,375	139,719	196,869
E	15	15	15	15	18	15	18	18	18	18	19	18	18	19
F	85	104,8	85	104,8	133,4	104,8	133,4	171,4	133,4	171,4	235	133,4	171,4	235
G	3xM10	4xM10	3xM10	4xM10	4xM12	4xM10	4xM12	4xM16	4xM12	4xM16	6xM20	4xM12	4xM16	6xM20
H	15	15	15	15	18	15	18	24	18	24	30	18	24	30
J	164	164	205	205	205	248	248	248	315	315	315	350	350	350
K	190	190	235	235	235	285	285	285	358	358	358	388	388	388
L	M 6	M 6	M 6	M 6	M 6	M 6	M 6	M 6	M 6	M 6	M 6	M 6	M 6	M 6
M	26	26	38	38	38	52	52	52	68	68	68	90	90	90
N	66,5	66,5	80,5	80,5	80,5	71	71	71	78,5	78,5	78,5	79,5	79,5	79,5
O	204	204	250	250	250	295	295	295	370	370	370	400	400	400
P	R 1/4"	R 1/4"	R 1/4"	R 1/4"	R 1/4"	R 1/4"	R 1/4"	R 1/4"	R 1/4"	R 1/4"	R 1/4"	R 1/4"	R 1/4"	R 1/4"
R	M 8	M 8	M 8	M 8	M 8	M 12	M 12	M 12	M 16	M 16	M 16	M 16	M 16	M 16
S	32	32	41	41	41	35	35	35	37	37	37	36	36	36
T	110	112,5	139,5	139,5	-	144	145	147	158,5	158,5	160,5	167,5	167,5	169,5
U	20	20	20,7	20,7	20,7	19	19	19	19	19	19	18	18	18
V	7	9,5	12	12	13,5	23,5	24,5	26,5	26,5	26,5	28,5	34,5	34,5	36,5
a min.	24	24	31,8	31,8	31,8	41,2	41,2	41,2	50	50	50	61,5	61,5	61,5
a max.	27	27	36	36	36	45,4	45,4	45,4	55	55	55	66,5	66,5	66,5
b min.	10	10	10	10	10	13	13	13	15	15	15	14,5	14,5	14,5
b max.	21	21	19,5	19,5	19,5	35	35	35	43	43	43	64	64	64
c	min 14 / max 25	min 14 / max 25	2 x 15	2 x 15	2 x 15	19	19	19	25	25	25	25	25	25
d	41	41	49,5	49,5	49,5	62	62	62	78	78	78	99	99	99
e	25	25	32	32	32	36	36	36	44	44	44	44	44	44
f^{H7}	12	12	12	12	12	17	17	17	21	21	21	21	21	21
Max. operating pressure bar	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Min. operating pressure bar	2	2	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5
Total clamping force at 6 bar kN	20	20	35	35	35	60	60	60	95	95	95	120	120	120
Max. admissible speed min^{-1}	4000	4000	3500	3500	3500	2800	2800	2800	2200	2200	2200	1800	1800	1800
Moment of inertia J kgm^2	0,028	0,028	0,125	0,125	0,125	0,262	0,262	0,262	0,675	0,675	0,675	1,35	1,35	1,35
Air consumption/ jaw travel at 6 bar NL	1,5	1,5	3,6	3,6	3,6	6,1	6,1	6,1	9,9	9,9	9,9	12,3	12,3	12,3
Weight without jaws approx. kg	13	13	25	25	25	36	36	36	57	57	57	85	85	85

A stationary fastening of the floating ring allows higher speeds

● from stock ■ 4 - 6 weeks ▲ on request

LVE up to 10 bar, with serration 90°, ISO 702-2





Tool group C 15
Type 525-04 **3-jaw** self-contained chucks **LVE**, with **through-hole**, **max. operating pressure 10 bar**, with **serration**
Short taper mount **ISO 702-2** (DIN 55029, studs for camlock)

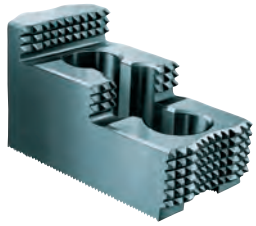
Item no.	421723 ■	421724 ■	421725 ■	421726 ■	421727 ■	421728 ■	421729 ■	421730 ■	421731 ■	421732 ■	421733 ■	421734 ■	421735 ■	421736 ■
Size	125	125	160	160	160	200	200	200	250	250	250	315	315	315
Short-taper	4	5	4	5	6	5	6	8	6	8	11	6	8	11
A	136	136	168	168	168	205	205	205	255	255	255	320	320	320
Jaw travel B	3	3	4,2	4,2	4,2	4,2	4,2	4,2	5	5	5	5	5	5
C	113	113	138	138	144	142,5	148,5	150,5	161	161	166	171	171	171
D	63,513	82,563	63,513	82,563	106,375	82,563	106,375	139,719	106,375	139,719	196,869	106,375	139,719	196,869
E	15	15	15	15	18	15	18	18	18	18	19	18	18	19
F	85	104,8	85	104,8	133,4	104,8	133,4	171,4	133,4	171,4	235	133,4	171,4	235
G	3x7/16-20	6x1/2-20	3x7/16-20	6x1/2-20	6x5/8-18	6x1/2-20	6x5/8-18	6x3/4-16	6x5/8-18	6x3/4-16	6x7/8-14	6x5/8-18	6x3/4-16	6x7/8-14
H	28	30	28	30	35	30	35	38,5	35	38,5	45	35	38,5	45
J	164	164	205	205	205	248	248	248	315	315	315	350	350	350
K	190	190	235	235	235	285	285	285	358	358	358	388	388	388
L	M 6	M 6	M 6	M 6	M 6	M 6	M 6	M 6	M 6	M 6	M 6	M 6	M 6	M 6
M	26	26	38	38	38	52	52	52	68	68	68	90	90	90
N	66,5	66,5	80,5	80,5	80,5	71	71	71	78,5	78,5	78,5	79,5	79,5	79,5
O	204	204	250	250	250	295	295	295	370	370	370	400	400	400
P	R 1/4"	R 1/4"	R 1/4"	R 1/4"	R 1/4"	R 1/4"	R 1/4"	R 1/4"	R 1/4"	R 1/4"	R 1/4"	R 1/4"	R 1/4"	R 1/4"
R	M 8	M 8	M 8	M 8	M 8	M 12	M 12	M 12	M 16	M 16	M 16	M 16	M 16	M 16
S	32	32	41	41	41	35	35	35	37	37	37	36	36	36
T	114,5	114,5	139,5	139,5	145,5	144	150	152	162,5	162,5	167,5	172,5	172,5	172,5
U	20	20	20,7	20,7	20,7	19	19	19	19	19	19	18	18	18
V	11,5	11,5	12	12	19	23,5	29,5	31,5	30,5	30,5	35,5	39,5	39,5	39,5
a min.	24	24	31,8	31,8	31,8	41,2	41,2	41,2	50	50	50	61,5	61,5	61,5
a max.	27	27	36	36	36	45,4	45,4	45,4	55	55	55	66,5	66,5	66,5
b min.	10	10	10	10	10	13	13	13	15	15	15	14,5	14,5	14,5
b max.	21	21	19,5	19,5	19,5	35	35	35	43	43	43	64	64	64
c	min 14 / max 25	min 14 / max 25	2 x 15	2 x 15	2 x 15	19	19	19	25	25	25	25	25	25
d	41	41	49,5	49,5	49,5	62	62	62	78	78	78	99	99	99
e	25	25	32	32	32	36	36	36	44	44	44	44	44	44
f^{h7}	12	12	12	12	12	17	17	17	21	21	21	21	21	21
Max. operating pressure bar	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Min. operating pressure bar	2	2	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5
Total clamping force at 6 bar kN	20	20	35	35	35	60	60	60	95	95	95	120	120	120
Max. admissible speed min^{-1}	4000	4000	3500	3500	3500	2800	2800	2800	2200	2200	2200	1800	1800	1800
Moment of inertia J kgm^2	0,028	0,028	0,125	0,125	0,125	0,262	0,262	0,262	0,675	0,675	0,675	1,35	1,35	1,35
Air consumption/ jaw travel at 6 bar NL	1,5	1,5	3,6	3,6	3,6	6,1	6,1	6,1	9,9	9,9	9,9	12,3	12,3	12,3
Weight without jaws approx. kg	13	13	25	25	25	36	36	36	57	57	57	85	85	85

A stationary fastening of the floating ring allows higher speeds

● from stock ■ 4 - 6 weeks ▲ on request

Jaws LVE

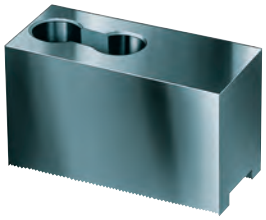
Tool group C 21
Type 543/538
Reversible top jaws,
3-jaw set, hardened
Serration 90°
material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
046404 ●	130	56	37,5	26	1/16"x 90°
118522 ●	200	75	49	36	1/16"x 90°
046414 ●	250/315	103,5	58	50	1/16"x 90°

Hardened jaws, supplied as supplement or as spares, must be ground on the chuck.

Tool group C 21
Type 543/538
Soft top jaws,
3-jaw set, can be hardened
Serration 90°
material: 16 MnCr 5

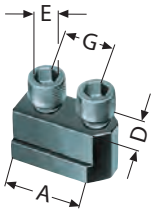


Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
046403 ●	130	55	38	26,5	1/16"x 90°
133153 ●	200	75	53	36,5	1/16"x 90°
133154 ●	250	95	54,5	45	1/16"x 90°

Accessories LVE

Tool group C 15

Type 549-00 **Extended T-nuts**
without screw



Item no.	Chuck Size	Contents of delivery	D	E	G
041245[1] ●	125	piece	12	M8	-
343234 ●	160/175	piece	12	M8	2x15
135765 ●	200	piece	17	M 12	19
135767[1] ●	315	piece	21	M16	25

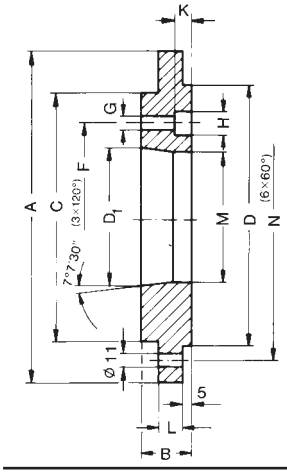
Tool group C 15

Type 0040-Y **Mounting screws**

Item no.	Size	Thread
233058 ●	130	M8x20
236949 ●	160	M8x25
233030 ●	210/254/315	M12x30
220564 ●	350	M16x35

Socket head cap screw to DIN 912, 12.9

Tool group C 15
Type 518-10 **Short-taper intermediate flanges ISO 702-1**
(DIN 55026/55021)
for LVE-chucks with centering rim



Item no.	Chuck Size	Short-taper	A	B	C	Dh5	D_1	F	G	H	K	L	M	N
636874 ■	125	4	160	28	112	120	63,525	82,55/85 [1]	11	17	12	12	48,2	137
636875 ■	125	5	160	32	160	120	82,563	104,8	11	17	17	14	26	137
267507 ■	160	4	190	30	117	125	63,525	82,55/85 [1]	11	18	12	13	60,7	150
267508 ●	160	5	190	35	146	125	82,575	104,8	11	18	12	13	79,4	150
267509 ●	200	5	215	35	146	155	82,575	104,8	11	18	12	13	79,4	180
267510 ■	200	6	215	35	181	155	106,390	133,4	14	20	17	13	103	180
267511 ■	250	6	250	40	181	185	106,390	133,4	14	20	17	13	103	210
267512 ■	250	8	250	40	225	185	139,735	171,4	18	26	22	18	135,7	210
267513 ■	315	6	290	40	181	225	106,390	133,4	14	20	17	18	103	250
267514 ●	315	8	290	40	225	225	139,735	171,4	18	26	22	18	135,7	250
267515 ■	315	11	290	50	298	225	196,885	235	22	33	28	35	192,5	250

[1] dimensions to DIN 55021

● from stock ■ 4 - 6 weeks ▲ on request

Accessories LVE

Tool group C 15
Type 518-91 **Electro-Pneumatic Safety Control Block**
for LVE 125-315

Item no.	voltage
437747 ●	220 V 50 Hz
437748 ●	24 V Dc

Please order accessories and the connection hoses separately

Tool group C 15
Type 518-91
Manual pulse generator, without cable

Item no.	Contents of delivery
220629 ●	piece

Tool group C 15
Type 1025-Q
Double foot-control switch

Item no.	Contents of delivery
249325 ■	piece

Tool group C 15
Type 3310-H **Service unit**

Item no.	Contents of delivery
367444[1] ▲	piece

[1] Containing filter, separator and oiler, R 3/8”

Tool group C 15
Type 3491-Y **Metal-coated hose**

Item no.	Chuck Size	Design	Contents of delivery
720237[1] ●	125-200	Ø 10/6 p. meter	piece
720262[1] ●	250-315	Ø 12/9 p. meter	piece

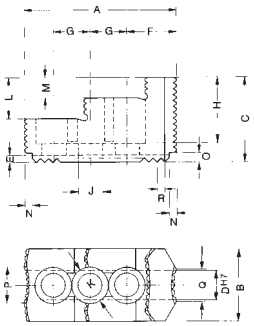
[1] Please indicate the hose length

Tool group C 15
Type 30-Y **Connector**

Item no.	Chuck Size	Design	Contents of delivery
720233 ●	125-200	snap-on connector CX-R 1/4”-PX-6	piece
720235 ■	125-200	swivel connector LCX-R 1/4”-PX-6	piece
720260 ■	250-315	straight screw-in unions Ø 12/9 R 1/4”	piece
720261 ●	250-315	swivel connector Ø 12/9 R 1/4”	piece

Jaw dimensions LVE

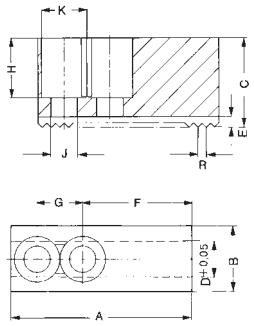
Reversible top jaws UB, hardened, serration 90°, material 16MnCr5

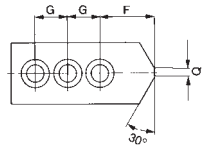


Chuck size	125	160	200	250	315
Type	538-02	538-02	538-04	538-05	538-05
Item no. 3-jaw	**046404**	**046404**	**118522**	**046414**	**046414**
A	56	56	75	103,5	103,5
B	26	26	36	50	50
C	37,5	37,5	49	58	58
DH7	12	12	17	21	21
E	3,5	3,5	5	5	5
F	14	14	21,5	33,5	33,5
G	15	15	19	25	25
H	29	29	37,5	45	45
J	8,4	8,4	13	17	17
K	13,5	13,5	19	25	25
L	20	20	24	28	28
M	10	10	12	14	14
N	4	4	6	6	6
O	4	4	7,5	6,5	6,5
P	5	5	18	24,5	24,5
Q	5	5	7	22,5	22,5
R	1/16"x90°	1/16"x90°	1/16"x90°	1/16"x90°	1/16"x90°
Weight/jaw kg	0,170	0,170	0,460	1,130	1,130

Reversible top jaws: Ground to finished size at surcharge.

Soft top jaws AB, material 16MnCr5



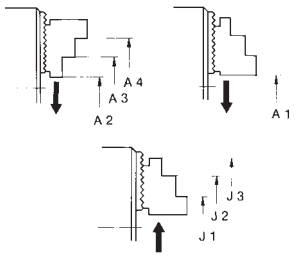


Type 537-02

Chuck size	125	160	200	250	250
Type	538-02	538-02	538-04	538-05	538-05
Item no. 3-jaw	**046403**	**046403**	**133153**	**133154**	**133154**
A	55	55	75	95	95
B	26,5	26,5	36,5	45	45
C	38	38	53	54,5	54,5
DH7	12	12	17	21	21
E	3,5	3,5	5	5	5
F	31	31	44	55	55
G	15	15	19	25	25
H	28	28	43	42,5	42,5
J	8,4	8,4	13	17	17
K	13,5	13,5	19	25	25
R	1/16"x90°	1/16"x90°	1/16"x90°	1/16"x90°	1/16"x90°
Weight/jaw kg	0,320	0,320	0,880	1,400	1,400

Chucking capacities LVE

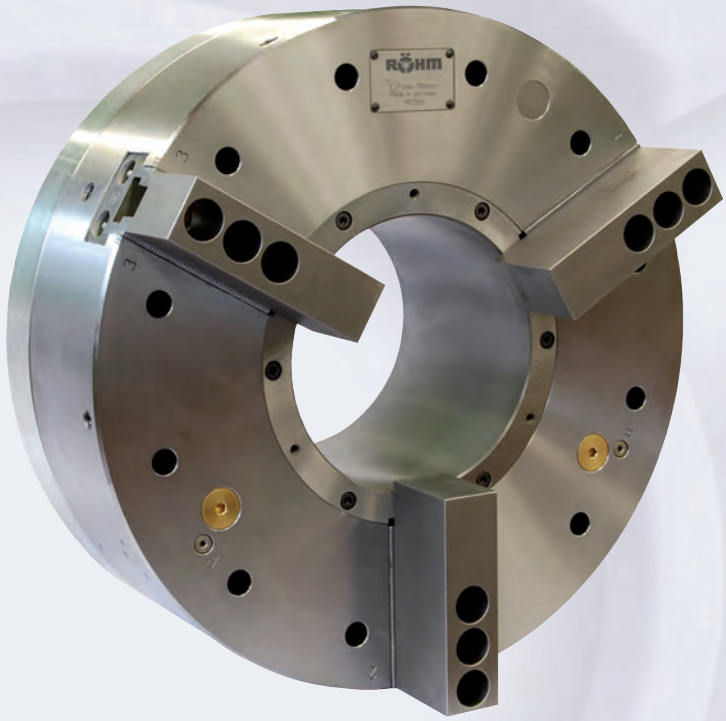
Chucking capacities with reversible top jaws UB



Chuck size		125	160	200	250	315
with reversible jaws	Type	538-02	538-02	538-04	538-05	538-05
	Jaw position					
External chucking	A1	12-63	28-80	30-115	20-128	41-194
	A2	17-69	32-84	44-128	46-154	67-220
	A3	67-119	82-132	101-185	128-238	150-303
	A4	101-153	118-168	152-236	210-318	231-384
Internal chucking	J1	49-99	64-116	80-165	70-188	91-244
	J2	81-131	96-148	130-214	146-255	168-320
	J3	125-175	140-192	182-266	225-334	246-400

Notes

LVE - with large through-hole



Sizes 400-1000

For the machining of large and long pipes as frequently used in the oil and gas industry.
Flange-type workpieces can of course, be chucked as well. A very reliable chucking tool thanks to high safety and modern production.

- Self-contained unit
- Unobstracted bore throughout spindle thanks to the elimination of the draw tube
- Quick interchangeability with manually operated chucks
- No retooling necessary when changing from bar work to normal chucking
- Specially for tube finishing as self-contained chuck

Application (example)

Two chucks are mounted at the front and rear of the machine spindle. A selector switch on our combined pneumatic and electrical control unit, LSV Type 525-91, enables the two chucks to be used together or separately and even with different chucking pressures. These combinations permit the ends of large pipes to be machined with high stock removal rates and high turning accuracy.

Air-Operated Self-Contained Chucks Sizes 400-1000

A special feature of this chuck is a pneumatic piston built into the chuck body and which supplies the chucking power. The workpiece is clamped or released by compressed air supplied, with chuck stopped, via the distributor ring and a non-return valve to the pneumatic piston.
The pneumatic piston is screwed on to the clamping piston, which is itself connected to the base jaws via a wedgesystem.
An axial movement of the pneumatic piston thus produces a radial movement of the base jaws.

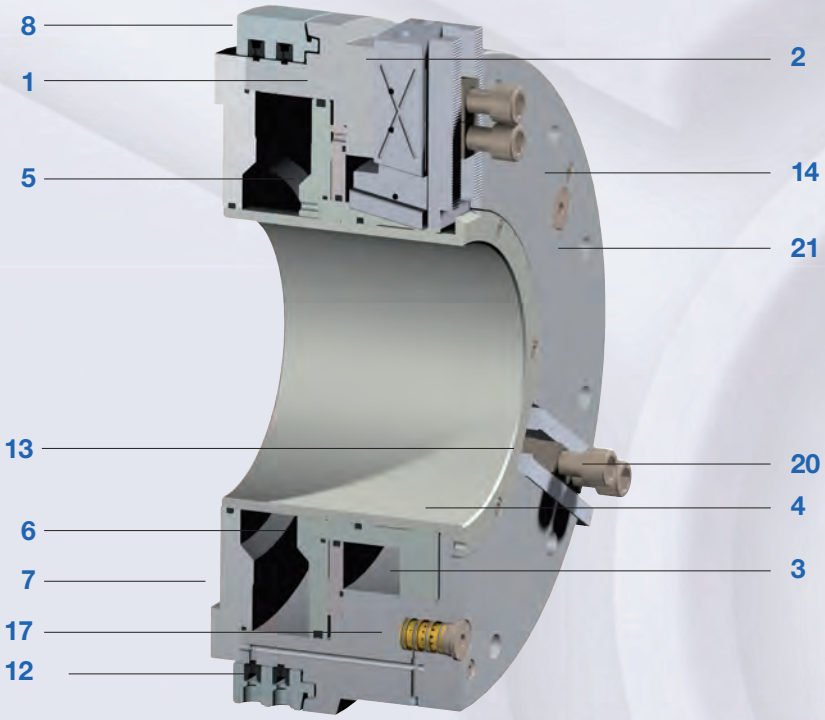
Distributor ring

The distributor ring has the function of transmitting the compressed air from outside into the chuck. This means that the ring is always stationary whilst the chuck rotates when the workpiece is being machined. It is therefore supported on the chuck and is prevented from turning with the chuck by means of a fork.
The distributor ring bearing is positioned axially via fixed bearings and radially via grooved ball bearings. Special seals seal the gap between ring and chuck during the clamping movement to ensure smooth pressure transmission.
Important: To prevent destruction of the sealing ring pressure transmission must only be carried out with chuck stopped.

Control unit

The control unit has the function of keeping the compressed air required for clamping within a closed system throughout the whole machining operation.
It automatically seals the piston side under pressure, whereby the compressed air is automatically released from the opposite side of the piston. The valve can be dismounted as a complete unit and replaced.

LVE - with large through-hole



Components LVE

1. Body
2. Base jaw
3. Piston
4. Protective bush
5. Intermediate washer
6. Piston plate
7. Flange
8. Distributor ring
12. Seal
13. T-Nut
14. Air-vent screw
17. Control valve
20. Jaw fixing screws
21. Chuck fixing screws

Control system

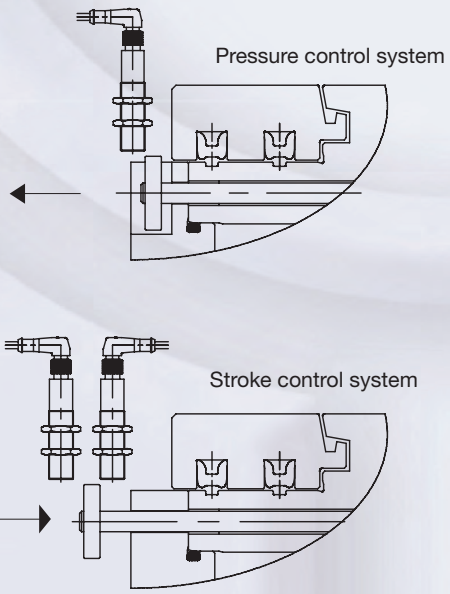
Clamping efficiency depends very much on the tightness of the sealed air chamber. A pressure drop during machining means a drop in clamping force. With the "RÖHM control" the pressure in the sealed air chamber is monitored. If the pressure drops below a set minimum value, a spring-loaded pin mounted on the outside diameter of the chuck moves out.

A proximity sensor is mounted on the same level as the pin at a set radial distance. When the extended pin passes through the magnetic field of the switch, an electric pulse is triggered which can be used to stop the machine.

Wedge system

The transmission and conversion of axial piston force into radial jaw force is effected via the proven wedge system. The large power transmission surfaces guarantes long service life and permanent high precision of clamping. These features apply to both chucks with normal jaw stroke and chucks with rapid and clamping strokes.

RÖHM-Control system



The control unit is designed for LVE chucks with rapid and clamping strokes only for external clamping.
For LVE chucks with a normal stroke only pressure control device for the external clamping is provided (on customer demand for internal clamping).

Further versions on request

including, for example, compensating self-contained chucks and chucks that can be converted from self-centering to compensating action and vice versa.

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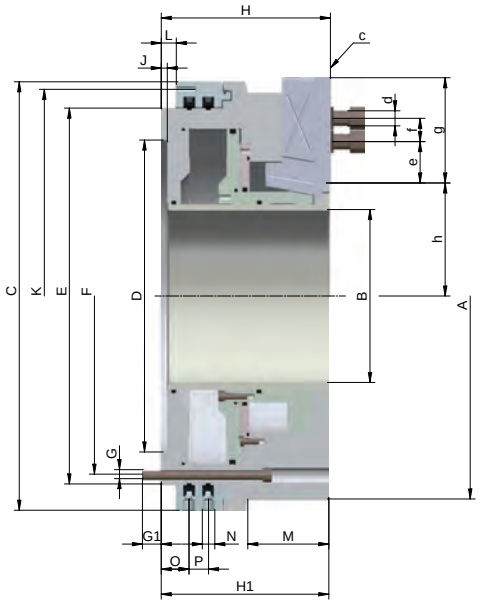
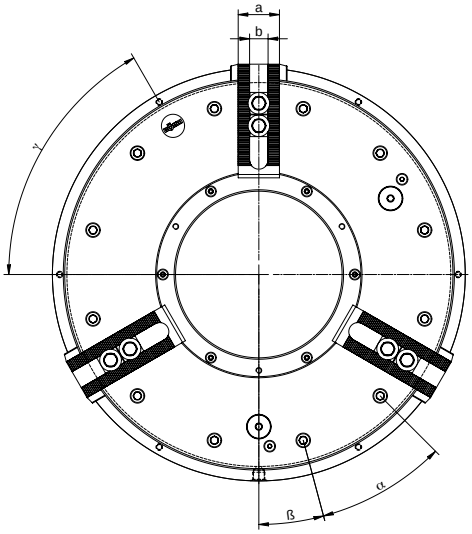
LVE - large through-hole, standard design



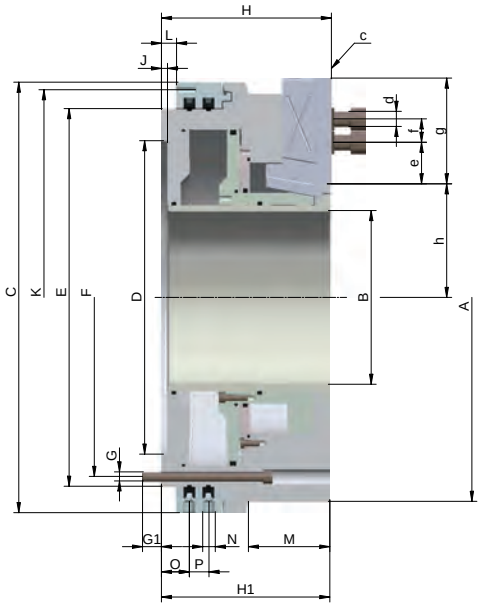


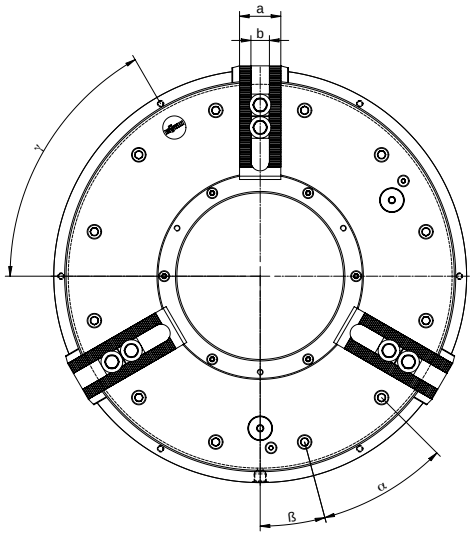
Tool group C 15
Type 525-00 **3-jaw** self-contained chucks **LVE**, with **large through-hole**, **max. operating pressure 8 bar**, with **serration adaptor recess** (standard design)

Item no.	169400 ▲	169401 ●	169402 ▲	169403 ●	169404 ▲	169405 ▲	169406 ▲	169407 ▲	169408 ▲	169409 ▲	169410 ▲
Size	400	400	500	500	600	600	600	700	800	800	1000
LVE	LVE 420-140	LVE 480-185	LVE 540-205	LVE 570-230	LVE 600-275	LVE 640-275	LVE 680-325	LVE 730-375	LVE 800-375	LVE 830-410	LVE 1000-570
Jaw travel	7	8,5	8,5	8,5	8,5	10	10	10	12	12	12
A	425	480	540	570	605	640	685	735	800	835	1000
B	140	185	205	230	280	275	325	375	375	410	570
C	470	530	570	570	605	685	685	735	850	850	925
DH6	310	365	415	415	450	510	510	560	700	700	700
E	400	460	500	500	535	610	610	660	775	775	850
F	374	434	474	474	508	580	580	630	745	745	815
G	M12	M12	M12	M12	M12	M16	M16	M16	M16	M16	M16
G_1	25	25	25	25	25	30	30	30	30	30	30
H	196	225	225	225	225	263	263	263	305	305	315
H_1	194	223	223	223	223	261	261	261	303	303	313
J	8	8	8	8	8	8	8	8	8	8	10
K	448	510	550	550	585	666	666	716	830	830	910
L	20	20	20	20	20	20	20	20	25	25	33
M	70	90	100	-	-	110	-	-	155	155	225
N	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8
O	37	37	37	37	37	39,5	39,5	39,5	44,5	44,5	52,5
P	26	26	26	26	26	33	33	33	33	33	33
a	57	57	57	57	57	75	75	75	75	75	75
bH7	25,5	25,5	25,5	25,5	25,5	30	30	30	30	30	30
c	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°
d	M20x50	M20x50	M20x50	M20x50	M20x50	M24x65	M24x65	M24x65	M24x65	M24x65	M24x65
e	20	20	20	20	20	28	28	28	28	28	28
f min.	32	32	32	32	32	42	42	42	42	42	42
f max.	85	85	105	105	105	100	100	100	125	125	125
g	120	120	140	140	135	145	145	145	173	173	173
h min.	94	118.5	131.5	141.5	164	175	195	220	225	242.5	323
h max.	101	127	140	150	172,5	185	205	230	237	254.5	345
α	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°
β	15°	15°	15°	15°	15°	15°	15°	15°	15°	15°	15°
γ	60°	60°	60°	60°	60°	60°	60°	60°	60°	60°	30°
Min. operating pressure bar	2	2	2	2	2	2	2	2	3	3	3
Max. operating pressure bar	8	8	8	8	8	8	8	8	8	8	8
Total clamping force at 6 bar kN	140	155	210	190	200	240	155	175	405	360	180
Cylinder surface area cm^2	710	899	1045	940	1010	1414	1181	1307	2382	2121	1075
Air consumption (total stroke) l	20	31	36	32	35	58	49	55	117	104	85
Max. admissible speed min^{-1}	1700	1500	1300	1300	1200	1000	900	800	750	750	450
Moment of inertia kgm^2	3,50	7.50	10,65	8.00	15,50	24.25	29.10	45,80	67.80	71.25	157,5
Weight kg	150	215	225	200	275	413	418	560	712	650	950

● from stock ■ 4 - 6 weeks ▲ on request

LVE - large through-hole, with pressure control device

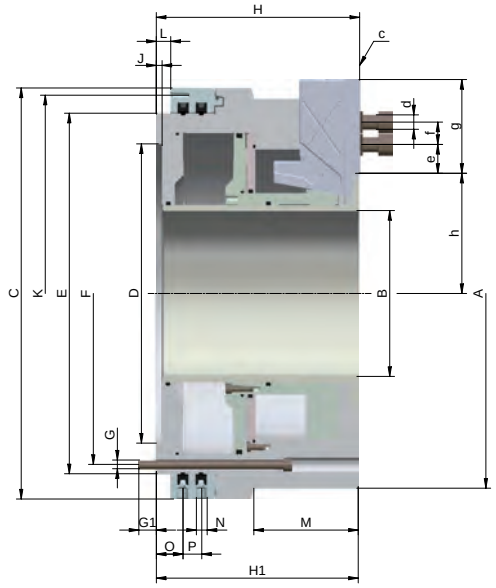


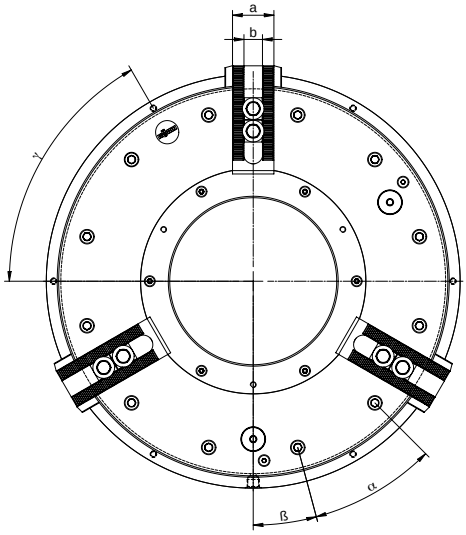


Tool group C 15
Type 525-10 **3-jaw** self-contained chucks **LVE**, with **large through-hole**, **max. operating pressure 8 bar**, with **serration adaptor recess** with pressure control device for external clamping

Item no.	169411 ▲	169412 ▲	169413 ▲	169414 ▲	169415 ▲	169416 ▲	169417 ▲	169418 ▲	169419 ▲	169420 ▲	169421 ▲
Size	400	400	500	500	600	600	600	700	800	800	1000
LVE	LVE 420-140	LVE 480-185	LVE 540-205	LVE 570-230	LVE 600-275	LVE 640-275	LVE 680-325	LVE 730-375	LVE 800-375	LVE 830-410	LVE 1000-570
Jaw travel	7	8,5	8,5	8,5	8,5	10	10	10	12	12	12
A	425	480	540	570	605	640	685	735	800	835	1000
B	140	185	205	230	280	275	325	375	375	410	570
C	470	530	570	570	605	685	685	735	850	850	925
DH6	310	365	415	415	450	510	510	560	700	700	700
E	400	460	500	500	535	610	610	660	775	775	850
F	374	434	474	474	500	580	580	630	745	745	815
G	M12	M12	M12	M12	M12	M16	M16	M16	M16	M16	M16
G_1	25	25	25	25	25	30	30	30	30	30	30
H	196	225	225	225	225	263	263	263	305	305	315
H_1	194	223	223	223	223	261	261	261	303	303	313
J	8	8	8	8	8	8	8	8	8	8	10
K	448	510	550	550	585	666	666	666	830	830	910
L	20	20	20	20	20	20	20	20	25	25	33
M	70	90	100	-	-	110	-	-	-	155	225
N	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8
O	37	37	37	37	37	39,5	39,5	39,5	39,5	44,5	52,5
P	26	26	26	26	26	33	33	33	33	33	33
a	57	57	57	57	57	75	75	75	75	75	75
bH7	25,5	25,5	25,5	25,5	25,5	30	30	30	30	30	30
c	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°
d	M20x50	M20x50	M20x50	M20x50	M20x50	M24x65	M24x65	M24x65	M24x65	M24x65	M24x65
e	20	20	20	20	20	28	28	28	28	28	28
f min.	32	32	32	32	32	42	42	42	42	42	42
f max.	85	85	105	105	105	100	100	100	125	125	125
g	120	120	140	140	135	145	145	145	173	173	173
h min.	94	118.5	131.5	141.5	164	175	195	220	225	242.5	323
h max.	101	127	140	150	172,5	185	205	230	237	254.5	345
α	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°
β	15°	15°	15°	15°	15°	15°	15°	15°	15°	15°	15°
γ	60°	60°	60°	60°	60°	60°	60°	60°	60°	60°	60°
Min. operating pressure bar	2	2	2	2	2	2	2	2	3	3	3
Max. operating pressure bar	8	8	8	8	8	8	8	8	8	8	8
Total clamping force at 6 bar kN	140	155	210	190	200	240	155	175	405	360	180
Cylinder surface area cm^2	710	899	1045	939	1010	1414	1181	1307	2382	2121	1075
Air consumption (total stroke) l	20	31	36	32	35	58	49	55	117	104	85
Max. admissible speed min^{-1}	1700	1500	1300	1300	1200	1000	900	800	750	750	450
Moment of inertia kgm^2	3,50	7.50	10,65	8.00	15,5	24.25	29.10	45,80	67.80	71.25	157,5
Weight kg	150	215	255	200	275	413	418	560	712	650	950

