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grabbing.

Automation Technology

2013/2014

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AUTOMATION TECHNOLOGY

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Automation Technology 5003 2-jaw parallel gripper Synthetic gripper 5024 3-jaw centric gripper 5027 2-jaw long stroke gripper 5051 5078 2-jaw electrical gripper 2-jaw angular gripper 5083 Swivel Units 5101 Swivel jaws 5113 Tool Changers 5117 Rotary Distributors 5124 Axis Compensation 5129 Crash protection 5137









Overview

Parallel grippers are especially suitable for rectangular or round workpieces.



2-Jaw Parallel Gripper RPP

- With high precision
- Tried and tested T-groove
- Simple interface master jaw / top jaw with 2 interfaces



2-Jaw Parallel Gripper RPP-A

- With high precision
- Tried and tested T-groove
- Simple interface master jaw / top jaw with crosswise slot and position pin
- Predecessor of RPP



2-Jaw Parallel Gripper RMPP-S

- For small parts
- Solid flat guides



2-Jaw Parallel Gripper RDPP-S

- For rough environment
- Sealed square guide



RPP

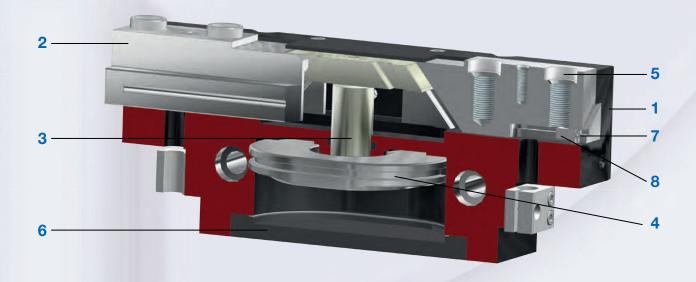
Parallel gripper with high precision and tried and tested T-groove. Interface master jaw / top jaw with only 2 centering sleeves.



- T-groove for maximum force and torque absorption
- Centric gripping of round and rectangular workpieces
- Universal application due to different types of jaws
- Robust, lightweight housing due to hard coated aluminium alloy
- All sizes available with 2 different stroke lengths
- Design GA with integrated springs as gripping force safety device
- Blast air terminal against dirt accummulation
- Gripper can be mounted on two sides of the gripper
- Optional inductive and magnetic position sensors
- Gripping force safety device as special type for exterior or interior gripping
- Simple interface master jaw / top jaw with only 2 centring sleeves
- Actuated by a double-acting cylinder
- Up to 5 mil. cycles maintenance free

- 1. Robust, lightweight housing Hard coated aluminium alloy
- Master jawPositioning of customized gripper fingers
- 3. Wedge-shaped piston
- 4. Oval pistons
- Centring sleeve removeable
 Positioning of the gripper jaws quick and cost-effective
- 6. Cap

- 7. Adjusting spindle
- 8. Adjusting block



RPP

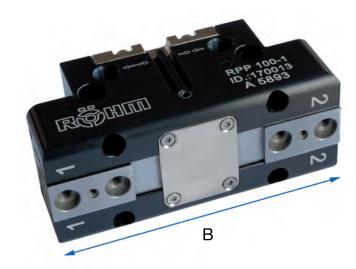
Description	Stroke pe	r jaw in mm	w in mm Gripping force max. in N			Recommended workpiece weight in kg		
	1	2	1	2	1	2		
RPP-50	4	2	208	398	0,7	1,45		
RPP-64	6	3	316	605	1,5	3		
RPP-80	8	4	470	886	2,2	4,3		
RPP-100	10	5	830	1570	3,5	7,0		
RPP-125	13	6	1243	2500	6,0	12		
RPP-160	16	8	2000	3775	9,0	17		
RPP-200	25	14	3080	5240	14	24		
RPP-240	30	17	4309	7324	21	35		
RPP-300	35	20	6400	11000	31	52		
RPP-380	45	26	9620	16350	48	82		

Design RPP:

- long jaw stroke, normal gripping force
- 2 normal jaw stroke, high gripping force
- GΑ integrated springs as gripping force safety device for exterior tension, thus increased gripping force
- GI integrated springs as gripping force safety device for interior tension, thus increased gripping force



RPP





Tool group C40 RPP-50 2-jaw parallel gripper air operated

Item no.	170119 •	170120 •	170121 •	170122 •	170123 •	170124 •
Design	RPP-50-1	RPP-50-2	RPP-50-1/GA	RPP-50-2/GA	RPP-50-1/GI	RPP-50-2/GI
Gripping force N	208	398	242	462	264	505
Stroke per jaw mm	4	2	4	2	4	2
Gripping force maintained N	-	-	35	65	35	65
Recommended workpiece weight kg	0,7	1,45	0,7	1,45	0,7	1,45
Weight kg	0,19	0,19	0,23	0,23	0,23	0,23
Width mm	65	65	65	65	65	65
Height mm	31	31	47	47	47	47
Depth mm	30	30	30	30	30	30
M _x	20	20	20	20	20	20
M_y	25	25	25	25	25	25
M _z	10	10	10	10	10	10
F _z	500	500	500	500	500	500

Tool group C40 RPP-64 2-jaw parallel gripper air operated

Item no.	170001	170002	170003 •	170004	170005	170006
Design	RPP-64-1	RPP-64-2	RPP-64-1/GA	RPP-64-2/GA	RPP-64-1/GI	RPP-64-2/GI
Gripping force N	316	605	458	876	487	932
Stroke per jaw mm	6	3	6	3	6	3
Gripping force maintained N	-	-	100	200	100	200
Recommended workpiece weight kg	1,5	3	1,5	3	1,5	3
Weight kg	0,3	0,3	0,4	0,4	0,4	0,4
Width mm	76	76	76	76	76	76
Height mm	39	39	57	57	57	57
Depth mm	36	36	36	36	36	36
M _x	40	40	40	40	40	40
M_{y}	60	60	60	60	60	60
M _z	40	40	40	40	40	40
F _z	1100	1100	1100	1100	1100	1100

Tool group C40 RPP-80 2-jaw parallel gripper air operated

Item no.	170007	170008	170009	170010 •	170011 •	170012
Design	RPP-80-1	RPP-80-2	RPP-80-1/GA	RPP-80-2/GA	RPP-80-1/GI	RPP-80-2/GI
Gripping force N	470	886	615	1156	657	1236
Stroke per jaw mm	8	4	8	4	8	4
Gripping force maintained N	-	-	160	300	160	300
Recommended workpiece weight kg	2,2	4,3	2,2	4,3	2,2	4,3
Weight kg	0,5	0,5	0,6	0,6	0,6	0,6
Width mm	96	96	96	96	96	96
Height mm	49	49	67	67	67	67
Depth mm	42	42	42	42	42	42
M _x	60	60	60	60	60	60
M_y	95	95	95	95	95	95
M_z	55	55	55	55	55	55
F,	1500	1500	1500	1500	1500	1500



2-jaw parallel gripper

RPP

Tool group C40
RPP-100
2-jaw parallel gripper
air operated

Item no.	170013 •	170014 •	170015 •	170016 •	170018 •	170019
Design	RPP-100-1	RPP-100-2	RPP-100-1/GA	RPP-100-2/GA	RPP-100-1/GI	RPP-100-2/GI
Gripping force N	830	1570	981	1857	1044	1977
Stroke per jaw mm	10	5	10	5	10	5
Gripping force maintained N	-	-	260	500	260	450
Recommended workpiece weight kg	3,5	7	3,5	7	3,5	7
Weight kg	0,8	0,8	1	1	1	1
Width mm	120	120	120	120	120	120
Height mm	55	55	81	81	81	81
Depth mm	50	50	50	50	50	50
M_x	80	80	80	80	80	80
M_{y}	115	115	115	115	115	115
M_z	70	70	70	70	70	70
F _z	2000	2000	2000	2000	2000	2000

Tool group C40
RPP-125
2-jaw parallel gripper
air operated

Item no.	170020 •	170021 •	170022	170023 •	170025 •	170026 •
Design	RPP-125-1	RPP-125-2	RPP-125-1/GA	RPP-125-2/GA	RPP-125-1/GI	RPP-125-2/GI
Gripping force N	1243	2500	1568	3162	1625	3277
Stroke per jaw mm	13	6	13	6	13	6
Gripping force maintained N	-	-	350	750	350	750
Recommended workpiece weight kg	6,2	12,5	6,2	12,5	6,2	12,5
Weight kg	1,5	1,5	1,9	1,9	1,9	1,9
Width mm	151	151	151	151	151	151
Height mm	63	63	93	93	93	93
Depth mm	60	60	60	60	60	60
M _x	120	120	120	120	120	120
M _y	145	145	145	145	145	145
M _z	100	100	100	100	100	100
F _z	2800	2800	2800	2800	2800	2800

Tool group C40 RPP-160 2-jaw parallel gripper air operated

Item no.	170029 •	170030 •	170031 •	170032 •	170033 •	170034 •
Design	RPP-160-1	RPP-160-2	RPP-160-1/GA	RPP-160-2/GA	RPP-160-1/GI	RPP-160-2/GI
Gripping force N	2000	3775	2555	4805	2664	5010
Stroke per jaw mm	16	8	16	8	16	8
Gripping force maintained N	-	-	550	1100	550	1100
Recommended workpiece weight kg	9	17	9	17	9	17
Weight kg	2,8	2,8	3,6	3,6	3,6	3,6
Width mm	192	192	192	192	192	192
Height mm	77	77	117	117	117	117
Depth mm	72	72	72	72	72	72
M_x	170	170	170	170	170	170
M_y	180	180	180	180	180	180
M_z	130	130	130	130	130	130
F _z	4300	4300	4300	4300	4300	4300

Tool group C40 RPP-200 2-jaw parallel gripper air operated

Item no.	170035 •	170036 •	170037 •	170038 •	170039 •	170040
Design	RPP-200-1	RPP-200-2	RPP-200-1/GA	RPP-200-2/GA	RPP-200-1/GI	RPP-200-2/GI
Gripping force N	3080	5240	3940	6700	4090	6950
Stroke per jaw mm	25	14	25	14	25	14
Gripping force maintained N	-	-	900	1500	900	1500
Recommended workpiece weight kg	14	24	14	24	14	24
Weight kg	5,5	5,5	7,5	7,5	7,5	7,5
Width mm	234	234	234	234	234	234
Height mm	91	91	141	141	141	141
Depth mm	100	100	100	100	100	100
M _x	180	180	180	180	180	180
M_{y}	200	200	200	200	200	200
M_z	140	140	140	140	140	140
F _z	5000	5000	5000	5000	5000	5000



ROHII 2-jaw parallel gripper

Tool group C40 RPP-240 2-jaw parallel gripper air operated

Item no.	170100 •	170101 •	170102	170103 •	170104 •	170105
Design	RPP-240-1	RPP-240-2	RPP-240-1/GA	RPP-240-2/GA	RPP-240-1/GI	RPP-240-2/GI
Gripping force N	4309	7324	5256	8934	5526	9392
Stroke per jaw mm	30	17	30	17	30	17
Gripping force maintained N	-	-	1000	1600	1000	1600
Recommended workpiece weight kg	21	35	21	35	21	35
Weight kg	8,8	9,2	12	12	12	12
Width mm	270	270	270	270	270	270
Height mm	107	107	163,5	163,5	163,5	163,5
Depth mm	115	115	115	115	115	115
M _x	260	260	260	260	260	260
M _y	250	250	250	250	250	250
M _z	160	160	160	160	160	160
F _z	6200	6200	6200	6200	6200	6200

Tool group C40 RPP-300 2-jaw parallel gripper air operated

Item no.	170041	170042	170043 •	170044	170045	170046
Design	RPP-300-1	RPP-300-2	RPP-300-1/GA	RPP-300-2/GA	RPP-300-1/GI	RPP-300-2/GI
Gripping force N	6400	11000	7590	12910	7860	13360
Stroke per jaw mm	35	20	35	20	35	20
Gripping force maintained N	-	-	1300	2200	1300	2200
Recommended workpiece weight kg	31	52	31	52	31	52
Weight kg	14	14	17	17	17	17
Width mm	320	320	320	320	320	320
Height mm	122	122	172	172	172	172
Depth mm	140	140	140	140	140	140
M _x	400	400	400	400	400	400
M _y	400	400	400	400	400	400
M _z	250	250	250	250	250	250
F _z	8000	8000	8000	8000	8000	8000

Tool group C40 RPP-380 2-jaw parallel gripper air operated

Item no.	172113 •	172114 •	172115 •	172116	172117 •	172118
Design	RPP-380-1	RPP-380-2	RPP-380-1/GA	RPP-380-2/GA	RPP-380-1/GI	RPP-380-2/GI
Gripping force N	9620	16350	12470	21200	12900	21900
Stroke per jaw mm	45	26	45	26	45	26
Gripping force maintained N	-	-	2850	4850	2850	4850
Recommended workpiece weight kg	48	82	35,5	82	48	82
Weight kg	28	28	35,5	35,5	35,5	35,5
Width mm	310	410	410	410	410	410
Height mm	226,5	155	226,5	226,5	226,5	226,5
Depth mm	170	170	170	170	170	170
M _x	560	560	560	560	560	560
M_y	560	560	560	560	560	560
M_z	370	370	370	370	370	370
F _z	10000	10000	10000	10000	10000	10000



Parallel gripper RPP

Accessories RPP

Jaw blank - steel 2-jaw set

Item no.	Number of jaws	Design	For
170574	2		RPP-50
170575 •	2	Steel	RPP-64
170576		Steel	RPP-80
170577 •	2	Steel	RPP-100
170578 •	2	Steel	RPP-125
170579 •	2	Steel	RPP-160
170580 •	2	Steel	RPP-200
170581	2	Steel	RPP-240
170582	2	Steel	RPP-300
170583	2	Steel	RPP-380

Jaw blank - aluminium 2-jaw set

Item no.	Number of jaws	Design	For
170584 •	2	Aluminium	RPP-50
170585 •	2	Aluminium	RPP-64
170586	2	Aluminium	RPP-80
170587 •	2	Aluminium	RPP-100
170588 •	2	Aluminium	RPP-125
170589	2	Aluminium	RPP-160
170590 •	2	Aluminium	RPP-200
170591	2	Aluminium	RPP-240
170592	2	Aluminium	RPP-300
170593	2	Aluminium	RPP-380

Protective cover

Item no.	For
170540	RPP-64
170541	RPP-80
170542 •	RPP-100
170543	RPP-125
170544 •	RPP-160
170545 •	RPP-200
170546	RPP-240
170547	RPP-300
170594 •	RPP-50
170548 •	RPP-380

Compressed air connection

Item no.	For
802539 •	RPP-50 / RPP-64 / RPP-80
477025 •	RPP-100 / RPP-125 / RPP-160 / RPP-200 / RPP-240 / RPP-300 / RPP-380

Pressure maintenance

Item no.	For
1078823 •	RPP-50 - RPP-380

Stroke monitors

Item no.	For
1078824 •	RPP-50 / RPP-64 / RPP-80

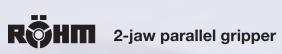
Proximity switch

Item no.	For
1149503 •	RPP-50
229114 •	RPP-64 / RPP-80 / RPP-110
389661 •	RPP-125 / RPP-160 / RPP-200 / RPP-240 / RPP-300 / RPP-380

Magnetic field sensors

Item no.	For
1083570 •	RPP-50 - RPP-380

5009 from stock 4 - 6 weeks







RPP-A

Parallel gripper with high precision and tried and tested T-groove. Simple interface master jaw / top jaw with traverse groove and position pin. Parallel gripper RPP-A available on request. Please contact us!