LVE - large through-hole, standard design, with rapid and gripping jaw movements



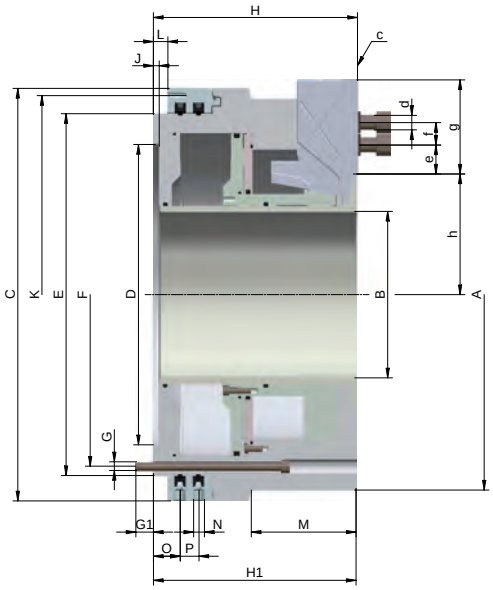


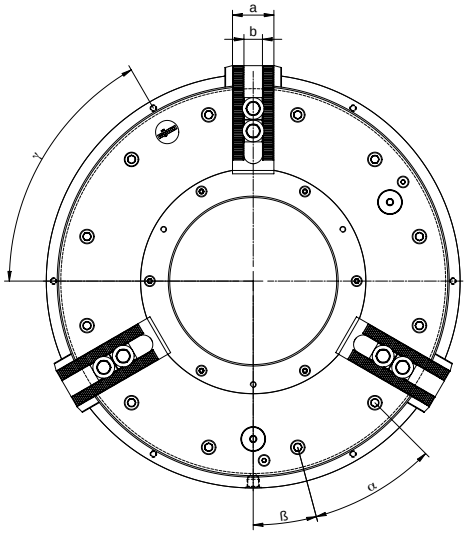
Tool group C 15
Type 525-20
3-jaw self-contained chucks **LVE**, with **rapid and gripping jaw movements**, with **large through-hole**, external chucking, **max. operating pressure 8 bar**, **with serration 90° adaptor recess** (standard design)

Item no.	169422 ▲	169423 ●	169424 ▲	169425 ●	169426 ▲	169427 ▲	169428 ▲	169429 ▲	169430 ▲	169431 ▲	169432 ▲
Size	400	400	500	500	600	600	600	700	800	800	1000
LVE	LVE 470-140 ES	LVE 490-185 ES	LVE 570-205 ES	LVE 570-230 ES	LVE 610-275 ES	LVE 680-275 ES	LVE 680-325 ES	LVE 730-375 ES	LVE 850-375 ES	LVE 850-410 ES	LVE 1000-570 ES
Jaw travel	19	25,4	25,4	25,4	25,4	25,4	25,4	25,4	25,4	25,4	25,4
Rapid movement	12	16.9	16,9	16.9	16.9	16,9	16.9	16.9	14,9	14,9	14,9
Gripping movement	7	8.5	8,5	8.5	8.5	8,5	8.5	8.5	10,5	10,5	10,5
A	470	490	570	570	605	685	685	735	850	850	1000
B	140	185	205	230	275	275	325	375	375	410	570
C	470	530	570	570	605	685	685	735	850	850	925
DH6	310	365	415	415	450	510	510	560	700	700	700
E	400	460	500	500	535	610	610	660	775	775	850
F	374	434	474	474	508	580	580	630	745	745	815
G	M12	M12	M12	M12	M12	M16	M16	M16	M16	M16	M16
G_1	25	25	25	25	25	30	30	30	30	30	30
H	240	282	282	282	282	308	308	308	322	322	332
H_1	238	280	280	280	280	306	306	306	320	320	330
J	8	8	8	8	8	8	8	8	8	8	10
K	448	510	550	550	585	666	666	716	830	830	910
L	20	20	20	20	20	20	20	20	25	25	33
M	-	140	100	-	-	110	-	-	-	-	225
N	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8
O	37	37	37	37	37	39,5	39,5	39,5	44,5	44,5	52,5
P	26	26	26	26	26	33	33	33	33	33	33
a	57	57	57	57	57	75	75	75	75	75	75
bH7	25,5	25,5	25,5	25,5	25,5	30	30	30	30	30	30
c	3/32“x90°	3/32“x90°	3/32“x90°	3/32“x90°	3/32“x90°	3/32“x90°	3/32“x90°	3/32“x90°	3/32“x90°	3/32“x90°	3/32“x90°
d	M20x50	M20x50	M20x50	M20x50	M20x50	M24x65	M24x65	M24x65	M24x65	M24x65	M24x65
e	20	20	20	20	20	28	28	28	28	28	28
f min.	32	32	32	32	32	42	42	42	42	42	42
f max.	80	80	95	95	95	95	95	95	120	120	120
g	112	112	130	130	125	140	140	140	170	170	170
h min.	126	132.6	142,1	154.6	177.1	182,6	202.6	227.6	234,6	252,1	329,6
h max.	145	158	167,5	180	202.5	208	228	253	260	277,5	355
α	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°
β	15°	15°	15°	15°	15°	15°	15°	15°	15°	15°	15°
γ	60°	60°	60°	60°	60°	60°	60°	60°	60°	60°	60°
Min. operating pressure bar	2	2	2	2	2	2	2	2	3	3	3
Max. operating pressure bar	8	8	8	8	8	8	8	8	8	8	8
Total clamping force at 6 bar kN	120	150	190	170	180	240	200	175	200	185	180
Cylinder surface area cm^2	700	862	1003	895	958	1414	1181	1307	1345	1130	1075
Air consumption (total stroke) l	32	42	48	45	46	68	57	63	80	67	65
Max. admissible speed min^{-1}	1500	1300	1200	1200	1100	900	800	750	750	750	450
Moment of inertia kgm^2	6,50	8.25	14,65	12.75	19,10	32,80	34.25	47.50	103,0	91,85	158,2
Weight kg	200	260	320	270	350	500	490	580	970	825	955

● from stock ■ 4 - 6 weeks ▲ on request

LVE - large through-hole, with pressure control device, with rapid and gripping jaw movements



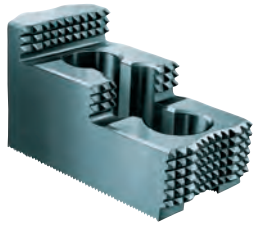


Tool group C 15
Type 525-30 **3-jaw** self-contained chucks **LVE**, with **rapid and gripping jaw movements**, with **large through-hole**, external chucking, **max. operating pressure 8 bar**, with **serration adaptor recess** with pressure control device for external clamping

Item no.	169433 ▲	169434 ▲	169435 ▲	169436 ▲	169437 ▲	169438 ▲	169439 ▲	169440 ▲	169441 ▲	169442 ▲	169443 ▲
Size	400	400	500	500	600	600	600	700	800	800	1000
LVE	LVE 470-140 ES	LVE 490-185 ES	LVE 570-205 ES	LVE 570-230 ES	LVE 610-275 ES	LVE 680-275 ES	LVE 680-325 ES	LVE 730-375 ES	LVE 850-375 ES	LVE 850-410 ES	LVE 1000-570 ES
Jaw travel	19	25,4	25,4	25,4	25,4	25,4	25,4	25,4	25,4	25,4	25,4
Rapid movement	12	16.9	16,9	16.9	16.9	16,9	16.9	16.9	14,9	14,9	14,9
Gripping movement	7	8.5	8,5	8.5	8.5	8,5	8.5	8.5	10,5	10,5	10,5
A	470	490	570	570	605	685	685	735	850	850	1000
B	140	185	205	230	275	275	325	375	375	410	570
C	470	530	570	570	605	685	685	735	850	850	925
DH6	310	365	415	415	450	510	510	560	700	700	700
E	400	460	500	500	535	610	610	660	775	775	850
F	374	434	474	474	509	580	580	630	745	745	815
G	M12	M12	M12	M12	M12	M16	M16	M16	M16	M16	M16
G_1	25	25	25	25	25	30	30	30	30	30	30
H	240	282	282	282	282	308	308	308	322	322	332
H_1	238	280	280	280	280	306	306	306	320	320	330
J	8	8	8	8	8	8	8	8	8	8	10
K	448	510	550	550	585	666	666	716	830	830	910
L	20	20	20	20	20	20	20	20	25	25	33
M	-	140	100	-	-	110	-	-	-	-	225
N	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8
O	37	37	37	37	37	39,5	39,5	39,5	44,5	44,5	52,5
P	26	26	26	26	26	33	33	33	33	33	33
a	57	57	57	57	57	75	75	75	75	75	75
bH7	25,5	25,5	25,5	25,5	25,5	30	30	30	30	30	30
c	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°
d	M20x50	M20x50	M20x50	M20x50	M20x50	M24x65	M24x65	M24x65	M24x65	M24x65	M24x65
e	20	20	20	20	20	28	28	28	28	28	28
f min.	32	32	32	32	32	42	42	42	42	42	42
f max.	80	80	95	95	95	95	95	95	120	120	120
g	112	112	130	130	125	140	140	140	170	170	170
h min.	126	132.6	142,1	154.6	177.1	182,6	202.6	227.6	234,6	252,1	329,6
h max.	145	158	167,5	180	202.5	208	228	253	260	277,5	355
α	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°
β	15°	15°	15°	15°	15°	15°	15°	15°	15°	15°	15°
	60°	60°	60°	60°	60°	60°	60°	60°	60°	60°	60°
Min. operating pressure bar	2	2	2	2	2	2	2	2	3	3	3
Max. operating pressure bar	8	8	8	8	8	8	8	8	8	8	8
Total clamping force at 6 bar kN	120	150	210	170	180	240	200	175	200	185	180
Cylinder surface area cm^2	700	862	1024	895	958	1414	1181	1307	1345	1130	1075
Air consumption (total stroke) l	32	42	50	45	46	68	57	63	80	67	65
Max. admissible speed min^{-1}	1500	1300	1200	1200	1100	900	800	750	750	750	450
Moment of inertia kgm^2	6,50	8.25	14,65	12.75	19,10	32,80	34.25	47.50	103,0	91,85	158,2
Weight kg	200	260	320	270	350	500	490	580	970	825	955

Jaws LVE

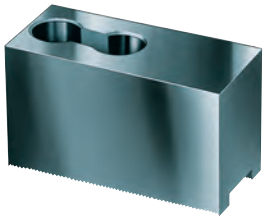
Tool group C 21
Type 543/538
Reversible top jaws, 3-jaw set, hardened
Serration 90°
material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
037531 ●	400	135	65	68	3/32”x 90°
169464 ▲	600/700	170	75	80	3/32”x90°
169466 ●	800/1000	195	85	80	3/32”x90°

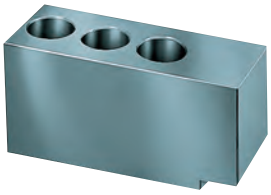
Hardened jaws, supplied as supplement or as spares, must be ground on the chuck.

Tool group C 21
Type 543/538
Soft top jaws,
3-jaw set, can be hardened
Serration 90°
material: 16 MnCr 5



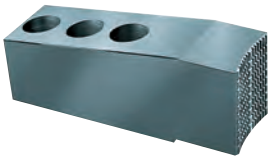
Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
118004 ■	400/500/600	130	80	50	3/32”x90°
137028 ●	400/500/600	180	80	50	3/32”x 90°
169450 ●	600/700	215	89	68	3/32”x90°
169452 ●	600/700/800/1000	245	89	68	3/32”x90°

Tool group C 21
Type 543
extented soft top jaws,
3-jaw set
Serration 90°
material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
137028 ●	400/500/600	180	80	50	3/32”x 90°
169449 ●	500/600	205	80	50	3/32”x90°
169452 ●	600/700/800/1000	245	89	68	3/32”x90°
169456 ●	800/1000	285	89	68	3/32”x90°

Tool group C 21
Type 543
extented hardened top jaws,
3-jaw set Serration 90°
material: 16 MnCr 5



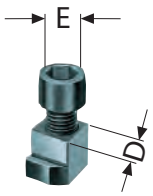
Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
284627 ●	400	170	80	50	3/32”x 90°
321209 ●	500/600	210	80	50	3/32”x 90°
169458 ●	600/700	225	89	68	3/32”x90°
169460 ●	800	285	89	68	3/32”x90°
169462 ■	1000	325	89	68	3/32”x90°

● from stock ■ 4 - 6 weeks ▲ on request

Accessories LVE

Tool group C 15

Type 525-00 **T-nuts**
without screw



Item no.	Chuck Size	Contents of delivery	D	E
588960 ▲	400/500/600	piece	25,5	M20
169447 ▲	400/500/600	piece	25,5	3/4-10 UNC
588770 ●	600/700/800/1000	piece	30	M24
169448 ▲	600/700/800/1000	piece	30	7/8-9 UNC

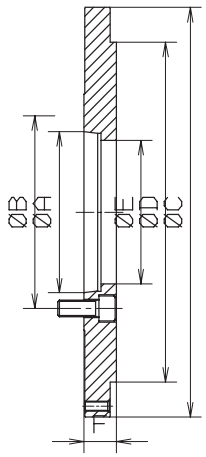
Tool group C 15

Type 0040-Y **Mounting screws**

Item no.	Size	Contents of delivery	Thread
249388 ●	630	piece	M20x50
243854 ●	400/500/600	piece	3/4-10 UNCx2
236514 ●	600/700/800/1000	piece	M24x60
680392 ●	600/700/800/1000	piece	7/8-9 UNCx2-1/4

Socket head cap screw to DIN 912, 12.9

Tool group C 15
Type 518-10 **Short-taper intermediate flanges ISO 702-1**
(DIN 55026)
for LVE-chucks with centering rim



Item no.	LVE	Spindle nose size	A	B	C	D	E	F
169475 ■	400-140	A8	139,719	171,4	400	310	136	40
169477 ■	400-140	A11	196,869	235	400	310	140	40
169479 ■	480-185	A8	139,719	171,4	460	365	136	40
169481 ■	480-185	A11	196,869	235	460	365	185	40
169483 ■	480-185	A15	285,775	330,2	460	365	185	40
169485 ■	540-205 / 570-230	A11	196,869	235	500	415	192	40
169487 ■	540-205/ 570-230	A15	285,775	330,2	500	415	230	40
169489 ■	540-205/ 570-230	A20	412,775	463,6	500	415	230	40
169491 ■	600-275	A11	196,869	235	545	415	192	40
169493 ■	600-275	A15	285,775	330,2	545	415	275	40
169495 ■	600-275	A20	412,775	463,6	545	415	275	40
169497 ■	630-275 / 680-325	A11	196,869	235	610	510	192	50
169499 ■	630-275 / 680-325	A15	285,775	330,2	610	510	281	50
169501 ■	630-275 / 680-325	A20	412,775	463,6	610	510	325	50
169503 ■	730-375	A15	285,775	330,2	660	560	281	50
169505 ■	730-375	A20	412,775	463,6	660	560	375	50
169507 ■	800-375 / 830-410	A15	285,775	330,2	775	700	281	50
169509 ■	800-375 / 830-410	A20	412,775	463,6	775	700	407,5	50
169511 ■	1000-570	A20	412,775	463,6	775	700	407,5	50
169513 ■	1000-570	A28	584,225	647,6	775	700	578,5	50

ISO 702-3 (DIN 55027) / ISO 702-2 (DIN 55029) on request

Accessories LVE

Tool group C 15
Type 525-91
Pneumatic control unit
for LVE 400-1000

Item no.	Width	Height	Depth	Control voltage	Connection	Weight approx. kg
426560 ●	280	250	100	24 V	R ½ “ inside thread	3

Two pneumatic control units are required for dual chucks

Tool group C 15
Type 3515-Y **Two Connecting hoses with screw couplings**

Item no.	Contents of delivery
302138[1] ●	set

[1] Please indicate the hose length

Tool group C 15
Typ 525-60/70
Contol units for single chucks
with dual foot switch, wired, 6 m cable, for LVE 400-1000

Item no.	Design	Width	Width with plug	Height	Depth	Control voltage	Cable length
426481 ●	without pressure monitoring	300	340	300	120	24 V	6 m
426263 ●	with pressure monitoring	300	340	300	120	24 V	6 m

Supply on request: primary 35-264 V ~, 47-63 HZ - secundary 24V/1,5 A

Tool group C 15
Typ 525-80/90
Contol units for dual chucks
with dual foot switch, wired, 6 m cable, for LVE 400-1000

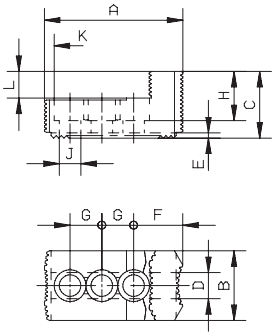
Item no.	Design	Width	Width with plug	Height	Depth	Control voltage	Cable length
426482 ▲	without pressure monitoring	300	340	300	120	24 V	6 m
426264 ▲	with pressure monitoring	300	340	300	120	24 V	6 m

Supply on request: primary 35-264 V ~, 47-63 HZ - secundary 24V/1,5 A

● from stock ■ 4 - 6 weeks ▲ on request

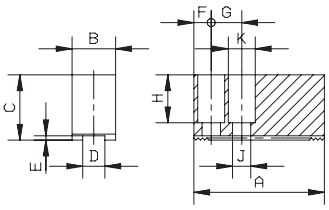
Chucking capacities und Jaw dimensions LVE

Reversible top jaws UB
serration 90°,
material 16MnCr5



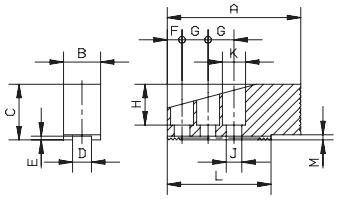
Chuck size		400		500		600			700	800		1000
LVE		400-140	480-185	540-205	570-230	600-275	630-275	680-325	730-375	800-375	830-410	1000-570
Typ		538-07		538-07		538-07	543-21		543-21	543-21		543-21
Item no. 3-jaw		**037531**		**037531**		**037531**	**169464**		**169464**	**169466**		**169466**
A		135	135	135	135	135	170	170	170	195	195	195
B		68	68	68	68	68	80	80	80	80	80	80
C		65	65	65	65	65	75	75	75	85	85	85
$D^{+0,05}$		25,5	25,5	25,5	25,5	25,5	30,0	30,0	30,0	30,0	30,0	30,0
E		5	5	5	5	5	6	6	6	6	6	6
F		48	48	48	48	48	56	56	56	78	78	78
G		31+31	31+31	31+31	31+31	31+31	42+42	42+42	42+42	42+42	42+42	42+42
H		48	48	48	48	48	58	58	58	62	62	62
J		21	21	21	21	21	26	26	26	26	26	26
K		31	31	31	31	31	40	40	40	40	40	40
L		26	26	26	26	26	32	32	32	35	35	35
M		--	--	--	--	--	--	--	--	--	--	--
Toothing		3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°
Weight/jaw kg		2,4	2,4	2,4	2,4	2,4	3,6	3,6	3,6	4,5	4,5	4,5
External chucking	A1	85 - 255	135 - 305	160 - 370	180 - 390	220 - 430	225 - 420	265 - 460	315 - 510	280 - 530	315 - 565	500 - 750
	A2	125 - 295	175 - 345	200 - 410	220 - 430	260 - 470	275 - 470	315 - 510	365 - 560	370 - 620	405 - 655	585 - 835
	A3	330 - 500	380 - 550	405 - 615	425 - 635	465 - 675	540 - 735	580 - 775	630 - 825	640 - 890	675 - 925	855 - 1105
Internal chucking	J1	155 - 325	205 - 375	230 - 440	250 - 460	290 - 500	305 - 500	345 - 540	395 - 590	405 - 655	440 - 690	600 - 850
	J2	350 - 520	405 - 570	430 - 640	450 - 660	490 - 700	565 - 770	605 - 800	655 - 850	670 - 920	705 - 955	865 - 1035
max. -Ø	S	570	625	690	710	750	800	840	890	1000	1030	1215

Soft top jaws AB
serration 90°,
material 16MnCr5



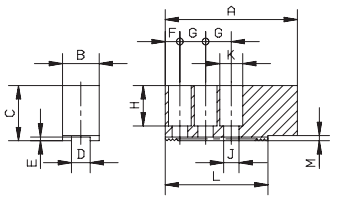
Chuck size	400		500		600			700	800		1000
LVE	400-140	480-185	540-205	570-230	600-275	630-275	680-325	730-375	800-375	830-410	1000-570
Typ	538-73		518-07		518-07	543-22		543-22	543-22		543-22
Item no. 3-jaw	**118004**		**137028**		**137028**	**169450**		**169450**	**169452**		**169452**
A	130	130	180	180	180	215	215	215	245	245	245
B	50	50	50	50	50	68	68	68	68	68	68
C	80	80	80	80	80	89	89	89	89	89	89
$D^{+0,05}$	25,5	25,5	25,5	25,5	25,5	30,0	30,0	30,0	30,0	30,0	30,0
E	5	5	5	5	5	6	6	6	6	6	6
F	20	20	20	20	20	25	25	25	25	25	25
G	35	35	35+35	35+35	35+35	45+45	45+45	45+45	45+45	45+45	45+45
H	60	60	60	60	60	69	69	69	69	69	69
J	21	21	21	21	21	25	25	25	25	25	25
K	31	31	31	31	31	37	37	37	37	37	37
L	130	130	180	180	180	140	140	140	140	140	140
M	-	-	-	-	-	7	7	7	7	7	7
Toothing	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°
Weight/jaw kg	3,1	3,1	4,2	4,2	4,2	7,8	7,8	7,8	9,1	9,1	9,1
A1 Ø External chucking	85 - 190	130 - 235	60 - 270	80 - 290	125 - 335	120 - 315	160 - 355	210 - 415	165 - 415	200 - 450	360 - 610
S Ø max.	460	505	640	660	710	760	800	850	920	955	1150

Extented top jaws AB hardened
serration 90°,
material 16MnCr5



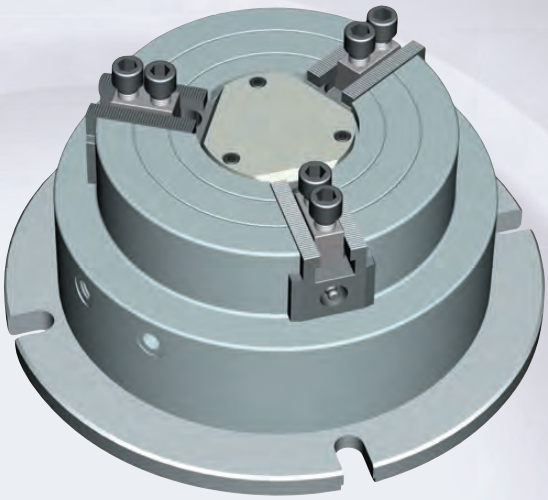
Chuck size	400		500		600			700	800		1000
LVE	400-140	480-185	540-205	570-230	600-275	630-275	680-325	730-375	800-375	830-410	1000-570
Typ	543-27		543-27		543-27	543-27		543-27	543-27		543-27
Item no. 3-jaw	**284627**		**321209**		**321209**	**169458**		**169458**	**169460**		**169462**
A	170	170	210	210	210	225	225	225	285	285	325
B	50	50	50	50	50	68	68	68	68	68	68
C	80	80	80	80	80	89	89	89	89	89	89
$D^{+0,05}$	25,5	25,5	25,5	25,5	25,5	30,0	30,0	30,0	30,0	30,0	30,0
E	5	5	5	5	5	6	6	6	6	6	6
F	22	22	20	20	20	25	25	25	30	30	30
G	35+35	35+35	45+45	45+45	45+45	45+45	45+45	45+45	50+50	50+50	60+60
H	60	60	60	60	60	69	69	69	69	69	69
J	22	22	22	22	22	26	26	26	26	26	26
K	33	33	33	33	33	40	40	40	40	40	40
L	121	121	135	135	135	140	140	140	160	160	180
M	6	6	6	6	6	7	7	7	7	7	7
Toothing	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°
Weight/jaw kg	3,1	3,1	4,1	4,1	4,1	7,1	7,1	7,1	9,4	9,4	11,0
A1 Ø External chucking	20 - 190	60 - 230	30 - 240	50 - 260	90 - 300	100 - 295	140 - 335	190 - 385	105 - 355	140 - 390	230 - 520
S Ø max.	540	580	660	680	720	760	800	850	940	975	1200

Extented soft top jaws AB
serration 90°,
material 16MnCr5



Chuck size	400		500		600			700	800		1000
LVE	400-140	480-185	540-205	570-230	600-275	630-275	680-325	730-375	800-375	830-410	1000-570
Typ	518-07		543-22		543-22	543-22		543-22	543-22		543-22
Item no. 3-jaw	**137028**		**169449**		**169449**	**169452**		**169452**	**169456**		**169456**
A	180	180	205	205	205	245	245	245	285	285	285
B	50	50	50	50	50	68	68	68	68	68	68
C	80	80	80	80	80	89	89	89	89	89	89
$D^{+0,05}$	25,5	25,5	25,5	25,5	25,5	30,0	30,0	30,0	30,0	30,0	30,0
E	5	5	5	5	5	6	6	6	6	6	6
F	20	20	20	20	20	25	25	25	25	25	25
G	35+35	35+35	35+35	35+35	35+35	45+45	45+45	45+45	55+55	55+55	55+55
H	60	60	60	60	60	69	69	69	69	69	69
J	21	21	21	21	21	25	25	25	25	25	25
K	31	31	31	31	31	37	37	37	37	37	37
L	180	180	190	190	190	140	140	140	160	160	160
M	--	--	6	6	6	7	7	7	7	7	7
Toothing	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°	3/32"x90°
Weight/jaw kg	4,2	4,2	5,0	5,0	5,0	9,1	9,1	9,1	10,9	10,9	10,9
A1 Ø External chucking	20 - 155	30 - 200	10 - 220	30 - 240	75 - 285	60 - 255	100 - 295	150 - 345	105 - 355	140 - 390	300 - 550
S Ø max.	330	575	640	660	710	760	800	850	945	980	1100

Overview



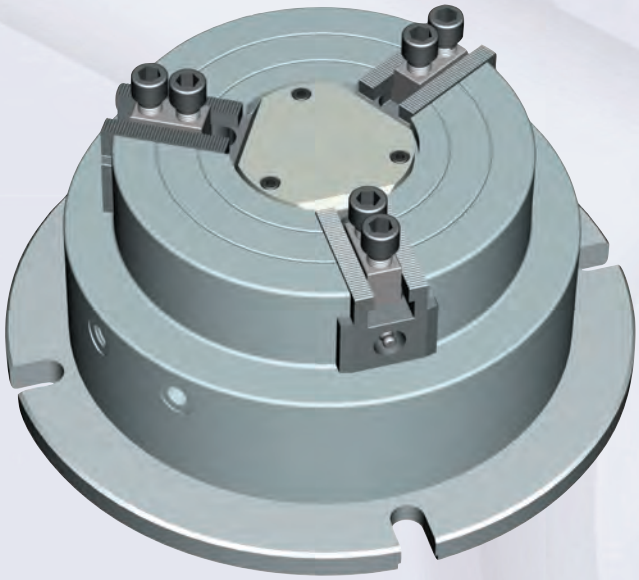
SSP / SSH **from page 6215**

Wedge system
Pneumatically operated (SSP)
Hydraulically operated (SSH)
Round mounting surface
2- and 3-jaw design

KZS-P **from page 6222**

Wedge system
Pneumatically operated (KZS-P)
Hydraulically operated (KZS-H) on request
2-jaw design
Options: with large jaw stroke (KZS-PG)

SSP / SSH

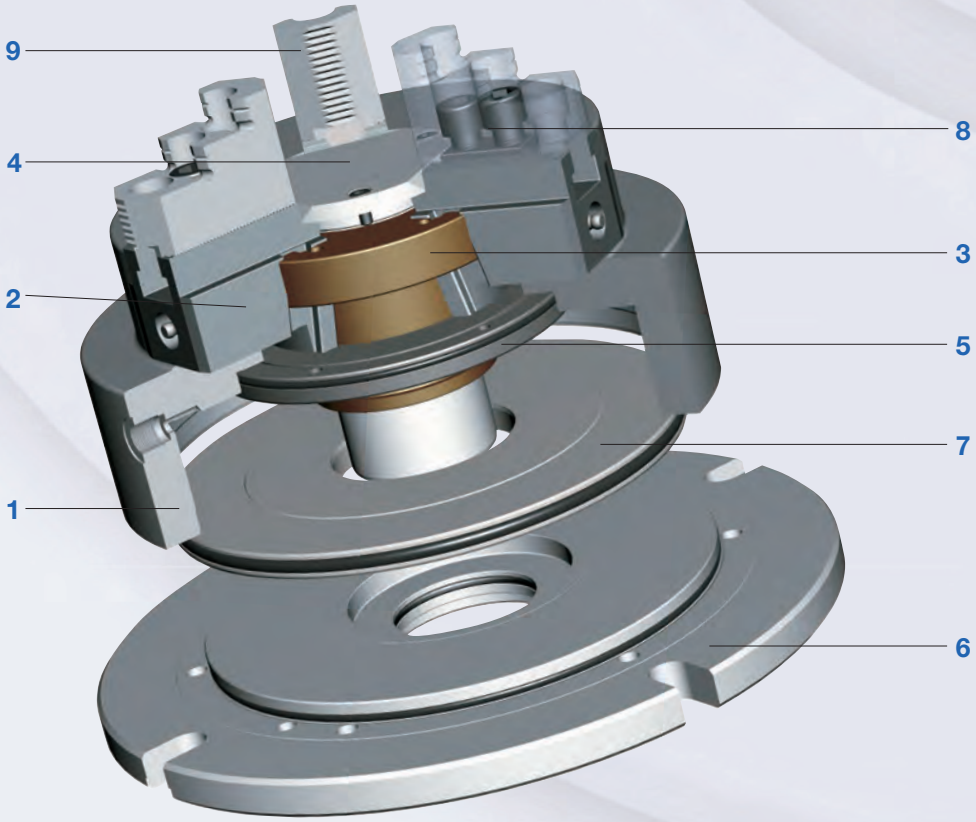


Technical features:

- Wedge system
- Quick and efficient chucking in stationary use
- Concentric gripping of round as well as angular parts
- Universal through use of different jaws
- Gripping force adjustable by changing the pressure
- High chucking accuracy thanks to constant gripping force at constant pressure
- Compact design
- Blast air terminal against dirt accumulation
- Used in conjunction with RÖHM actuating cylinders with safety device SZS, OVS, LHS-L, LVS, EHS and EVS the power chucks SSP / SSH meet the requirements of the German Employers' Insurance Association

Designs:

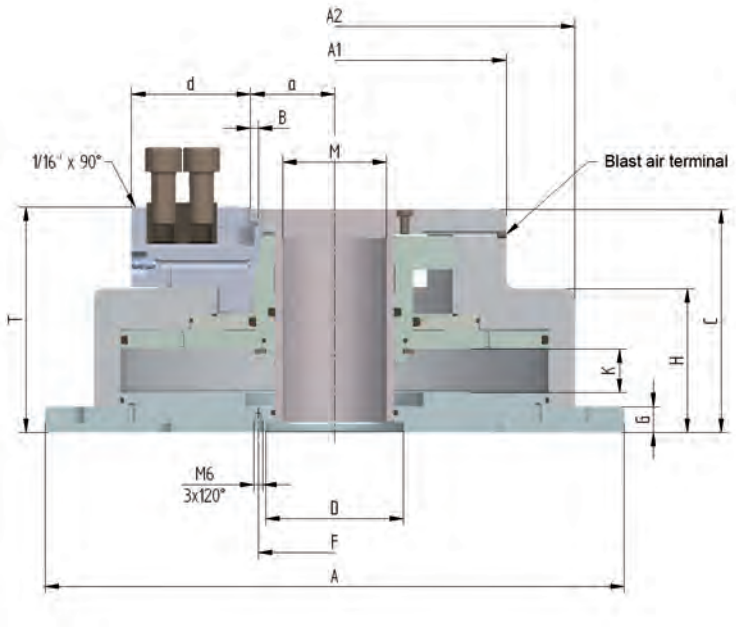
- Pneumatically operated (SSP)
- Hydraulically operated (SSH)

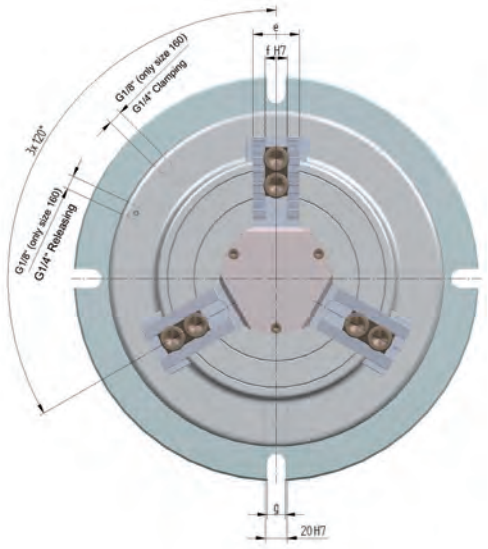


Components

1. Body
2. Base jaw
3. Piston
4. Protective bushing
5. Intermediate disc
6. Mount
7. Piston disc
8. T-nut
9. Top jaws

SSP 2-/3-jaw, pneumatically operated, without through-hole





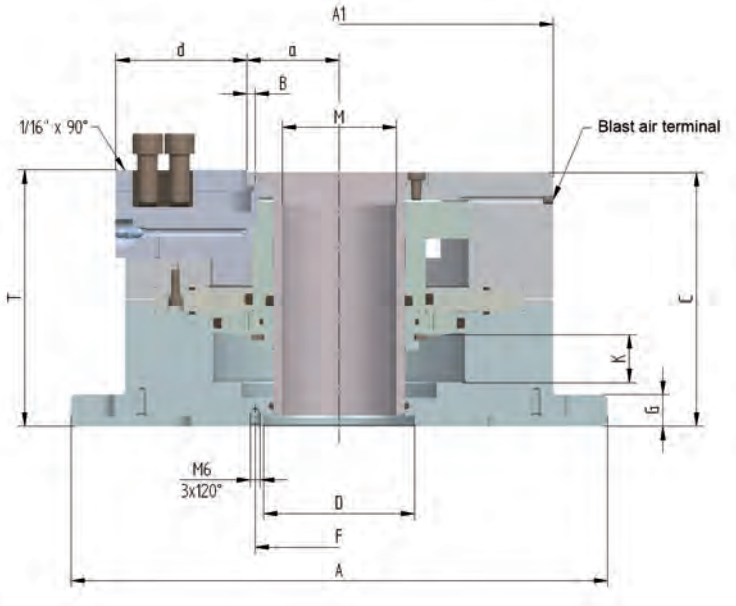
Tool group C 15
Type 447-0
Stationary power chucks **SSP**, **pneumatically operated 2-jaw and 3-jaw** chucks, **without through-hole**, **serration $^{1}/_{16}$" x 90°**