- T-groove for maximum force and torque absorption
- Universal application due to different types of jaws
- Fast and efficient gripping
- Centric gripping of round and rectangular workpieces
- Ideal for series production
- All sizes available with 2 different stroke lengths
- Gripping pressure controlled by change of pressure
- Design GA with integrated springs as gripping force safety device
- Blast air terminal against dirt accummulation
- Up to 5 mil. cycles maintenance free
- Actuated by a pneumatic or a double-acting cylinder
- Gripper can be mounted on two sides of the gripper
- Optional inductive position sensors
- Screw connection or direct connection to compressed air
- Gripping force safety device as special type for exterior or interior gripping
- Previous model to RPP

Parallel grippers RPP-A are available on request. Please contact us!

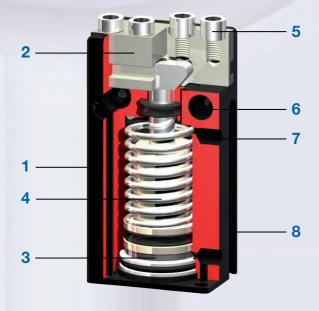


RMPP-S

Tight small-part gripper with solid flat guides



- Flat guides for maximum force and torque absorption
- Gripper jaws made of grinded and hardened steel ensure precision anda long durability
- Robust housing due to hard coated aluminium alloy
- Integrated position sensing for compact design and to minimized theinterfering contour
- Maintenance free to 10 mil. cycles
- Available on request: High-temperature-resistant model (up to 150°C)



1. Robust, lightweight housing

Hard coated aluminium alloy

2. Gripper jaw

For individual gripper finger mounting

3. Position sensing

Permanent magnet for direct position sensing of piston movement (starting from size 820)

4. Integrated gripping force safety device

Integrated spring into cylinder as energy storage starting from size 820)

5. Removable centering sleev

Quick and economical positioning of the gripper fingers

6. Mounting and positioning

Mounting possible at several sides individual positioning of the gripper flexible

7. Energy supply

On several sides possible

8. Integrated slot

Mounting and positioning of magnetic field sensors (starting from size 820)



RMPP-S

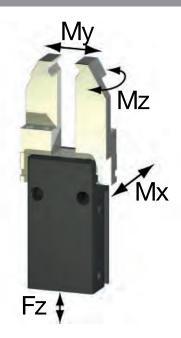
Description	Stroke per jaw in mm	Gripping force max. in N	Recommended workpiece weight in kg
RMPP-S-12	1	8	0,04
RMPP-S-16	2	19	0,095
RMPP-S-20	3	40	0,2
RMPP-S-24	4	65	0,325
RMPP-S-30	6	120	0,6
RMPP-S-36	8	190	0,95
RMPP-S-42	10	310	1,55
RMPP-S-48	12	350	1,75

Design RMPP-S:

GΑ integrated springs as gripping force safety device for exterior tension, thus increased gripping force







Tool group C40 RMPP-S-12 2-jaw parallel gripper air operated

Item no.	1242536 •
Design	RMPP-S-12
Gripping force N	6
Stroke per jaw mm	1
Gripping force maintained N	0
Recommended workpiece weight kg	0,04
Weight kg	0,008
Width mm	12
Height mm	20
Depth mm	10
M_x	1
M_{y}	2
M_z	1
F _z	54

Tool group C40 RMPP-S-16 2-jaw parallel gripper air operated

Item no.	1242537 •
Design	RMPP-S-16
Gripping force N	16
Stroke per jaw mm	2
Gripping force maintained N	0
Recommended workpiece weight kg	0,095
Weight kg	0,016
Width mm	16
Height mm	25
Depth mm	12
M_{x}	2
M_y	3
M_{z}	1
F _z	90

Tool group C40 RMPP-S-20 2-jaw parallel gripper air operated

Item no.	1242538	1242539 •
Design	RMPP-S-20	RMPP-S-20/GA
Gripping force N	40	55
Stroke per jaw mm	3	3
Gripping force maintained N	0	20
Recommended workpiece weight kg	0,2	0,2
Weight kg	0,025	0,035
Width mm	20	20
Height mm	27	39
Depth mm	14	14
M _x	2	2
M _y	5	5
M _z	2	2
F,	140	140

2-jaw parallel gripper

RMPP-S

Tool group C40 RMPP-S-24 2-jaw parallel gripper air operated

Item no.	1242540 •	1242541 •
Design	RMPP-S-24	RMPP-S-24/GA
Gripping force N	65	90
Stroke per jaw mm	4	4
Gripping force maintained N	0	30
Recommended workpiece weight kg	0,325	0,325
Weight kg	0,05	0,07
Width mm	24	24
Height mm	32	44
Depth mm	18	18
M_x	3	3
M_{y}	7	7
M_z	3	3
F _z	230	230

Tool group C40 RMPP-S-30 2-jaw parallel gripper air operated

Item no.	1242542 •	1242543 •
Design	RMPP-S-30	RMPP-S-30/GA
Gripping force N	120	140
Stroke per jaw mm	6	6
Gripping force maintained N	0	40
Recommended workpiece weight kg	0,6	0,6
Weight kg	0,1	0,11
Width mm	30	30
Height mm	40	46,5
Depth mm	23	23
M_{x}	5	5
M_{y}	14	14
M_z	4	4
F _z	330	330

Tool group C40 RMPP-S-36 2-jaw parallel gripper air operated

Item no.	1242544 •	1242545 ●
Design	RMPP-S-36	RMPP-S-36/GA
Gripping force N	190	220
Stroke per jaw mm	8	8
Gripping force maintained N	0	50
Recommended workpiece weight kg	0,95	0,95
Weight kg	0,16	0,18
Width mm	36	36
Height mm	49	57
Depth mm	28	28
M _x	7	7
M _y	21	21
M _z	6	6
F_z	450	450

Tool group C40 RMPP-S-42 2-jaw parallel gripper air operated

Item no.	1242546 •	1242547 •
Design	RMPP-S-42	RMPP-S-42/GA
Gripping force N	310	350
Stroke per jaw mm	10	10
Gripping force maintained N	0	80
Recommended workpiece weight kg	1,55	1,55
Weight kg	0,28	0,32
Width mm	42	42
Height mm	60	69
Depth mm	33	33
M _x	12	12
M_y	32	32
M _z	9	9
F _z	590	590

2-jaw parallel gripper

RMPP-S

Tool group C40 RMPP-S-48 2-jaw parallel gripper air operated

Item no.	1242548 •	1242549 •
Design	RMPP-S-48	RMPP-S-48/GA
Gripping force N	350	400
Stroke per jaw mm	12	12
Gripping force maintained N	0	80
Recommended workpiece weight kg	1,75	1,75
Weight kg	0,41	0,46
Width mm	48	48
Height mm	68	77
Depth mm	38	38
M_{x}	16	16
M _y	42	42
M_z	11	11
F _z	790	790

Accessories RMPP-S

Magnetic field sensors

Item no.	Design	For
1242868 •	Angle / Cable 5m	RMPP-S-20 - RMPP-S-48
1242869 •	Straight / Cable 5m	RMPP-S-20 - RMPP-S-48
1242870	Angle / Cable 0,3m / Connector M8	RMPP-S-20 - RMPP-S-48
1242871 •	Straight / Cable 0,3m / Connector M8	RMPP-S-20 - RMPP-S-48

Compressed air connection

Item no.	Design	For
1242883 •	Angle	RMPP-S-20 - RMPP-S-30
1242884 •	Angle	RMPP-S-36 - RMPP-S-48
1242885 •	Straight	RMPP-S-20 - RMPP-S-30
1242886 •	Straight	RMPP-S-36 - RMPP-S-48





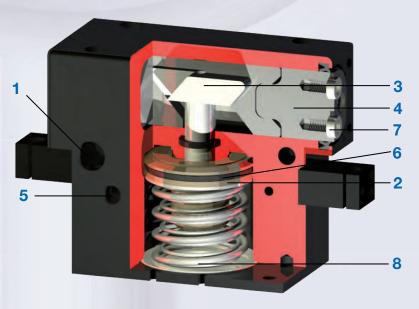


RDPP-S

Parallel gripper for rough environment with sealed square guide



- Sealed square guide
- Sealed with additional wiper
- High precision due to low play guide
- Optimum transmission of power into gripping force
- Positioning of the customized gripper fingers via centering sleeves
- Maintenance free to 5 mil. cycles
- Available on request: High-temperature-resistant model (up to 150°C)



1. Mounting and positioning

Mounting possible from several sides for versatile positioning

2. Permanent magnet

Installed in the piston area as a signed transmitter

3. Wedge hook mechanism

Synchronized movement of the gripper jaws and high power

4. Strong and precise square flat guide

High forces and moments capacity

5. Energy supply

Air connections available on several sides

6. Drive

Double-acting pneumatic cylinder

7. Removable centering sleeve

Quick and cost-effective gripper finger positioning

8. Integrated gripping force safety device Optional via intergrated spring

(GA and GI Models)



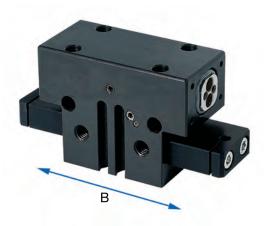
RDPP-S

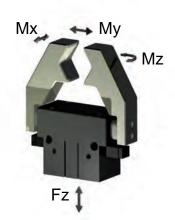
Description	Stroke per jaw in mm	Gripping force max. in N	Recommended workpiece weight in kg
RDPP-S-50-3	3	85	0,425
RDPP-S-50-1	4	160	0,8
RDPP-S-64	6	280	1,4
RDPP-S-80	8	550	2,75
RDPP-S-100	10	735	3,675
RDPP-S-125	12	1165	5,825
RDPP-S-160	16	1915	9,575
RDPP-S-200	20	3085	15,425
RDPP-S-260	30	6670	33,35

Design RDPP-S:

- long jaw stroke, normal gripping force
- GΑ integrated springs as gripping force safety device for exterior tension, thus increased gripping force
- GI integrated springs as gripping force safety device for interior tension, thus increased gripping force







Tool group C40 RDPP-S-50-1 2-jaw parallel gripper air operated

Item no.	1242553 •	1242554 •	1242555 •
Design	RDPP-S-50-1	RDPP-S-50-1/GA	RDPP-S-50-1/GI
Gripping force N	160	155	155
Stroke per jaw mm	4	4	4
Gripping force maintained N	0	40	40
Recommended workpiece weight kg	0,8	0,8	0,8
Weight kg	0,19	0,215	0,215
Width mm	50	50	50
Height mm	30	46	46
Depth mm	27,8	27,8	27,8
M _x	7	7	7
M _y	12	12	12
M _z	6	6	6
F _z	250	250	250

Tool group C40 RDPP-S-50-3 2-jaw parallel gripper air operated

Item no.	1242550	1242551	1242552
Design	RDPP-S-50-3	RDPP-S-50-3/GA	RDPP-S-50-3/GI
Gripping force N	85	90	90
Stroke per jaw mm	3	3	3
Gripping force maintained N	0	32	32
Recommended workpiece weight kg	0,425	0,425	0,425
Weight kg	0,12	0,135	0,135
Width mm	50	50	50
Height mm	39	36,5	36,5
Depth mm	24	24	24
M _x	4	4	4
M _y	8	8	8
M _z	3	3	3
F _z	150	150	150

Tool group C40 RDPP-S-64 2-jaw parallel gripper air operated

**			
Item no.	1242556 •	1242557 •	1242558 •
Design	RDPP-S-64-1	RDPP-S-64-1/GA	RDPP-S-64-1/GI
Gripping force N	280	290	290
Stroke per jaw mm	6	6	6
Gripping force maintained N	0	100	100
Recommended workpiece weight kg	1,4	1,4	1,4
Weight kg	0,4	0,425	0,425
Width mm	64	64	64
Height mm	47,5	55,5	55,5
Depth mm	36	36	36
M _x	25	25	25
M _y	30	30	30
M _z	15	15	15
F _z	500	500	500

2-jaw parallel gripper

RDPP-S

Tool group C40 RDPP-S-80 2-jaw parallel gripper air operated

Item no.	1242559 •	1242560 •	1242561 •
Design	RDPP-S-80-1	RDPP-S-80-1/GA	RDPP-S-80-1/GI
Gripping force N	550	560	560
Stroke per jaw mm	8	8	8
Gripping force maintained N	0	160	160
Recommended workpiece weight kg	2,75	2,75	2,75
Weight kg	0,64	0,72	0,72
Width mm	80	80	80
Height mm	57,5	67,5	67,5
Depth mm	42	42	42
M _x	30	30	30
M _y	40	40	40
M _z	25	25	25
F _z	750	750	750

Tool group C40 RDPP-S-100 2-jaw parallel gripper air operated

Item no.	1242562	1242563	1242564
Design	RDPP-S-100-1	RDPP-S-100-1/GA	RDPP-S-100-1/GI
Gripping force N	735	780	780
Stroke per jaw mm	10	10	10
Gripping force maintained N	0	220	220
Recommended workpiece weight kg	3,675	3,675	3,675
Weight kg	1,1	1,3	1,3
Width mm	100	100	100
Height mm	67	85	85
Depth mm	50	50	50
M_x	45	45	45
M _y	70	70	70
M_z	35	35	35
F _z	1200	1200	1200

Tool group C40 RDPP-S-125 2-jaw parallel gripper air operated

Item no.	1242565 •	1242566 •	1242567
Design	RDPP-S-125-1	RDPP-S-125-1/GA	RDPP-S-125-1/GI
Gripping force N	1165	1400	1400
Stroke per jaw mm	12	12	12
Gripping force maintained N	0	500	500
Recommended workpiece weight kg	5,825	5,825	5,825
Weight kg	1,6	2,2	2,2
Width mm	125	125	125
Height mm	77,5	102,5	102,5
Depth mm	60	60	60
M _x	60	60	60
M _y	90	90	90
M _z	50	50	50
F _z	2000	2000	2000

Tool group C40 RDPP-S-160 2-jaw parallel gripper air operated

Item no.	1242568	1242569	1242570
Design	RDPP-S-160-1	RDPP-S-160-1/GA	RDPP-S-160-1/GI
Gripping force N	1915	2050	2050
Stroke per jaw mm	16	16	16
Gripping force maintained N	0	650	650
Recommended workpiece weight kg	9,575	9,575	9,575
Weight kg	3,65	4,25	4,25
Width mm	160	160	160
Height mm	94	124	124
Depth mm	72	72	72
M_x	80	80	80
M _y	120	120	120
M_z	65	65	65
F_z	3000	3000	3000

• from stock • 4 - 6 weeks 5021

2-jaw parallel gripper

RDPP-S

Tool group C40 RDPP-S-200 2-jaw parallel gripper air operated

Item no.	1242571 •	1242572 •	1242573
Design	RDPP-S-200-1	RDPP-S-200-1/GA	RDPP-S-200-1/GI
Gripping force N	3085	3200	3200
Stroke per jaw mm	20	20	20
Gripping force maintained N	0	900	900
Recommended workpiece weight kg	15,425	15,425	15,425
Weight kg	6	7,65	7,65
Width mm	200	200	200
Height mm	110	146	146
Depth mm	95	95	95
M _x	130	130	130
M _y	170	170	170
M _z	110	110	110
F _z	6000	6000	6000

Tool group C40 RDPP-S-260 2-jaw parallel gripper air operated

Item no.	1242574 •	1242575 •	1242576 •
Design	RDPP-S-260-1	RDPP-S-260-1/GA	RDPP-S-260-1/GI
Gripping force N	6670	6900	6900
Stroke per jaw mm	30	30	30
Gripping force maintained N	0	1900	1900
Recommended workpiece weight kg	33,35	33,35	33,35
Weight kg	16	22	22
Width mm	260	260	260
Height mm	150	214	214
Depth mm	139	139	139
M _x	180	180	180
M _y	250	250	250
M _z	150	150	150
F _z	8000	8000	8000

5022

Parallel gripper RDPP-S

Accessories RDPP-S

Jaw blank - steel 2-jaw set

Item no.	Number of jaws	Design	For
1242926	2	Steel	RDPP-S-50-3
1242927 •	2	Steel	RDPP-S-50-1
1242928 •	2	Steel	RDPP-S-64
1242929	2	Steel	RDPP-S-80
1242930 •	2	Steel	RDPP-S-100
1242931	2	Steel	RDPP-S-125
1242932 •	2	Steel	RDPP-S-160
1242933 •	2	Steel	RDPP-S-200
1242934 •	2	Steel	RDPP-S-260

Jaw blank - aluminium 2-jaw set

Item no.	Number of jaws	Design	For
1242917 •	2	Aluminium	RDPP-S-50-3
1242918 •	2	Aluminium	RDPP-S-50-1
1242919 •	2	Aluminium	RDPP-S-64
1242920 •	2	Aluminium	RDPP-S-80
1242921 •	2	Aluminium	RDPP-S-100
1242922 •	2	Aluminium	RDPP-S-125
1242923 •	2	Aluminium	RDPP-S-160
1242924 •	2	Aluminium	RDPP-S-200
1242925 •	2	Aluminium	RDPP-S-260

Mounting bracket

Item no.	For
1242887 •	RDPP-S-100
1242888 •	RDPP-S-125
1242889	RDPP-S-160
1242890 •	RDPP-S-200
1242891	RDPP-S-260

Proximity switch

Item no.	Design	For
1242892 •	Cable 5m	RDPP-S-50-3 - RDPP-S-80
1242875	Cable 5 m	RDPP-S-100 - RDPP-S-260
1242893 •	Cable 0,3m / Connector M8	RDPP-S-50-3 / RDPP-S-50-1
1242877 •	Connector M8	RDPP-S-64 - RDPP-S-260

Connector

Item no.	Design	For
1242872 •	Angle / Cable / Bushing M8	all sizes
1242873 •	Straight / Cable / Bushing M8	all sizes

Magnetic field sensors

Item no.	Design	For
1242868 •	Angle / Cable 5m	all sizes
1242869 •	Straight / Cable 5m	all sizes
1242870 •	Angle / Cable 0,3m / Connector M8	all sizes
1242871 •	Straight / Cable 0,3m / Connector M8	RDPP-S-64 - RDPP-S-260

Compressed air connection

Item no.	Design	For
1242884 •	Angle	RDPP-S-50-3 - RDPP-S-64
1242894 •	Angle	RDPP-S-80 - RDPP-S-160
1242895	Angle	RDPP-S-200 - RDPP-S-260
1242886 •	Straight	RDPP-S-50-3 - RDPP-S-64
1242896 •	Straight	RDPP-S-80 - RDPP-S-160
1242897 •	Straight	RDPP-S-200 - RDPP-S-260

Mounting block

Item no.	For
1242898 •	RDPP-S-50-3
1242899 •	RDPP-S-50-1
1242900 •	RDPP-S-64 / RDPP-S-80
1242901 •	RDPP-S-100
1242902 •	RDPP-S-125
1242903 •	RDPP-S-160 / RDPP-S-200 / RDPP-S-260

Protective cover

Item no.	For
1242904 •	RDPP-S-50-3
1242905	RDPP-S-50-1
1242906	RDPP-S-64
1242907 •	RDPP-S-80
1242908	RDPP-S-100
1242909	RDPP-S-125
1242910 •	RDPP-S-160
1242911	RDPP-S-200
1242912 •	RDPP-S-260

Switch cam

Item no.	For
1242913 •	RDPP-S-50-3
1242914 •	RDPP-S-50-1 / RDPP-S-64
1242915 •	RDPP-S-80
1242916 •	RDPP-S-100 / -125 / - 160 / -200 / -260
	1.2.1

5023 4 - 6 weeks from stock



RRMP

Individual, cost-effective, lightweight.

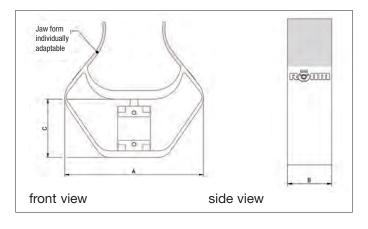


The ideal solution for light workpieces:

- Jaws can be designed with free-form surfaces
- Ideal for complex formes and sensitive workpieces
- · Individually adapted to your workpiece
- Extremly light in weight
- External and internal clamping possible

Tested fatigue strength:

- More than 10 mio gripping cycles without any signs of wear
- Entirely maintenance-free



Size		2	3	4
Α	mm	77	114	168
В	mm	25	35	50
С	mm	33	48	71
Operating pressure max.	bar	6	6	6
Pneumatic connection		M5	M5	M5
Stroke	mm	9	15	22
Clamping force max.	N	25	55	80

Connection geometry and jaws individually adaptable

Variant 1: Mounting at flange



- With draw-down effect
- Image shows the application with internal clamping

Variant 2: Mounting at bar



- Little draw-down effect
- Image shows the application in the RÖHM drill chuck production (External clamping)







Overview



Overview

Centric grippers are especially suitable for round and cylindrical workpieces



3-jaw Centric Gripper RZP

- With high precision
- Tried and tested T-groove
- Simple interface master jaw / top jaw with 2 interfaces



3-jaw Centric Gripper RZP-A

- With high precision
- Tried and tested T-groove
- Simple cut surface of master jaw / top jaw with crosswise slot, positioning pin



3-jaw Centric Gripper RGZP

- With long stroke
- Precise T-groove



3-jaw Centric Gripper RMZP

- For smaller parts
- Precise T-groove



3-jaw Centric Gripper RDZP

- For rough environments
- Sealed square guides

RZP

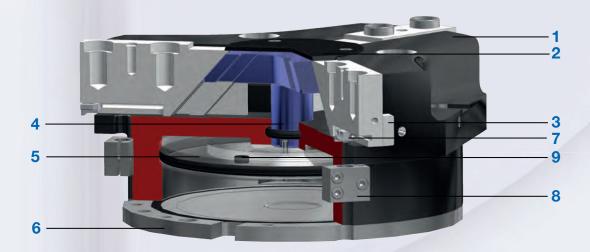
Centric gripper with high precision and tried and tested T-groove. Simple interface master jaw / top jaw with 2 centring sleeves and 2 screw threads.



- Tried and tested T-groove gripping guide for master jaw at max. loads
- Centric gripping of round and angular workpieces
- All sizes available wit 2 different stroke lengths
- Gripping pressure controlled by change of pressure
- Sealing air connection to prevent contamination
- Gripper can be mounted on one side of the gripper
- Inductive or magnetic position sensors
- Screw connection or direct connection to compressed
- Gripping force safety device as a special type for exterior or interior gripping
- Positioning of the customized gripper fingers via centering sleeves
- Up to 5 mil. cycles maintenance free
- Available on request: High-temperature-resistant model (up to 150°C)

- 1. Body
- 2. Cap
- Master jaw
- Wedge-shaped piston
- 5. Piston

- 6. Flange
- **Adjusting block**
- 8. Sensor holder
- 9. Magnet





RZP

Description	Total stroke in mm		Maximum grij	oping force in N	Recommended workpiece weight in kg	
	1	2	1	2	1	2
RZP-64	6	3	650	1200	3,2	6
RZP-80	8	4	1200	2400	6	12
RZP-100	10	5	2000	4000	10	20
RZP-125	13	6	3200	6000	30	55
RZP-160	16	8	6000	11000	30	55
RZP-200	25	14	7500	12500	37	62
RZP-240	30	17	10500	18000	53	90
RZP-300	35	20	16000	28000	80	140

Design RZP:

- 1 long jaw stroke, normal gripping force
- 2 normal jaw stroke, high gripping force
- GΑ integrated springs as gripping force safety device for exterior tension, thus increased gripping force
- GI integrated springs as gripping force safety device for interior tension, thus increased gripping force

D7D





Tool group C40 RZP-64 3-jaw centric gripper air operated

Item no.	170050	170051	170052	170053 •	170054	170055 •
Design	RZP-64/3-1	RZP-64/3-2	RZP-64/3-1 GA	RZP-64/3-2 GA	RZP-64/3-1 GI	RZP-64/3-2 GI
Gripping force N	650	1200	850	1600	900	1700
Stroke per jaw mm	6	3	6	3	6	3
Gripping force maintained N	-	-	200	400	200	400
Recommended workpiece weight kg	3,2	6	3,2	6	3,2	6
Weight kg	0,45	0,45	0,55	0,55	0,55	0,55
Height mm	43,3	43,3	56,8	56,8	56,8	56,8
Ømm	76	76	76	76	76	76
M _x	40	40	40	40	40	40
M _y	60	60	60	60	60	60
M_z	40	40	40	40	40	40
F _z	1100	1100	1100	1100	1100	1100

Tool group C40
RZP-80
3-jaw centric gripper
air operated

Item no.	170056	170057	170058	170059 •	170060	170061
Design	RZP-80/3-1	RZP-80/3-2	RZP-80/3-1 GA	RZP-80/3-2 GA	RZP-80/3-1 GI	RZP-80/3-2 GI
Gripping force N	1200	2400	1550	3100	1700	3250
Stroke per jaw mm	8	4	8	4	8	4
Gripping force maintained N	-	-	350	700	350	700
Recommended workpiece weight kg	6	12	6	12	6	12
Weight kg	0,8	0,8	1	1	1	1
Height mm	49,3	49,3	64,3	64,3	64,3	64,3
Ø mm	96	96	96	96	96	96
M_x	60	60	60	60	60	60
M _y	95	95	95	95	95	95
M_z	55	55	55	55	55	55
F _z	1500	1500	1500	1500	1500	1500