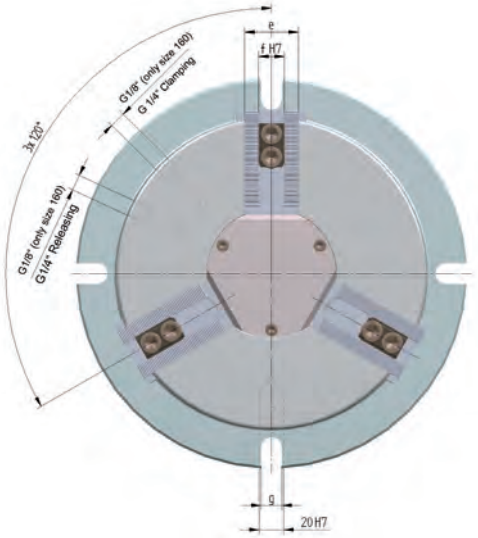
Item no.	161852 ■	161505 ■	161853 ■	161506 ■	161854 ■	161507 ■	161855 ■	161508 ■
Size	160	160	200	200	250	250	315	315
Number of jaws	2	3	2	3	2	3	2	3
A	260	260	320	320	380	380	415	415
A1	178	178	205	205	255	255	320	320
A2	210	210	255	255	315	315	350	350
Jaw travel B	4,2	4,2	4,2	4,2	5	5	5	5
C	130,5	130,5	134	134	146	146	156,5	156,5
Mount D^{H6}	55	55	70	70	90	90	110	110
D	M8	M8	M12	M12	M16	M16	M16	M16
F	65	65	80	80	100	100	120	120
G	15	15	17	17	17	17	21,5	21,5
H	84,5	84,5	86	86	94	94	104,5	104,5
Wedge stroke K	24	24	23,8	23,8	28,4	28,4	28,4	28,4
Possible through-hole M	38	38	52	52	68	68	90	90
T	131,5	131,5	135,5	135,5	147,5	147,5	158	158
U	M8	M8	M12	M12	M16	M16	M16	M16
a min.	31,8	31,8	41,2	41,2	50	50	61,5	61,5
a max.	36	36	45,4	45,4	55	55	66,5	66,5
c	15	15	19	19	25	25	25	25
d	54,5	54,5	62	62	78	78	99	99
e	32	32	36	36	44	44	44	44
f^{H7}	12	12	17	17	21	21	21	21
g	13	13	17	17	17	17	17	17
Piston area cm^2	209	209	323	323	532	532	654	654
Min. operating pressure bar	2	2	2	2	2	2	2	2
Max. operating pressure bar	5	8	5	8	5	8	5	8
Max. total clamping force at working pressure - **External clamping** kN	20 (at 5 bar)	36 (at 6 bar)	31 (at 5 bar)	55 (at 6 bar)	50 (at 5 bar)	90 (at 6 bar)	62 (at 5 bar)	111 (at 6 bar)
Max. total clamping force at working pressure - **Internal clamping** kN	22 (at 5 bar)	38 (at 6 bar)	34 (at 5 bar)	60 (at 5 bar)	54 (at 5 bar)	96 (at 6 bar)	66 (at 5 bar)	118 (at 6 bar)
Weight without jaws approx. kg	25	25	34	34	54	54	65	65

Stationary Power chucks with serration 1,5x60°, tongue and groove and/or through-hole on request available

● from stock ■ 4 - 6 weeks ▲ on request

SSH 2-/3-jaw, hydraulically operated, without through-hole





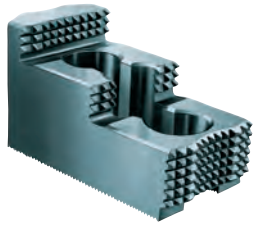
Tool group C 15
Type 447-1
Stationary power chucks **SSH**, **hydraulically operated 2-jaw and 3-jaw** chucks, **without through-hole**, **serration $^{1}/_{16}$" x 90°**

Item no.	161856 ■	161509 ■	161857 ■	161510 ■	161858 ■	161511 ■	161859 ■	161512 ■
Size	160	160	200	200	250	250	315	315
Number of jaws	2	3	2	3	2	3	2	3
A	230	230	280	280	320	320	385	385
A1	178	178	205	205	255	255	320	320
Jaw travel B	4,2	4,2	4,2	4,2	5	5	5	5
C	133,5	133,5	134	134	151	151	159,5	159,5
Mount D^{H6}	55	55	70	70	90	90	110	110
D	M8	M8	M12	M12	M16	M16	M16	M16
F	65	65	80	80	100	100	120	120
G	15	15	17	17	19	19	21,5	21,5
Wedge stroke K	24	24	23,8	23,8	28,4	28,4	28,4	28,4
Possible through-hole M	35	35	52	52	60	60	90	90
T	134,5	134,5	135,5	135,5	152,5	152,5	161	161
U	M8	M8	M12	M12	M16	M16	M16	M16
a min.	31,8	31,8	41,2	41,2	50	50	61,5	61,5
a max.	36	36	45,4	45,4	55	55	66,5	66,5
c	15	15	19	19	25	25	25	25
d	54,5	54,5	62	62	78	78	99	99
e	32	32	36	36	44	44	44	44
f^{H7}	12	12	17	17	21	21	21	21
g	13	13	17	17	17	17	17	17
Piston area cm^2	32,4	32,4	47	47	92	92	118	118
Max. operating pressure / **clamping** bar	26	40	26	40	26	40	26	40
Max. operating pressure / **opening** bar	20	30	16	25	20	30	20	30
Max. total clamping force at max. operating pressure - **External clamping** kN	26	40	35	53	70	100	90	134
Max. total clamping force at max. operating pressure - **Internal clamping** kN	26	40	35	53	70	100	90	134
Weight without jaws approx. kg	22	22	30	30	50	50	60	60

Stationary Power chucks with serration 1,5x60°, tongue and groove and/or through-hole on request available

Jaws SSP / SSH

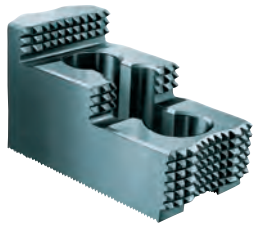
Tool group C 21
Type 543/538
Reversible top jaws,
2-jaw set, hardened
Serration 90°
material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
045796 ■	130	56	37,5	26	1/16”x 90°
118521 ■	200/250	75	49	36	1/16”x 90°
046435 ■	250/315	103,5	58	50	1/16”x 90°

Hardened jaws, supplied as supplement or as spares, must be ground on the chuck.

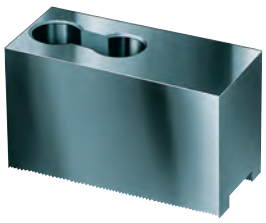
Tool group C 21
Type 543/538
Reversible top jaws,
3-jaw set, hardened
Serration 90°
material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
046404 ●	130	56	37,5	26	1/16”x 90°
118522 ●	200	75	49	36	1/16”x 90°
046414 ●	250/315	103,5	58	50	1/16”x 90°

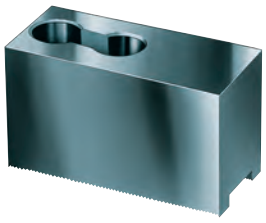
Hardened jaws, supplied as supplement or as spares, must be ground on the chuck.

Tool group C 21
Type 543/538
Soft top jaws,
2-jaw set, can be hardened
Serration 90°
material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
045795 ●	130	55	38	26,5	1/16”x 90°
133148 ●	200/250	75	53	36,5	1/16”x 90°
133149 ●	250	95	54,5	45	1/16”x 90°

Tool group C 21
Type 543/538
Soft top jaws,
3-jaw set, can be hardened
Serration 90°
material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width	Serration
046403 ●	130	55	38	26,5	1/16”x 90°
133153 ●	200	75	53	36,5	1/16”x 90°
133154 ●	250	95	54,5	45	1/16”x 90°

● from stock ■ 4 - 6 weeks ▲ on request

Jaws SSP / SSH

Tool group C 21
Type 544-50 **Claw-type jaws**, 1 piece, **hardened**
Serration 90°
width of the groove **12**

Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
144320 ●	130	66	38	52
144321 ●	130	56	38	34
144322 ●	130	66	38	25

Tool group C 21
Type 544-50 **Claw-type jaws**, 1 piece, **hardened**
Serration 90°
width of the groove **17**

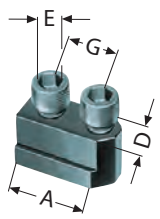
Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
137031 ●	200	67	45	53
137032 ●	200	65	45	46
137039 ●	200	55	45	40
137034 ●	200	50	45	31
137035 ●	200	55	45	27
137036 ●	200	65	45	19
137037 ●	200	65	45	26
137038 ●	200	55	45	24
137033 ●	200	55	45	39

Tool group C 21
Type 544-50 **Claw-type jaws**, 1 piece, **hardened**
Serration 90°
width of the groove **21**

Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
137041 ●	250/315	95	50	80
137042 ●	250/315	75	50	60
137043 ●	250/315	60	50	43
137044 ●	250/315	70	50	37
137045 ●	250/315	95	50	25
137046 ●	250/315	80	50	30

Accessories SSP / SSH

Tool group C 15



Type 549-00 **Extended T-nuts**
without screw

Item no.	Chuck Size	Contents of delivery	A	D	E	G
343234 ●	160/175	piece	42	12	M8	2x15
135765 ●	200	piece	36	17	M 12	19
135767[1] ●	315	piece	46	21	M16	25

Tool group C 15

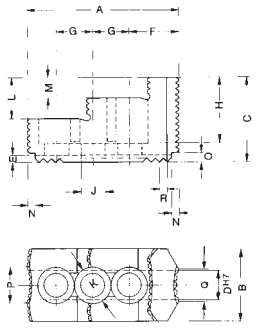
Type 0040-Y **Mounting screws**

Item no.	Size	Contents of delivery	Thread
236949 ●	160	piece	M8x25
233030 ●	210/254/315	piece	M12x30
220564 ●	350	piece	M16x35

Socket head cap screw to DIN 912, 12.9

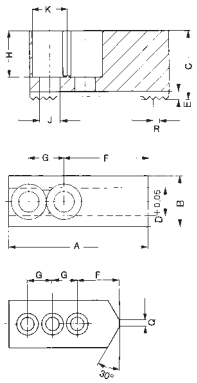
Jaw dimensions SSP / SSH

Reversible top jaws UB, hardened, serration 90°



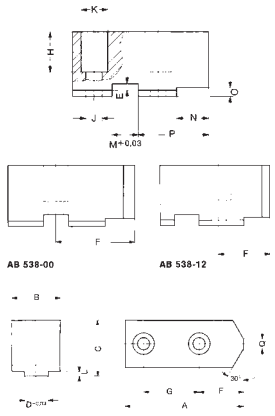
Chuck size	160	200	250/315
Type	538-02	538-04	538-05
Item no. 2-jaw	**045796**	**118521**	**046435**
Item no. 3-jaw	**046404**	**118522**	**046414**
A	56	75	103,5
B	26	36	50
C	37,5	49	58
D^{H7}	12	17	21
E	3,5	5	5
F	14	21,5	33,5
G	15	19	25
H	29	37,5	45
J	8,4	13	17
K	13,5	19	25
L	20	24	28
M	10	12	14
N	4	6	6
O	4	7,5	6,5
P	5	18	24,5
Q	5	7	22,5
R	$^1/_{16}$"x90°	$^1/_{16}$"x90°	$^1/_{16}$"x90°
Weight/jaw kg	0,170	0,460	1,130

Soft top jaws AB, serration 90°,



Chuck size	160	250	315
Type	538-03	538-05	538-06
Item no. 2-jaw	**133147**	**133149**	**133150**
Item no. 3-jaw	**133152**	**133154**	**133155**
A	66,7	95	103
B	36,5	45	50
C	53	54,5	80
D	17	21	21
E	5	5	5
F	36	55	62
G	19	25	25
H	43	42,5	67
J	13	17	17
K	19	25	25
Q	-	-	-
R	$^1/_{16}$"x90°	$^1/_{16}$"x90°	$^1/_{16}$"x90°
Weight/jaw kg	0,700	1,400	2,580

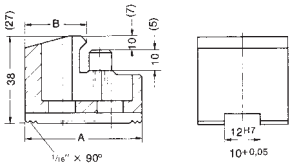
Soft top jaws AB, tongue and groove



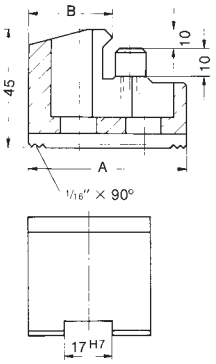
Chuck size	160	200	250	315
Type	538-13	538-14	538-15	538-66
Item no. 2-jaw	**123359**	**123431**	**123434**	**129847**
Item no. 3-jaw	**123358**	**123430**	**123433**	**129849**
A	72,7	90,3	115,3	146
B	36,5	36,5	45	50
C	53	53	54,5	80
$D_{-0,03}$	16	16	20	20
E	5,5	5,5	5,5	5,5
F	32,5	45,3	58,3	63,5
G	25	30	40	50
H	38	38	38	60
J	13	13	17	17
K	19	19	25	25
L	4,5	4,5	4,5	4,5
$M^{+0,03}$	10	12	16	16
N	24,7	35,3	45,3	43
O	5	5	5	5
P	39,7	54,3	70,3	80,5
Q	3	6	6	6
Weight/jaw kg	0,720	1,000	1,550	3,600

Jaw dimensions SSP / SSH

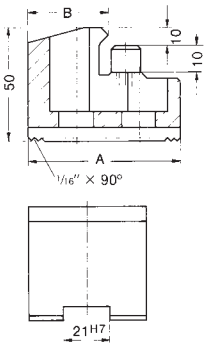
Claw type jaws KB, serration 90°



Chuck size	A	B	160
Item no. piece			Capacities external
144320	66	52	56-102
144321	56	34	96-152
144322	66	25	138-184
			Capacities internal
144322	66	25	70-116
144321	56	34	112-200
144320	66	52	152-198



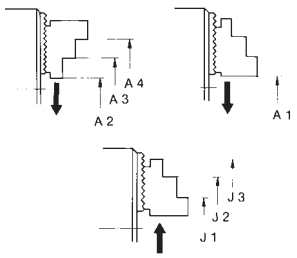
Item no. Piece	A	B	200
			Capacities external
137031	67	53	66-104
137032	65	46	80-118
137039	55	40	106-144
137034	50	31	130-148
137035	55	27	126-164
			Capacities internal
137036	65	19	82-120
137037	65	26	92-130
137038	55	24	110-148
137035	55	27	132-170
137034	50	31	148-184
137039	55	40	134-190
137033	55	39	164-202
137032	65	46	178-216



Item no. Piece	A	B	250	315
			Capacities external	
137041	95	80	54-112	78-186
137042	75	60	94-152	118-226
137043	60	43	128-186	152-260
137044	70	37	158-216	182-290
137045	95	25	238-280	262-330
			Capacities internal	
137045	95	25	72-130	96-204
137046	80	30	110-168	134-242
137044	70	37	152-210	176-284
137043	60	43	182-240	206-314
137042	75	60	216-274	-

Chucking capacities SSP / SSH

Chucking capacities with reversible top jaws UB

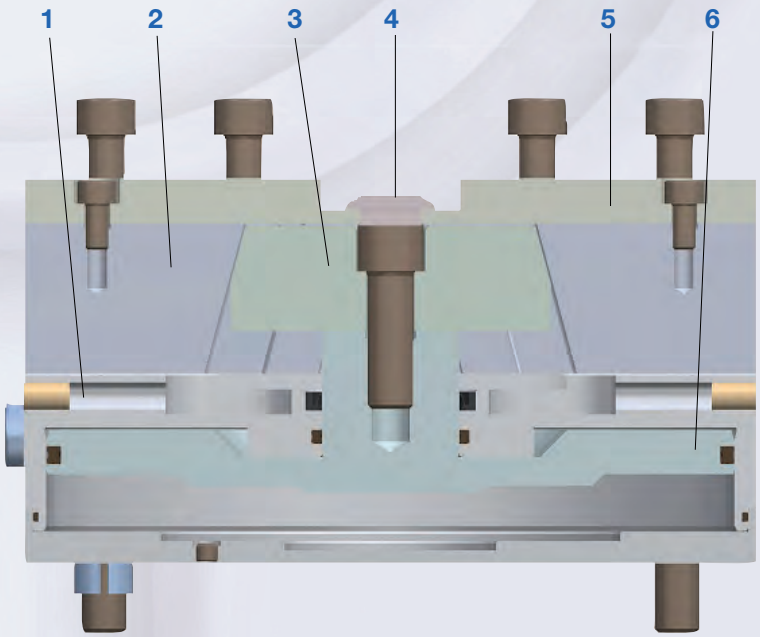


Chuck size		160	200	250	315
with reversible jaws	Type	538-02	538-04	538-05	538-05
	Jaw position				
External chucking	A1	28-80	30-115	20-128	41-194
	A2	32-84	44-128	46-154	67-220
	A3	82-132	101-185	128-238	150-303
	A4	118-168	152-236	210-318	231-384
Internal chucking	J1	64-116	80-165	70-188	91-244
	J2	96-148	130-214	146-255	168-320
	J3	140-192	182-266	225-334	246-400

KZS-P / KZS-PG

Technical features:

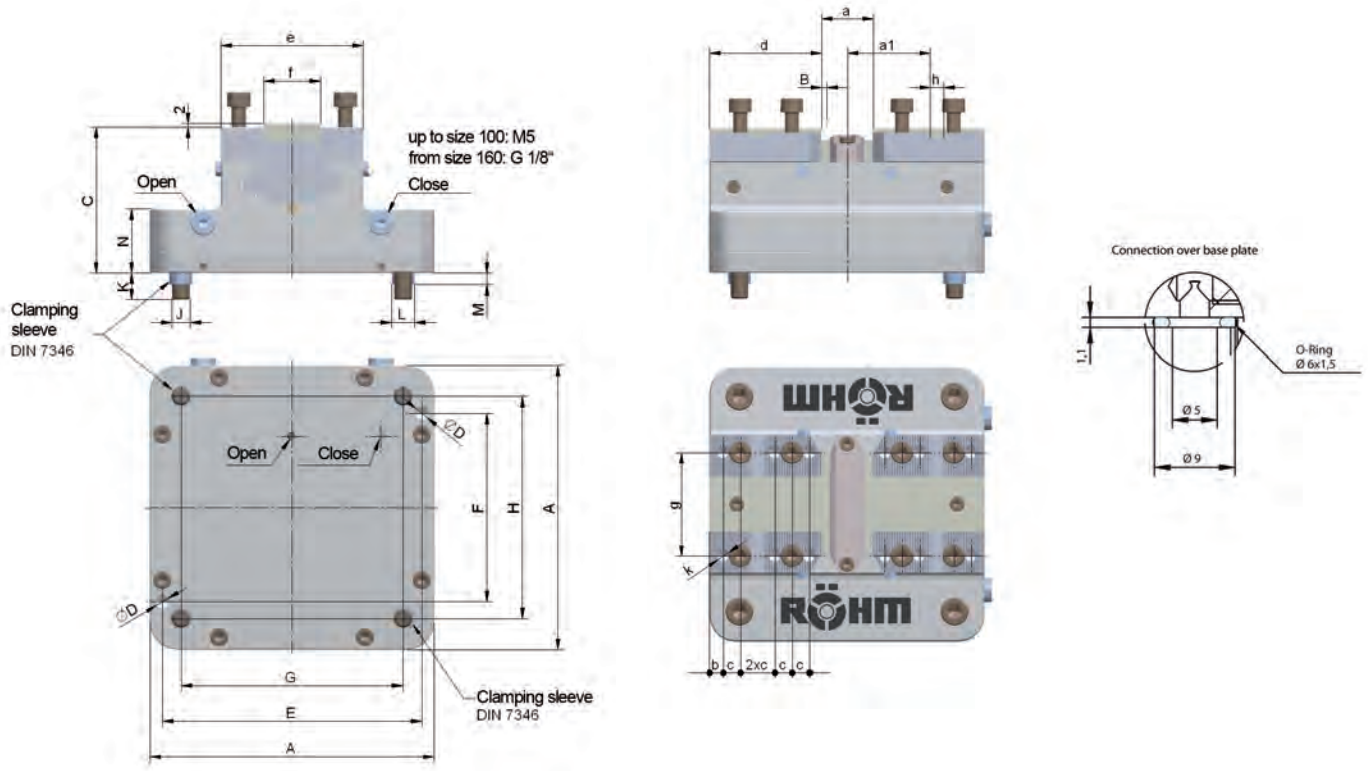
- Wedge system with integrated pneumatic actuation
- Concentric gripping of round as well as angular parts due to use of different clamping jaws
- Gripping force adjustable by changing the pressure
- High chucking accuracy thanks to constant gripping force at constant pressure
- Compact design, large jaw stroke
- Rigid, extra tight jaw guidings
- High repeating accuracy
- For internal and extarnal clamping
- Suitable for use in automated work cycles



Components:

1. Body
2. Base jaw
3. Piston
4. Cover bridge
5. Guiding rail
6. Piston disc

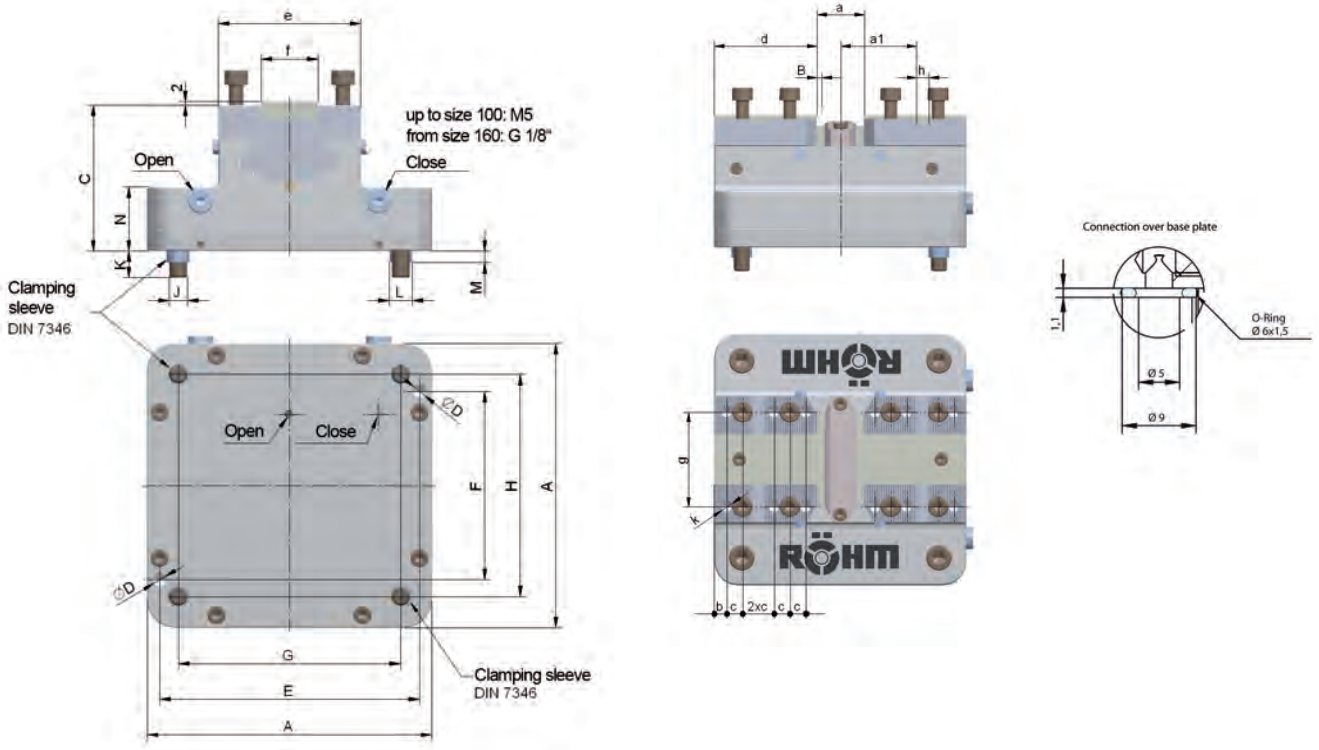
KZS-P standard design, serration 60°



Tool group C 15
Type 501-00
Pneumatically-operated centering vices **KZS-P**
Base jaws with **serration 1,5 x 60°** and **tongue and groove connection**

Item no.	165092 ●	165093 ●	165094 ■	165455 ■	165095 ■	165096 ■
Size	64	100	160	200	250	315
A	64	100	160	200	250	315
Jaw travel B	2,2	2,5	3,2	3,5	4	5
C	50,5	69	82	90	98	138
Ø D	4	6	8	8	10	12
E±0,01	18 from center	90	146	184	230	280
F±0,01	56	64	106	146	154	210
G±0,04	50	80	125	160	200	250
H±0,04	50	80	125	160	200	250
J (4x)	M6	M8	M10	M10	M12	M16
K	8	12	15	15	18	23
Ø L Clamping sleeve	8	11	13	13	16	21
M	2,5	4,5	6,5	6,5	6	9
N	28	35	36	42	52	64
O	17	32	40	50	64	80
P	17	29,5	50	65	75	90
a min.	12	20	23,6	25	28	42
a max.	16,4	25	30	32	36	52
a 1 min.	13	25,5	44,8	54,5	57	88
a 1 max.	15,2	28	48	58	61	93
b	4	5	8	8	11	13,5
c	5	7	10	10	12	15
d	23	37,5	65	84	107	131,5
e	34	55	80	100	125	160
f g6	14	20	32	40	50	60
g	24	35	60	80	90	120
h H7	4	6	8	8	10	12
k	4xM4/6	4xM6/8	5xM8/13	6xM8/13	8xM10/16	8xM12/18
Piston area cm^2	22	62	175	250	370	600
Max. operating pressure bar	6	9	9	6	6	6
Max. total clamping force kN	2,5	13	35	35	50	80
Weight kg	1	3	9	19	29,5	73
Air consumption/ Double stroke cm^3	31	126	420	650	1300	2310

KZS-PG with large stroke, serration 60°



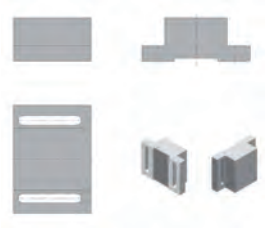
Tool group C 15
Type 501-10 Air-operated centering vices **KZS-PG**, **large jaw movement**
Base jaws with **serration 1,5 x 60°** and **tongue and groove connection**

Item no.	165340 ●	165341 ■	165456 ■	165342 ■	165343 ■
Size	100	160	200	250	250
A	100	160	200	250	250
Jaw travel B	6	7,8	8,5	10,1	15
C	69	82	90	98	98
Ø D	6	8	8	10,1	10
E±0,01	90	146	184	230	230
F±0,01	64	106	146	154	154
G±0,04	80	125	160	200	200
H±0,04	80	125	160	200	200
J (4x)	M8	M10	M10	M12	M12
K	12	15	15	16	18
Ø L Clamping sleeve	11	13	13	16	16
M	4,5	6,5	6,5	4,5	6
N	35	36	42	52	52
O	32	40	50	64	64
P	29,5	50	65	75	75
a min.	20	23	25	28	33
a max.	32	38,6	42	48,2	63
a 1 min.	25,5	44,8	54,5	57	51,5
a 1 max.	31,5	52,6	63	67,1	66,5
b	5	11,2	11,5	15	15
c	7	10	10	12	12
d	37,5	68,5	87,5	111	103
e	55	80	100	125	125
f g6	20	32	40	50	50
g	35	60	80	90	90
h H7	6	8	8	10	10
k	4xM6/8	5xM8/13	6xM8/13	8xM10/15	8xM12/18
Piston area cm^2	62	175	250	370	370
Max. operating pressure bar	6	6	6	6	6
Max. total clamping force kN	4,2	10,5	14	18	15
Weight kg	3	9	19	29,5	29,5
Air consumption/Double stroke cm^3	126	420	650	1300	1300

● from stock ■ 4 - 6 weeks ▲ on request

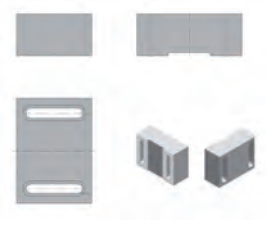
Jaws KZS-P / KZS-PG

Tool group C 21
Type 543-32 **Soft top jaws, 2-jaw set, can be hardened**
Serration 60°
material: 16 MnCr 5



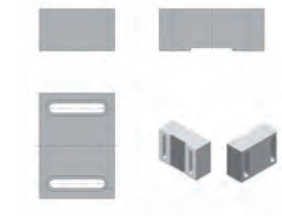
Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
166138 ●	64	25	20	34
166140 ●	100	42	25	55
166142 ●	160	60	40	80
166144 ●	200	75	45	100
166146 ●	250	90	50	125
166148 ●	315	110	60	160

Tool group C 21
Type 543-38 **Soft top jaws, 2-jaw set**
Serration 60° design without holes
material: 16 MnCr 5



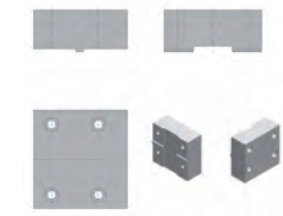
Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
167774 ■	64	25	20	34
167776 ■	100	42	25	55
167778 ■	160	60	40	80
167780 ■	200	75	45	100
167782 ■	250	90	50	125
167784 ■	315	110	60	160

Tool group C 21
Type 543-32 **Soft top jaws, 2-jaw set**
Serration 60°
with **long hole**
material: 16 MnCr 5



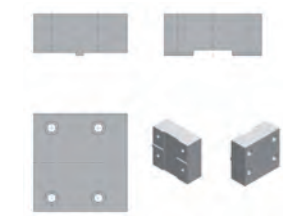
Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
167786 ■	64	34	13	20
167788 ■	100	55	16	25
167790 ■	160	80	28	40
167792 ■	200	100	33	45
167794 ■	250	125	32	50
167796 ■	315	160	37	60

Tool group C 21
Type 543-12 **Soft top jaws, 2-jaw set**
tongue and groove, flat design,
material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
166114 ■	64	28,5	16	34
166116 ●	100	47	25	55
166118 ●	160	76	40	80
166120 ●	200	96	45	100
166122 ●	250	120	50	125
166124 ■	315	150	60	160

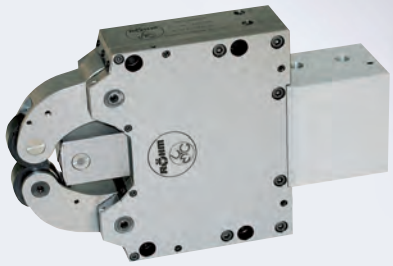
Tool group C 21
Type 543-12 **Soft top jaws, 2-jaw set**
tongue and groove, high design,
material: 16 MnCr 5



Item no.	Chuck Size	Jaw length	Jaw height	Jaw width
166126 ■	64	28,5	35	34
166128 ■	100	47	48	55
166130 ■	160	76	77,5	80
166132 ■	200	96	85	100
166134 ■	250	120	100	125
166136 ■	315	150	110	160

Overview

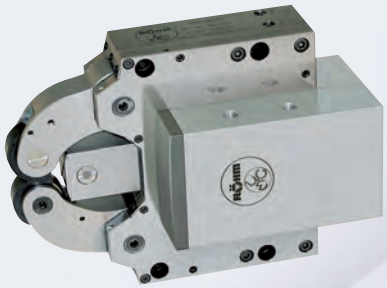
Steady rests, oil or air operated
Optimal support.
High repeatability, high stiffness, easy mounting, small dimensions, air purge to prevent dirt penetration, stroke control and central lubrication are features highlighting the Röhm steady rests.



SLZ

with mounted cylinder

from page 6230



SLZB

with side mounted cylinder

from page 6233

SLZW

extra opening of one arm

from page 6237

SLZC

extremely compact design,
developed for minimum mounting dimensions

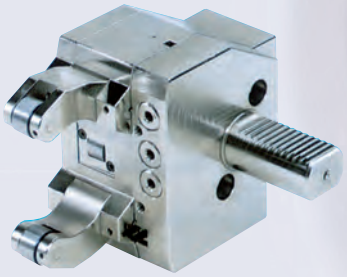
from page 6238

Overview

SLZK

from page 6239

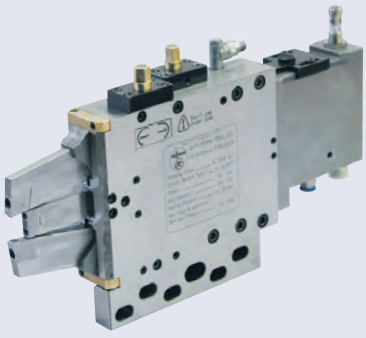
with slim clamping arms
for machining crankshafts



SLZR

from page 6240

for turrets on four axis lathes



SLZV

from page 6246

Steady rest for grinding with fine adjustment
of X- and Y- axis for the machining of slim shafts

Technical features

To more efficient turning of slender shafts

With these steady rests, RÖHM engineers have made an important contribution to solving the problems related to supporting slender work (shafts) on lathes.

The requirements that must be met by modern steady rests can be summarized as follows:

- Large clamping range with no need for interchangeable elements
- Compact (short and robust) construction
- High centering accuracy and repeatability throughout the clamping range
- No loss of accuracy when changing clamping pressure
- Central lubrication

The steady rests of the SLZ range meet all these requirements. The cam-and-lever system has been optimized in comparison to known solutions and permits the three rollers performing the centering and supporting functions to be applied to the workpiece almost symmetrically with a spacing of 3 x 120°.

This feature together with an innovative internal compensating system (on request) which compensates for the displacement of the workpiece center occurring under changing pressures in conventional steady rests accounts for the unusually high centering accuracy throughout the working range.

For central lubrication only one connection is necessary.
The proportioning units for the rollers are integrated in the body of the rest and assure sufficient greasing in the respective greasing interval.

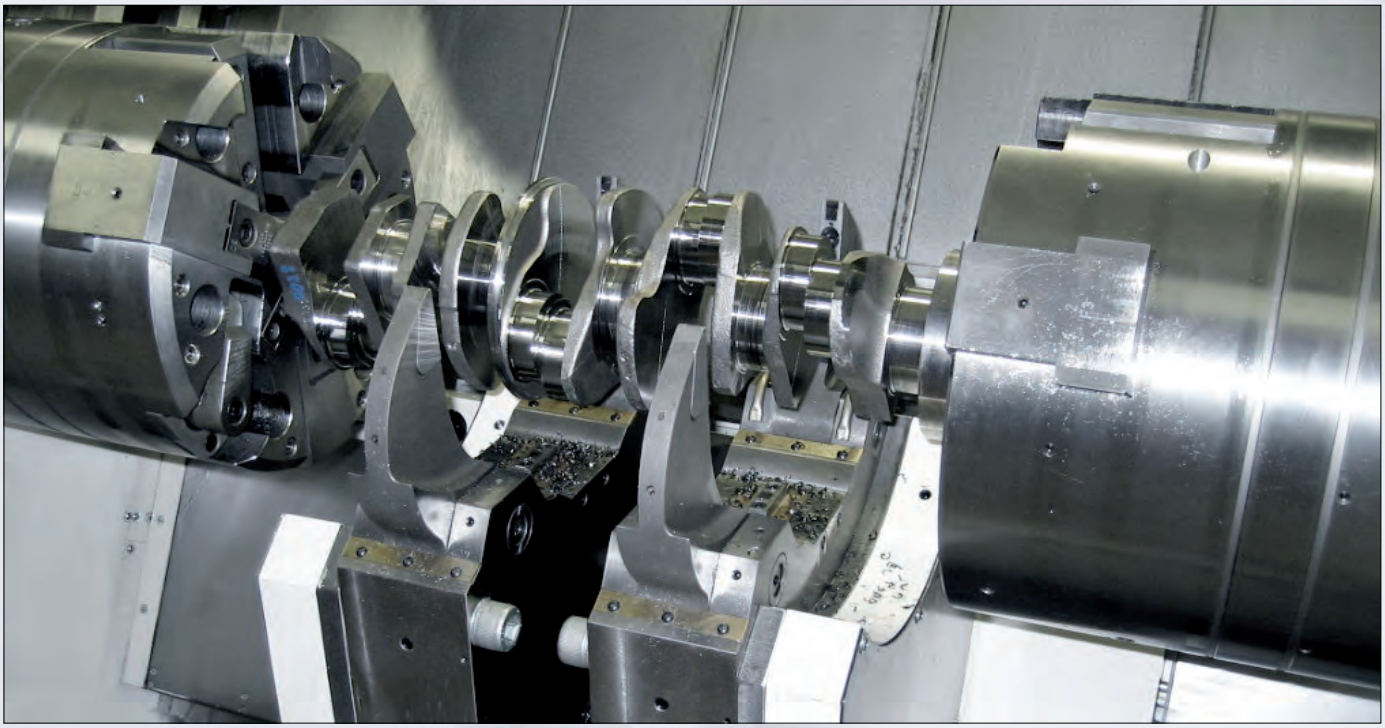
Various mounting options permit these steady rests to be used for turning outside diameters, facing, centering, drilling, internal machining, recessing, parting-off, copy turning etc., both as fixed steady rests and following rests, in any desired angular positioning relative to the cutting tool.