Tool group C40
RZP-100
3-jaw centric gripper
air operated

Item no.	170062	170063 •	170064	170065	170066	170067
Design	RZP-100/3-1	RZP-100/3-2	RZP-100/3-1 GA	RZP-100/3-2 GA	RZP-100/3-1 GI	RZP-100/3-2 GI
Gripping force N	2000	4000	2650	5300	2800	5620
Stroke per jaw mm	10	5	10	5	10	5
Gripping force maintained N	-	-	650	1300	650	1300
Recommended workpiece weight kg	10	20	10	20	10	20
Weight kg	1,4	1,4	2	2	2	2
Height mm	59,3	59,3	79,3	79,3	79,3	79,3
Ø mm	120	120	120	120	120	120
M_{x}	80	80	80	80	80	80
M _y	115	115	115	115	115	115
M_{z}	70	70	70	70	70	70
F.	2000	2000	2000	2000	2000	2000

3-jaw centric gripper

RZP

Tool group C40
RZP-125
3-jaw centric gripper
air operated

Item no.	170068 •	170069 •	170070	170071	170072	170073
Design	RZP-125/3-1	RZP-125/3-2	RZP-125/3-1 GA	RZP-125/3-2 GA	RZP-125/3-1 GI	RZP-125/3-2 GI
Gripping force N	3200	6000	4200	7800	4400	8000
Stroke per jaw mm	13	6	13	6	13	6
Gripping force maintained N	-	-	1000	1800	1000	1800
Recommended workpiece weight kg	16	30	16	30	16	30
Weight kg	2,4	2,4	3,2	3,2	3,2	3,2
Height mm	67	67	91,5	91,5	91,5	91,5
Ø mm	150	150	150	150	150	150
M _x	120	120	120	120	120	120
M _y	145	145	145	145	145	145
M_z	100	100	100	100	100	100
F _z	2800	2800	2800	2800	2800	2800

Tool group C40
RZP-160
3-jaw centric gripper air operated

Item no.	170074	170075	170076	170077	170078	170079
Design	RZP-160/3-1	RZP-160/3-2	RZP-160/3-1 GA	RZP-160/3-2 GA	RZP-160/3-1 GI	RZP-160/3-2 GI
Gripping force N	6000	11000	8000	15000	8500	16000
Stroke per jaw mm	16	8	16	8	16	8
Gripping force maintained N	-	-	2000	4000	2000	4000
Recommended workpiece weight kg	30	55	30	55	30	55
Weight kg	5,5	5,5	8	8	8	8
Height mm	81	81	111	111	111	111
Ø mm	190	190	190	190	190	190
M_x	170	170	170	170	170	170
M _y	180	180	180	180	180	180
M_z	130	130	130	130	130	130
F _z	4300	4300	4300	4300	4300	4300

Tool group C40
RZP-200
3-jaw centric gripper
air operated

Item no.	170080	170081	170082	170083	170084	170085
Design	RZP-200/3-1	RZP-200/3-2	RZP-200/3-1 GA	RZP-200/3-2 GA	RZP-200/3-1 GI	RZP-200/3-2 GI
Gripping force N	7500	12500	9300	15500	9500	16200
Stroke per jaw mm	25	14	25	14	25	14
Gripping force maintained N	-	-	1800	3000	1800	3000
Recommended workpiece weight kg	37	62	37	62	37	62
Weight kg	10	10	13	13	13	13
Height mm	96	96	132	132	132	132
Ømm	250	250	250	250	250	250
M _x	180	180	180	180	180	180
M _y	200	200	200	200	200	200
M_z	100	100	100	100	100	100
F _z	5000	5000	5000	5000	5000	5000

Tool group C40
RZP-240
3-jaw centric gripper
air operated

Item no.	170086	170087 •	170088	170089	170090	170091
Design	RZP-240/3-1	RZP-240/3-2	RZP-240/3-1 GA	RZP-240/3-2 GA	RZP-240/3-1 GI	RZP-240/3-2 GI
Gripping force N	10500	18000	14000	24000	15000	25000
Stroke per jaw mm	30	17	30	17	30	17
Gripping force maintained N	-	-	3500	6000	3500	6000
Recommended workpiece weight kg	53	90	53	90	53	90
Weight kg	20	20	24	24	24	24
Height mm	128,1	128,1	171,5	171,5	171,5	171,5
Ø mm	290	290	290	290	290	290
M_x	265	265	265	265	265	265
M _y	250	250	250	250	250	250
M _z	160	160	160	160	160	160
F_	6200	6200	6200	6200	6200	6200



3-jaw centric gripper

RZP

Tool group C40
RZP-300
3-jaw centric gripper
air operated

Item no.	170092	170093	170094	170095	170096	170097
Design	RZP-300/3-1	RZP-300/3-2	RZP-300/3-1 GA	RZP-300/3-2 GA	RZP-300/3-1 GI	RZP-300/3-2 GI
Gripping force N	16000	28000	20000	37500	22500	38000
Stroke per jaw mm	35	20	35	20	35	20
Gripping force maintained N	-	-	6000	9500	6000	9500
Recommended workpiece weight kg	80	140	80	110	80	140
Weight kg	30	30	40	40	40	40
Height mm	146	146	196	196	196	196
Ø mm	345	345	345	345	345	345
M _x	400	400	400	400	400	400
M _y	400	400	400	400	400	400
M _z	250	250	250	250	250	250
F _z	8000	8000	8000	8000	8000	8000

Accessories RZP

Jaw blank - aluminium

3-jaw set

Item no.	Number of jaws	Design	For
170550 •	3	Aluminium	RZP-64
170552 •	3	Aluminium	RZP-80
170554 •	3	Aluminium	RZP-100
170556 •	3	Aluminium	RZP-125
170558 •	3	Aluminium	RZP-160
170560	3	Aluminium	RZP-200
170562	3	Aluminium	RZP-240
170564	3	Aluminium	RZP-300

Jaw blank - steel

3-jaw set

Item no.	Number of jaws	Design	For
170500 •	3	Steel	RZP-64
170502	3	Steel	RZP-80
170504 •	3	Steel	RZP-100
170506	3	Steel	RZP-125
170508 •	3	Steel	RZP-160
170510 •	3	Steel	RZP-200
170512	3	Steel	RZP-240
170514	3	Steel	RZP-300

Protective cover

Item no.	For
170810 •	RZP-64
170811 •	RZP-80
170812 •	RZP-100
170813 •	RZP-125
170814 •	RZP-160
170815	RZP-200
170816	RZP-240
170817	RZP-300

Resilient pressure piece

Item no.	For
170516	RZP-64
170517	RZP-80
170518	RZP-100
170519	RZP-125
170520	RZP-160
170521	RZP-200
170522	RZP-240
170523	BZP-300

Compressed air connection

Item no.	For
802539 •	RZP-64 / RZP-80
477025	RZP- 100 / RZP-125 / RZP-160 / RZP-200 / RZP-240 / RZP-300

Pressure maintenance

Item no.	For
1078823	RZP-64 - RZP-300

Proximity switch

Item no.	For
229114 •	RZP-64 / RZP-80 / RZP-100 / RZP-125 / RZP-160
389661 •	RZP-200 / RZP-240 / RZP-300

Magnetic field sensors

Item no.	For
1083570	RZP-64 - RZP-300

RZP-A

Centric gripper with high precision and tried and tested T-groove. Simple interface of master jaw/top jaw with crosswise slot and positioning pin.



- Tried and tested T-groove gripping guide for master jaw at max. loads
- Fast and efficient gripoing
- Centric gripping of round and angular workpieces
- Universal application due to differnt types of jaws
- Ideal for series production
- All sizes available wit 2 different stroke lengths
- Gripping pressure controlled by change of pressure
- Constant clamping force at a constant pressure and thus high clamping precision
- Compact and ergonomic design
- Inductive or magnetic position sensors
- Screw connection or direct connection to compressed air
- Gripping force safety device as a special type for exterior or interior gripping
- Simple interface of master jaw / top jaw with crosswise slot, positioning pin and positioning borehole
- Previous model to RZP

Parallel grippers RPP-A are available on request. Please contact us!

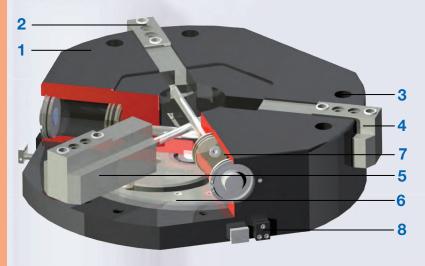


RGZP-S

Centric gripper with long stroke and precision T-groove



- Maximum gripping force when opening and closing at minor overall height
- Direct drive synchronized via cam disc
- T-slot guide for maximum force and moment absorption
- Positioning of the customized gripper fingers via centering sleeves
- Up to 10 mil. cycles maintenance free
- Available on request: High-temperature-resistant model (up to 150°C)



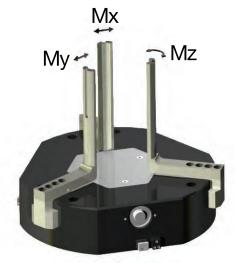
- 1. Robust, lightweight housing Hard coated anodized aluminium alloy
- 2. Removable centring sleeve Quick and cost-effective gripping jaw positioning
- 3. Mounting and positioning
- Gripper jaw Hardened steel, ground
- Precise T-slot guide High force and moment absorption
- 6. Cam Synchronized jaw movement
- **Drive** Three double acting pneumatic cylinders
- **Mounting block** Mounting for inductive proximity switch

Accessories RGZP-S

Description	Stroke per jaw in mm	Gripping force max. in N	Recommended workpiece weight in kg
RGZP-S-19830	30	1300	6,5
RGZP-S-29840	40	2480	12,4
RGZP-S-38060	60	2480	12,4







Fz ‡

Tool group C40 RGZP-S-19830 3-jaw centric gripper air operated

Item no.	1242577
Design	RGZP-S-19830/3
Gripping force N	1300
Stroke per jaw mm	30
Recommended workpiece weight kg	6,5
Weight kg	7,4
Height mm	71
Ømm	198
M_x	300
M_{y}	200
M_z	300
F _z	8000

Tool group C40 RGZP-S-29840 3-jaw centric gripper air operated

Item no.	1242578
Design	RGZP-S-29840/3
Gripping force N	2480
Stroke per jaw mm	40
Recommended workpiece weight kg	12,4
Weight kg	19
Height mm	100
Ømm	298
M_{x}	300
M_y	200
M _z	300
F _z	8000

Tool group C40 RGZP-S-38060 3-jaw centric gripper air operated

Item no.	1242579
Design	RGZP-S-38060/3
Gripping force N	2480
Stroke per jaw mm	60
Recommended workpiece weight kg	12,4
Weight kg	29
Height mm	100
Ømm	380
M _x	300
M_{y}	200
M _z	300
F ₂	8000

ROHII Centric gripper RGZP-S

Accessories RGZP-S

Compressed air connection

Item no.	Design	For
1242895	Angle	all sizes
1242897	Straight	all sizes

Connector

Item no.	Design	For
1242872 •	Angle / Cable / Bushing M8	all sizes
1242873	Straight / Cable / Bushing M8	all sizes

Proximity switch

Item no.	Design	For
1242875	Cable 5 m	all sizes
1242877	Connector M8	all sizes

5037 • from stock 4 - 6 weeks

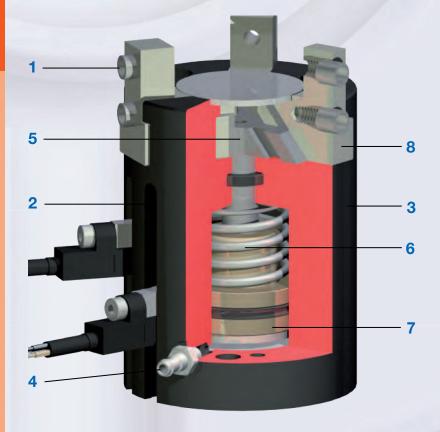


RMZP-S

Small-part gripper with precision T-groove



- Gripper jaws made of ground and hardened steel assure precision and long service life
- Central grip action achieved with synchronized positive
- Positively driven wedge-hook transmission
- Design GA with integrated springs as gripping force safety device
- Up to 10 mil. cycles maintenance free



- Removable centering sleeve Fast and cost-effective gripper finger positioning
- 2. Integrated groove Mounting and positioning of magnetic field sensors (from size 31 upwards)
- 3. Robust, lightweight housing Hard-coated aluminium alloy
- 4. Power supply Possible from several sides
- 5. Positively driven wedge hook mechanism Synchronized movement of gripper jaws
- 6. Integrated gripping force security device

Spring integrated into cylider as energy storage (from size 31 upwards)

- 7. Position sensing Permanent magnet for direct sensing of piston movement (from size 31)
- 8. Precise T-groove High forces and moments capacity

RMZP-S

Description	Stroke per jaw in mm	Gripping force max. in N	Recommended workpiece weight in kg
RMZP-S-21	1	34	0,17
RMZP-S-26	2	45	0,225
RMZP-S-31	3	87	0,435
RMZP-S-38	4	140	0,7
RMZP-S-48	6	265	1,325
RMZP-S-61	8	450	2,25
RMZP-S-75	10	790	3,95
RMZP-S-91	12	1200	6

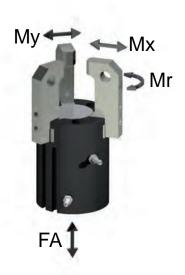
Design RMZP-S:

GΑ integrated springs as gripping force safety device for exterior tension, thus increased gripping force



RMZP-S





Tool group C40 RMZP-S-21 3-jaw centric gripper air operated

Item no.	1242580 •
Design	RMZP-S-21/3
Gripping force N	34
Stroke per jaw mm	1
Gripping force maintained N	0
Recommended workpiece weight kg	0,17
Weight kg	0,025
Height mm	21
Ømm	21
M_x	4
M_y	2
M_z	2
F _z	58

Tool group C40 RMZP-S-26 3-jaw centric gripper air operated

Item no.	1242581 •
Design	RMZP-S-26/3
Gripping force N	45
Stroke per jaw mm	2
Gripping force maintained N	0
Recommended workpiece weight kg	0,225
Weight kg	0,05
Height mm	26
Ømm	26
M_x	6
M_{y}	4
M_z	4
F _z	100

Tool group C40
RMZP-S-31
3-jaw centric gripper
air operated

Item no.	1242582 •	1242583 •
Design	RMZP-S-31/3	RMZP-S-31/3 GA
Gripping force N	87	110
Stroke per jaw mm	3	3
Gripping force maintained N	0	32
Recommended workpiece weight kg	0,435	0,435
Weight kg	0,08	0,115
Height mm	32	44
Ø mm	31	31
M _x	8	8
M _y	5	5
M_z	5	5
F _z	155	155

3-jaw centric gripper

RMZP-S

Tool group C40 RMZP-S-38 3-jaw centric gripper air operated

Item no.	1242584 •	1242585 •
Design	RMZP-S-38/3	RMZP-S-38/3 GA
Gripping force N	140	160
Stroke per jaw mm	4	4
Gripping force maintained N	0	35
Recommended workpiece weight kg	0,7	0,7
Weight kg	0,14	0,18
Height mm	38	50
Ømm	38	38
M_x	12	12
M_{y}	8	8
M_z	8	8
F _z	250	250

Tool group C40 RMZP-S-48 3-jaw centric gripper air operated

Item no.	1242586 •	1242587 •
Design	RMZP-S-48/3	RMZP-S-48/3 GA
Gripping force N	265	295
Stroke per jaw mm	6	6
Gripping force maintained N	0	55
Recommended workpiece weight kg	1,325	1,325
Weight kg	0,26	0,35
Height mm	45	57
Ø mm	48	48
M_x	18	18
M _y	12	12
M_{z}	12	12
F _z	420	420

Tool group C40
RMZP-S-61
3-jaw centric gripper
air operated

Item no.	1242588	1242589 •
Design	RMZP-S-61/3	RMZP-S-61/3 GA
Gripping force N	450	560
Stroke per jaw mm	8	8
Gripping force maintained N	0	145
Recommended workpiece weight kg	2,25	2,25
Weight kg	0,47	0,65
Height mm	55	67
Ø mm	61	61
M_{x}	29	29
M _y	19	19
M_z	18	18
F _z	660	660

Tool group C40
RMZP-S-75
3-jaw centric gripper
air operated

Item no.	1242590 •	1242591 •
Design	RMZP-S-75/3	RMZP-S-75/3 GA
Gripping force N	790	920
Stroke per jaw mm	10	10
Gripping force maintained N	0	180
Recommended workpiece weight kg	3,95	3,95
Weight kg	0,98	1,16
Height mm	69	83
Ø mm	75	75
M _x	43	43
M _y	29	29
M_z	27	27
F _z	960	960

Tool group C40
RMZP-S-91
3-jaw centric gripper
air operated

Item no.	1242592 •	1242593 •
Design	RMZP-S-91/3	RMZP-S-91/3 GA
Gripping force N	1200	1420
Stroke per jaw mm	12	12
Gripping force maintained N	0	290
Recommended workpiece weight kg	6	6
Weight kg	1,67	2
Height mm	80	94
Ø mm	91	91
M_x	65	65
M _y	45	45
M_{z}	41	41
F _z	1500	1500

• from stock • 4 - 6 weeks 5041



Accessories RMZP-S

Magnetic field sensors

Item no.	Design	For
1242868 •	Angle / Cable 5m	RMZP-S-31 - RMZP-S-91
1242869 •	Straight / Cable 5m	RMZP-S-31 - RMZP-S-91
1242870	Angle / Cable 0,3m / Connector M8	RMZP-S-31 - RMZP-S-91
1242871 •	Straight / Cable 0,3m / Connector M8	RMZP-S-31 - RMZP-S-91

Compressed air connection

Item no.	Design	For
1242883 •	Angle	RMZP-S-21 - RMZP-S-38
1242884 •	Angle	RMZP-S-48 - RMZP-S-75
1242894 •	Angle	RMZP-S-91
1242885 •	Straight	RMZP-S-21 - RMZP-S-38
1242886	Straight	RMZP-S-48 - RMZP-S-75
1242896 •	Straight	RMZP-S-91

5042



Accessories RMZP-S

5043 from stock 4 - 6 weeks

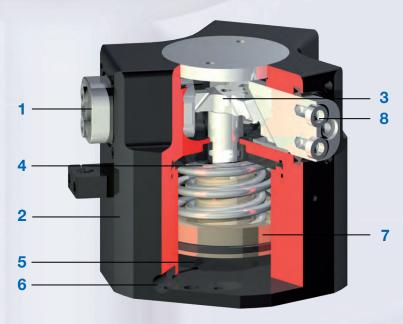


RDZP-S

Centric gripper for rough environments with sealed square guides



- Sealed square guide
- Sealed with additional wiper
- High precision due to low play guide
- Self-centering due to synchronized positive drive
- Precise positioning of individual gripping jaws
- Up to 10 mil. cycles maintenance free
- Available on request: High-temperature and corrosion resistant model



- 1. Sealed and precise guide for harsh environmental conditions
 - High forces and moments capacity
- 2. Robust, lightweight housing Hard coated anodized aluminium alloy
- 3. Wedge hook mechanism Synchronized gripper jaw movement
- 4. Integrated gripping force safety device Spring integrated into cylinder as energy storage (optional in designs GA and GI)
- 5. Permanent magnet Installed in piston chamber as indicator for magnetic field sensor (up to size 92/3)
- 6. Energy supply Available on several sides
- 7. Drive
 - Double-acting pneumatic cylinder
- 8. Removable centering sleeve Quick and cost-effective gripper finger positioning



RDZP-S

Description	Stroke per jaw in mm	Gripping force max. in N	Recommended workpiece weight in kg
RDZP-S-57	4	280	1,4
RDZP-S-74	6	380	1,9
RDZP-S-92	8	660	3,3
RDZP-S-114	10	960	4,8
RDZP-S-139	12	1700	8,5
RDZP-S-179	16	3500	17,5
RDZP-S-218	20	5250	26,25

Design RDZP-S:

GΑ integrated springs as gripping force safety device for exterior tension, thus increased gripping force GI integrated springs as gripping force safety device for interior tension, thus increased gripping force



RDZP-S





Tool group C40 RDZP-S-57 3-jaw centric gripper air operated

Item no.	1242594 •	1242595 •	1242596
Design	RDZP-S-57/3	RDZP-S-57/3 GA	RDZP-S-57/3 GI
Gripping force N	280	400	400
Stroke per jaw mm	4	4	4
Gripping force maintained N	0	120	120
Recommended workpiece weight kg	1,4	1,4	1,4
Weight kg	0,35	0,41	0,41
Height mm	41	51	51
Ø mm	57	57	57
M _x	8	8	8
M _y	12	12	12
M _z	8	8	8
F _z	300	300	300

Tool group C40 RDZP-S-74 3-jaw centric gripper air operated

Item no.	1242597 •	1242598 •	1242599 •
Design	RDZP-S-74/3	RDZP-S-74/3 GA	RDZP-S-74/3 GI
Gripping force N	380	560	560
Stroke per jaw mm	6	6	6
Gripping force maintained N	0	180	180
Recommended workpiece weight kg	1,9	1,9	1,9
Weight kg	0,65	0,85	0,85
Height mm	48,5	66	66
Ø mm	74	74	74
M _x	18	18	18
M _y	25	25	25
M_z	20	20	20
F _z	700	700	700

Tool group C40
RDZP-S-92
3-jaw centric gripper
air operated

Item no.	1242600	1242601	1242602
Design	RDZP-S-92/3	RDZP-S-92/3 GA	RDZP-S-92/3 GI
Gripping force N	660	960	960
Stroke per jaw mm	8	8	8
Gripping force maintained N	0	290	290
Recommended workpiece weight kg	3,3	3,3	3,3
Weight kg	0,9	1,5	1,5
Height mm	58,5	83,5	83,5
Ø mm	92	92	92
M _x	30	30	30
M _y	45	45	45
M _z	30	30	30
F,	1300	1300	1300

3-jaw centric gripper

RDZP-S

Tool group C40 RDZP-S-114 3-jaw centric gripper air operated

Item no.	1242603	1242604 •	1242605
Design	RDZP-S-114/3	RDZP-S-114/3 GA	RDZP-S-114/3 GI
Gripping force N	960	1400	1400
Stroke per jaw mm	10	10	10
Gripping force maintained N	0	240	240
Recommended workpiece weight kg	4,8	4,8	4,8
Weight kg	2,4	2,8	2,8
Height mm	74	104	104
Ø mm	114	114	114
M_x	45	45	45
M_y	70	70	70
M_{z}	50	50	50
F,	2300	2300	2300

Tool group C40 RDZP-S-139 3-jaw centric gripper air operated

Item no.	1242606 •	1242607 •	1242608 •
Design	RDZP-S-139/3	RDZP-S-139/3 GA	RDZP-S-139/3 GI
Gripping force N	1700	2250	2250
Stroke per jaw mm	12	12	12
Gripping force maintained N	0	550	550
Recommended workpiece weight kg	8,5	8,5	8,5
Weight kg	3,6	5,3	5,3
Height mm	83,5	120,5	120,5
Ø mm	139	139	139
M_{x}	65	65	65
M_y	100	100	100
M_z	75	75	75
F _z	3600	3600	3600

Tool group C40 RDZP-S-179 3-jaw centric gripper air operated

Item no.	1242609	1242610	1242611
Design	RDZP-S-179/3	RDZP-S-179/3 GA	RDZP-S-179/3 GI
Gripping force N	3500	4700	4700
Stroke per jaw mm	16	16	16
Gripping force maintained N	0	1200	1200
Recommended workpiece weight kg	17,5	17,5	17,5
Weight kg	6,5	8,5	8,5
Height mm	105,5	153,5	153,5
Ø mm	179	179	179
M_{x}	85	85	85
M _y	100	100	100
M_z	95	95	95
F _z	5200	5200	5200

Tool group C40 RDZP-S-218 3-jaw centric gripper air operated

Item no.	1242612
Design	RDZP-S-218/3
Gripping force N	5250
Stroke per jaw mm	20
Gripping force maintained N	0
Recommended workpiece weight kg	26,25
Weight kg	13,4
Height mm	122
Ømm	218
M_x	105
M _y	140
M_z	120
F	7000

• from stock • 4 - 6 weeks 5047

Centric gripper RDZP-S

Accessories RDZP-S

Jaw blank - steel 3-jaw set

Item no.	Number of jaws	Design	For
1242945	3	Steel	RDZP-S-57
1242946	3	Steel	RDZP-S-74
1242947	3	Steel	RDZP-S-92
1242948	3	Steel	RDZP-S-114
1242949	3	Steel	RDZP-S-139
1242950	3	Steel	RDZP-S-179
1242951	3	Steel	RDZP-S-218

Jaw blank - aluminium

3-jaw set

Item no.	Number of jaws	Design	For
1242938 •	3	Aluminium	RDZP-S-57
1242939 •	3	Aluminium	RDZP-S-74
1242940	3	Aluminium	RDZP-S-92
1242941	3	Aluminium	RDZP-S-114
1242942 •	3	Aluminium	RDZP-S-139
1242943	3	Aluminium	RDZP-S-179
1242944	3	Aluminium	RDZP-S-218

Compressed air connection

Item no.	Design	For
1242884 •	Angle	RDZP-S-57
1242894 •	Angle	RDZP-S-74 - RDZP-S-179
1242895 •	Angle	RDZP-S-218
1242886 •	Straight	RDZP-S-57
1242896 •	Straight	RDZP-S-74 - RDZP-S-179
1242897 •	Straight	RDZP-S-218

Connector

Item no.	Design	For
1242872 •	Angle / Cable / Bushing M8	all sizes
1242873 •	Straight / Cable / Bushing M8	all sizes

Magnetic field sensors

Item no.	Design	For
1242868 •	Angle / Cable 5m	RDZP-S-57 - RDZP-S-92
1242869 •	Straight / Cable 5m	RDZP-S-57 - RDZP-S-92
1242870	Angle / Cable 0,3m / Connector M8	RDZP-S-57 - RDZP-S-92
1242871 •	Straight / Cable 0,3m / Connector M8	RDZP-S-57 - RDZP-S-92

Proximity switch

Item no.	Design	For
1242892	Cable 5m	RDZP-S-57
1242875	Cable 5 m	RDZP-S-74 - RDZP-S-218
1242893	Cable 0,3m / Connector M8	RDZP-S-57
1242877	Connector M8	RDZP-S-74 - RDZP-S-218

Protective cover

Item no.	For
1242952	RDZP-S-57
1242953	RDZP-S-74
1242954	RDZP-S-92
1242955	RDZP-S-114
1242956	RDZP-S-139
1242957	RDZP-S-179
1242958	RDZP-S-218