Even with a fixed steady rest, the outside diameter of the shaft can be turned on its entire length since the clearance between the rollers leaves room for the cutting tool and the rollers are reclamped with self-centering action. As a rule, 2 steady rests should be used for support so that one can support the work on the full width of the rollers at any time.

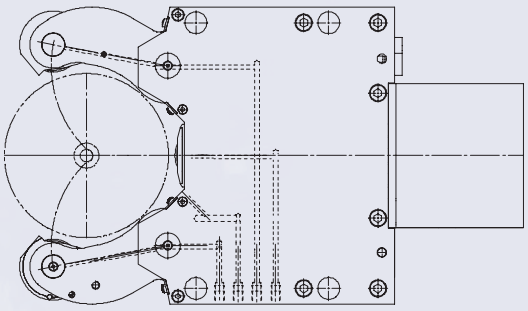
The attached actuating cylinder can be selected for hydraulic or pneumatic actuation. The only difference is in the size of the piston areas. In the standard version, the cylinder is attached as an axial extension of the steady rest housing. With Type SLZB the cylinder is bolted to the side of the steady rests body.

Depending on requirements and proposed use, the steady rest is available with a stroke monitor or safety device only. The supporting rollers are carried in radial and axial antifriction bearings. Both cylindrical and convex rollers are available as standard equipment. Convex rollers must be used for tapered work and follower rests. Here again, special designs are available on request to complete the range.

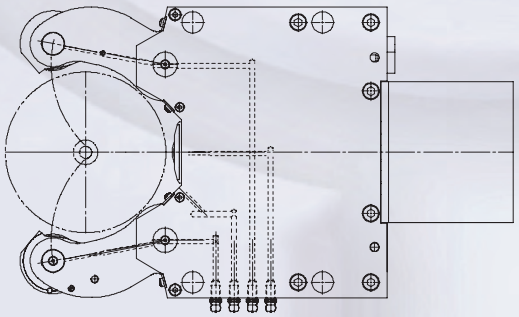
Versions



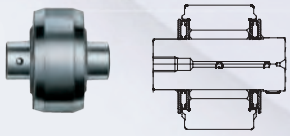
Oil central lubrications
RÖHM steady rests are normally equipped with central lubrication. The necessary dosage valves are situated in the steady rest body. Lubrication cycles 2 - 5 minutes depending on load at a cycle pressure between 16 - 50 bar.



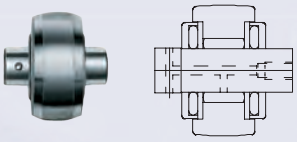
Manual Lubrication (Option)
Steady rest for average load and low dirt quote. Lubrication points and rollers will be greased with grease nipples and a grease gun.
Lubrication cycle all 4 to 8 operation hours depending on application.



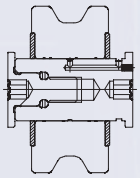
Cylindrical roller
Roller design for standard cases



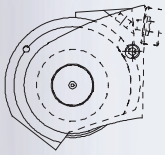
Convex roller
for conical workpieces and following steady rests



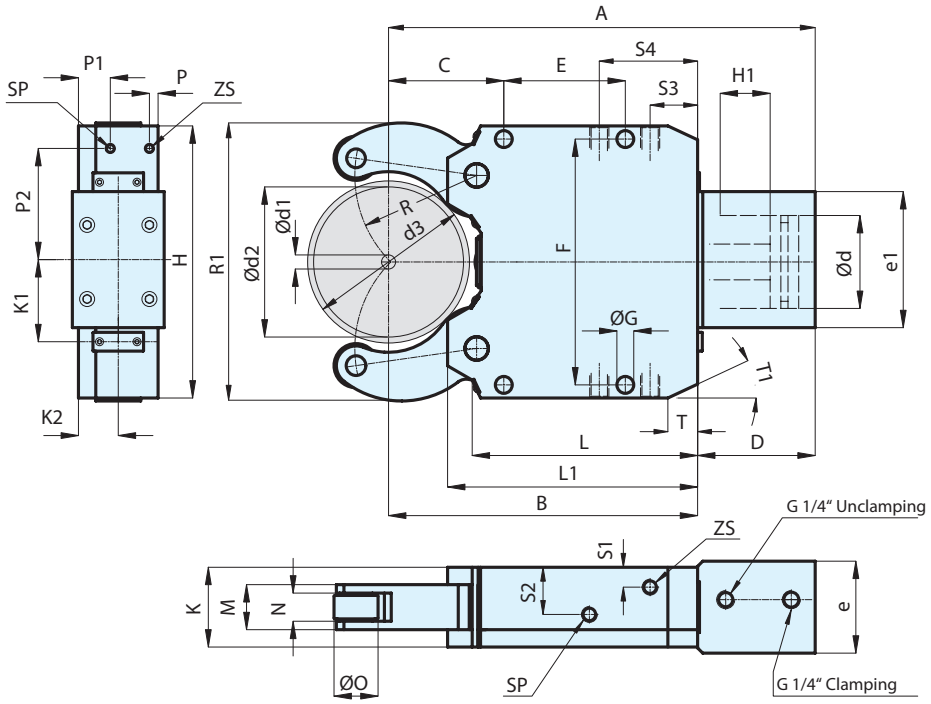
Special rollers
on request



Chip protector
Standard design



SLZ standard design



Tool group C 15
Type 576 Self-centering steady rests **SLZ**
oil or air operated
With **mounted cylinder**

Clamping ranges Type	SLZ 047	SLZ 08105	SLZN 1152	SLZN 1517	SLZN 40200	SLZ 325	SLZ 50315	SLZ 95360
Clamping range - with chip protection	15-62	16-101	22-140	25-158	40-195	40-240	50-305	95-355
Clamping range - without chip protection	4-70	8-105	11-152	15-170	40-200	35-250	50-315	95-360
Max. radial clamping range - d3	70	105	161	170	200	250	315	360
With chip protectors RZ	**685751** ●	**685755** ●	**1685575** ■	**1685579** ■	**1685583** ■	**685779** ■	**685787** ■	**1685604** ■
With chip protectors RB	**685752** ●	**685756** ●	**1685576** ■	**1685580** ■	**1685584** ■	**685780** ■	**685789** ■	**1685605** ■
Without chip protectors RZ	**685753** ●	**685757** ●	**1685577** ■	**1685581** ■	**1685585** ■	**685781** ■	**685790** ■	**1685606** ■
Without chip protectors RB	**685754** ●	**685758** ●	**1685578** ■	**1685582** ■	**1685586** ■	**685782** ■	**685791** ■	**1685607** ■
d_1	4	8	11	15	40	35	50	95
d_2	70	105	152	170	200	250	315	360
d_3	70	105	161	170	200	250	315	360
A	206	279,5	432,5	440,5	459,5	617,5	699	730,5
B	137	197	306	314	333	451	521,5	553
C	51	70	115	123	138	146	203	234,5
D	69	82,5	126,5	126,5	126,5	166,5	177,5	177,5
E	64	85	135	135	135	240	270	270
F	118	170	262	262	262	365	400	400
G	11	14	18	18	18	23	23	23
H	132	190	290	290	290	400	440	440
K	54	58	85	85	85	110	145	145
L	102	143	223	223	223	331,5	361	361
L1	115,5	164	251	251	251	364	406	406
Clamping arm width M	20	31	48	48	48	60	75	75
Roller width N	11,5/9	20,5/19	30/25	30/25	30/25	40/35	45/40	45/40
O	19	35	47	47	47	52	60	60
P	-	-	9,5	9,5	9,5	13	21,5	21,5
P1	-	-	34	34	34	12,5	12,5	12,5
P2	-	-	117,5	117,5	117,5	160	160/175	160/175
R	48,6	74,5	122	130	143,5	183	209	242
S1	8	9,5	-	-	-	-	-	-
S2	23	33	-	-	-	-	-	-
S3	10	28	-	-	-	-	-	-
S4	34,5	28	-	-	-	-	-	-
K1	-	61,5	85	85	85	98	150	141
K2	-	30	42,5	42,5	42,5	55	59,5	59,5
d	40	50	80	80	80	100	100	100
e	60	68	98	98	98	124	142	142
e_1	87	92	145	145	145	156	156	156
T	-	-	-	-	-	45	31,5	31,5
T1	-	-	-	-	-	30°	30°	30°
R1	121	190	291	303	326	394	483	534
Weight kg	7	14,5	47	47	48	115	185	190
ZS	M 10x1	M 10x1	M 10x1	M 10x1	M 10x1	M 10x1	M 10x1	M 10x1
SP	G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 1/8"

* At constant pressure and clamping force

● from stock ■ 4 - 6 weeks ▲ on request

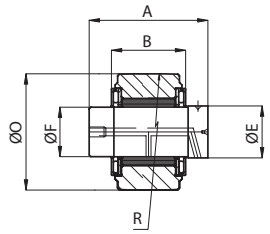
SLZ

Clamping ranges Type	SLZ 047	SLZ 08105	SLZN 1152	SLZN 1517	SLZN 40200	SLZ 325	SLZ 50315	SLZ 95360
Cylinder-Ø	C40	C50	C80	C80	C80	C100	C100	C100
Cylinder surface area cm²	12,5	19,6	50	50	50	78,5	78,5	78,5
Max. operating pressure bar	25	53	62	68	40	57	80	58
Operating pressure bar	5-20	6-30	6-40	6-44	6-25	8-42	8-58	8-40
Clamping force per roller at max. operating pressure N	830	1960	6500	6500	4160	11000	14000	10460
Max. permissible clamping force per roller N	1040	3500	10000	10000	6670	15000	20000	15000
Clamping force per roller at 20 bar N	830	1300	3230	2800	2800	5200	5200	5000
Centering accurancy over the entire clamping range mm	0,02*	0,02*	0,04*	0,04*	0,04*	0,05*	0,06*	0,06*
Repeat accurancy for the same clamping-Ø at the same operating pressure mm	0,005	0,005	0,005	0,005	0,005	0,005	0,01	0,01
Max. roller peripheral speed m/min	800	800	725	725	725	715	700	700
Max. roller peripheral speed at half the max. clamping force per roller m/min	900	950	875	875	875	860	850	850
Displacement of the geometrical workpiece center in the event of a 20-70% change in the operating pressure /at constant force) mm Compensating system on request	0,02	0,02	0,03	0,03	0,03	0,03	0,03	0,03

* At constant pressure and clamping force

Accessories SLZ

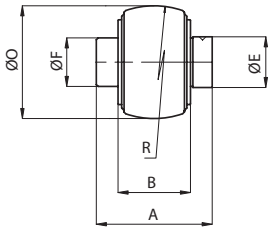
Tool group C 15
Type 576-ZR **Cylindrical rollers**



Item no.	For	A	B	Ø F	Ø O	Ø E	R
735120 ●	SLZ 047	20	11,5	6	19	6	500
1831277 ●	SLZ/SLZB 08105	31	20,5	15	35	15	500
649513 ●	SLZ/SLZB 1152, SLZ/SLZB 1517, SLZ/SLZB 40200	48	30	20	47	21	1000
649514 ●	SLZ/SLZB 325	60	40	20	52	21	3000
381420 ●	SLZ/SLZB 50315, SLZ/SLZB 95360	75	45	20,1	60	21	3000

Rollers SLZ 047 and 08105 without axle

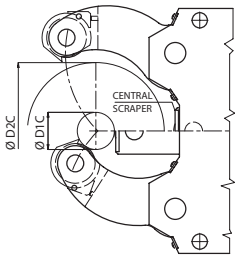
Tool group C 15
Type 576-BR **Convex rollers**



Item no.	For	A	B	Ø F	Ø O	Ø E	R
735120 ●	SLZ 047	20	11,5	6	19	6	500
649787[2] ●	SLZ/SLZB 08105	31	20,5	15	35	15	100
649780[1] ●	SLZ/SLZB 08105	31	20,5	15	35	15	100
649515 ●	SLZ/SLZB 1152, SLZ/SLZB 1517, SLZ/SLZB 40200	48	30	20	47	21	100
649516 ●	SLZ/SLZB 325	60	40	20	52	21	100
381426 ●	SLZ/SLZB 50315, SLZ/SLZB 95360	75	45	20,1	60	21	500

[1] 1x central
[2] 2x outer
SLZW on request

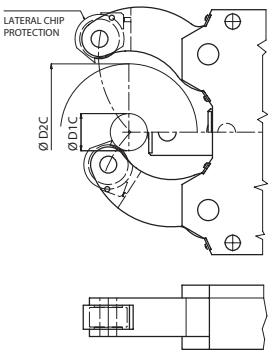
Tool group C 15
Type 576-RZ **Central scraper RZ**



Item no.	For	Clamping ranges D1C	Clamping ranges D2C
836591 ■	SLZ 047	15	62
836604 ■	SLZ/SLZB 08105	16	101
1831222 ■	SLZ/SLZB 1152	22	140
1831134 ■	SLZ/SLZB 1517, SLZ/SLZB 40200	25/40	158/195
735005 ■	SLZ/SLZB 325	40	240
836584 ■	SLZ/SLZB 50315, SLZ/SLZB 95360	50/95	305/355

Scraper RB on request

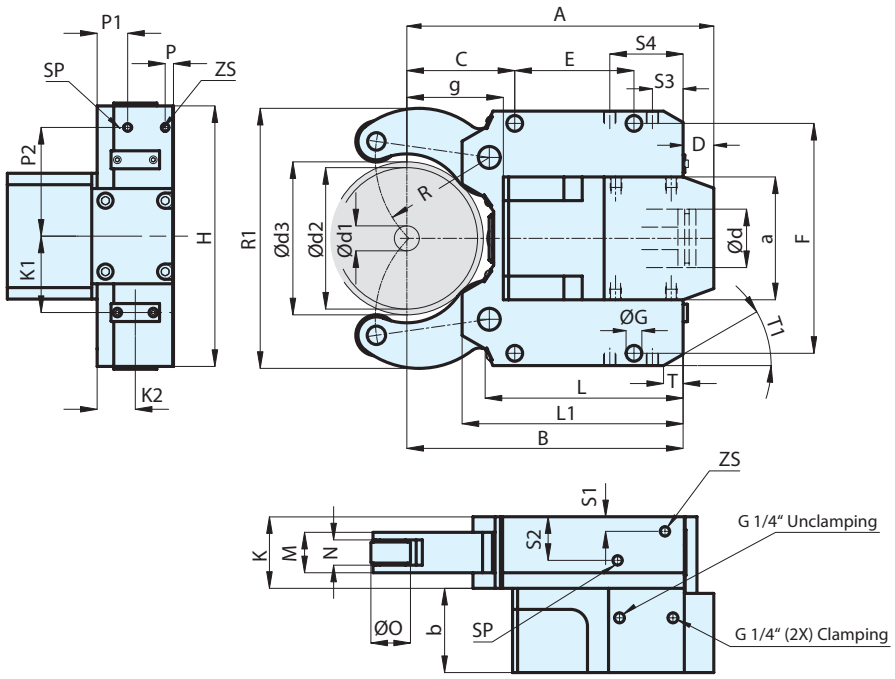
Tool group C 15
Type 576-SSA **Chip protector outer**
Set = 2 Pieces



Item no.	For	Clamping ranges D1C	Clamping ranges D2C
836609 ●	SLZ 047	15	62
836610 ●	SLZ/SLZB 08105	16	101
836611 ●	SLZ/SLZB 1152, SLZ/SLZB 1517, SLZ/SLZB 40200	22/25/40	140/158/195
836612 ●	SLZ/SLZB 325	40	240
836613 ●	SLZ/SLZB 50315, SLZ/SLZB 95360	50/95	305/355

● from stock ■ 4 - 6 weeks ▲ on request

SLZB with side mounted cylinder



Tool group C 15
Type 576 Self-centering steady rests **SLZB**
oil or air operated
With **side mounted cylinder**

Clamping ranges Type	SLZB 08105	SLZNB 1152	SLZNB 1517	SLZNB 40200	SLZB 325	SLZB 50315	SLZB 95360
Clamping range - with chip protection	16-101	22-140	25-158	40-195	40-240	50-305	95-355
Clamping range - without chip protection	8-105	11-152	15-170	40-200	35-250	50-315	95-360
Max. radial clamping range - d3	105	161	170	200	250	315	360
With chip protectors RZ	**685792** ■	**1685543** ■	**1685547** ■	**1685551** ■	**685744** ■	**685740** ■	**1685612** ■
With chip protectors RB	**685793** ■	**1685544** ■	**1685548** ■	**1685552** ■	**685743** ■	**685739** ■	**1685613** ■
Without chip protectors RZ	**685794** ■	**1685545** ■	**1685549** ■	**1685553** ■	**685742** ■	**685738** ■	**1685614** ■
Without chip protectors RB	**685795** ■	**1685546** ■	**1685550** ■	**1685554** ■	**685741** ■	**685737** ■	**1685615** ■
d_1	8	11	15	40	35	50	95
d_2	105	152	170	200	250	315	360
d_3	105	161	170	200	250	315	360
A	228	341	349	368	489	566,5	598
B	197	306	314	333	451	521,5	553
C	70	115	123	138	146	203	234,5
D	31	35	35	35	38	45	45
E	85	135	135	135	240	270	270
F	170	262	262	262	365	400	400
G	14	18	18	18	23	23	23
H	190	290	290	280	400	440	440
K	58	85	85	85	110	145	145
L	143	223	223	223	331,5	361	361
L1	164	251	251	251	364	406	406
Clamping arm width M	31	48	48	48	60	75	75
Roller width N	20,5/19	30/25	30/25	30/25	40/35	45/40	45/40
O	35	47	47	47	52	60	60
P	-	9,5	9,5	9,5	13	21,5	21,5
P1	-	34	34	34	12,5	12,5	12,5
P2	-	117,5	117,5	117,5	160	160/175	160/175
R	74,5	122	130	143,5	183	209	242
S1	9,5	-	-	-	-	-	-
S2	33	-	-	-	-	-	-
S3	28	-	-	-	-	-	-
S4	28	-	-	-	-	-	-
K1	61,5	85	85	85	98	150	141
K2	30	42,5	42,5	42,5	55	59,5	59,5
a	95	140	140	140	180/136	180/136	180/136
b	53	100	100	100	106/119	101/114	101/114
d	50	80	80	80	100	100	100
g	69	102	110	135	180	182,5	214
T	-	-	-	-	45	31,5	31,5
T1	-	-	-	-	30°	30°	30°
R1	190	281	305	326	394	483	534
Weight kg	14,5	51	51	52	134	194	199
ZS	M 10x1	M 10x1	M 10x1	M 10x1	M 10x1	M 10x1	M 10x1
SP	G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 1/8"

* At constant pressure and clamping force

● from stock ■ 4 - 6 weeks ▲ on request

SLZB

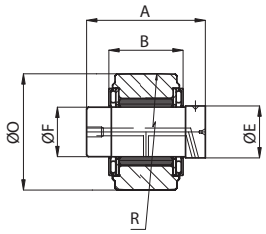
Clamping ranges Type	SLZB 08105	SLZNB 1152	SLZNB 1517	SLZNB 40200	SLZB 325	SLZB 50315	SLZB 95360
Cylinder-Ø	C50	C80	C80	C80	C100	C100	C100
Cylinder surface area cm^2	19,6	50	50	50	78,5	78,5	78,5
Max. operating pressure bar	53	62	68	40	57	80	58
Operating pressure bar	8-30	8-40	8-44	8-25	8-42	8-58	4-40
Clamping force per roller at max. operating pressure N	1960	6500	6500	4160	11000	1400	10460
Max. permissible clamping force per roller N	3500	10000	10000	6670	15000	2000	15000
Clamping force per roller at 20 bar N	1300	3230	2800	2800	5200	5200	5000
Centering accurancy over the entire clamping range mm	0,02*	0,04*	0,04*	0,04*	0,05*	0,06*	0,06*
Repeat accurancy for the same clamping-Ø at the same operating pressure mm	0,005	0,005	0,005	0,005	0,005	0,01	0,01
Max. roller peripheral speed m/min	800	725	725	725	715	700	700
Max. roller peripheral speed at half the max. clamping force per roller m/min	950	875	875	875	860	850	850
Displacement of the geometrical workpiece center in the event of a 20-70% change in the operating pressure /at constant force) mm Compensating system on request	0,02	0,03	0,03	0,03	0,03	0,03	0,03

* At constant pressure and clamping force

● from stock ■ 4 - 6 weeks ▲ on request

Accessories SLZB

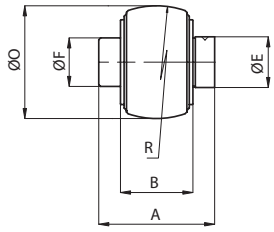
Tool group C 15
Type 576-ZR **Cylindrical rollers**



Item no.	For	A	B	Ø F	Ø O	Ø E	R
1831277 ●	SLZ/SLZB 08105	31	20,5	15	35	15	500
649513 ●	SLZ/SLZB 1152, SLZ/SLZB 1517, SLZ/SLZB 40200	48	30	20	47	21	1000
649514 ●	SLZ/SLZB 325	60	40	20	52	21	3000
381420 ●	SLZ/SLZB 50315, SLZ/SLZB 95360	75	45	20,1	60	21	3000

Rollers SLZ 047 and 08105 without axle

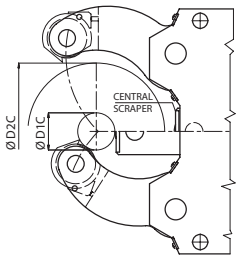
Tool group C 15
Type 576-BR **Convex rollers**



Item no.	For	A	B	Ø F	Ø O	Ø E	R
649787[2] ●	SLZ/SLZB 08105	31	20,5	15	35	15	100
649780[1] ●	SLZ/SLZB 08105	31	20,5	15	35	15	100
649515 ●	SLZ/SLZB 1152, SLZ/SLZB 1517, SLZ/SLZB 40200	48	30	20	47	21	100
649516 ●	SLZ/SLZB 325	60	40	20	52	21	100
381426 ●	SLZ/SLZB 50315, SLZ/SLZB 95360	75	45	20,1	60	21	500

[1] 1x central
[2] 2x outer
SLZW on request

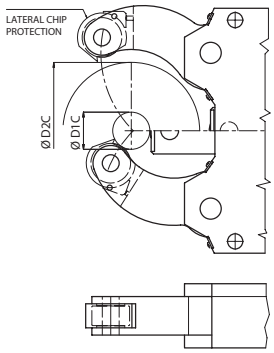
Tool group C 15
Type 576-RZ **Central scraper RZ**



Item no.	For	Clamping ranges D1C	Clamping ranges D2C
836604 ■	SLZ/SLZB 08105	16	101
1831222 ■	SLZ/SLZB 1152	22	140
1831134 ■	SLZ/SLZB 1517, SLZ/SLZB 40200	25/40	158/195
735005 ■	SLZ/SLZB 325	40	240
836584 ■	SLZ/SLZB 50315, SLZ/SLZB 95360	50/95	305/355

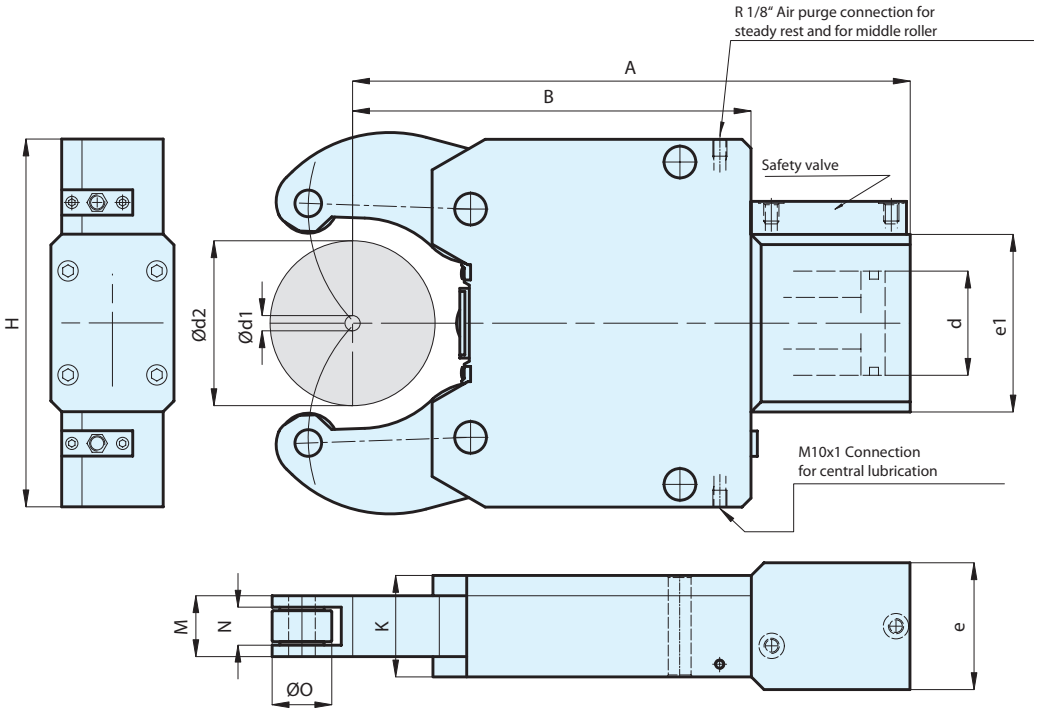
Scraper RB on request

Tool group C 15
Type 576-SSA **Chip protector outer**
Set = 2 Pieces



Item no.	For	Clamping ranges D1C	Clamping ranges D2C
836610 ●	SLZ/SLZB 08105	16	101
836611 ●	SLZ/SLZB 1152, SLZ/SLZB 1517, SLZ/SLZB 40200	22/25/40	140/158/195
836612 ●	SLZ/SLZB 325	40	240
836613 ●	SLZ/SLZB 50315, SLZ/SLZB 95360	50/95	305/355

SLZ heavy design



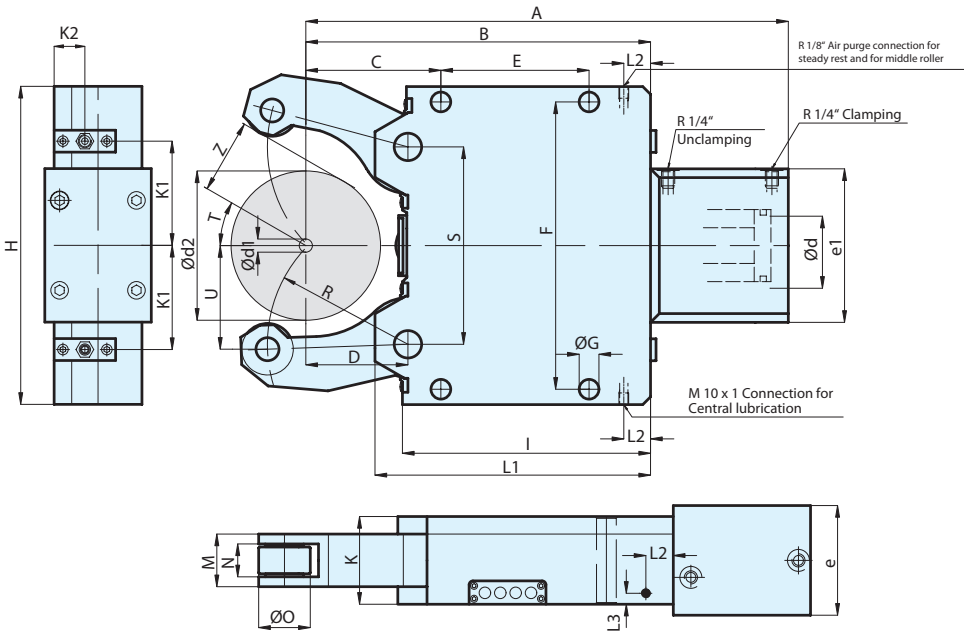
Tool group C 15
Type 576 Self-centering steady rests **SLZ**
heavy design
oil or air operated
Heavy design for high loads

Clamping ranges Type	SLZ 437	SLZ 5040	SLZ 1546	SLZ 1060	SLZ 3580
Clamping range - with chip protection	75-350	75-380	150-430	100-590	350-770
Clamping range - without chip protection	40-375	50-400	150-460	100-600	350-800
With chip protectors RZ	**685899** ■	**1685722** ■	**685897** ■	**685896** ■	**685895** ■
With chip protectors RB	**685894** ■	**685893** ■	**685892** ■	**685891** ■	**685890** ■
Without chip protectors RZ	**685889** ■	**685888** ■	**685887** ■	**685886** ■	**685885** ■
Without chip protectors RB	**685884** ■	**685883** ■	**685882** ■	**685881** ■	**685880** ■
d_1	40	50	150	100	350
d_2	370	400	460	600	800
A	1086	1100	1110	1465	1810
B	762	800	800	1105	1340
H	730	730	730	1020	1270
K	170	170	170	270	440
Clamping arm width M	90	90	90	170	240
Roller width N	60/50	60/50	60/50	104/95	150/138
O	80	80	80	160	220
d	120	120	120	150	180
e	150	150	150	260	370
e_1	240	240	240	280	320
Weight kg	490	500	570	2000	4000
Cylinder-Ø	C120	C120	C120	C150	C180
Cylinder surface area cm^2	113	113	113	176	254
Max. operating pressure bar	100	100	85	90	98
Operating pressure bar	10-40	10-40	10-40	10-40	10-40
Clamping force per roller at max. operating pressure N	15000	15000	15000	23000	32000
Max. permissible clamping force per roller N	35000	35000	40000	50000	80000
Centering accurancy over the entire clamping range mm	0,04*	0,04*	0,04*	0,04*	0,06*
Repeat accurancy for the same clamping-Ø at the same operating pressure mm	0,01	0,01	0,01	0,01	0,01
Max. roller peripheral speed m/min	725	725	725	725	715
Max. roller peripheral speed at half the max. clamping force per roller m/min	875	875	875	875	860
Displacement of the geometrical workpiece center in the event of a 20-70% change in the operating pressure /at constant force) mm Compensating system on request	0,06	0,06	0,06	0,06	0,06

* At constant pressure and clamping force

● from stock ■ 4 - 6 weeks ▲ on request

SLZW one arm with extra opening



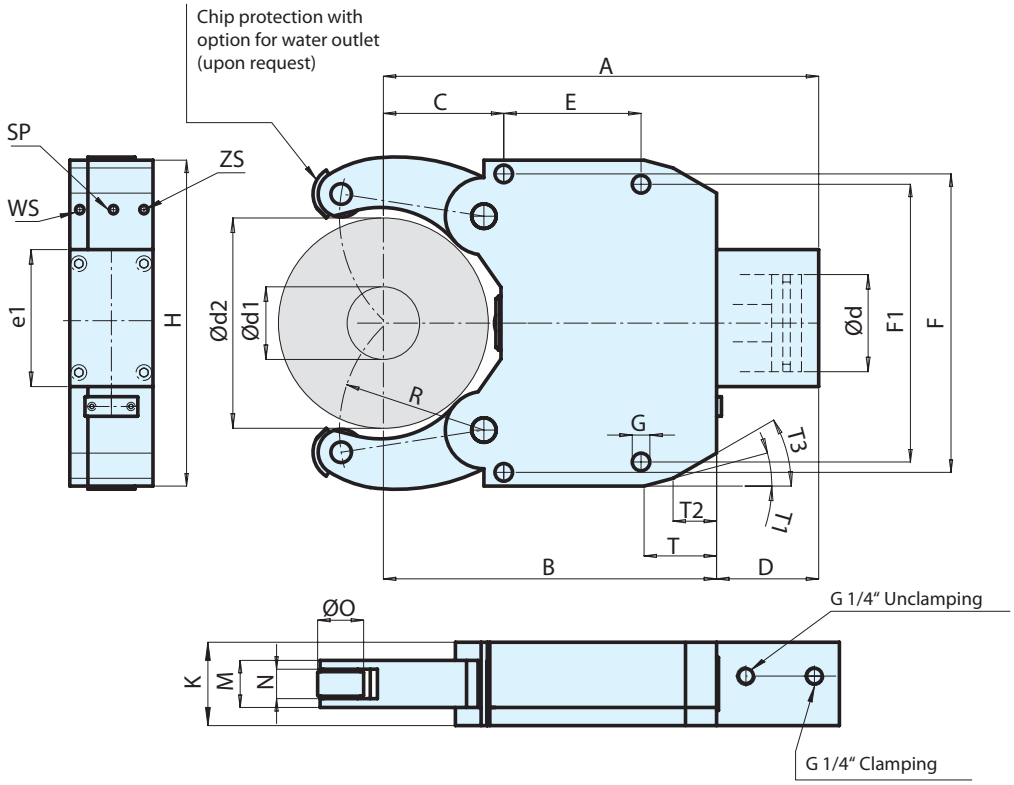
Tool group C 15
Type 576 Self-centering steady rests **SLZW**
oil or air operated
One arm extra opening

Clamping ranges Type	SLZW 445	SLZW 890	SLZW 12150	SLZW 35220	SLZW 50270
Clamping range - without chip protection	4-50	8-90	12-150	35-220	50-270
With chip protectors RZ	**685555** ■	**1685658** ■	**685917** ■	**685916** ■	**685915** ■
With chip protectors RB	**685914** ■	**1685659** ■	**685912** ■	**685911** ■	**685910** ■
Without chip protectors RZ	**685696** ■	**1685660** ■	**685907** ■	**685906** ■	**685905** ■
Without chip protectors RB	**685904** ■	**1685661** ■	**685902** ■	**685901** ■	**685900** ■
d_1	4	8	12	35	50
d_2	50	90	150	220	270
A	206	297	439,5	628	726
B	137	197	314	451	545
C	51	70	123	146	203
D	33	52,5	93	124,5	156
E	64	85	135	240	270
F	118	170	262	365	400
G	11	14	18	23	23
H	132	190	290	400	446
I	104	150	221	329,5	390
K	45	55	80	110	145
L1	119	164	251	364	433
Clamping arm width M	20	31	48	60	75
Roller width N	11,5/9	17,5/14	30/25	40/35	45/40
O	19	30	47	52	60
Z	25	45	75	110	135
U	36,5	62	103,5	143,5	168
T	30°	30°	30°	30°	30°
R	47,5	74,3	128	178	223,5
S	74	111	180	256	310
K1	-	61	85	130	150
K2	-	27	28,5	55	67,5
d	40	50	80	100	100
e	60	68	98	116,5	139
e_1	87	92	140	186	156
L2	40	26	28	21	30
L3	11	14,5	9	50	17,5
Weight kg	6	14,5	50	130	190
Cylinder-Ø	C40	C50	C80	C100	C100
Cylinder surface area cm^2	12,5	19,6	50	78,5	78,5
Max. operating pressure bar	22	45	60	50	70
Operating pressure bar	6-18	8-30	8-40	8-38	8-50
Clamping force per roller at max. operating pressure N	750	1960	6000	9950	12000
Max. permissible clamping force per roller N	900	2900	9400	11000	16000
Clamping force per roller at 20 bar N	83	130	2900	4800	4800
Centering accurancy over the entire clamping range mm	0,02*	0,02*	0,04*	0,05*	0,07*
Repeat accurancy for the same clamping-Ø at the same operating pressure mm	0,005	0,005	0,005	0,005	0,01
Max. roller peripheral speed m/min	800	800	725	715	700
Max. roller peripheral speed at half the max. clamping force per roller m/min	900	950	875	860	850

* At constant pressure and clamping force

● from stock ■ 4 - 6 weeks ▲ on request

SLZC extremely compact design



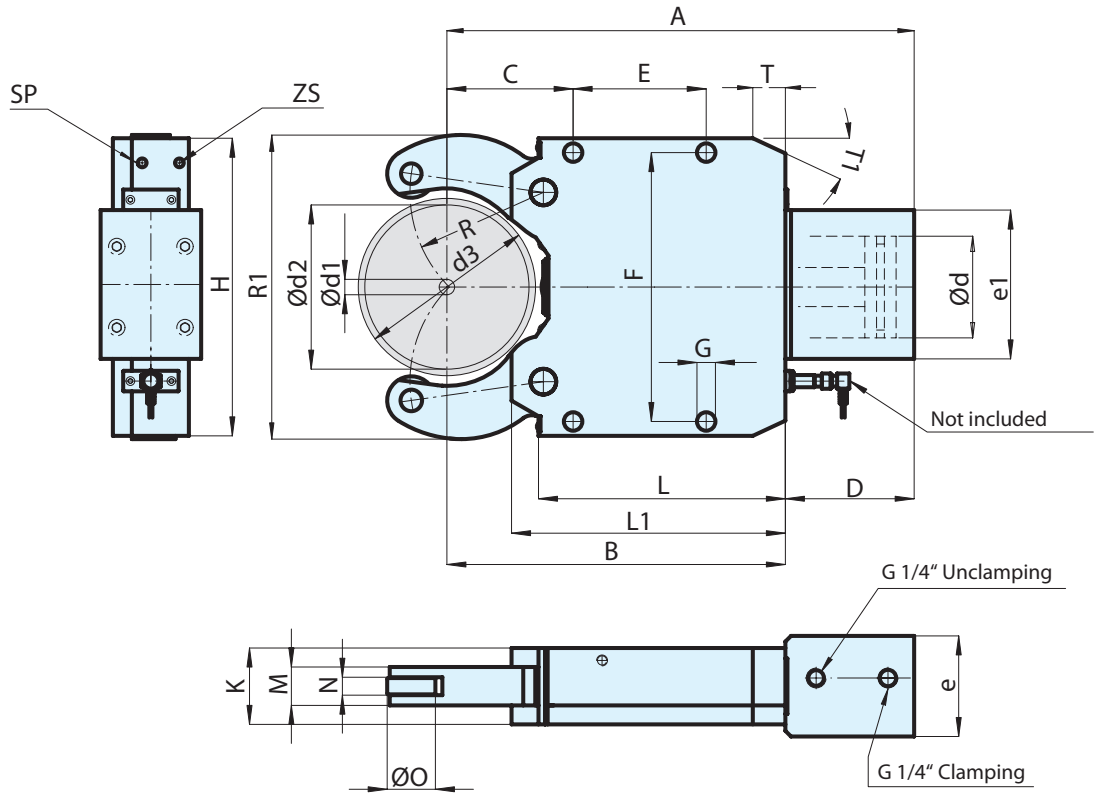
Tool group C 15
Type 576 Self-centering steady rests **SLZC** - **oil or air operated**
Extremely compact design, developed for **minimum mounting dimensions**

Clamping ranges Type	SLZC 60280	SLZC 80390	SLZC 100410	SLZC 135460	SLZC 215510
Clamping range - without chip protection	60-280	80-390	100-410	135-460	215-520
With chip protectors RZ	**1685616** ■	**1685620** ■	**1685624** ■	**1685628** ■	**1685632** ■
With chip protectors RB	**1685617** ■	**1685621** ■	**1685625** ■	**1685629** ■	**1685633** ■
Without chip protectors RZ	**1685618** ■	**1685622** ■	**1685626** ■	**1685630** ■	**1685634** ■
Without chip protectors RB	**1685619** ■	**1685623** ■	**1685627** ■	**1685631** ■	**1685635** ■
d_1	60	80	100	135	215
d_2	280	390	410	460	520
A	580	755	763	816	817
B	450	607	617	670	685
C	168	230	240	215	245
D	130	148	146	146	132
E	180	240	240	330	300
F	360	445	445	640	640
F1	360	445	445	610	610
G	23	23	23	27	27
H	400	485	485	680	680
K	125	150	150	150	150
Clamping arm width M	60	75	75	75	75
Roller width N	40/35	45/40	45/40	29	29
O	52	60	60	80	80
R	200	265	275	290	310
d	90	100	100	120	120
e_1	184	194	194	215	215
T	100	130	130	150	150
T1	15°	15°	15°	15°	20°
T2	61	50	50	77	85
T3	30°	30°	30°	30°	30°
Weight kg	85	170	170	390	380
ZS	G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 1/8"
SP	G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 1/8"
WS	G 1/4"	G 1/4"	G 1/4"	G 1/4"	G 1/4"
Operating pressure bar	8-70	8-80	8-80	8-80	8-80
Max. permissible clamping force per roller N	14500	20000	20000	25000	25000
Centering accurancy over the entire clamping range mm	0,05*	0,06*	0,06*	0,06*	0,06*
Repeat accurancy mm	0,007*	0,01*	0,01*	0,01*	0,01*
Max. roller peripheral speed m/min	715	700	700	700	700

* At constant pressure and clamping force
Water connection (WS) on request

● from stock ■ 4 - 6 weeks ▲ on request

SLZK with slim clamping arms



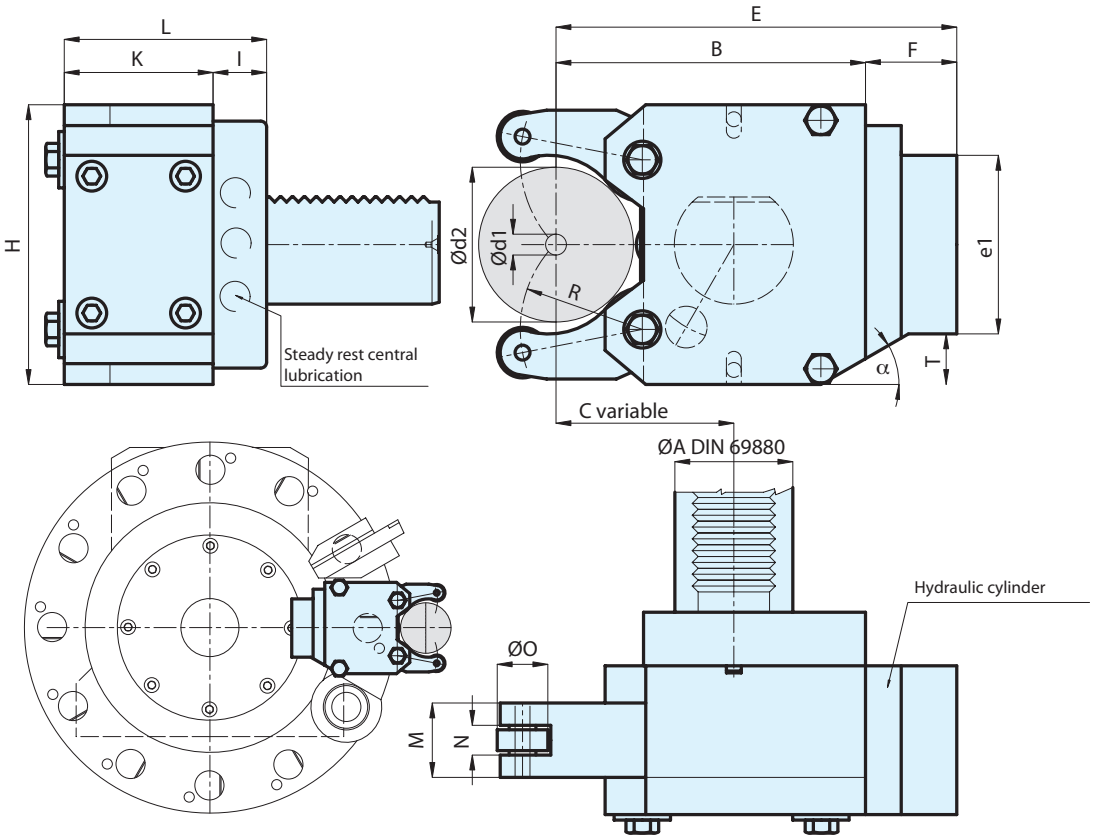
Tool group C 15
Type 576 Self-centering steady rests **SLZK**
oil or air operated
With **slim clamping arms**, developed for a machining crankshafts

Clamping ranges Type	SLZK 08101-15	SLZK 08101-19	SLZK 08101-22	SLZK 40200-18	SLZK 40200-22	SLZK 325-19	SLZK 325-22	SLZK 325-29
Clamping range - with chip protection	16-101	16-101	16-101	30-185	30-185	35-248	35-248	35-248
Clamping range - without chip protection	8-105	8-105	8-105	30-185	30-185	35-250	35-250	35-250
With chip protectors RZ	**1685636** ■	**1685638** ■	**1685640** ■	**1685642** ■	**1685644** ■	**1685646** ■	**1685648** ■	**1685650** ■
Without chip protectors RB	**1685637** ■	**1685639** ■	**1685641** ■	**1685643** ■	**1685645** ■	**1685647** ■	**1685649** ■	**1685651** ■
d_1	8	8	8	30	30	35	35	35
d_2	105	105	105	185	185	250	250	250
d_3	106	106	106	190	190	254	254	254
Max. Ø opening range d4sw	113	113	113	200	200	263	263	263
A	279,5	279,5	279,5	458,5	458,5	617,5	617,5	617,5
B	197	197	197	333	333	451	451	451
C	70	70	70	138	138	146	146	146
D	82,5	82,5	82,5	125,5	125,5	166,5	166,5	166,5
E	85	85	85	135	135	240	240	240
F	170	170	170	262	262	365	365	365
G	14	14	14	18	18	23	23	23
H	190	190	190	290	290	400	400	400
K	50	50	50	85	85	110	110	110
L	143	143	143	223	223	331,5	331,5	331,5
L1	164	164	164	251	251	364	364	364
Clamping arm width M	15	18	22	18	22	19	22	29
Roller width N	8	10	13	11	13	11	13	16
O	35	35	35	47	47	52	52	52
R	74,5	74,5	74,5	143,5	143,5	183	183	183
d	50	50	50	60	60	60	60	60
e	68	68	68	98	98	124	124	124
e_1	92	92	92	145	145	156	156	156
T	-	-	-	-	-	45	45	45
T1	-	-	-	-	-	30°	30°	30°
R1	190	190	190	320	320	394	394	394
Weight kg	11,5	11,5	11,5	40	40	80	80	80
ZS	G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 1/8"
SP	G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 1/8"	G 1/8"
Operating pressure bar	8-32	8-40	8-50	8-60	8-75	8-70	8-80	8-80
Max. permissible clamping force per roller N	2100	2700	3350	5600	7000	6600	7500	7500
Centering accurancy over the entire clamping range mm	0,03*	0,03*	0,03*	0,05*	0,05*	0,06*	0,06*	0,06*
Repeat accurancy mm	0,007*	0,007*	0,007*	0,007*	0,007*	0,01*	0,01*	0,01*
Max. roller peripheral speed m/min	750	750	750	715	715	700	700	700
Clamping force per roller at max. operating pressure N	210	270	335	560	700	660	750	750
Max. operating pressure bar	32	40	50	60	75	70	80	80

* At constant pressure and clamping force

● from stock ■ 4 - 6 weeks ▲ on request

SLZR shaft in accordance to DIN 69880



Tool group C 15
Type 576 Self-centering steady rests **SLZR oil or air operated**
With shafts in accordance with **DIN 69880**, for **CNC turning machines with 4 axes**

Clamping ranges Type	SLZR 0432 M	SLZR 0752 M	SLZR 0865 M
Clamping range - with chip protection	4-32	7-52	8-65
Clamping range - without chip protection	4-32	7-52	8-65
With chip protectors RZ	**1685662** ■	**685879** ■	**685878** ■
With chip protectors RB	**1685663** ■	**685877** ■	**685876** ■
Without chip protectors RZ	**1685664** ■	**685875** ■	**685874** ■
Without chip protectors RB	**1685665** ■	**685873** ■	**685872** ■
d_1	4	7	8
d_2	32	52	65
Ø A	20-30-40-50	30-40-50	30-40-50
B	86	104	112
E	117	138	146
H	80	94	105
I	18	23	23
K	36	50	50
L	54	73	73
Clamping arm width M	15	25	25
Roller width N	9	9	12
O	19	19	19
R	32	40	48
e_1	54	60	60
T	-	-	23
α	-	-	30°
Weight kg	2,1	3,5	3,5
central lubrication	in adaptor plate	in steady rest	in steady rest
Cylinder-Ø	30	32	32
Operating pressure bar	8-28	8-28	8-28
Max. working pressure bar	35	35	35
Max. permissible clamping force per roller N	950	950	1000
Centering accurancy over the entire clamping range mm	0,02*	0,02*	0,02*
Repeat accurancy for the same clamping-Ø at the same operating pressure mm	0,005	0,005	0,005
Max. roller peripheral speed m/min	950	950	950

* At constant pressure and clamping force

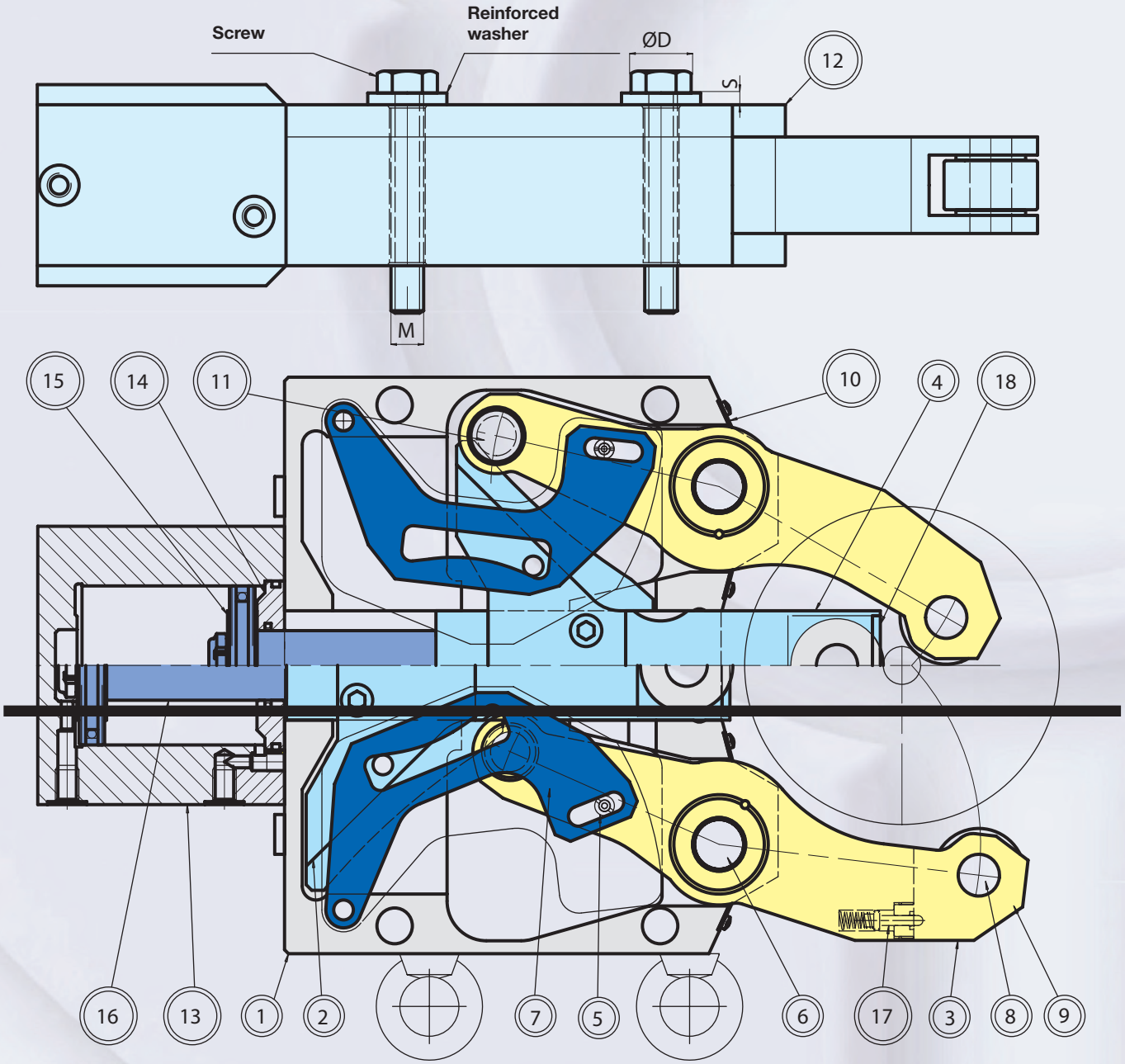
● from stock ■ 4 - 6 weeks ▲ on request

Construction principle SLZ / SLZB

All steady rests have an engraved identification number. This number must be provided when ordering replacement parts.

Components SLZ/SLZB

1. Body
2. Cam segment
3. Clamping arm outside
4. Clamping arm center
5. Bolt and roller
6. Clamping arm arbor
7. Return lever
8. Roller center
9. Roller
10. Scraper band
11. Axle and rollers
12. Cover
13. Cylinder housing
14. Cylinder flange
15. Piston
16. Piston rod
17. Pressure sleeve
18. Scraper center

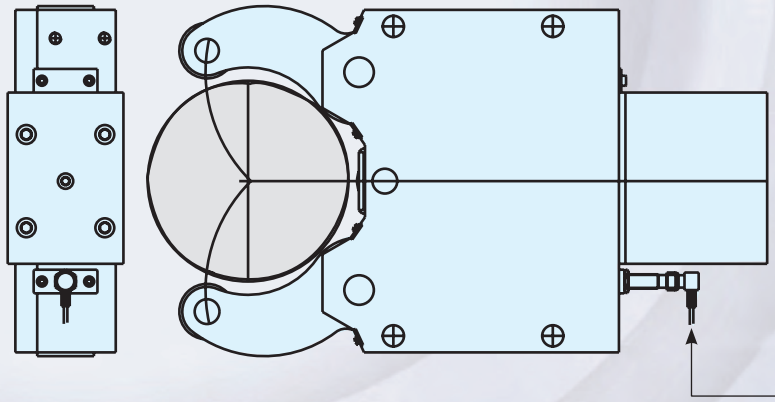


Type	SLZ 047	SLZ/SLZB 08105	SLZ/SLZB 1152	SLZ/SLZB 1517	SLZ/SLZB 40200	SLZ/SLZB 325	SLZ/SLZB 50315	SLZ/SLZB 95360
Screw M	M 10	M 12	M 16	M 16	M 16	M 20	M 20	M 20
Screw torque daN/m	4	7	12	12	12	19	21	21
Washer thickness S	4	4	4	4	4	5	5	5
Outer diameter of washer D	25	26	34	34	34	48	48	48

Accessories SLZ series

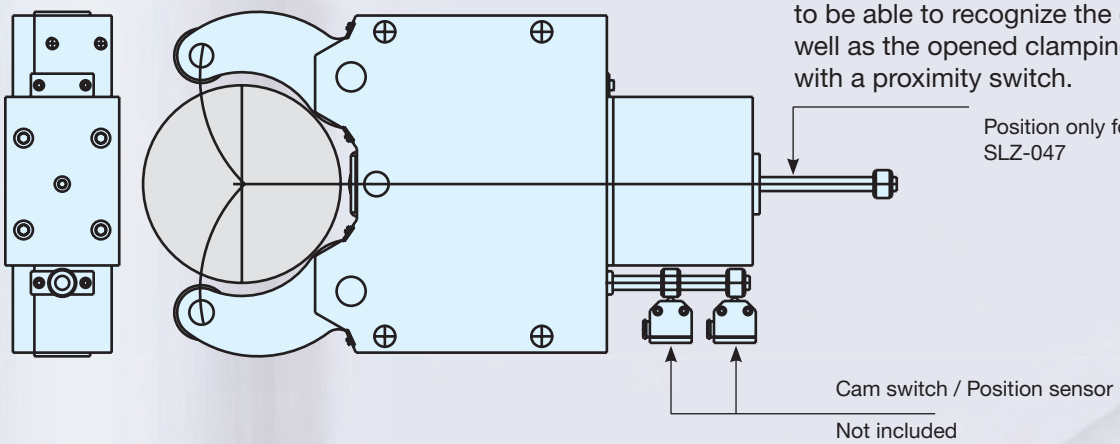
ZS	=	Central lubrication of the steady rest
SE	=	Cylinder with safety valve
HN	=	Control via proximity switch (not included in delivery) steady rest in open position
SS	=	Chip protection outer arms
RZ	=	Cylindrical rollers
RB	=	Convex rollers
HK	=	Stroke monitoring rod
HK-IP5	=	Stroke monitoring with 2 proximity switches (opening and closing) with seal housing IP552 (proximity switches not included in delivery)
MS	=	Manual lubrication, grease/oil
RAB	=	Manual regulation of the opening of the clamping arms

Clamping arm control system SLZ-HN



There is the option of attaching a sensor (proximity switch) to the steady rests as standard, which measures the position of the opened steady rest. This option is not available for the steady rest of Type SLZ-047.
The proximity switch is not included in the delivery of the steady rest.

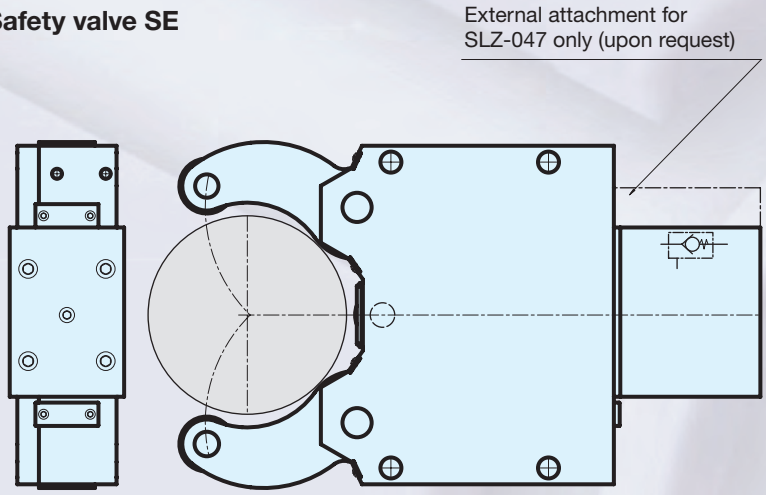
Control system of the clamping arms SLZ-HK



All steady rests of Type SLZ, SLZB, and SLZW can be equipped with holders and rods, or rod only, in order to be able to recognize the closed as well as the opened clamping arms with a proximity switch.

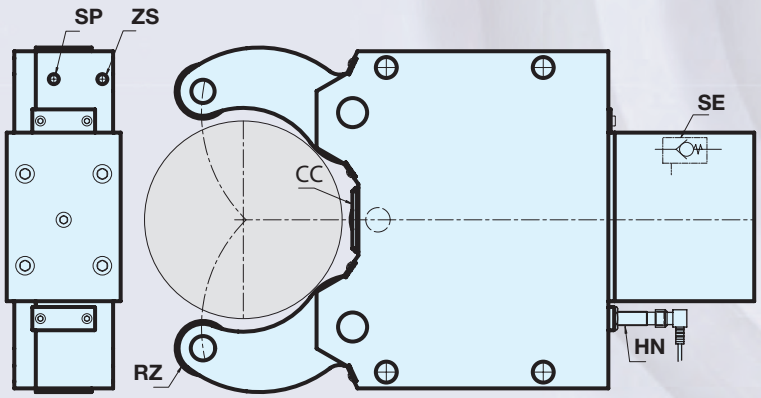
Accessories SLZ series

Safety valve SE



All standard steady rests come equipped with a safety valve integrated in the cylinder. If the clamping pressure in the cylinder should be interrupted, the valve prevents the steady rest from opening. With following applications, the safety valve isn‘t necessary.
This device is available as an option for the SLZ-047 series.

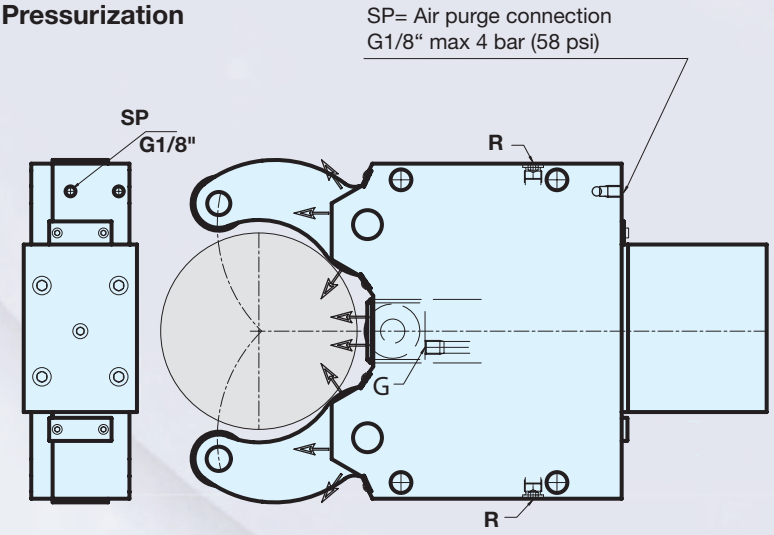
Standard configuration



The standard steady rest is configured as follows:

– Cylindrical rollers
– Pressurization
– Central lubrication
– Axially extended cylinder with safety valve (except SLZ-047)
– Proximity switch component (open steady rest) HN
– Device for manual lubrication via grease cup or oiler

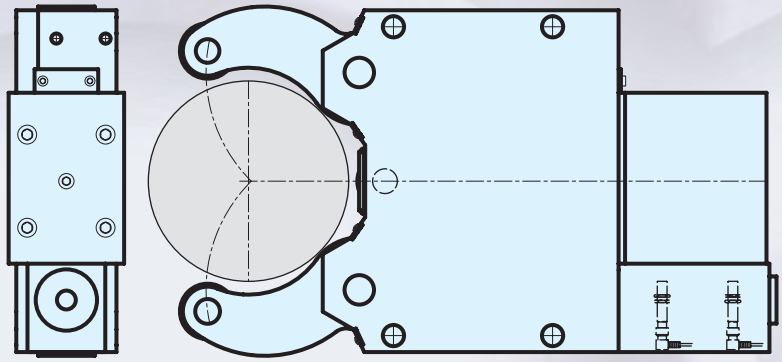
Pressurization



All RÖHM steady rests have a G 1/8“ air purge connection. This system protects the body of the steady rest from chip and dust penetration. When the steady rest is completely open, the air consumption is automatically reduced, but not completely interrupted to prevent unnecessary air consumption. The system includes the cleaning of the middle roller bearings. To activate this option, the screw „G“, which is located in bottom of the housing, must be removed. The pressure may differ between a minimum of 2 bar and a maximum of 4 bar (58 psi). The steady rest can also be used without the air purge. Drain holes are on the top and bottom part of the steady rest housing. It is recommended that the lower of the two seals is released to allow the coolant to drain and to prevent penetration of contaminants into the body of the steady rest.

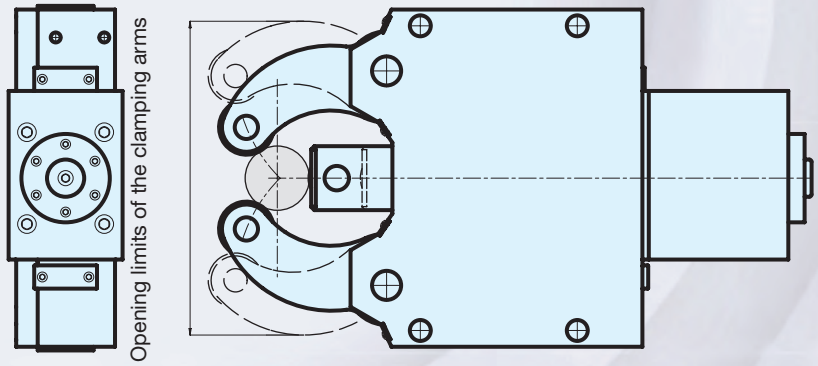
Accessories SLZ series

Control system of the clamping arms HK-IP5



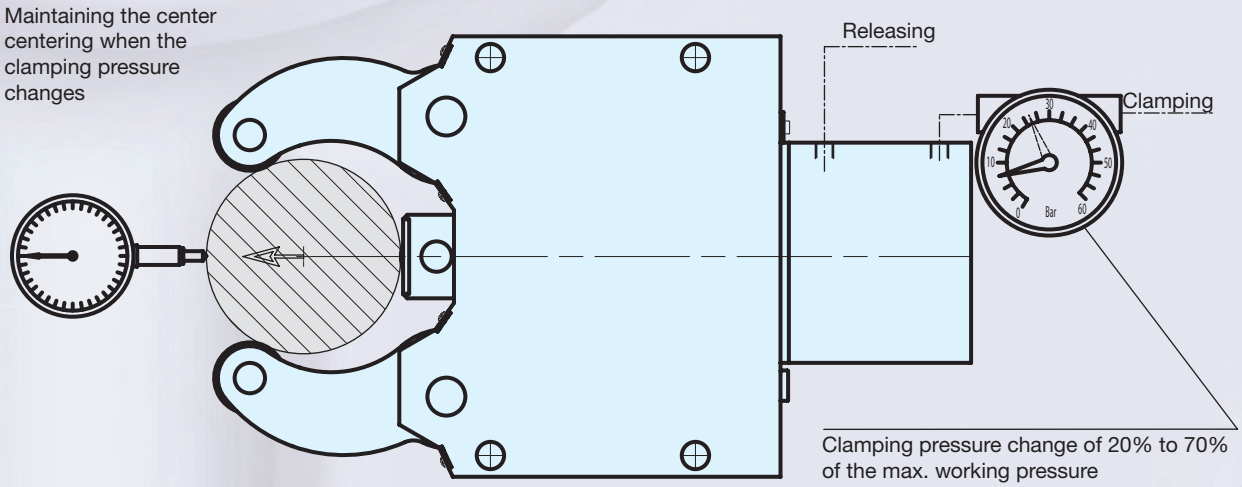
This system allows the position of the clamping arms (open/closed on the workpiece) to be controlled via two proximity switches with O-ring seals (IP552), located in the housing.
The proximity switch, which signals the closing of the steady rest during changing and the clamping diameter, is set with an external screw. The proximity switch and the bore must be considered by the customer.

Regulation of the clamping arm opening system



Sometimes the opening of the clamping arms must be limited, e.g. to set the supporting roller diameter with the steady rest open or to limit the dimensions of the lateral clamping arms or to reduce the opening and closing times of the steady rest. Here, the „RAB“ cylinder (regulation of the clamping arm opening) can be used. The device limits the cylinder stroke to 75 % of the total stroke. Regulation is done manually. This device can be used with the steady rests of the SLZ and SLZB series. The device does not reduce the clamping range of the steady rest.

Compensation rod (on request)



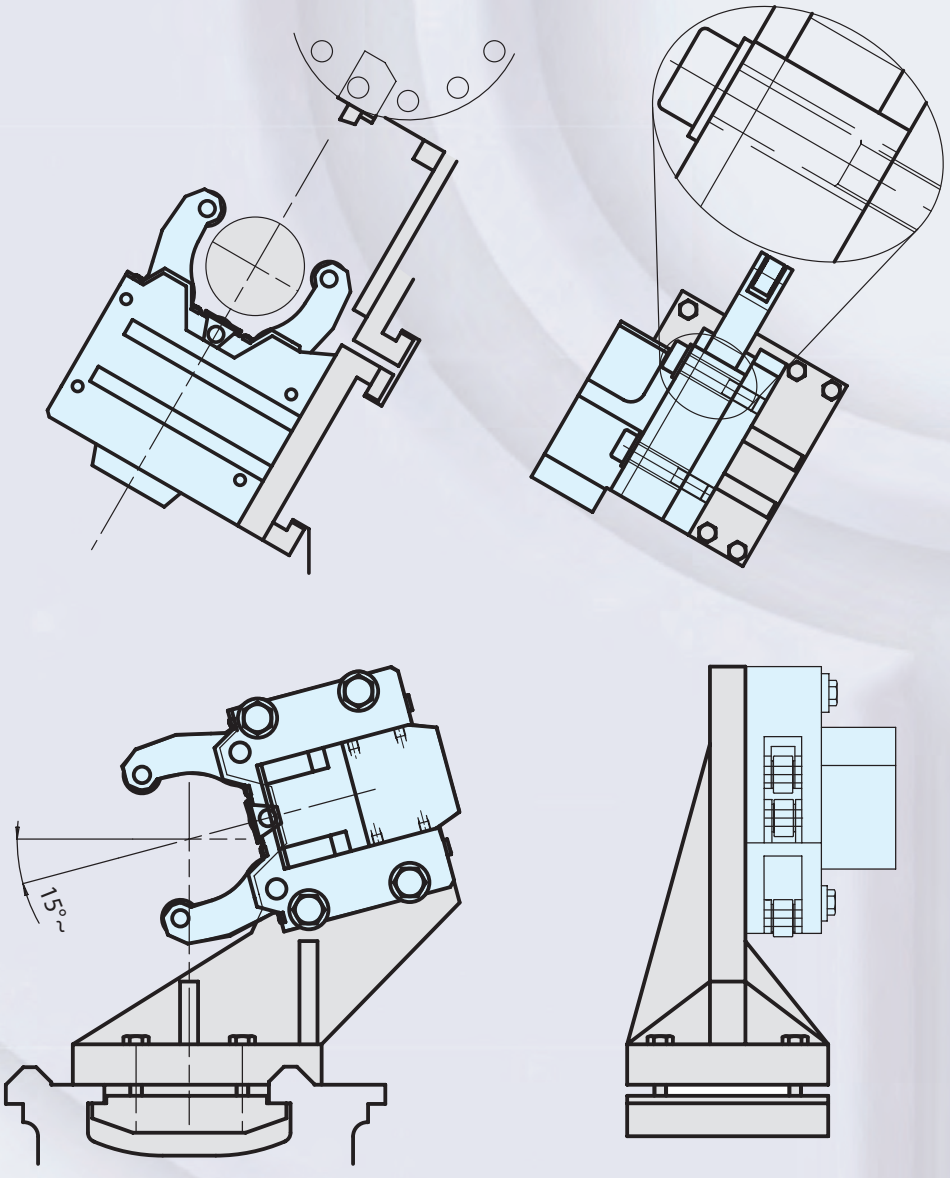
The steady rest is centered via operating pressure which is selected depending on the work to be done. The center of the workpiece is shifted according to the increasing/decreasing cylinder pressure, depending on the working conditions. The shifting of the workpiece center due to a pressure change is be reduced by the patented system. See the table „Characteristicsof the steady rest series SLZ, SLZB and the SLZ heavy series.