Mounting block

For
RDZP-S-57
RDZP-S-74 / RDZP-S-92

Pressure piece

Item no.	For
1242961 •	RDZP-S-57
1242962 •	RDZP-S-74
1242963 •	RDZP-S-92
1242964 •	RDZP-S-114
1242965 •	RDZP-S-139
1242966	RDZP-S-179
1242967	RDZP-S-218

Resilient pressure piece with gripping force safety GA / GI

Item no.	For
1242968 •	RDZP-S-57 GA / GI
1242969 •	RDZP-S-74 GA / GI
1242970 •	RDZP-S-92 GA / GI
1242971 •	RDZP-S-114 GA / GI
1242972 •	RDZP-S-139 GA / GI
1242973	RDZP-S-179 GA / GI
1242974	RDZP-S-218 GA / GI



Accessories RDZP-S



Overview



Overview

Long stroke gripper especially suitable for overhanging workpieces



2-Jaw Long Stroke Gripper RGP

- For rough enviroment
- With long stroke
- Sealed guide



2-Jaw Long Stroke Gripper RGPO - "Premium-Design"

- With long stroke
- Precise T-groove
- Highest precision due to regrounded jaw guides



2-Jaw Long Stroke Gripper RGPO-S

- With long stroke
- Precise T-groove



2-Jaw Long Stroke Gripper RGPO-S/K

- With long stroke
- Precise T-groove
- Postion clamping in case of pressure drop



2-Jaw Long Stroke Gripper RGPL-S

- With long stroke
- Heavy load linear guide



E-QUIPMENT by RÖHM

2-Jaw Electrical Long Stroke Gripper REPG

- Flexible
- With long stroke
- Force, distance and speed control
- Workpiece detection



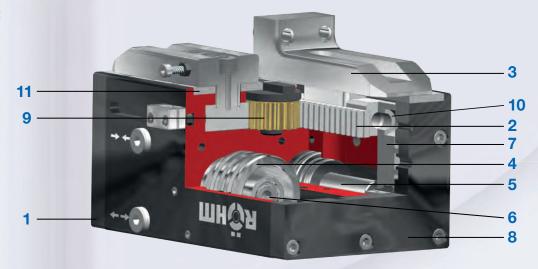
RGP

Long stroke gripper for rough environment with sealed guides.



- Gripper body made of high-strength, hard-coated aluminium
- Steering racks, intermediate jaws and gear wheel made of hardened steel
- Intermediate jaws absorb large moments due to a robustflat guidance of steering racks
- Suitable for long top jaws
- Construction allows long jaw stroke
- Extensively sealed off due to wiping between wiper bladeand intermediate jaw via quad ring
- Centric gripping due to synchronization of the two steering racks with a gear wheel
- Optional, separate delivery of gripping safety device for exterior tension (GA) and interior tension (GI) of gripper
- Tubeless direct connection for central lubrication and sealing air
- Optional tubeless, direct screw connection for power supply
- Simple interface: Gripper intermediate jaw / top jaw (centring sleeves)
- Economical production of top jaws
- Inductive or magnetic positioning sensors
- Maintenance free up to 5 mil. cycles
- Available on request: High-temperature-resistant model (up to 150°C)
- 1. Body
- 2. Steering rack
- 3. Intermediate jaw
- 4. Piston disk
- 5. Piston rod
- 6. Socket

- 7. Carrier
- 8. Cover
- 9. Gearwheel
- 10. Gearwheel bearing
- 11. Wiper blade





RGP

Description	Stroke per jaw in mm	Gripping force max. in N	Recommended workpiece weight in kg
RGP-30	30	630	3
RGP-40	40	1260	6,3
RGP-50	50	2600	13

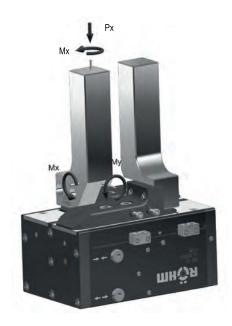
Design RGP:

GΑ integrated springs as gripping force safety device for exterior tension, thus increased gripping force

GI integrated springs as gripping force safety device for interior tension, thus increased gripping force

RGP





Tool group C40 RGP-30 - Long stroke gripper air operated

Item no.	170109 •	170110
Design	RGP 30	RGP 30-GA
Gripping force N	630	720
Stroke per jaw mm	30	30
Gripping force maintained N	-	90
Recommended workpiece weight kg	3	3
Weight kg	3,2	3,2
Width mm	134	134
Height mm	66	66
Depth mm	94	94
M _x	30	30
M _y	95	95
M_z	45	45
F _z	1000	1000

Tool group C40 RGP-40 - Long stroke gripper air operated

Item no.	170111	170112 •	170113 •
Design	RGP 40	RGP 40-GA	RGP 40-GI
Gripping force N	1260	1540	1380
Stroke per jaw mm	40	40	40
Gripping force maintained N	-	150	150
Recommended workpiece weight kg	6,3	6,3	5,5
Weight kg	5,6	5,6	5,6
Width mm	171	171	171
Height mm	83	83	83
Depth mm	115	115	115
M_{x}	50	50	50
M _y	100	100	100
M_z	70	70	70
F _z	1100	1100	1100

Tool group C40 RGP-50 - Long stroke gripper air operated

Item no.	170114 •	170115 •	170116 •
Design	RGP 50	RGP 50-GA	RGP 50-GI
Gripping force N	2600	2950	2680
Stroke per jaw mm	50	50	50
Gripping force maintained N	-	450	450
Recommended workpiece weight kg	13	13	11,5
Weight kg	11	11	11
Width mm	218	218	218
Height mm	103	103	103
Depth mm	141	141	141
M _x	60	60	60
M _y	100	100	100
M _z	80	80	80
F.	1300	1300	1300

Long stroke gripper RGP

Accessories RGP

Intermediate jaw - steel 2-jaw set

Item no.	Number of jaws	Design	For
170993 •	2	Steel	RGP-30
170995	2	Steel	RGP-40
170997 •	2	Steel	RGP-50

Jaw blank - steel 2-jaw set

Item no.	Number of jaws	Design	For
1146146 •	2	Steel	RGP-30
1146144 •	2	Steel	RGP-40
1131198 •	2	Steel	RGP-50

Pressure maintenance

Item no.	For
1078823 •	all sizes

Compressed air connection

Item no.	For
477025 •	all sizes

Proximity switch

Item no.	For
229114	all sizes

Magnetic field sensors

Item no.	For
1139737	all sizes

5055 4 - 6 weeks from stock



RGPO

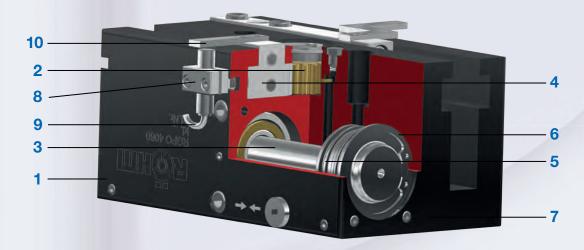
Premium design:

Long stroke gripper for rough environment with long stroke and regrounded jaw guidings.



- Gripper body made of high-strength hard-coated aluminium
- Steering racks, intermediate jaws and gear wheel made of hardened steel
- Due to a robust flat guidance of steering racks, intermediate jaws absorb large moments
- Suitable for long top jaws
- Centric gripping due to synchronization of the two steering racks with a gear wheel
- Optional, separate delivery of gripping safety device for exterior tension (GA) and interior tension (GI) of gripper or with additional pressure safety valve
- Optional tubeless, direct screw connection for power supply
- Inductive or magnetic positioning sensors
- Up to 5 mil. cycles maintenance free
- Available on request: High-temperature-resistant model (up to 150°C)
- **Body**
- Gearwheel
- Piston rod
- Steering rack
- 5. **Piston**

- 6. Seal
- Cover
- Sensor holder
- 9. Inductive sensor
- 10. Magnet





RGPO

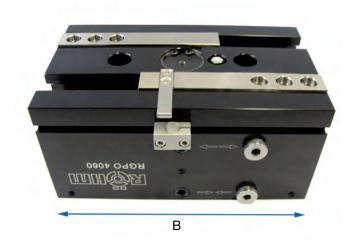
Description	Stroke per jaw in mm	Gripping force max. in N	Recommended workpiece weight in kg
RGPO-4060	30	1250	5,5
RGPO-40100	50	1250	5,5
RGPO-6360	30	3000	15
RGPO-63100	50	3000	15

Design RGPO:

GΑ integrated springs as gripping force safety device for exterior tension, thus increased gripping force



RGPO





Tool group RGPO 4060 2-jaw long stroke gripper air operated

Item no.	172774 •	172775 •
Design	RGPO 4060	RGPO 4060-GA
Gripping force N	1250	1920
Stroke per jaw mm	30	30
Recommended workpiece weight kg	5,5	5,5
Weight kg	3,8	4,2
Width mm	170	170
Height mm	80	80
Depth mm	100	100
M _x	80	80
M _y	125	125
M_z	100	100
F _z	3000	3000

Tool group RGPO 40100 2-jaw long stroke gripper air operated

Item no.	172777 •
Design	RGPO 40100
Gripping force N	1250
Stroke per jaw mm	50
Recommended workpiece weight kg	5,5
Weight kg	5,3
Width mm	170
Height mm	80
Depth mm	100
M_{x}	80
M_{y}	125
M_{z}	100
F _z	3000

Tool group RGPO 6360 2-jaw long stroke gripper air operated

Item no.	172794 •	172795 •
Design	RGPO 6360	RGPO 6360-GA
Gripping force N	3000	4000
Stroke per jaw mm	30	30
Recommended workpiece weight kg	15	15
Weight kg	10	11
Width mm	185	185
Height mm	121,5	121,5
Depth mm	154	154
M_x	200	200
M _y	300	300
M_z	250	250
F _z	9000	9000

ROHIII Long stroke gripper RGPO

RGPO

Tool group RGPO 63100 2-jaw long stroke gripper air operated

Item no.	172797
Design	RGPO 63100
Gripping force N	3000
Stroke per jaw mm	50
Recommended workpiece weight kg	15
Weight kg	13,4
Width mm	185
Height mm	121,5
Depth mm	154
M_x	200
M _y	300
M_z	250
F _z	9000

5059 • from stock 4 - 6 weeks

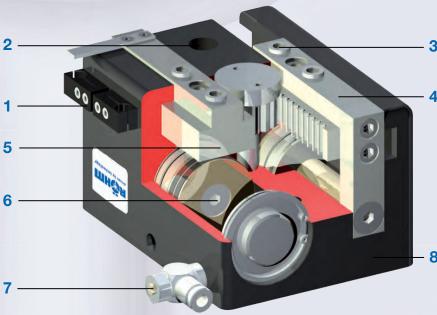


RGPO-S

Long stroke gripper with precise T-groove.



- Direct drive synchronized via gear wheel
- T-groove guide for maximum force and moment capacity
- High precision due to low play guide
- Process safe due to direct gripper jaw position sensing
- Up to 10 mil. cycles maintenance free
- Available on request: High-temperature-resistant model (up to 150°C)



1. Mounting block Mounting for inductive proximity switch

2. Mounting and positioning Mounting possible from several sides for versatile positioning

3 3. Removable centering sleeve Quick and cost-effective gripper finger positioning

4. Gripper jaw Individual gripper finger mounting

5. Precise long T-groove High forces and moments capacity

6. Drive

Two double-acting pneumatic cylinders synchronized by gear wheel

7. Engergy supply Air connection available on several sides

Caution: always operate long stroke gripper with supplied exhaust air flow control valve (speed regulation)

8. Robust, lightweight housing Hard coated aluminium alloy

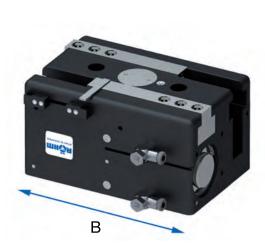


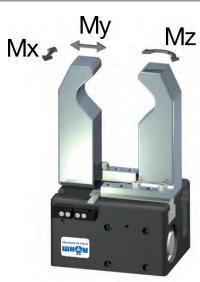
RGPO-S

Description	Stroke per jaw in mm	Gripping force max. in N	Recommended workpiece weight in kg
RGPO-S-1440	40	155	0,775
RGPO-S-1460	60	155	0,775
RGPO-S-1480	80	155	0,775
RGPO-S-2540	40	490	2,45
RGPO-S-2560	60	510	2,55
RGPO-S-2580	80	530	2,65
RGPO-S-4040	40	1120	5,6
RGPO-S-4060	60	1200	6
RGPO-S-4080	80	1280	6,4
RGPO-S-40100	100	1350	6,75
RGPO-S-40150	150	1400	7
RGPO-S-5060	60	1840	9,2
RGPO-S-50100	100	2100	10,5
RGPO-S-50150	150	2270	11,35
RGPO-S-6360	60	3000	15
RGPO-S-63100	100	3200	16
RGPO-S-63150	150	3300	16,5
RGPO-S-63200	200	3400	17



RGPO-S







Tool group C40 RGPO-S-1440 2-jaw long stroke gripper air operated

Item no.	1242501 •
Design	RGPO-S-1440
Gripping force N	155
Stroke per jaw mm	40
Recommended workpiece weight kg	0,775
Weight kg	0,472
Width mm	110
Height mm	30
Depth mm	48
M_{x}	35
M_y	35
M_{z}	35
F _z	500

Tool group C40 RGPO-S-1460 2-jaw long stroke gripper air operated

Item no.	1242502 •
Design	RGPO-S-1460
Gripping force N	155
Stroke per jaw mm	60
Recommended workpiece weight kg	0,775
Weight kg	0,606
Width mm	150
Height mm	30
Depth mm	48
M_{x}	35
M_{y}	35
M_{z}	35
F_z	500

Tool group C40 RGPO-S-1480 2-jaw long stroke gripper air operated

Item no.	1242503 •
Design	RGPO-S-1480
Gripping force N	155
Stroke per jaw mm	80
Recommended workpiece weight kg	0,775
Weight kg	0,745
Width mm	190
Height mm	30
Depth mm	48
M_x	35
M_y	35
M_{z}	35
F,	500

RGPO-S

Tool group C40 RGPO-S-2540 2-jaw long stroke gripper air operated

Item no.	1242504 •
Design	RGPO-S-2540
Gripping force N	490
Stroke per jaw mm	40
Gripping force maintained N	-
Recommended workpiece weight kg	2,45
Weight kg	1,5
Width mm	120
Height mm	50
Depth mm	80
M_x	60
M_{y}	100
M_z	70
F _z	1500

Tool group C40 RGPO-S-2560 2-jaw long stroke gripper air operated

Item no.	1242505 •
Design	RGPO-S-2560
Gripping force N	510
Stroke per jaw mm	60
Gripping force maintained N	-
Recommended workpiece weight kg	2,55
Weight kg	1,9
Width mm	160
Height mm	50
Depth mm	80
M_x	60
M_y	100
M_z	70
F_z	1500

Tool group C40 RGPO-S-2580 2-jaw long stroke gripper air operated

Item no.	1242506 •
Design	RGPO-S-2580
Gripping force N	530
Stroke per jaw mm	80
Gripping force maintained N	-
Recommended workpiece weight kg	2,65
Weight kg	2,2
Width mm	200
Height mm	50
Depth mm	80
M_x	60
M_{y}	100
M_{z}	70
F_z	1500

Tool group C40 RGPO-S-4040 2-jaw long stroke gripper air operated

Item no.	1242507 •
Design	RGPO-S-4040
Gripping force N	1120
Stroke per jaw mm	40
Gripping force maintained N	-
Recommended workpiece weight kg	5,6
Weight kg	3,3
Width mm	130
Height mm	80
Depth mm	100
M_x	80
M_y	125
M_z	100
F _z	3000

RGPO-S

Tool group C40 RGPO-S-4060 2-jaw long stroke gripper air operated

Item no.	1242508 •
Design	RGPO-S-4060
Gripping force N	1200
Stroke per jaw mm	60
Gripping force maintained N	-
Recommended workpiece weight kg	6
Weight kg	4,1
Width mm	170
Height mm	80
Depth mm	100
M_x	80
M_y	125
M_z	100
F _z	3000

Tool group C40 RGPO-S-4080 2-jaw long stroke gripper air operated

Item no.	1242509 •
Design	RGPO-S-4080
Gripping force N	1280
Stroke per jaw mm	80
Gripping force maintained N	-
Recommended workpiece weight kg	6,4
Weight kg	4,8
Width mm	210
Height mm	80
Depth mm	100
M_x	80
M_y	125
M _z	100
F _z	3000

Tool group C40 RGPO-S-40100 2-jaw long stroke gripper air operated

1242510
RGPO-S-40100
1350
100
-
6,75
5,6
250
80
100
80
125
100
3000

Tool group C40 RGPO-S-40150 2-jaw long stroke gripper air operated

Item no.	1242511
Design	RGPO-S-40150
Gripping force N	1400
Stroke per jaw mm	150
Gripping force maintained N	-
Recommended workpiece weight kg	7
Weight kg	7,5
Width mm	350
Height mm	80
Depth mm	100
M_{x}	80
M_{y}	125
M _z	100
F_z	3000

RGPO-S

Tool group C40 RGPO-S-5060 2-jaw long stroke gripper air operated

Item no.	1242512
Design	RGPO-S-5060
Gripping force N	1840
Stroke per jaw mm	60
Gripping force maintained N	-
Recommended workpiece weight kg	9,2
Weight kg	7
Width mm	185
Height mm	101,5
Depth mm	120
M_x	130
M_y	190
M_z	160
F _z	3800

Tool group C40 RGPO-S-50100 2-jaw long stroke gripper air operated

Item no.	1242513
Design	RGPO-S-50100
Gripping force N	2100
Stroke per jaw mm	100
Gripping force maintained N	-
Recommended workpiece weight kg	10,5
Weight kg	9,1
Width mm	265
Height mm	101,5
Depth mm	120
M _x	180
M_y	260
M_z	220
F _z	3800

Tool group C40 RGPO-S-50150 2-jaw long stroke gripper air operated

Item no.	1242514
Design	RGPO-S-50150
Gripping force N	2270
Stroke per jaw mm	150
Gripping force maintained N	-
Recommended workpiece weight kg	11,35
Weight kg	10,5
Width mm	365
Height mm	101,5
Depth mm	120
M _x	220
M_y	290
M_z	250
F _z	3800

Tool group C40 RGPO-S-6360 2-jaw long stroke gripper air operated

Item no.	1242515 •
Design	RGPO-S-6360
Gripping force N	3000
Stroke per jaw mm	60
Gripping force maintained N	-
Recommended workpiece weight kg	15
Weight kg	10,4
Width mm	185
Height mm	121,5
Depth mm	154
M_x	200
M_y	300
M_{z}	250
F _z	9000

• from stock • 4 - 6 weeks 5065



RGPO-S

Tool group C40 RGPO-S-63100 2-jaw long stroke gripper air operated

Item no.	1242516
Design	RGPO-S-63100
Gripping force N	3200
Stroke per jaw mm	100
Gripping force maintained N	-
Recommended workpiece weight kg	16
Weight kg	13,7
Width mm	265
Height mm	121,5
Depth mm	154
M _x	200
M_y	300
M_z	250
F _z	9000

Tool group C40 RGPO-S-63150 2-jaw long stroke gripper air operated

Item no.	1242517
Design	RGPO-S-63150
Gripping force N	3300
Stroke per jaw mm	150
Gripping force maintained N	-
Recommended workpiece weight kg	16,5
Weight kg	18,3
Width mm	365
Height mm	121,5
Depth mm	154
M_x	200
M_{y}	300
M _z	250
F_z	9000

Tool group C40 RGPO-S-63200 2-jaw long stroke gripper air operated

Item no.	1242518
Design	RGPO-S-63200
Gripping force N	3400
Stroke per jaw mm	200
Gripping force maintained N	-
Recommended workpiece weight kg	17
Weight kg	22,7
Width mm	465
Height mm	121,5
Depth mm	154
M_x	200
M_y	300
M_z	250
F _z	9000

5066

ROHIII Long stroke gripper RGPO-S

Accessories RGPO-S

Jaw blank - aluminium 2-jaw set

Item no.	Number of jaws	Design	For
1242865 •	2	Aluminium	RGPO-S-1440 - RGPO-S-1480
1242866 •	2	Aluminium	RGPO-S-2540 - RGPO-S-2580
4040007	2	Aluminium	DCDO C 4040 DCDO C 40150

Proximity switch

Item no.	Design	For
1242874	Cable 5 m	RGPO-S-1440 - RGPO-S-1480
1242875	Cable 5 m	RGPO-S-2540 - RGPO-S-63200
1242876	Connector M8	RGPO-S-1440 - RGPO-S-1480
1242877	Connector M8	RGPO-S-1440 - RGPO-S-1480

Magnetic field sensors

Item no.	Design	For
1242868	Angle / Cable 5m	all sizes
1242869 •	Straight / Cable 5m	all sizes
1242870	Angle / Cable 0,3m / Connector M8	all sizes
1242871	Straight / Cable 0,3m / Connector M8	all sizes

Mounting bracket

Item no.	For
1242850 •	RGPO-S-2540
1242851 •	RGPO-S-2560
1242852 •	RGPO-S-2580
1242853 •	RGPO-S-4040
1242854 •	RGPO-S-4060
1242855 •	RGPO-S-4080
1242856 •	RGPO-S-40100
1242857 •	RGPO-S-40150
1242858 •	RGPO-S-5060
1242859 •	RGPO-S-50100
1242860 •	RGPO-S-50150
1242861 •	RGPO-S-6360
1242862 •	RGPO-S-63100
1242863 •	RGPO-S-63150
1242864 •	RGPO-S-63200

Connector

Item no.	Design	For	
1242872	Angle / Cable / Bushing M8	all sizes	
4040070	Chrainht / Cabla / Duahing MO	all aimes	

5067 4 - 6 weeks from stock



RGPO-S/K

Long stroke gripper with position clamping in case of pressure drop and precise T-groove.

- Workpiece safety¹⁾ in case of pressure drop due to a clamping element
- Dimensions are based on long stroke gripper RGPO-S
- Long stroke, up to max 200 mm per jaw
- T-groove over the entire housing length
- For jaws up to a length of 600 mm
- Compact design



1. Clamping element

Highest retention force at compact design

2. Standard gripper

Except for side screw-on option, all dimensions match the series RGPO-S



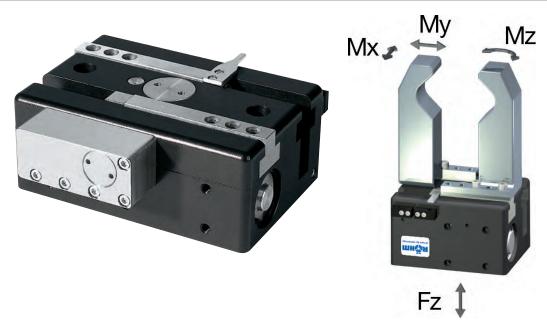
RGPO-S/K

Description	Total stroke in mm	Maximum gripping force in N	Recommended workpiece weight in kg
RGPO-S-2540/K	40	490	2,45
RGPO-S-2560/K	60	510	2,55
RGPO-S-2580/K	80	530	2,65
RGPO-S-4040/K	40	1120	5,6
RGPO-S-4060/K	60	1200	6
RGPO-S-4080/K	80	1280	6,4
RGPO-S-40100/K	100	1350	6,75
RGPO-S-40150/K	150	1400	7
RGPO-S-5060/K	60	1840	9,2
RGPO-S-50100/K	100	2100	10,5
RGPO-S-50150/K	150	2270	11,35
RGPO-S-6360/K	60	3000	15
RGPO-S-63100/K	100	3200	16
RGPO-S-63150/K	150	3300	16,5
RGPO-S-63200/K	200	3400	17

Design RGPO-S/K:
K with position clamping



RGPO-S/K



Tool group C40 RGPO-S-2540/K 2-jaw long stroke gripper with workpiece safety air operated

Item no.	1242519
Design	RGPO-S-2540/K
Gripping force N	490
Stroke per jaw mm	40
Gripping force maintained N	-
Recommended workpiece weight kg	2,45
Weight kg	1,5
Width mm	120
Height mm	50
Depth mm	80
M_x	60
M_{y}	100
M_z	70
F_z	1500

Tool group C40 RGPO-S-2560/K 2-jaw long stroke gripper with workpiece safety air operated

Item no.	1242520
Design	RGPO-S-2560/K
Gripping force N	510
Stroke per jaw mm	60
Gripping force maintained N	-
Recommended workpiece weight kg	2,55
Weight kg	1,9
Width mm	160
Height mm	50
Depth mm	80
M _x	60
M_y	100
M_{z}	70
F _z	1500

Tool group C40 RGPO-S-2580/K 2-jaw long stroke gripper with workpiece safety air operated

Item no.	1242521 •
Design	RGPO-S-2580/K
Gripping force N	530
Stroke per jaw mm	80
Gripping force maintained N	-
Recommended workpiece weight kg	2,65
Weight kg	2,2
Width mm	200
Height mm	50
Depth mm	80
M_{x}	60
M_y	100
M _z	70
F _z	1500

2-jaw long stroke gripper

RGPO-S/K

Tool group C40 RGPO-S-4040/K 2-jaw long stroke gripper with workpiece safety air operated

Item no.	1242522 •
Design	RGPO-S-4040/K
Gripping force N	1120
Stroke per jaw mm	40
Gripping force maintained N	-
Recommended workpiece weight kg	5,6
Weight kg	3,3
Width mm	130
Height mm	80
Depth mm	100
M_x	80
M_{y}	125
M_z	100
F _z	3000

Tool group C40 RGPO-S-4060/K 2-jaw long stroke gripper with workpiece safety air operated

Item no.	1242523 •
Design	RGPO-S-4060/K
Gripping force N	1200
Stroke per jaw mm	60
Gripping force maintained N	-
Recommended workpiece weight kg	6
Weight kg	4,1
Width mm	170
Height mm	80
Depth mm	100
M_x	80
M_y	125
M_z	100
F ₂	3000

Tool group C40 RGPO-S-4080/K 2-jaw long stroke gripper with workpiece safety air operated

Item no.	1010001
item no.	1242524 •
Design	RGPO-S-4080/K
Gripping force N	1280
Stroke per jaw mm	80
Gripping force maintained N	-
Recommended workpiece weight kg	6,4
Weight kg	4,8
Width mm	210
Height mm	80
Depth mm	100
M_{x}	80
M_y	125
M_z	100
F _z	3000

Tool group C40 RGPO-S-40100/K 2-jaw long stroke gripper with workpiece safety air operated

Item no.	1242525
Design	RGPO-S-40100/K
Gripping force N	1350
Stroke per jaw mm	100
Gripping force maintained N	-
Recommended workpiece weight kg	6,75
Weight kg	5,6
Width mm	250
Height mm	80
Depth mm	100
M_x	80
M_{y}	125
M_z	100
F _z	3000