Brackets for steady rests SLZ / SLZB

Precise steady rest function also depends on its stable and secure fastening to the lathe. The steady rest bracket must be made with corrugated, welded plates and meet the design standards.
The bracket design of the steady rest depends on the Typee of steady rest and the application:

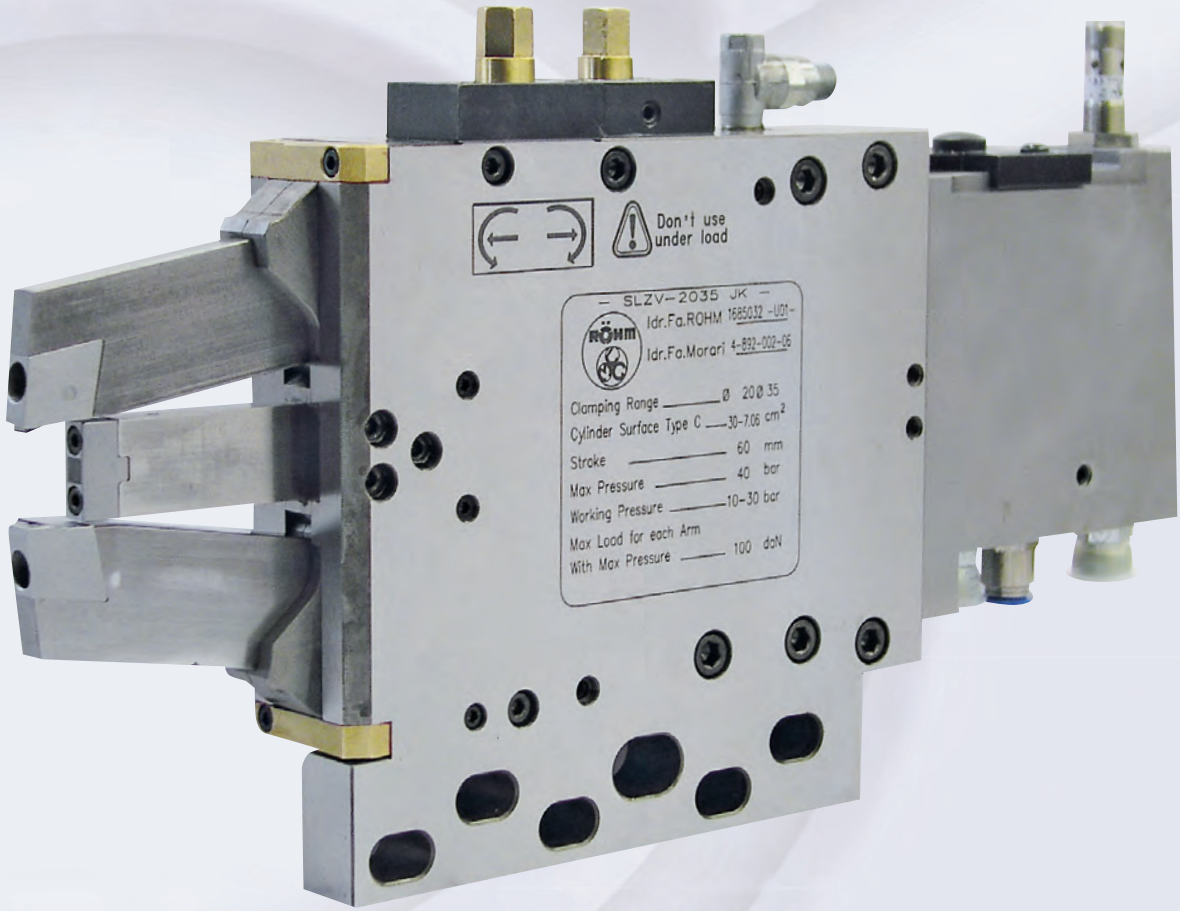
- Space available
- Height of the turning center
- How the steady rest is used (fixed or following)
- Position angle of the steady rest in relation to the dimensions of the tools.

The mounting surface of the steady rest bracket must be absolutely flat in order not to distort the steady rest when fastening. The steady rest must be exactly centered along the X and Y axes of the lathe.
Max. deviation 0.01 mm.



Technical features / Application ranges SLZV

With retractable arms



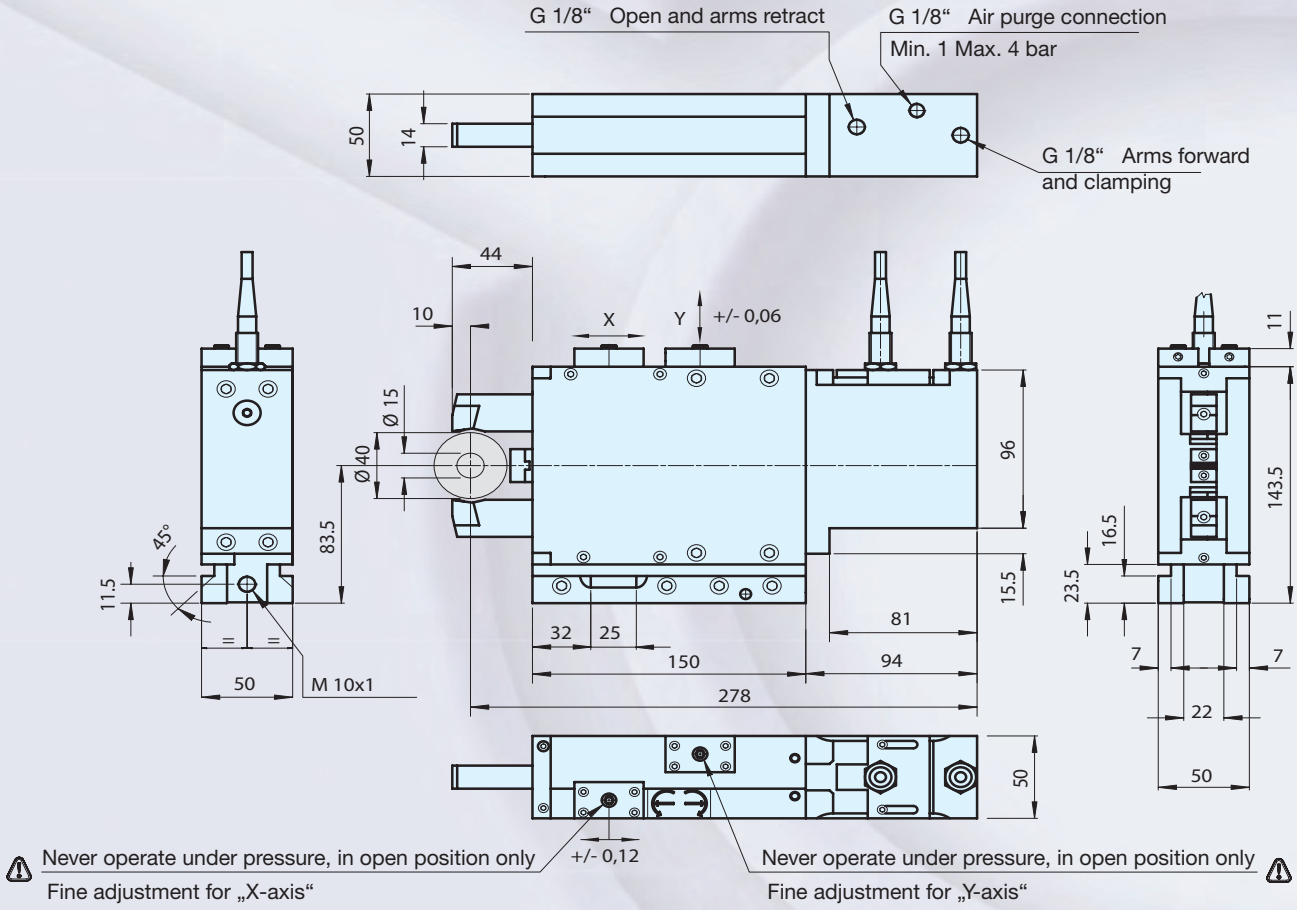
The main feature of the SLZV steady rest is that they can retract the arms inside the body, leaving the working area free and allowing, in this way, the loading of the pieces by automatic systems.

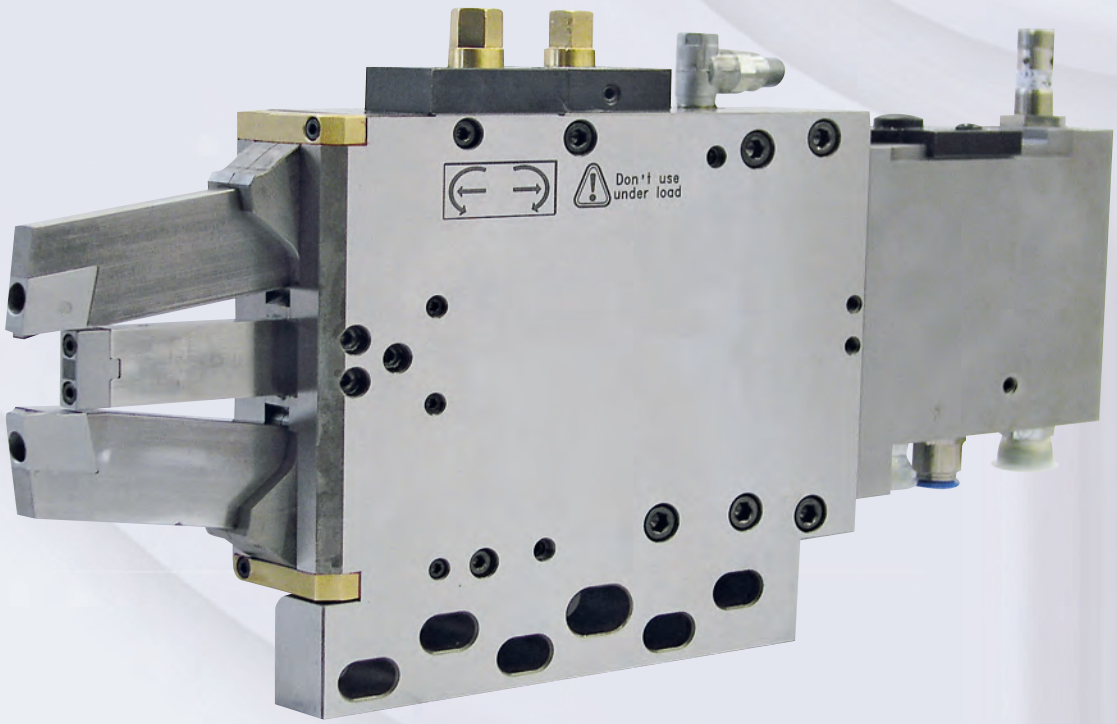
The minimum sizes, the high positioning and repeatability accuracy make this accessory the ideal tool for grinding operations on CNC-grinding machines. It can be used as a support for long shafts, for internal machining or when grinding on the clamping seat (follows the diameter).

The SLZV steady rest is equipped with a system for the fine adjustement in X and Y axis. It is generally manufactured with hard metal pads, but it can also be supplied with PKD (Diamond) pads, on request.

SLZV for grinders

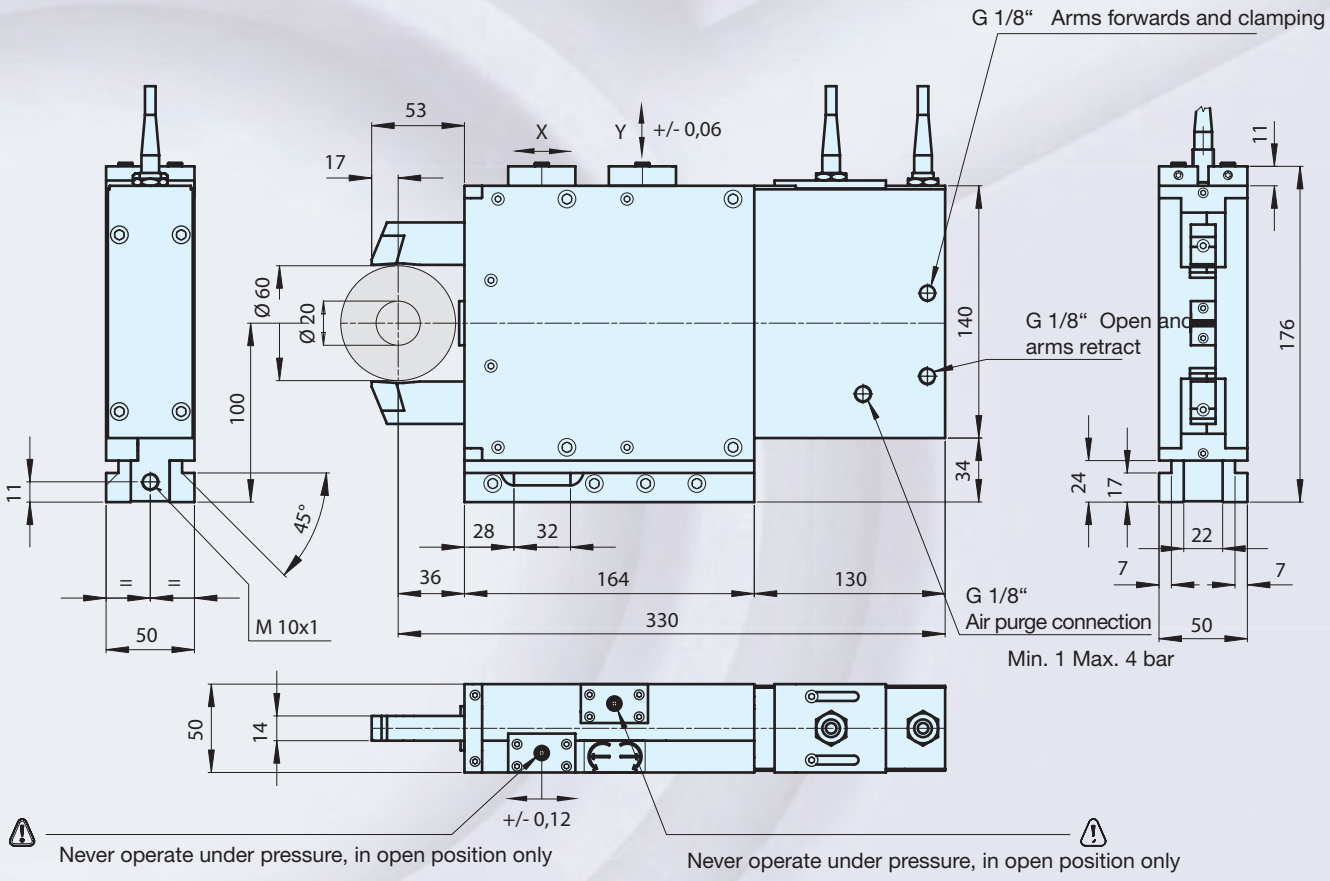
Type: SLZV 1540

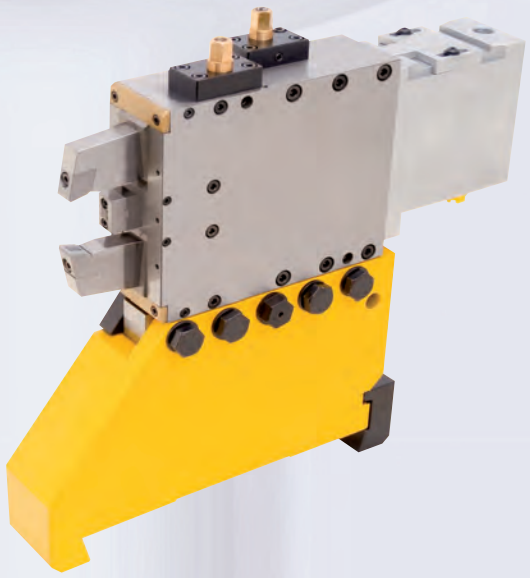


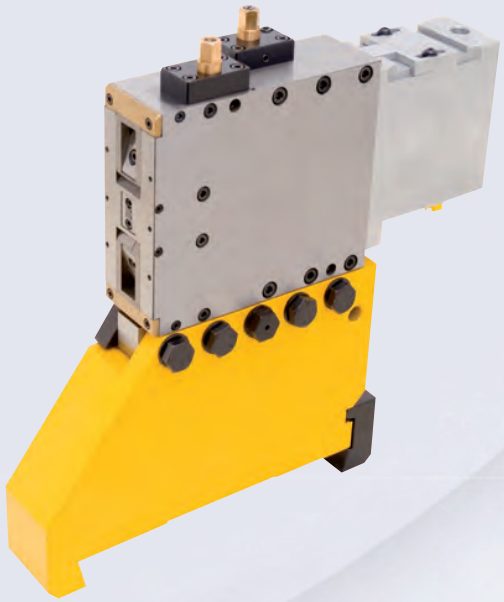


SLZV for grinders

Type: SLZV 2060

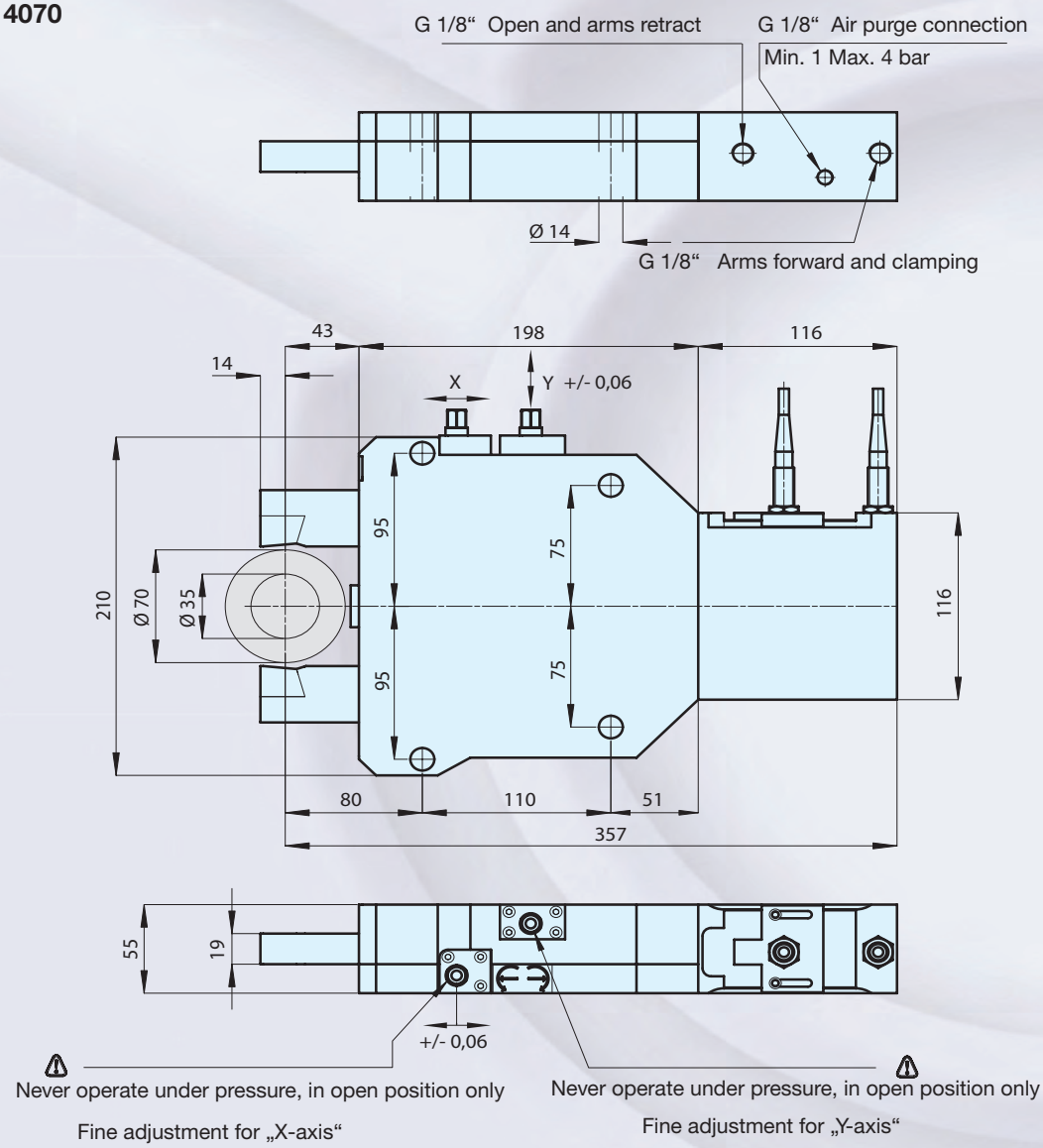


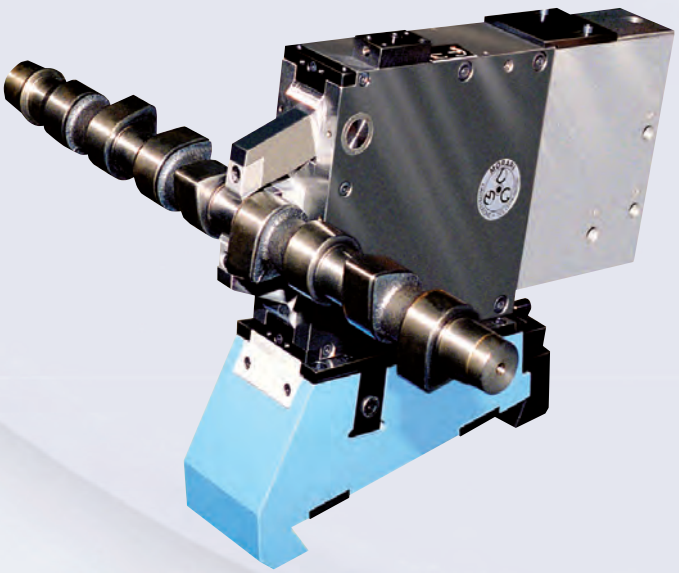




SLZV for grinders

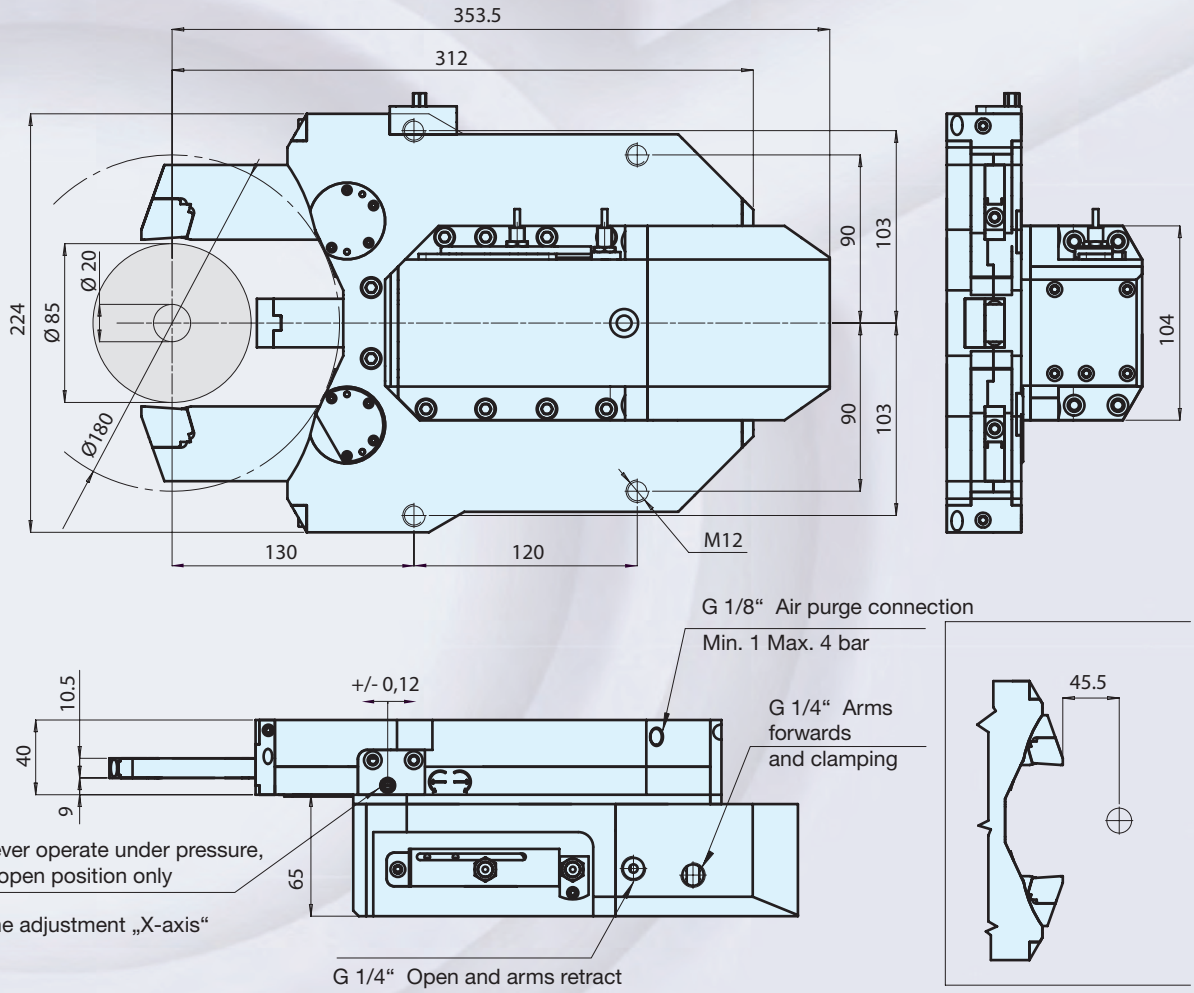
Type: SLZV 4070





SLZV for grinders

Type: SLZ VB 2085/180



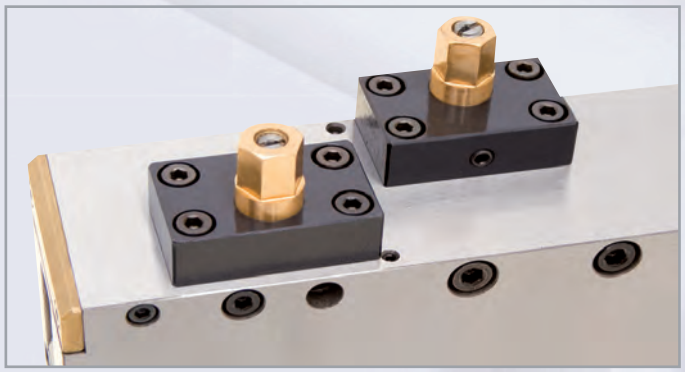
Technical features

Type		SLZV 1540	SLZV 2060	SLZV 4070	SLZ VB 2085/180
Item no. with fine adjustment over X.axis		1685730	1685731	1685732	1685733
Clamping diameter	mm	15 – 40	20 – 60	40 – 70	20 – 85
Cylinder-Type		C32 = 8 cm^2	C32 = 8 cm^2	C40 = 12 cm^2	-
Piston stroke	mm	59	76	85	-
Max. working pressure	bar	40	22	48	-
Operating pressure min.	bar	5 - 25	3 - 22	8 - 28	-
Clamping power per arm	N / bar	350 N / 15 bar	350 N / 15 bar	1100	-
Centering accuracy over whole range	mm	0,01	0,01	0,01	0,01
Repeatability at same clamping diameter and pressure	mm	0,002	0,002	0,002	0,002

SLZV for grinders

Self-centering steady rest for crankshaft grinding operations complete our SLZV series.

We develop and manufacture standard and special steady rests.



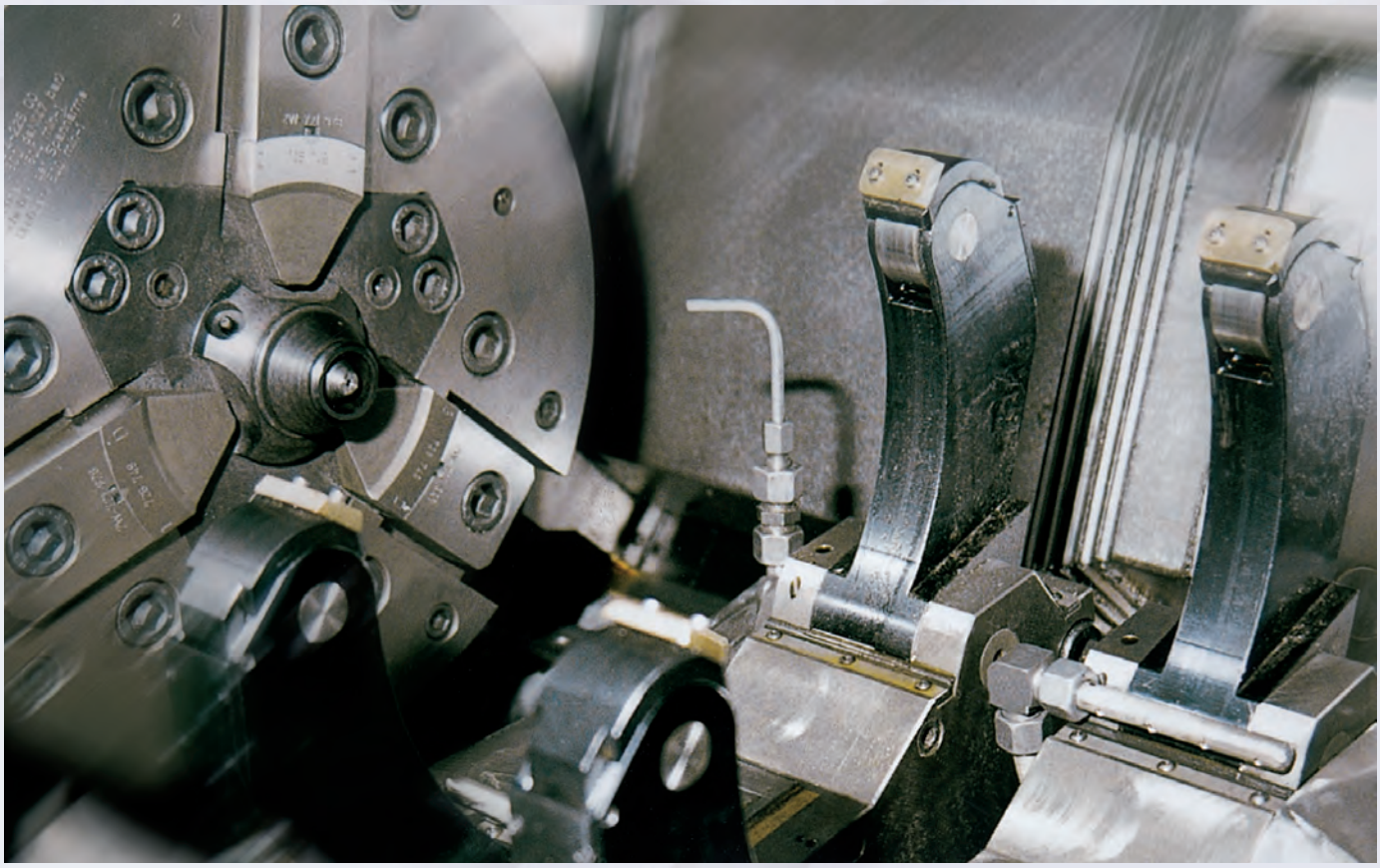
Main Features:

- Pads in hard metal (CBN) or PKD (Multicrystal Diamond) on request
- Hydraulic or pneumatic actuation
- High centering accuracy
- It allows grinding on the clamping seat
- High repeatability
- Opening and closing stroke control
- Compact and rigid design
- Special designs on customer‘s request

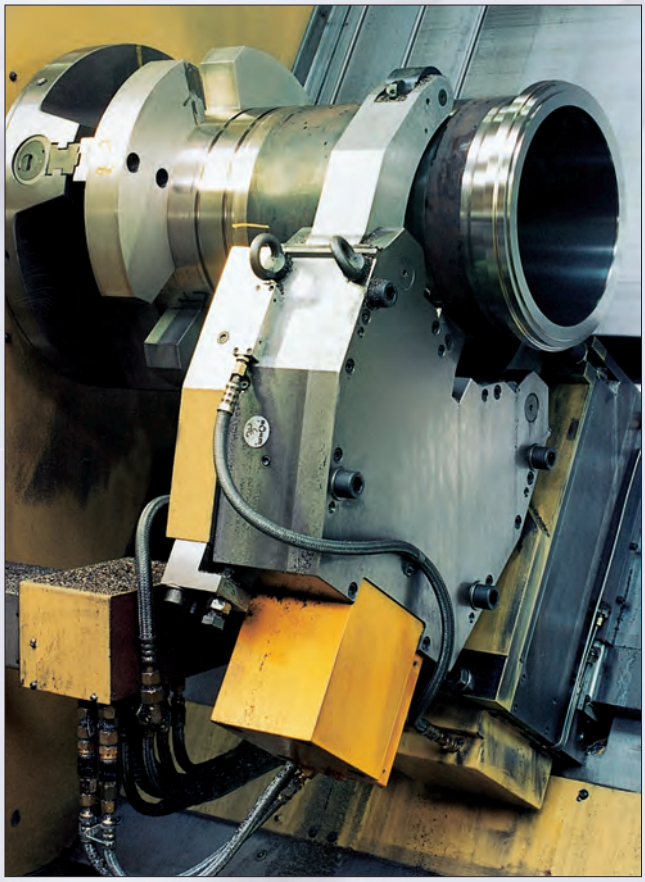
Micron-adjustement system for the precise adjustement of the centerline of the steady rest. This system guarantees an easy and quick set-up when more steady rests are used on the same workpiece. The control system of the closing and opening is standard on all the Types of steady rests.
The hydraulic or pneumatic connections can be positioned on specifi c customer‘s request. It‘s recommended that pressure remains unchanged during operation.

Mounting examples

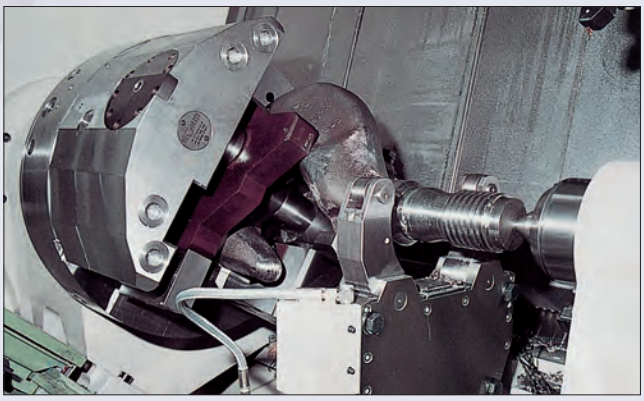
Reaming: crank shafts



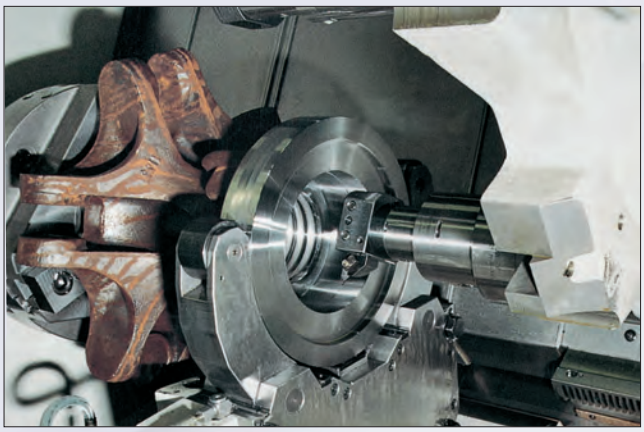
Turning: sleeves



Turning: load hooks



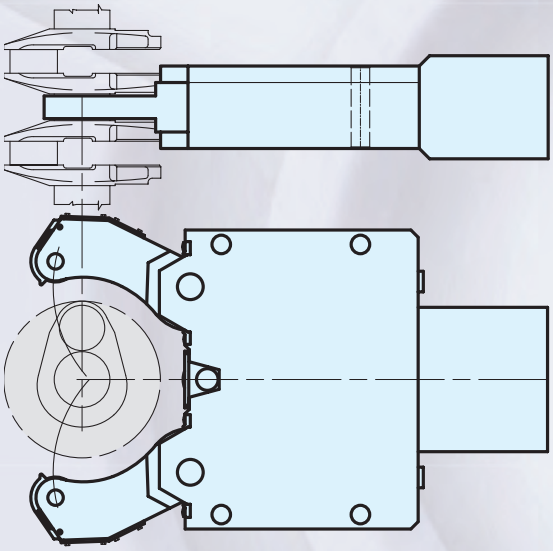
Turning: adaptor cages



Special designs

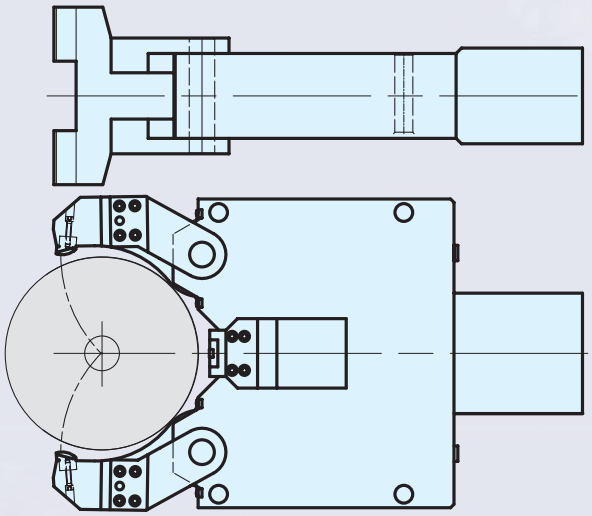
Special steady rest for machining crankshafts

These steady rests are made upon request. Together with our customers, we construct the section of the clamping arms for supporting the workpiece individually according to the workpiece to be machined.
Due to years of development and experience in this area, the company RÖHM is able to design special rollers with very slim sections, and therefore to design especially slim clamping arm sections.



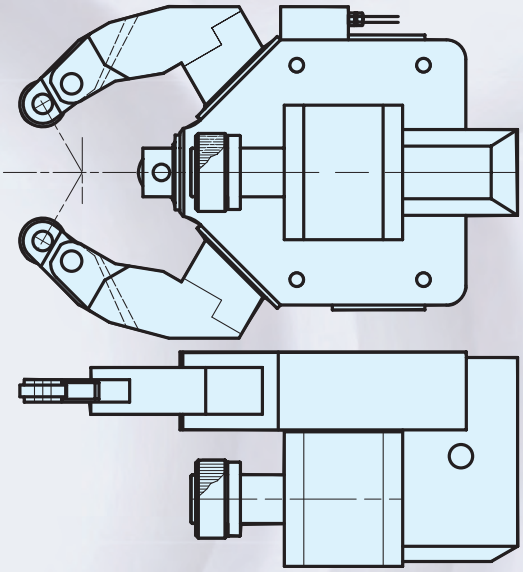
Special steady rest for milling wormshafts

These steady rests are made upon request. The width of the sliding jaws are designed together with our customers. Designed with increased rigidity, the lateral clamping arms and the middle guide rail are reinforced. Upon request, the steady rests can also be equipped with rinsing nozzles.

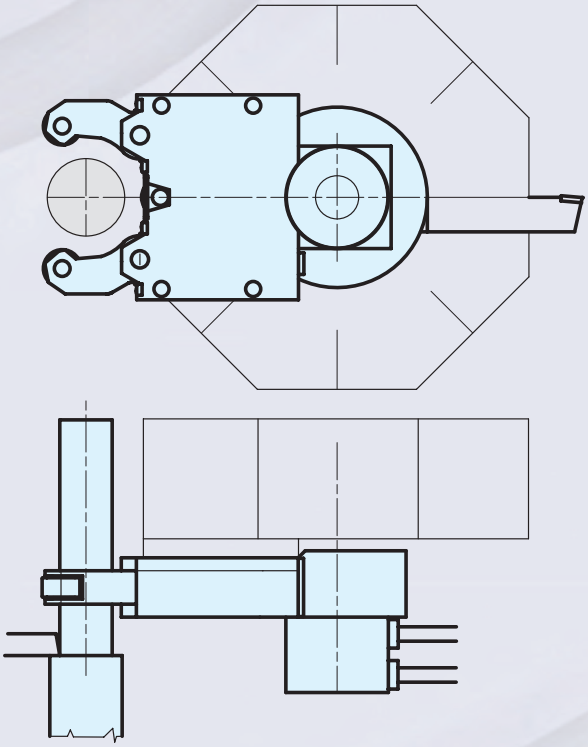


Special designs

Steady rests with swivel arms of the SL series with the vibrationdamping design,
the roller holder diameters of which are not perfectly round, are used for machining „slender“ turn parts.

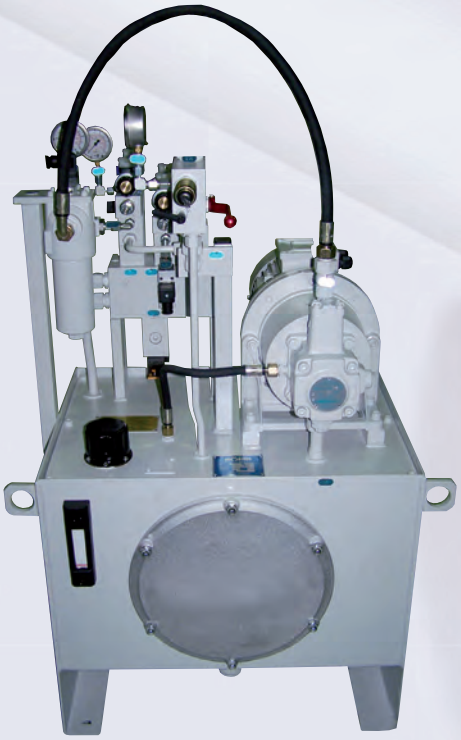


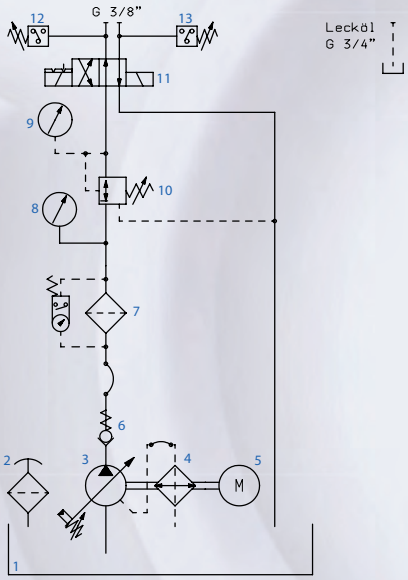
Steady rest with hydraulic rotary distributor which is mounted on the revolver.



Hydraulic power units

Standard power units





Dimensions:
Length 640
Width 460
Height approx. 1000

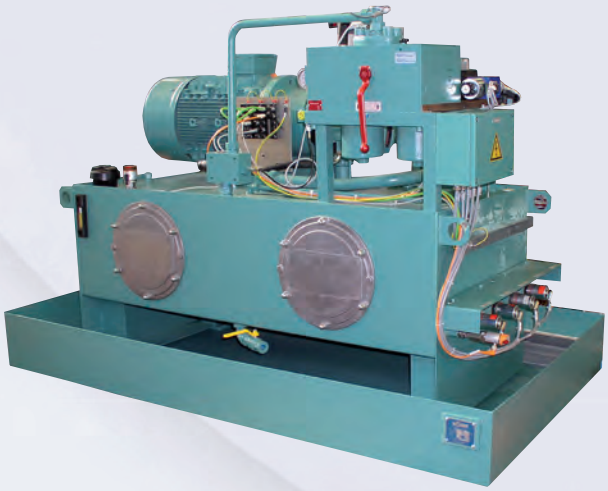
Hydraulic power units are required to produce the pressure needed to actuate hydraulic power chucking tools and cylinders. These power units are compact and equipped with electrically or manually operated control depending on the application.

Item no. 438384

Technical data:

1 Oil reservoir 100 ltr.
2 Areator
3 Self-regulating vane pump, Q = 19 l/min, pmax. = 80 bar
4 Pump carrier
5 Elektronic- Motor P = 2,2 kW, 230/400 V 50 Hz
6 Non-return-valve
7 Pressure filter, Fineness of filtration 10 µm absolut
8+9 Manometer 0-100 bar
10 Decompression valve, 5 – 80 bar adjustable
11 4/2 Control valve NG 6 with detent 24 V DC
12+13 Pressure switch, 10 – 100 bar adjustable (für internal/ext. clamping)

Power units in special design



If desired, these hydraulic power units can be delivered wired, complete with terminal box or terminal box and protective motor switch.

Design variants:

- Complete hydraulic power units
- Control blocks

For such designs, the customer should specify:

1. The number of connections or consuming devices (e.g. power chuck, tailstocks, steady rests etc.)
2. The piston area and the stroke of the cylinder, the desired stroking time and the functional sequence as a basis for determining the required pump capacity.

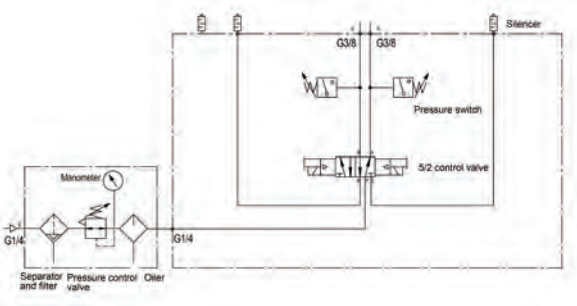
LSG

The air-operated control system LSG includes all components required for the control of rotary (LV, LVS, LT, LTS) or just stationary pneumatic cylinders.

If the directly machine control is not possible, an individual designed switchbox can be purchased from us.

Technical features:

- Combined maintenance unit
- 5/2 way solenoid valve
- pressure switch
- 5/2 way solenoid valve and pressure switch are wired on a clamping gib.



Tool group C 15
Type 592-38
Air-operated control LSG R1/4 up to 10 bar, for air-operated power chucks

Item no.	Width	Height	Depth	Control voltage	Conn. thread
437107 ▲	380	380	210	24V DC	R 3/8" internal
438208 ▲	380	380	210	110V - 50Hz	R 3/8" internal
438209 ▲	380	380	210	230V - 50Hz	R 3/8" internal

Other voltages on request

This unit consits of: Separator & filtre CKS-08/10, Pressure regulator CKS-08/10, Lubricator CL-08/10

Tool group C 15
Type 2250-H
Air line oiler & filter assemblies at 6 bar and 1 bar pressure drop

Item no.	Width	Height	Depth	Max. flow
843603 ▲	130	240	105	51 NM³/h
680999 ▲	130	240	102	33 Nm³/h

All parts of LWE are separately available

● from stock ■ 4 - 6 weeks ▲ on request

LSG

Tool group C 15
Type 592-32 **Manually operated air control valve LHV**
2-position with safety control lever

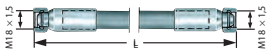
Item no.	Width	Height	Depth	Conn. thread internal	Conn. thread external
418224 ●	66,5	64	38	R ¼ “	M 16 x 1,5

Tool group C 15
Type 592-04 **Air shut-off valve**

Item no.	Width	Height	Depth	Conn. thread
021237 ▲	51	55	30	R 1/4” innen

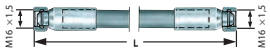
Accessories: 2 screw unions pipe thread 1/4”, Id.-Nr. 8096

Tool group C 15
Type 591-01 **Hydraulic low-pressure hose lines**
with end fittings



Item no.	Length	Thread
021201 ▲	250	M18x1,5
021202 ▲	500	M18x1,5
021203 ▲	750	M18x1,5
021204 ▲	1000	M18x1,5
021205 ▲	1250	M18x1,5
021206 ▲	1500	M18x1,5
021207 ▲	1750	M18x1,5
021208 ▲	2000	M18x1,5
021209 ▲	2250	M18x1,5
021210 ▲	2500	M18x1,5
021211 ▲	3000	M18x1,5
021212 ▲	4000	M18x1,5

Tool group C 15
Type 592-00 **Pneumatic connecting hoses**
Rated pressure 12 bar



Item no.	Length
021241 ▲	250
021242 ▲	500
021243 ▲	750
021244 ▲	1000
021245 ▲	1200
021246 ▲	1500
021247 ▲	1750
021248 ▲	2000

Tool group C 15
Type 1310-Q **Double hand-control switch**

Item no.	Contents of delivery
220629 ▲	piece

Tool group C 15
Type 1025-Q **Double foot-control switch**

Item no.	Contents of delivery
249325 ■	piece

Axial- and Radial Tool Heads

Complete part machining on CNC lathes and machining centers

The top quality range of tool heads manufactured with the highest precision, for your complete machining projects.

Technical features:

- Compact design of tool heads
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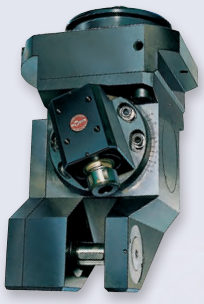
We provide our customers with a broad range of special design tool heads for every machining situation.

Axial screw driving machine HSK A63

Angular tool head with collet reception

Milling tool head with rotatable millingshaft fork



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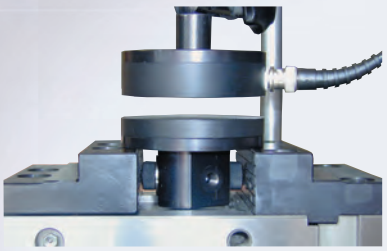
We offer a broad range of axial and radial tool heads in standard and special design.
If we have aroused your interest, please contact us!

Electronic-dynamical gripping measuring equipment EDS

Contactless transmission of data and energy from and to the measuring head (no collector rings) up to 12000 rpm



Two points measuring method

Measuring range EDS 50	**Item no. 161425**	**0-50 kN per jaw**
Measuring range EDS 100	**Item no. 161426**	**0-100 kN per jaw**
Permitted overload	**110 % of max. range value**	
Measuring frequency	**1 kHZ**	
Display 1	**speed rpm**	
Display 2	**gripping force kN**	
Number of jaws	**2 or 3**	
Gripping dia. EDS 50	**50 - 138**	
Gripping dia. EDS 100	**85 - 175**	
max. speed	**12000 rpm**	
Speed measuring	**every 2 sec. (0,5 Hz)**	
Measuring tolerance	**< 3 % of max. range value**	

Dynamic measuring:
Distance between measuring head and stator
axial 10-40 mm, radial 0-15 mm

Serial port PC/Laptop	**RS 232 C**
Voltage	**220 V AC**
Weight measuring head	**0,65 kg**

EDS 50 + 100
complete in a massive case,
Item no. 161427

Display-Software for PC/Laptop

Data transmission via serial Port RS 232C.

Input:

- Automatic reading of the measuring values (speed/clamping)
- Number of measuring step/graph scale freely selectable

Output:

- Table of speed/clamping force
- Graph speed/clamping force

Technical features:

- Simple Operation
- Simple Inserting respective initialising
- Simple Reading of the values
- Simple Data transmission to the PC

Power-operated clamping devices

To ensure safe operation of power-operated clamping devices, particularly of chucks, on heavy-duty lathes with high speeds certain criteria must be observed:

1. Whenmounting the power chuck and the clamping cylinder on the lathe, the following safety requirements must be met:
   1.1 The machine spindle may only start when the clamping pressure has been built up in the actuating cylinder and the clamping has been carried out in the permissible working area.
   1.2 Unclamping may only be possible when the machine spindle has completely stopped.
   1.3 In case of a clamping energy failure, the workpiece must be firmly clamped until the spindle is completely stopped. (The Röhm safety cylindersmeet this requirement.)
   1.4 In case of a current failure and upon return of the current supply the actual control position may not be changed.
   1.5 In case of a clamping energy failure the machine spindle must be stopped by a signal.

2. The safety instructions given in the respective operation manual must be precisely followed.

3. After havingmounted the chuck and before starting the operation, the function of the chuck must be checked.

Two important points are:

3.1 **Clamping force**

The clamping force (±15%) stated for the clamping devicemust be reached atmax. actuating force/pressure.

3.2 **Stroke control**

A safety range must be provided for the stroke of the clamping piston in the front and rear end position. The machine spindle may only start after the clamping piston has crossed the safety range.
Only limit switches meeting the requirements for safety limit switches in accordance with VDE 0113/12.73 section 7.1.3 may be used for monitoring the clamping path.

4. If themax. speed of the lathe exceeds themax. speed of the clamping device or clamping cylinder, the machine must be equipped with a speed limitation device.
5. When the clamping device has been changed, the stroke control must be adjusted to the new condition.
6. When calculating the required clamping force formachining a workpiece, the centrifugal force of the clamping jaws must be considered.
7. A reliable operation of the power chuck can only be guaranteed when themaintenance instructions contained in the instruction manual are precisely followed.

In particular the following points must be observed:

7.1 For the lubrication only the lubricants recommended in the operation manual shall be used. (An unsuitable lubricant can reduce the clamping force by more than 50%).
7.2 The lubricationmust reach all surfaces to be lubricated.
(At the narrow fits of themounting parts a high pressure is required for pressing-in the lubricant. For those purpose a pressure gun must be used).
7.3 In order to distribute the grease evenly, actuate the clamping piston several times to its end positions, repeat the lubrication and then check the clamping force.

Power-operated clamping devices

8. Before restarting a serial machining operation and in between the maintenance intervals the clamping force should be checked by means of a load cell. ”Only regular checks ensure optimum reliability”.

9. It is recommended to move the clamping piston several times to its end positions after 500 clamping strokes at the latest. (In this way any lubricant pushed away will be returned to the pressure surfaces. The pressure force is thus maintained for a longer period of time.)

10. When using special clamping jawsthe following instructions must be observed:

10.1 The clamping jaws should be designed in such a way that their weight and height is as low as possible. The clamping point should as possible be as close to the frontside of the chuck. (Clamping points at a larger distancemay cause a higher surface pressure in the jaw guiding mechanism and may thus reduce the clamping force considerably.)

10.2 In case the special jaws are for constructional reasons wider and/or higher than the step jaws assigned to the clamping device, the resulting higher centrifugal forcesmust be considered when calculating the required clamping pressure and the rated speed.

For calculating the rated speed for a certainmachining task the following formula is to be applied:

$$n_{max.} = \sqrt{\frac{F_{spo} - F_{spz}}{m \cdot r_c \cdot a}} \cdot \frac{30}{\pi}$$

Fspo = initial clamping force with the chuck at standstill (N)
F spz = required clamping force with the chuck at standstill for a certain machining task (N)
n max. = max. admissible speed (min 1)
m = mass of the entire jaw unit (kg) (base and top jaw)
rc = center of gravity radius of the entire jaw unit (m)
a = number of jaws

10.3 Welded jaws should not be used. If required, the welding seamsmust be checked as to their centrifugal and clamping force capacity.

10.4 Themounting screwsmust be arranged in such a way that the highest possible useful moment is reached.

11. Themax. speedmay only be used atmax. applied actuating force and with properly functioning chucks.
12. In case of high speeds the chucks may only be used below a protective hood with sufficiently large dimensions.
13. For power chucks with a jaw quick-change feature internal to the chuck a safety device is required which revents the machine spindle from rotating when the clamping jaws are released.
14. After a collision the clamping devicemust be checked for fissures before being used again.
15. Worn or damaged jaw fixing bolts must be replaced. Only use bolts of quality 12.9.

Power-operated clamping devices

Determining the required gripping force of a power chuck and the corresponding operating power

I) Calculating the gripping force F_{spz} (without considering the effects of angular speed) required for the job (machining operation).

II) Determining the chuck's initial gripping force F_{spo} with spindle stationary (taking into account the centrifugal forces of the jaws).

III) Determining the operating power required to provide the initial gripping force F_{spo}.

Definition of gripping force

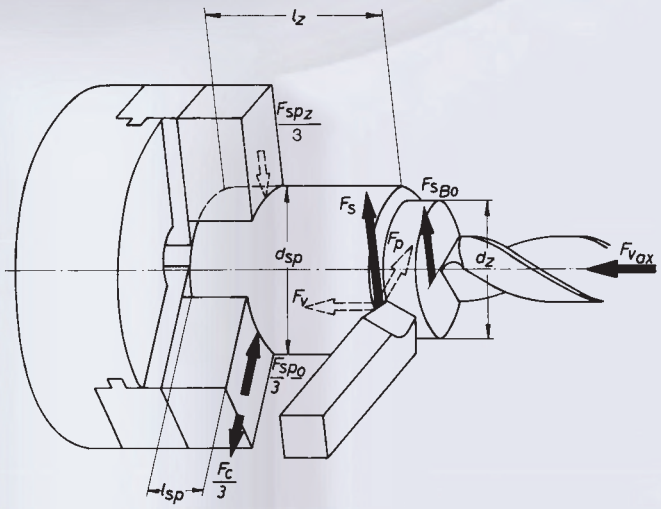
Progress in machining techniques has made it necessary for safety reasons not only to determine the **necessary gripping force** but also to know and consider its change with increasing angular speed.

The forces and moments generated by the machining operation must be properly absorbed and transmitted by the chuck. The chuck accomplishes this task mainly by **producing a gripping force:**

This gripping force is the arithmetic sum of the radial forces exerted on the workpiece by the jaws. The initial gripping force F_{spo} produced when the chuck is stationary can be measured at any time and is therefore controllable. (Denoted by 'total gripping force' in the gripping force / operating power diagrams).

The figures given in the catalogue refer only to chucks that are fully and correctly lubricated and in a properly serviced condition. Many factors act on the clamping point during any machining operation. A precise specification of these factors in the form of universally applicable tables is not possible in this context.

In most cases it is sufficient in practice to use a simplified formula containing the fundamental determining factors (crude determination).



Forces and moments acting at the machining and clamping points.

F_s = Main cutting force on radially applied tool

F_{sBo} = Cutting force on axially applied tool (drill)

F_{vax} = Feeding force on axially applied tool

F_{spz} = Required total gripping force (without considering the effects of angular speed

F_c = Centrifugal force of the jaws
= Loss of gripping force (see gripping force/speed diagram of each chuck Typee

F_{spo} = (Total) initial gripping force with the chuck stationary

l_z = Distance betwwen machining and clamping points

d_z = Machining diameter

d_{sp} = Chucking diameter

l_{sp} = Chucking length

Power-operated clamping devices

A Turning

I) Calculating the required gripping force F_{spz}

The gripping force required depends on the Type of work to be performed.
The cutting force on the turning tool has three basic components:
Main cutting force Fs - feeding force Fv - passive force (static force) Fp.
During turning, the feeding force Fv and the passive force (static force) Fp are mainly absorbed by the jaw faces in contact with the seated workpiece. The remaining main cutting force produces a moment (Fs x dz/2) which must be absorbed by the chuck and transmitted by friction at the clamping point.
The moment produced by the main cutting force during turning determines the gripping force required:

$$F_{spz} = \frac{F_s \cdot S_z}{\mu sp} \cdot \frac{d_z}{d_{sp}} \quad \textbf{(1)}$$

where:
F_{spz} = gripping force required for a specific job with the chuck stationary

F_s = main cutting force

chucking ratio $\frac{d_z}{d_{sp}} = \frac{\text{machining diameter}}{\text{chucking}}$

μsp = cucking coefficient (friction between jaw and workpiece)

S_z = safety factor

The feeding force and passive components, Fv and Fp, are not included in this formula. If necessary for extreme conditions, they are included in the safety factor Sz.

The **main cutting force Fs** is calculated from feed, depth of cut and material.

$$F_s = s \cdot t \cdot k_c \quad \textbf{(2)}$$

where:
s = feed, mm/rev.
t = depth of cut, mm
k_c = specific cutting force, kN/mm2

The product s x t (feed.depth of cut) =chip cross-section(cross sectional area of cut) can be obtained from Table 1.

Determining the chip cross section [mm2] Table 1

Feed (mm)	Depth of cut t (mm)									
	2	3	4	5	6	7	8	9	10	12
0,16				0,8	0,96	1,12	1,28	1,44	1,6	1,92
0,20			0,8	1,0	1,2	1,4	1,6	1,8	2,0	2,4
0,25		0,75	1,0	1,25	1,5	1,75	2,0	2,25	2,5	3,0
0,32	0,64	0,96	1,28	1,6	1,96	2,24	2,56	2,88	3,2	3,84
0,40	0,8	1,2	1,6	2,0	2,4	2,8	3,2	3,6	4,0	4,8
0,50	1,0	1,5	2,0	2,5	3,0	3,5	4,0	4,5	5,0	6,0
0,63	1,26	1,89	2,52	3,15	3,78	4,41	5,04	5,67	6,3	7,56
0,80	1,6	2,4	3,2	4,0	4,8	5,6	6,4	7,2	8,0	9,6
1,0	2,0	3,0	4,0	5,0	6,0	7,0	8,0	9,0	10,0	12,0
1,25	2,5	3,75	5,0	6,25	7,5	8,75	10,0	11,25	12,5	15,0
1,60	3,2	4,8	6,4	8,0	9,6	11,2	12,8	14,4	16,0	19,2

The specific cutting force kc as a function of feed can be obtained from Table 2.

Power-operated clamping devices

Specific cutting force k_C [kN/mm²] Table 2

Material		Strength Ō B kN/mm²	Specific cutting force k_c at feed s and a setting angle of 45° Feed s [mm] 0,16	0,25	0,4	0,63	1,0	1,6
Steels	St 42	sino 0,50	2,60	2,40	2,20	2,05	1,90	1,80
	St 50	0,52	3,50	3,10	2,75	2,45	2,15	1,95
	St 60	0,62	3,05	2,80	2,60	2,40	2,20	2,05
	C 45	0,67						
	C 60	0,77						
	St 70	0,72	4,35	3,80	3,30	2,90	2,50	2,20
	18 CrNi 6	0,63						
	42 CrMo 4	0,73	4,35	3,90	3,45	3,10	2,75	2,45
	16 MnCr 5	0,77	3,75	3,30	2,95	2,60	2,30	2,05
	Mn, CrNi	0,85-1,00	3,70	3,40	3,10	2,80	2,55	2,35
	Mn-austentic st.		5,40	4,90	4,40	4,00	3,60	3,30
Cast iron materials	St 42	0,30-0,50	2,30	2,10	1,95	1,80	1,70	1,60
	St 42	0,50-0,70	2,55	2,35	2,20	2,05	1,90	1,80
	St 42	HB 2,00	1,50	1,35	1,20	1,10	1,00	0,90
	St 42	HB 2,00-2,50	2,05	1,80	1,60	1,45	1,30	1,15
NE-ferrous metals	Cast bronze		2,55	2,35	2,20	2,05	1,90	1,80
	Gunmetal		1,10	1,00	0,90	0,80	0,70	0,65
	Brass	HB 0,80-1,20	1,20	1,10	1,00	0,90	0,80	0,75
	Cast alumin.	0,30-0,422,60	1,10	1,00	0,90	0,80	0,70	0,65

The chucking ratio $\frac{d_z}{d_{sp}}$ can either be determined from the specified working conditions or obtaines from Table 3.

Chucking ratio Table 3

Feed-Ø d_{sp} (mm)	Depth of cut-Ø d_z [mm] 20	40	60	80	100	150	200	250	300	350	400	500	600	700	800
20	1,0	2,0	3,0	4,0											
40	0,5	1,0	1,5	2,0	2,5	3,8									
60	0,33	0,67	1,0	1,3	1,7	2,5	3,3	4,2							
80	0,25	0,5	0,75	1,0	1,3	1,9	2,5	3,1	3,8	4,4					
100	0,2	0,4	0,6	0,8	1,0	1,5	2,0	2,5	3,0	3,5	4,0				
150	0,13	0,27	0,4	0,53	0,67	1,0	1,3	1,7	2,0	1,3	2,7	3,3	4,0		
200		0,2	0,3	0,4	0,5	0,75	1,0	1,3	1,5	1,8	2,0	2,5	3,0	3,5	4,0
250		0,16	0,24	0,32	0,4	0,6	0,8	1,0	1,2	1,4	1,6	2,0	2,4	2,8	3,2
300			0,2	0,27	033	0,5	0,67	0,83	1,0	1,2	1,3	1,7	2,0	2,3	2,7
350			0,17	0,23	0,29	0,43	0,57	0,72	0,86	1,0	1,1	1,4	1,7	2,0	2,3
400				0,2	0,25	0,38	0,5	0,62	0,75	0,87	1,0	1,3	1,5	1,8	2,0
500				0,16	0,2	0,3	0,4	0,5	0,6	0,7	0,8	1,0	1,2	1,4	1,6
600					0,17	0,25	0,33	0,42	0,5	0,58	0,67	0,83	1,0	1,2	1,3
700						0,21	0,29	0,36	0,43	0,5	0,57	0,71	0,86	1,0	1,1
800						0,19	0,25	0,31	0,37	0,44	0,5	0,62	0,75	0,87	1,0

The chucking coefficient µsp accounts for the friction existing between the gripping surface of the jaws and the workpiece in the zone of contact. It is influenced by
- the pattern of the gripping surfaces of the jaws
- the surface quality of the workpiece
- the material.

The chucking coefficient can be obtained from Table 4.

Note:
Forces aremore efficiently transmitted by a snug fit than by edge or saddle-Typee seats.

Chucking coefficient µsp for steel parts Table 4

Surface workpiece	smooth	Gripping surface of jaws Siamond style	Serrated
smooth machine finish ground	0,07	0,12	0,20
rough to medium machine finish	0,10	0,20	0,35
unmachined	0,15	0,30	0,45
Corrections:	Al, alloy = 0,95 Brass = 0,90 Gray cast iron = 0,80		

Power-operated clamping devices

Safety factor S_z

The magnitude of the safety factor Sz depends on the degree of accuracy with which the influencing parameters, such as load, chucking coefficient etc., can be determined and on the degree of safety required.
It should be $\geqq 2$ wherever possible.

Safety factor S_z (approximate)
Table 5

Influencing parameters	Safety factor S_z	
	New chucks	Older chucks **serviced regularly**
a) overhung chucking $l_z \leq d_{sp}$ b) no radial support from tailstock c) tool applied radially d) no axial seating of workpiece against jaws e) ratio: chucking length to distance between cutting and clamping points $l_z \leq 3$	$\geqq 2.0$	$\geqq 2.4$
$l_z \geq 3 \leq 6$	$\geqq 4.0$*	$\geqq 4.8$*

* Lower safety factors can be applied if the workpiece is supported in the tailstock or axially seated against the jaws.

Superimpositions of alternating forces are neglected because their influence is very small in comparison with the total gripping force required.

The safety factors so determined are applicable if the following requirements are met:
Chuck in perfect condition, no damage, adequately lubricated (operating instructions followed to the letter).

No allowance has been made for the following loads acting on the chuck:
a) Unbalanced forces and moments produced by unsymmetrical workpieces
b) Weight of workpiece

For a precise calculation of the gripping force required for a given job, use VDI Recommendation 3106. Available from:
Beuth-Verlag GmbH, Kamekestraße 8, D-50672 Köln, Germany.

II)
At high speeds, the gripping force of the rotating lathe chuck is greatly influenced by the centrifugal forces of the jaws. These forces must be taken into account when determining the initial gripping force Fspo

The applicable formula is:

$$F_{SPO} = S_{SP} \times (F_{SPZ} \pm F_C)$$

The + sign applies to external gripping.
The - sign applies to internal gripping.

Power-operated clamping devices

Where:

F_c = experimentally determined total centrifugal force of the chuck jaws obtained from the gripping forcespeed diagram. The gripping force curves refer to the hard, stepped jaws of the chuck.

S_{sp} = safety factor for the initial gripping force in accordance with VDI Recommendation 3106 ≥ 1,5

If extremely heavy top jaws (special jaws) are used, the centrifugal forces Fc can be calculated using VDI Recommendation 3106.

III)

The operating power bears a given relationship to the total gripping force, depending on the Typee of chuck employed. The values for the operating power can be obtained from the gripping force/operating power diagram.

In special cases where the centrifugal forces of the jaws are very high in comparison with the initial gripping force and power chucks with standard top jaws cannot be used, certain operations can be done with aluminium top jaws of special strength.

Calculation (example)
Having:

1. Workpiece and machining data:

Material		= C 45
Chucking diameter: (roughed)	d_{sp}	= 60 mm Ø
Machining diameter:	d_z	= 20 mm Ø
Feed:	s	= 0,5 mm
Depth of cut:	t	= 5 mm
Distance cutting/clamp. points:	l_z	= 50 mm
Speed:	n	= 3000 min^{-1}

2. Chuck data:

KFD 200 power chuck
Jaws with diamond style gripping surface Condition of chuck: new (no special influencing parameters)
External gripping with UB-538-04 top jaws at mid-position of gripping range.

Find:

1) Required gripping force F_{spz} = total gripping force required (without the effect of angular speed

2) Initial gripping force F_{spo} = (total) initial gripping force with the chuck stationary

3) Operating power

Power-operated clamping devices

Solution

1) Main cutting force (Formula 2)

s · t = from Table 1
k_c = from Table 2

$$F_s = s \cdot t \cdot k_c$$
$$= 0{,}5 \cdot 5 \cdot 2{,}50 = 6{,}25 \text{ kN}$$

2) Required gripping force (Formula 1)

$$F_{spz} = \frac{F_s \cdot S_z}{\mu sp} \cdot \frac{d_z}{d_{sp}}$$

$$= \frac{6{,}25 \text{ kN} \cdot 2{,}0 \cdot 0{,}33}{0{,}20} \approx 21{,}00 \text{ kN}$$

Safety factor S_z = from Table 5
Chucking coeff. µsp = from Table 4

Chucking ratio $\frac{d_z}{d_{sp}}$ = from Table 3

3) Obtain the loss of the gripping force from the gripping force speed diagram for KFD 200. At a speed of 3000 rpm: Fc = 18 kN. See diagram below.

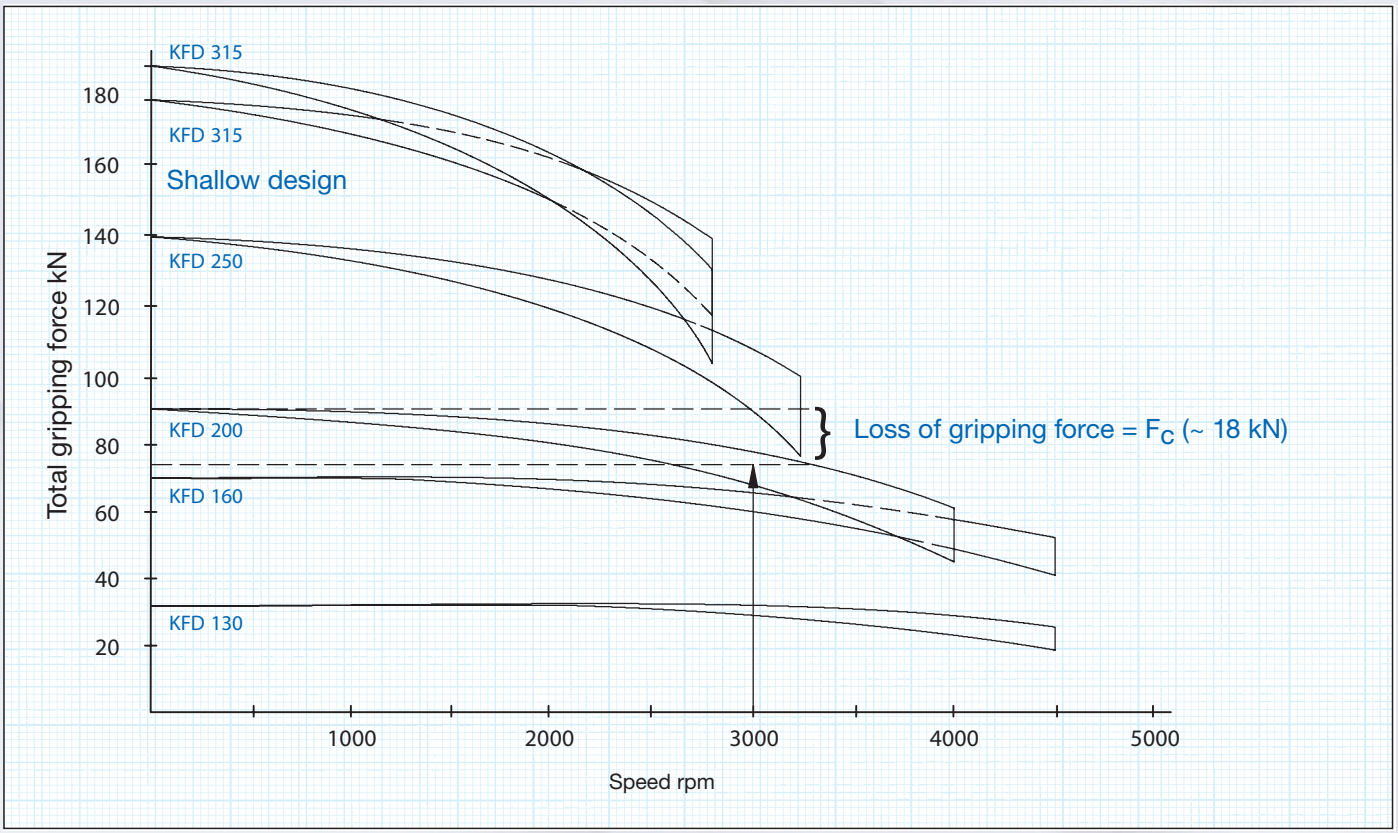
4) Initial gripping force $F_{spo} = S_{sp} \cdot (F_{spz} + F_c)$ (Formula 3) = 1,5 · (21 kN + 18 kN) = 58,50 kN
S_{sp} determined in accordance with VDI Recommendation 3106 Fc obtained from diagram below

5) Obtain operating power from "gripping force/operating power" diagram for KFD 200. For a gripping force of 58,50 kN the operating power is ~ 29,00 kN (next page)

Gripping force/speed diagram for KFD 3-jaw chucks

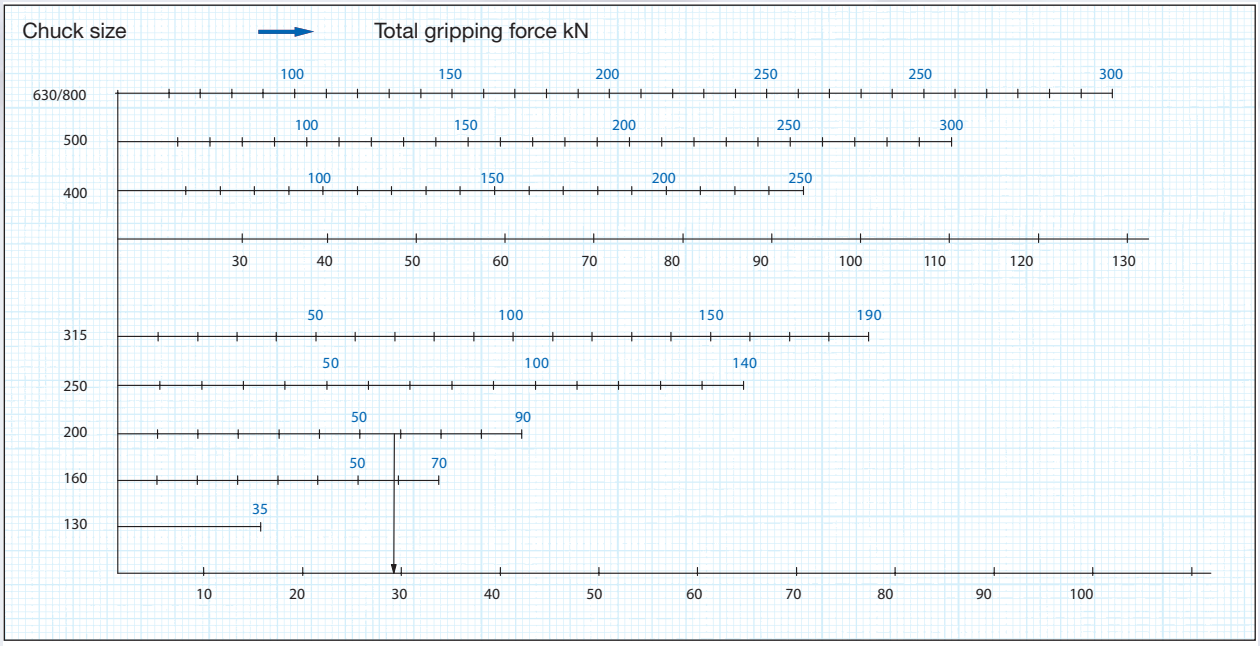
upper curve: min. centrifugal force of top jaw

lower curve: max. centrifugal force of top jaw



Power-operated clamping devices

Gripping force/operating power diagram KFD 3-jaw chuck



B. Drilling

1. Drilling in solid material (Top lip twist drill, point angle ≧ 120°)

I)

The gripping force required is determined by the Typee of work to be performed. The calculation described below applies to freely chucked work, i. e. workpieces which are not axially seated against the jaws. In this situation the components FsBo (cutting force) and Fvax (feeding force) acting on the workpiece give the resultant FR to determine the gripping force.

The cutting force FsBo can be calculated from

$$F_{sBo} = s \cdot t \cdot k_c \qquad (4)$$

where:

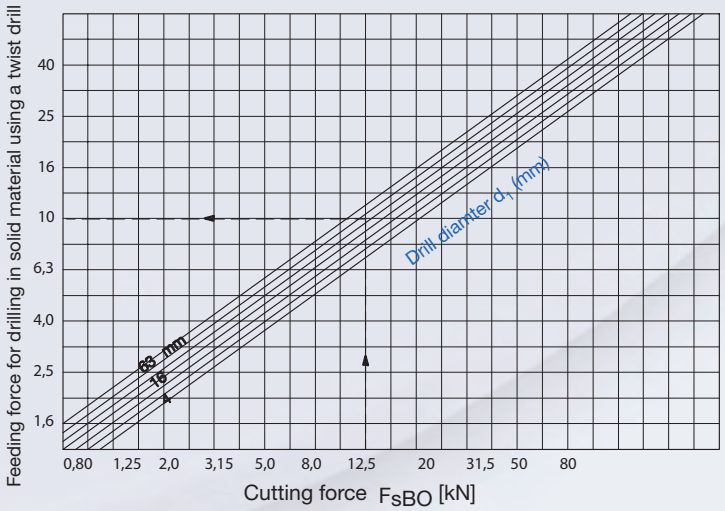
s = feed, mm/rev.

t = depth of cut, mm = $\frac{\text{drill diameter}}{2}$

kc = specific cutting force kN/mm^2

The feeding force Fvax bears a given relationship to thecutting force and can be directly obtained from Table 6.

Feeding force F_{vax}
Table 6



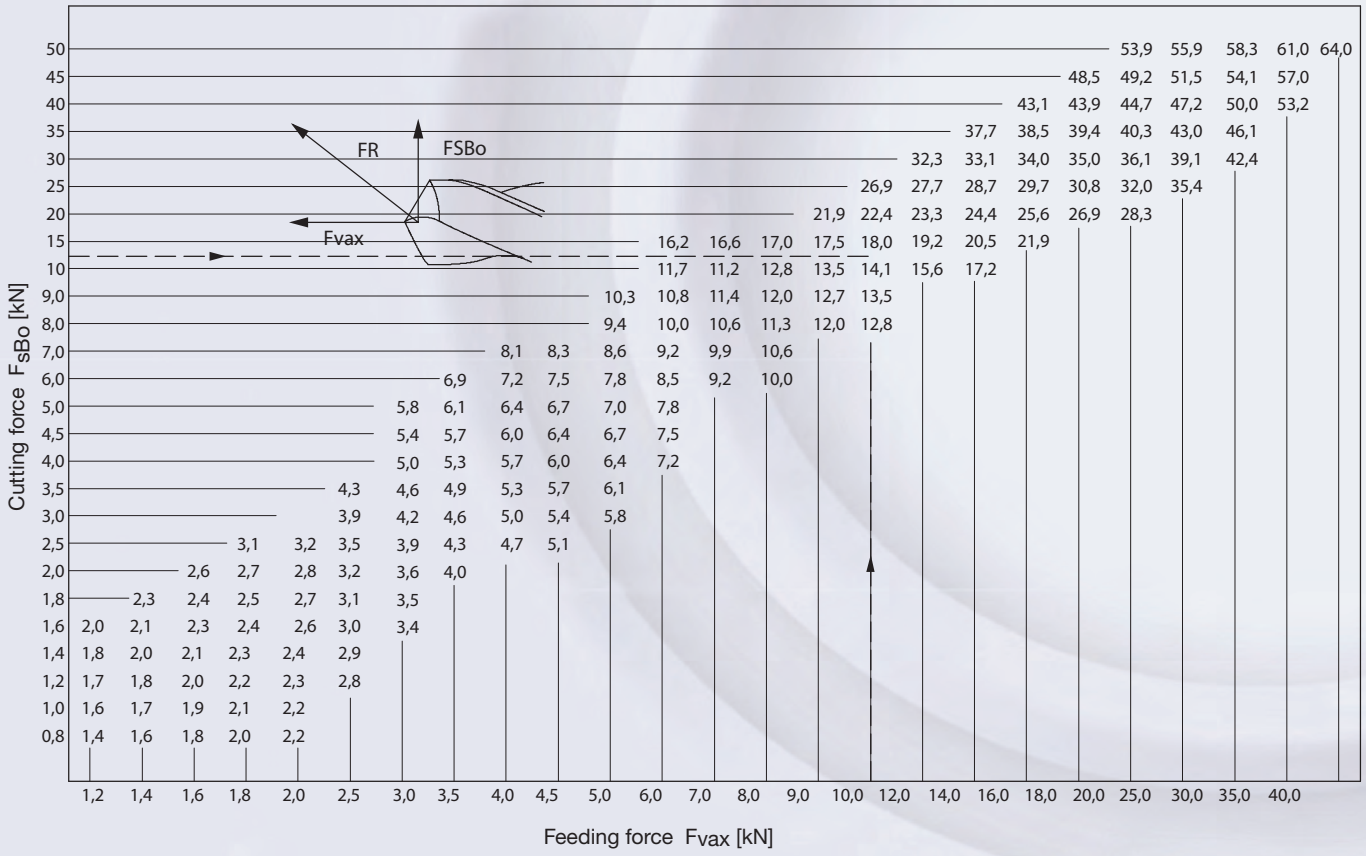
Power-operated clamping devices

The two components F_{sBo} and F_{vax} give the resultant force F_R

$$F_R = \sqrt{F_{SBo}^2 + F_{vax}^2}$$

The amount of the resultant force F_R can be obtained directly from Table 7.
Intermediate values will have to be determined by interpolation.

Resultant force F_R KN
Table 7



Place resultant force F_R for drilling in solid material in the known formula for determining the required gripping force Fspz:

$$F_{spz} = \frac{F_R \cdot S_z}{\mu sp} \cdot \frac{d_z}{d_{sp}}$$

where:
F_{spz} = gripping force required for a given job with the chuck stationary.
F_R = resultant force of cutting force and feeding force

Chucking ratio $\frac{d_z}{d_{sp}} = \frac{\text{cutting dia.}}{\text{chucking dia}}$ where $d_z = \frac{\text{drill dia.}}{2}$

μsp = chucking coefficient (friction between jaw and workiece)
S_z = safety factor

II and III
Continue the calculation - from determination of the initial gripping force Fspo to determination of operating power and the pressure required - exactly as described in Section A) Turning, II) and III).

Power-operated clamping devices

Calculation (example):

Having:

1. Workpiece and machining data.

Material	=	C 45
Chucking dia. d_{sp} (roughed)	=	60 mm
Drill dia. (in solid mat.)	=	30 mm
Feed s	=	0,3 mm
Deepth of cut t	=	15 mm
Speed n	=	200 min^{-1}

2. Chuck data

Power chuck KFD 200
Jaws with diamond style gripping surface
External gripping with UB 538-04 top jaws at mid position of gripping range
Chuck in new condition (no special influencing parameters)

Find:

1. Required gripping force F_{spz}
2. Initial gripping force F_{spo}
3. Operating power

Solution:

1. Cutting force (Formula 4)

$F_{sBo} = s \cdot t \cdot kc = 0,3 \cdot 15 \cdot 2,70 = 12,10$ kN
$s \cdot t$ from Table 1 (or calculated)
k_c from Table 2

2. Required gripping force

$$F_{spz} = \frac{F_R \cdot S_Z}{\mu sp} \cdot \frac{d_Z}{d_{sp}} = \frac{15,70 \cdot 2,0}{0,2} \cdot 0,25 = 39,25 \text{ kN}$$

Obtain resultant force F_R
from Table 7
(after first obtaining F
Chucking ratio $\frac{d_z}{d_{sp}}$ from Table 3 (or calculated).

3. Check if any effective centrifugal forces act on the jaws at a speed of n = 200 min-1.
As this is not the case in this example, we have:

4. Initial gripping force $F_{spo} = S_{sp} \cdot F_{spz} = 1,5 \cdot 39,25$ kN
Ssp from VDI recommendation 3106 = 59,00 kN

5. Obtain operating power from the "gripping force/operating power" diagram for KFD 200.
For a gripping force of 59,00 kN the operating power is 29 kN

6. For boring (using a boring cutter) the calculation described under "A. Turning" applies analogously.

Notes

The headquarter: our parent plant in Sontheim/Brenz.

The RÖHM parent plant is located in Sontheim/Brenz. In this ultra-modern production facility comprising 41,000 m², optimum conditions have been achieved in order to solve the extensive range of discerning construction and production tasks making the company even better, faster and more efficient in the future.

Sontheim/Brenz

All national and international activities are planned and co-ordinated at the administrative headquarters in Sontheim. Thanks to the excellent infrastructure and transport routes available, this location is ideal for a company relying on perfect product quality as well as maximum flexibility. Furthermore, the region around Sontheim offers another key basis for the success of our company: it is rich in quality awareness and motivated employees with the result that we are ideally prepared for the challenges of the future. The parent plant uniquely unites mass production, serial production and customised individual production under a single roof.

Key locations for the company: Dillingen and St. Georgen.

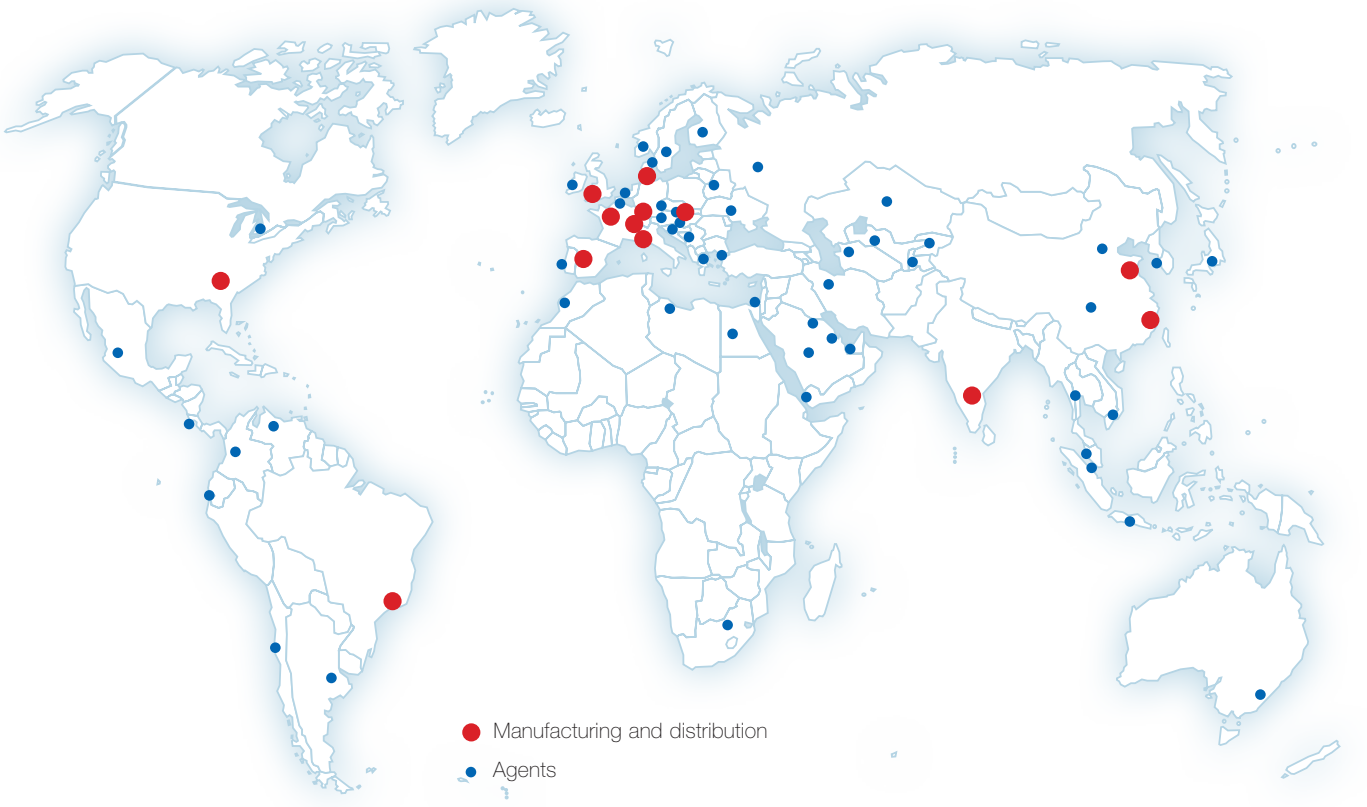
Such strong growth on the part of the RÖHM Group is also obviously associated with higher requirements on development and production capacities. The demands of today and tomorrow can be complied with the two facilities in Dillingen and St. Georgen.

Dillingen/Danube

St. Georgen

Plant: Dillingen/Danube | This branch plant in Dillingen was put into operation by the RÖHM Group as early as 1953. Thanks to extremely positive development, the plant is subject to constant expansion and modernisation. For this reason, new modern production facilities were built in 1982 and 1991. In 2007 RÖHM built a new production hall for two portal turning and milling machines. This enables machining of workpieces up to 4 metres in length which will secure a leading market position for the RÖHM brand in the future.
More than 300 employees are primarily involved in engineering and manufacturing lathe chucks, machine vices and special clamping equipment for turning and milling machinery as well as for machining centres.

Engineering and sales department St. Georgen | Apart from standard mandrels, tailor-made solutions for a wide variety of requirements are also manufactured here in this small but accomplished high-tech forge. RÖHM retains mechanical or power-operated mandrels, sliding jaw mandrels and hydraulic mandrels for its customers for tensioning workpieces in drill holes or interior contours.



Always close to our customers. With locations all around the world.

Customer orientation at RÖHM has less to do with marketing than with attitude. We consider customer proximity as an intensive dialogue with our partners as well as direct presence on key international markets.
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General conditions of sale and delivery

§ 1 Quotation, Formation of Contract and Content of Contract

1. The present General Terms of Sale and Delivery apply exclusively. We do not recognise any terms and conditions that are contradictory or different from our own, unless we have explicitly given our written agreement to do so. Our Terms of Sale and Delivery will also apply if we effect delivery to the Purchaser without any reservation in full awareness of the contradictory or different nature of the terms of the Purchaser, as compared to our own Terms.
2. Our quotations are always subject to change without notice unless they have been explicitly described as binding. The contract will only materialise upon our written confirmation and in line with the content thereof and by way of performance/delivery on our part. If delivery/service is immediately provided without any confirmation, the invoice will also be deemed to be the order confirmation.
3. Our General Terms of Sale and Delivery will only apply to a business entity as defined in Section 14 BGB [German Civil Code].
4. Costs for the compilation of drawings for specific constructions will be borne by the Orderer if, for reasons for which we are not responsible, the quotation does not lead to an order placement.
5. All particulars regarding weights, dimensions, services and technical data that feature in our printed matter, catalogues, price lists or in other contract documents are only approximate, unless they have been explicitly described as binding.
6. We retain the right to amend the construction and form of the subject of contract, providing this does not involve unreasonable alterations for the Orderer.
7. The documentation comprises an assembly layout, piece list with details of the wearing and spare parts, as well as operational and maintenance instructions; this is always in the German language. Documentation is only in paper form or in digital form. For digital forms, the texts are provided in the formats .TXT, .RTF or .DOC; drawings and piece lists are in the .TIF format (grid format). Any documentation in excess thereof will be billed and is subject to particular arrangement.
8. For testing, when specific temperatures, times and other measurements or control values are to apply, the appropriate measurement methods must be specified prior to delivery and acknowledged by both Parties. Unless such values are so defined, our own measurement methods will apply.
9. Samples will only be delivered subject to a fee.
10. Assurances given, ancillary agreements and changes to the contract will require the written form to be operative. It will not be possible to waive this requirement.
11. An order placement will be deemed irrevocable unless the Deliverer has agreed in writing to cancel it.
12. For export transactions, delivery will be subject to the conditions specified on the order confirmation; in addition, the respectively current version of the international trade definitions most commonly used in international sales contracts (incoterms 1953) will apply as devised by the International Chamber of Commerce.
13. In addition to the General Terms of Delivery and Sale, compliance with our "product information" sheets, the technical data sheets as well as other product-specific publications will apply, each in their current version.

§ 2 Prices

1. Failing specific written agreement, prices apply as in the Federal Republic of Germany, free house plus the value added tax required by law. For export transactions, the item to be delivered is deemed sold "ex works", unless the contract stipulates otherwise about the type of sale. For single orders for a value of goods less than 100.00 € net, a handling fee of 10.00 € plus the value added tax required by law will be charged throughout the country.
2. Please note that we only despatch the consignment at the request of the customer. Irrespective of this, the rulings laid down in Section 5 will apply.
3. We bill the prices that were valid when the contract was drawn up, based on the cost factors applicable at the time. Should these cost factors (particularly material, wages, energy etc.) alter during the period between the drawing up of contract and the agreed delivery time, we will be entitled to amend prices accordingly. For export transactions, the Deliverer will be entitled to cancel that part of the order that has not yet been completed or to adjust prices appropriately if the currency in which the contract was drawn up has devalued.
4. With an „ex works" contract, the goods will be transported at the expense and risk of the Orderer. For all consignments, the respectively current version of the provisions of incoterms 1953 will apply to the insurance and bearing of risk.
5. For parts/products that are produced in line with Purchaser requirements, we will notify the Purchaser of our production quantity. The Purchaser undertakes to take receipt of the quantity thus confirmed.
6. Over-deliveries and short-deliveries are admissible up to 5%; for special tooling up to 10% is admissible, at least, however, 2 (two) pieces. The respective delivery will be billed.

§ 3 Modalities of Payment

1. Failing specific arrangements, payment is due without deduction and without charges within 10 days of the date of invoice - even for delivery instalments.
2. We are not bound to accept cheques or bills. In the event cheques or bills are accepted subject to prior arrangement in individual circumstances, this will only be as conditional payment, taking due account of discount charges and collection fees that are to be paid immediately in cash by the Customer. The ultimate credit entry of bills of exchange and cheques will be after their redemption. The acceptance of cheques or bills will be without prejudice for subsequent commitments to payment. We will not be liable for the punctual presentation, protest, notification and return of a bill in the event it is not honoured.
3. Any overshooting of the payment deadline will incur interest to the amount of the banks' borrowing costs, at least, however 8% in excess of the respective basic interest rate of the European Central Bank.
4. If a bill or a cheque is not honoured on time or if a deadline for payment is overreached, all receivables still outstanding, including those that are deferred and those for which bills or cheques have been given, will become due for immediate payment.
5. The Purchaser will only be entitled to offset if the counterclaims he asserts have been established by declaratory judgment, if they are undisputed or have been acknowledged by us. The Purchaser will be authorized to exercise a right of retention to the extent his counterclaim is derived from the same contractual relations.
6. For export transactions, payments will be paid subject to the modalities of payment contracted.
7. Costs of payment transactions, particularly bank charges of foreign payment transfers to us, are in principle for debits of the client.

§ 4 Delivery Period

1. The delivery period we specify begins to run providing all technical issues have been fully clarified. The delivery deadlines we give are in principle not binding and only constitute a probable delivery time.
2. The compliance with our commitment to deliver depends on the Purchaser having punctually and properly fulfilled his commitments, particularly his commitment to comply with the contracted terms of payment. The right to plea non-performance of contract will be retained.
This right will also be derived from commitments that have not been satisfied in full from previous deliveries.
3. The period of delivery commences upon the despatch of the order confirmation, yet not before the Orderer has provided the documents, permits, clearance papers etc. to be procured and not before the agreed deposit has been received.
4. If a fixed delivery date has been arranged, the Deliverer will effect delivery on time. Compliance with the delivery period will be deemed given if the item to be delivered has left the works or the readiness for despatch has been notified before the expiry of said delivery period, subject to timely and accurate delivery from our own suppliers. If the Orderer amends parts of the consignment to be delivered, the delivery period will run anew upon confirmation of said amendment.
5. Force majeure, war, uprising, strike, lock-out or measures enforced by the authorities for whatever reason that impede delivery, as well as a lack of raw materials, means of transport and theft – even with our own suppliers – will release the Deliverer from his commitment to deliver within the specified period of time. The Orderer will be notified immediately of the occurrence of the hindrance and of the likely repercussions.
6. It is admissible to effect delivery prior to the expiry of the specified delivery period and to deliver in appropriate instalments.
7. Compliance with the delivery period depends on the fulfilment of all contractual duties of the Orderer.
8. In the event of delivery delays or of the impossibility of delivery, the provisions of Section 10 will apply.

§ 5 Transfer of Risk and Taking Receipt

1. Risk will pass to the Orderer at the latest with the despatch of the consignment, even if delivery is to be in instalments or if we still have other services to provide, e.g. despatch costs or transport and delivery as well as installation.
2. At the request and at the expense of the Orderer, we will ensure insurance cover of the consignment to be delivered for theft, breakage and damages from transportation, fire and water and for other insurable risks.
3. If despatch is delayed for reasons for which the Orderer is responsible, the risk will pass to the Orderer as from the date of readiness for despatch; nevertheless, we undertake to ensure insurance cover at the request and expense of the Orderer as called for by the Orderer.
4. Even if the delivered items feature insignificant defects, the Orderer will take receipt thereof irrespective of the rights laid down in Section 8.

§ 6 Default of Acceptance, Call-off Orders

1. If the Orderer fails to take receipt of the items contracted on time, we will be entitled to set the Orderer a subsequent period of grace after which we will be entitled to dispose of the items otherwise and supply the Orderer subject to a subsequently lengthened delivery period. Irrespective of this, we will be entitled to withdraw from the contract as defined in Section 326 BGB [German Civil Code] and to call for compensation for damages owing to non-performance. In the event we call for compensation for non-performance, we will be able to claim compensation of 25% of the agreed price plus value added tax without having to provide evidence. We retain the right to assert actual damages of a greater dimension.
2. Orders, which we confirm for call-off must be accepted within one year of the date of order placement at the latest - unless otherwise arranged. The same will apply to fixed reservations or to permanent "call-off statuses. Section 6.1 will apply accordingly in the event the goods are not called off.

§ 7 Retention of Title

1. The items for delivery (the goods subject to the retention of title) will remain our property until all claims to which we are entitled from the Purchaser from the business relations have been satisfied in full. Where the value of all security interests to which we are entitled against the Purchaser exceeds all secured claims by more than 10%, we will release some of the security interests as appropriate at the request of the Purchaser.
2. During the period in which title to the goods is retained, the Purchaser is not allowed to pledge or assign the goods as security and is only permitted to resell to resellers in normal business transactions and only providing the reseller receives payment from its own customer or subjects the customer's ownership of the item to the full satisfaction of the customer's commitments to payment.
3. In the event of attachment, seizure or any other disposition or third-party intervention in respect of the goods, the Purchaser will notify us immediately so that we can file action subject to Section 771 ZPO [German Code of Civil Procedure]. If the third party is not able to reimburse us for the court and out-of-court costs of legal action pursuant to Section 771 ZPO, the Purchaser will be liable for the loss we thus incur.
4. The Purchaser undertakes to treat the item purchased with care. In particular, the Purchaser undertakes at his own expense to ensure it is adequately insured at reinstatement value against damages from fire, water and theft. Should maintenance and inspection work be required, the Purchaser will have this carried out in good time at his own expense.
5. In the event of breaches of duty on the part of the Purchaser, particularly with default in payment, we will be entitled to cancel the contract and to take back the goods; the Purchaser undertakes to surrender the goods. If we take back the goods and/or assert the retention of title, this does not mean we are cancelling the contract, unless we have explicitly declared as much.

6. If the Purchaser has resold the item purchased in regular business transactions, the Purchaser herewith now assigns to us all claims to payment in the amount of the final invoice amount (including value added tax), such as due to the Purchaser from the resale to his customer or a third party, irrespective of whether the item purchased has been resold without or after further reworking. The Purchaser remains authorized to collect this payment, even after assignment. Our own authority to collect payment ourselves will not be affected hereby. However we undertake not to collect payment providing the Purchaser satisfies his own commitments to payment from the proceeds collected, does not default in payment and in particular providing the initiation of insolvency proceedings is not petitioned or payments cease to be made. Should this, however, be the case, we will be able to demand that the Purchaser provides us with details of the assigned payments and their debtors as well as all information necessary to collect payment, that he hands over the relevant documentation to us and notifies the debtors (third parties) of the assignment.
7. The processing or reworking of the item purchased by the Purchaser will always be carried out on our behalf. If the item purchased is processed with other items not belonging to us, we will acquire co-ownership to the new item to the value of the item purchased (final invoice amount including value added tax) in relation to the other processed items at the time of reworking. The same will apply to the thus newly created items as for the items delivered subject to retention of title.
8. If the item purchased is processed with other items not belonging to us, we will acquire co-ownership to the new item to the value of the item purchased (final invoice amount including value added tax) in relation to the other processed items at the time of reworking. If the intermixing is such that the Purchaser's item is to be deemed the main item, it is herewith agreed that the Purchaser will transfer co-ownership to us proportionately. The Purchaser will keep the property in which we hold exclusive ownership or co-ownership on our behalf.

§ 8 Quality Defects
We are liable for defects in quality as follows:
1. All parts or services will be remedied, at our discretion, free of charge or redelivered or provided again that are found to feature a quality defect during the statutory period of limitation - irrespective of service life - providing the origin thereof already existed at the time of the passing of risk.
2. Claims to quality defects will become statute-barred in 12 (twelve) months. The period of time commences with the passing of risk (Section 6).
3. The Purchaser will immediately file written objection to the quality defect with us.
4. In the event objections are filed, the Purchaser will be permitted to refrain from payment to an extent appropriate to the quality defects featured. The Purchaser will only be able to refrain from payment if an objection is asserted, the justification of which cannot be doubted. If the objection has been asserted unjustifiably, we will be entitled to call for the reimbursement of the expenses incurred by us.
5. Initially we will always be granted an opportunity to remedy a defect within an appropriate period of grace.
6. Should the remedy fail, the Purchaser – notwithstanding any claims to damages – will be able to cancel the contract or reduce remuneration. The Purchaser will only be able to call for the reimbursement of fruitless expenditure if the defect in question is attributable to our own wilful intent or gross carelessness for which we are responsible.
7. Claims to defects in quality are not given if the divergence from the agreed nature of the product is only minimal, if usability is only insignificantly impaired, in cases of natural depreciation or damages generated after passing of the risk as a result of faulty or negligent treatment, excessive exposure, unsuitable operating media or because of specific outer impact that was not to be expected given the contract, as well as in cases of non-reproducible software errors. If amendments or repair work is carried out improperly by the Purchaser or by third parties, there will be no claims to the defects resulting or the effects thereof. The same will apply to a lack of compliance with our instructions on handling and other instructions and if maintenance is not carried out properly
8. Claims of the Purchaser to a refund of the expenses incurred for the purpose of remedy, such as costs of transport, travel, labour and materials will be ruled out, when such expenses increase because the item delivered was brought to a destination other than the Purchaser's branch premises, unless said relocation is in accordance with the intended use of the item.
9. Legal claims to recourse against us on the part of the Purchaser will only be given if the Purchaser has entered into no agreement with his customer in excess of those claims to defects regulated by the law.
10. Claims to compensation for damages will be governed by Section 9. Any farther-reaching claims to quality defects or others than those governed in this Section or in Section 9 will be ruled out.

§ 9 Industrial Property Rights and Copyrights, Defects of Title
Unless otherwise agreed, we undertake to only effect delivery free from proprietary rights and third party copyrights (referred to in the following as industrial property rights) in the country of the delivery destination. In the event a third party files justified claims against the Purchaser for a breach of industrial property rights derived from deliveries we effected that are being used as contracted, we will be liable towards the Purchaser for the period of time specified in Section 8.2 as follows:
1. At our discretion and at our own expense, we will either procure a licence for the deliveries in question, alter them so that there is no breach of industrial property rights or we will provide a substitute. Should this not prove possible at appropriate conditions, the Purchaser will be entitled to the rights of cancellation or reduction as laid down by the law. The Purchaser will only be able to call for the reimbursement of fruitless expenditure if we are to blame for wilful intent or gross negligence. Our commitment to provide compensation for damages is governed by Section 10.
2. The above commitments will only be given if the Purchaser has given us immediate, written notification of the claims asserted by the third party, does not recognise any breach of rights and if we retain the right to initiate defence measures and negotiate a settlement. If the Purchaser ceases to use the item delivered in order to reduce damages or for other good cause, the Purchaser undertakes to inform the third party that this discontinuation of use does not embody any acknowledgement of a breach of industrial property rights.
3. Claims of the Purchaser will be ruled out if the Purchaser is responsible for the breach of industrial property rights.
4. Any claims of the Purchaser will also be ruled out if the breach of industrial property rights was derived from specific specifications of the Purchaser, from an application that we could not foresee or from the item delivered being altered by the Purchaser or used in combination with products that we have not delivered.
5. In the case of breaches of industrial property rights, the provisions of Sections 8.4, 8.5 and 8.9 will apply appropriately to the claims of the Purchaser governed by Section 13.
6. Any farther-reaching claims to defects of title of the Purchaser or claims other than those governed by the present Section 9 against us or our vicarious agents will be ruled out.

§ 10 Overall Liability
1. Claims of the Purchaser to compensation for damages – irrespective of the legal nature of the claim asserted – will be ruled out.
2. The exceptions are:
a) Damages due to the violation of major contractual duties (cardinal duties). However, in the case of simple negligence, liability for damages will be restricted to foreseeable, typically occurring damages.
b) Damages derived from injury to life and limb if we are responsibility for the breach of duty.
c) Damages attributable to wilfully intentional or negligent violations, said breach of duty on the part of our legal representatives or vicarious agents being of equal status to any breaches of duty on our part.
d) Claim to damages for impossibility or inability.
3. Any alteration of the onus of proof to the detriment of the Purchaser does not relate to the above provisions.
4. Liability subject to the Product Liability Act remains unaffected hereby.
5. Where liability for compensation is ruled out or restricted in our respect, this will also apply to the personal liability for damages of our employees, our trade representatives and our vicarious agents.

§ 11 Duties to Involvement of the Purchaser
1. The involvement of the Purchaser that has been agreed to explicitly or implicitly in the contract will be subject to no specific remuneration, unless otherwise explicitly agreed.
2. The Purchaser undertakes to inform us in good time of all facts, which indicate that stocks and products we have made available in the light of our notified production capacities cannot be used or not be used in full. Where stock remains, in the case of a premature change to his planning, the Purchaser will take over the remainder and any costs of destruction that might be incurred. This will also apply to products for which we have had to place orders for minimum quantities from our own suppliers, providing we previously advised the customer thereof.
3. The Purchaser guarantees that the products delivered by him for reworking are suitable for the purpose. We do not undertake to check the products delivered by the Purchaser for their quality and aptitude for reworking. In ongoing business relations and whenever an item for reworking has been initially checked, tested and released, the Purchaser undertakes to inform us in writing of each and every product amendment without actually being requested to do so. When items are being reworked, after every change in production conditions on his premises, in particularly when substituting tooling, machinery or introducing new production processes, the Purchaser also undertakes to examine the item to be processed by us for any divergence and alteration and to notify us in writing of any such divergence and alteration.
4. Instructions from our Purchaser, the selection of material or other specifications laid down by the Purchaser do not oblige us to check them for accuracy.
5. The Purchaser will hence check all instructions it issues as well as the quality of the material specified to us or made available to us for compliance with the law and technical regulations.
6. Should the Purchaser default in terms of its duties to provide or to become involved, we will be entitled to the rights stipulated by law.
7. In any case, goods may only be returned subject to the explicit consent of the Deliverer. Their return will be free-house and details of the order number and delivery date will be given as well as the original delivery packaging. The goods will be in their original condition, i.e. in an undamaged state. For the handling of a return, we charge 20% of the value of the goods, at least, however, 50.00 € plus value added tax. In individual circumstances, the Deliverer retains the right to charge the Orderer a higher sum based on evidence.

§ 12 Place of Performance and Jurisdiction/ Other
1. The place of performance and payment will be the registered office of our company in Sontheim/Brenz.
2. Exclusively the laws of the Federal Republic of Germany will govern the present contractual relations. The application of the United Nations Convention dated 11.04.80 on Contracts for the International Sale of Goods (CISG – "Wiener Kaufrecht") is ruled out.
3. For all disputes derived from contractual relations, if the Orderer is a registered businessperson, a legal entity under public law or a separate estate under public law, legal action will be filed with the court of law with jurisdiction for our registered office. We will also be entitled to file legal action at the location of the registered seat of the Orderer.
4. Should any one condition of our General Terms of Sale and Delivery be void for any reason whatsoever, the validity of the remaining provisions will not be affected hereby.
5. We will save your data in accordance with Section 23 BDSG [Federal Data Protection Act].

RÖHM GmbH

D–89565 Sontheim/Brenz

Revised: September 2012

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