2-jaw long stroke gripper

RGPO-S/K

Tool group C40 RGPO-S-40150/K 2-jaw long stroke gripper with workpiece safety air operated

Item no.	1242526
Design	RGPO-S-40150/K
Gripping force N	1400
Stroke per jaw mm	150
Gripping force maintained N	-
Recommended workpiece weight kg	7
Weight kg	7,5
Width mm	350
Height mm	80
Depth mm	100
M_x	80
M_y	125
M_z	100
F ₂	3000

Tool group C40 RGPO-S-5060/K 2-jaw long stroke gripper with workpiece safety air operated

Item no.	1242527 •
Design	RGPO-S-5060/K
Gripping force N	1840
Stroke per jaw mm	60
Gripping force maintained N	-
Recommended workpiece weight kg	9,2
Weight kg	7
Width mm	185
Height mm	101,5
Depth mm	120
M_{x}	130
M_{y}	190
M_{z}	160
F _z	3800

Tool group C40 RGPO 50100/K 2-jaw long stroke gripper with workpiece safety air operated

Item no.	1242528
Design	RGPO-S-50100/K
Gripping force N	2100
Stroke per jaw mm	100
Gripping force maintained N	-
Recommended workpiece weight kg	10,5
Weight kg	9,1
Width mm	265
Height mm	101,5
Depth mm	120
M _x	180
M_y	260
M_z	220
F _z	3800

Tool group C40 RGPO-S-50150/K 2-jaw long stroke gripper with workpiece safety air operated

Item no.	1242529
Design	RGPO-S-50150/K
Gripping force N	2270
Stroke per jaw mm	150
Gripping force maintained N	-
Recommended workpiece weight kg	11,35
Weight kg	10,5
Width mm	365
Height mm	101,5
Depth mm	120
M _x	220
M_{y}	290
M _z	250
F_z	3800

2-jaw long stroke gripper

RGPO-S/K

Tool group C40 RGPO-S-6360/K 2-jaw long stroke gripper with workpiece safety air operated

Item no.	1242530 •
Design	RGPO-S-6360/K
Gripping force N	3000
Stroke per jaw mm	60
Gripping force maintained N	-
Recommended workpiece weight kg	15
Weight kg	10,4
Width mm	185
Height mm	121,5
Depth mm	154
M_x	200
M_{y}	300
M_z	250
F _z	9000

Tool group C40 RGPO-S-63100/K 2-jaw long stroke gripper with workpiece safety air operated

Item no.	1242531
Design	RGPO-S-63100/K
Gripping force N	3200
Stroke per jaw mm	100
Gripping force maintained N	-
Recommended workpiece weight kg	16
Weight kg	13,7
Width mm	265
Height mm	121,5
Depth mm	154
M_x	200
M_y	300
M_z	250
F_z	9000

Tool group C40 RGPO-S-63150/K 2-jaw long stroke gripper with workpiece safety air operated

In the second se	
Item no.	1242532
Design	RGPO-S-63150/K
Gripping force N	3300
Stroke per jaw mm	150
Gripping force maintained N	-
Recommended workpiece weight kg	16,5
Weight kg	18,3
Width mm	365
Height mm	121,5
Depth mm	154
M_x	200
M_{y}	300
M_z	250
F_z	9000

Tool group C40 RGPO-S-63200/K 2-jaw long stroke gripper with workpiece safety air operated

Item no.	1242533
Design	RGPO-S-63200/K
Gripping force N	3400
Stroke per jaw mm	200
Gripping force maintained N	-
Recommended workpiece weight kg	17
Weight kg	22,7
Width mm	465
Height mm	121,5
Depth mm	154
M _x	200
M_y	300
M_z	250
F _z	9000

• from stock • 4 - 6 weeks 5073

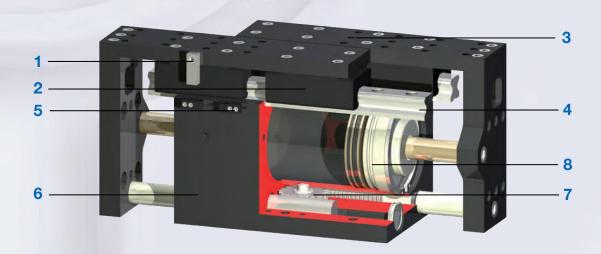


RGPL-S

Long stroke gripper with heavy load linear guide.



- For use under extreme conditions
- Ideal for highest transverse forces and moment capacity
- Direct drive synchronized via gear wheel
- Process safe due to direct gripper jaw position sensing
- Up to 10 mil. cycles maintenance free
- Available on request: High-temperature-resistant model (up to 150°C)



- 1. Switch cam
 - For position sensing
- 2. Carriage with wiper

For use under extreme conditions

- 3. Gripper jaw
 - Individual gripper finger mounting
- 4. Precise linear guide

Ideal for highest transverse forces and loads Double secured against twisting

- 5. Mounting block adjustable
 - Mounting for inductive proximity switch
- Robust, lightweight housing Hard coated aluminium alloy
- **Synchronization**

Via rack and pinion

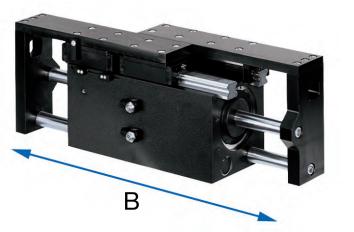
8. Drive

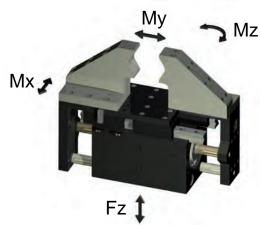
Two double-acting pneumatic cylinders



RGPL-S

Description	Stroke per jaw in mm	Gripping force max. in N	Recommended workpiece weight in kg
RGPL-S-10065	65	8500	42,5
RGPL-S-100100	100	8500	42,5





Tool group C40 RGPL-S-10065 2-jaw long stroke gripper air operated

Item no.	1242534
Design	RGPL-S-10065
Gripping force N	8500
Stroke per jaw mm	65
Recommended workpiece weight kg	42,5
Weight kg	31
Width mm	299
Height mm	200
Depth mm	148
M_{x}	1500
M_{y}	2000
M_{z}	2000
F _z	4000

Tool group C40 RGPL-S-100100 2-jaw long stroke gripper air operated

Item no.	1242535
Design	RGPL-S-100100
Gripping force N	8500
Stroke per jaw mm	100
Recommended workpiece weight kg	42,5
Weight kg	36
Width mm	369
Height mm	200
Depth mm	148
M_x	1500
M_y	2000
M_{z}	2000
F_z	4000

ROHIII Long stroke gripper RGPL-S

Accessories RGPL-S

Proximity switch

Item no.	Design	For
1242875	Cable 5 m	all sizes
1242877	Connector M8	all sizes

Mounting bracket

Item no.	For
1242881 •	RGPL-S-10065
1242882 •	RGPL-S-100100

Connector

Item no.	Design	For
1242872 •	Angle / Cable / Bushing M8	all sizes
1242873	Straight / Cable / Bushing M8	all sizes

5077 4 - 6 weeks from stock



Electrical long stroke gripper with force, distance and speed control as well as workpiece detection



Usable as economic servo axle with integrated propulsion and stable roll guidance...

- Compact axle system for centric movements
- System for the execution of processes such as burnishing or bending

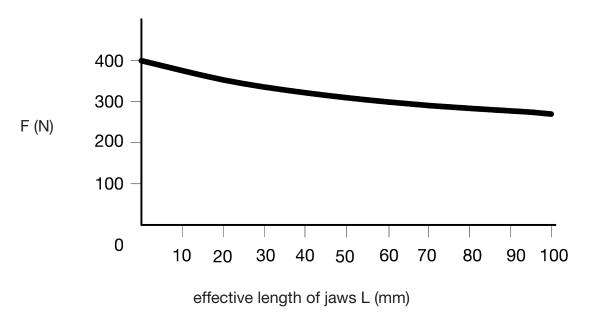
... or flexible robot grip:

- Able to grip parts of various sizes without modification
- With short gripping times from 70 ms
- Able to grip sensitive parts with a force of 10 N
- Able to grip heavy parts up to 400 N
- Able to check parts regarding their dimensional stability
- With a repeat accuracy of 0.03 mm during gripping
- Operational following a simpler and faster start-up

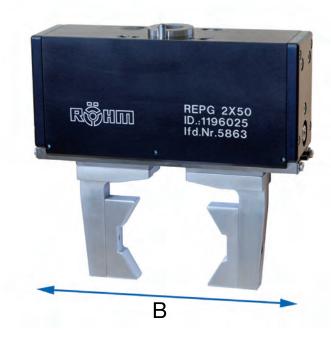


Description	Stroke per jaw in mm	Gripping force max. in N	Recommended workpiece weight in kg
REPG-30	30	400	2
REPG-50	50	400	2

Total-Gripping force: Exterior gripping







Tool group C40
REPG 30
2-jaw electrical gripper

Item no.	1196024 •
Orientes trans N	400
Gripping force N	400
Stroke per jaw mm	30
Gripping force maintained N	10
Weight kg	1,5
Width mm	137
Height mm	90
Depth mm	50
M_{x}	47
M_{y}	85
M_z	47

Tool group C40
REPG 50
2-jaw electrical gripper

Item no.	1196025 •
Gripping force N	400
Stroke per jaw mm	50
Gripping force maintained N	10
Weight kg	1,8
Width mm	177
Height mm	90
Depth mm	50
M_{x}	37
M_y	67
M_{z}	37







5082



Overview

Angular grippers are especially suitable for round shafts e.g. crank shafts



2-Jaw Angular Grippers RWP-S

- With positively driven lever mechanism
- Robust
- Powerful



2-Jaw Angular Grippers RWP-K-S

- With positively driven lever mechanism
- Infinitely adjustable stroke



2-Jaw Angular Grippers RMWP-S

- For small parts
- Compact



2-Jaw Angular Grippers RDWP-S

- For rough enviroment
- With positively driven lever mechanism
- Infinitely adjustable stroke

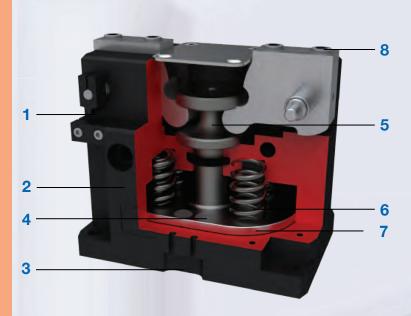


RWP-S

Angular gripper with positively driven lever mechanism - robust and powerful



- Double acting pneumatic cylinder with oval pistons and integrated mechanical gripping force safety device
- Positively driven lever gearing
- Functional parts made of hardened steel ensure high repeat accurancy
- Individual gripper finger positioning via centering sleeves
- Up to 10 mil. cycles maintenance free
- Stroke limitation for infinite setting of the opening angle available
- Available on request: High-temperature and corrosion resistant model



- 1. Cam-switch and mounting block
 Mounting for inductive proximity switch
- **2. Robust, lightweight housing** Hard coated aluminium alloy
- Integrated slot
 Mounting and positioning of magnetic field sensors
- **4.** Permanent magnet
 Sensing of the piston setting position via magnetic field sensors
- 5. Positively driven lever gear mechanism Synchronized gripping jaw movement
- Integrated gripping force safety locking device
 Spring integrated into cylinder as energy storage
- 7. Drive Double acting pneumatic cylinder
- 8. Removable centering sleeve
 Quick and cost-effective gripping
 jaw positioning



RWP-S

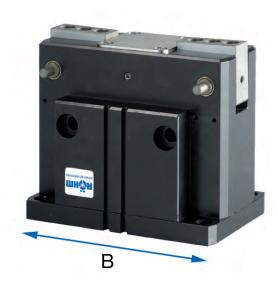
Description	Stroke per jaw ^o	Gripping moment max. in Nm
RWP-S-100	20	39
RWP-S-130	20	120
RWP-S-170	20	370
RWP-S-210	20	725

Design RWP-S:

sideway mounting of the gripper fingers



RWP-S





Tool group C40 RWP-S-100 2-jaw angular gripper air operated

Item no.	1242613	1242614
Design	RWP-S-100-B/GA	RWP-S-100-F/GA
Stroke per jaw °	20	20
Gripping moment Nm	39	39
Weight kg	1,3	1,4
Width mm	100	100
Height mm	88	88
Depth mm	65	65
M_{x}	20	20
M_{z}	20	20
F _z	330	330

Tool group C40 RWP-S-130 2-jaw angular gripper air operated

Item no.	1242615	1242616
Design	RWP-S-130-B/GA	RWP-S-130-F/GA
Stroke per jaw °	20	20
Gripping moment Nm	120	120
Weight kg	2,8	3,2
Width mm	130	130
Height mm	114,5	114,5
Depth mm	85	85
M_x	50	50
M_z	40	40
F _z	600	600

Tool group C40 RWP-S-170 2-jaw angular gripper air operated

Item no.	1242617	1242618
Design	RWP-S-170-B/GA	RWP-S-170-F/GA
Stroke per jaw °	20	20
Gripping moment Nm	370	370
Weight kg	6,3	6,7
Width mm	170	170
Height mm	150	150
Depth mm	110	110
M _x	65	65
M_z	60	60
F _z	1000	1000

2-jaw angular gripper

RWP-S

Tool group C40 RWP-S-210 2-jaw angular gripper air operated

Item no.	1242619	1242620
Design	RWP-S-210-B/GA	RWP-S-210-F/GA
Stroke per jaw °	20	20
Gripping moment Nm	725	725
Weight kg	12,4	13
Width mm	210	210
Height mm	186,5	186,5
Depth mm	140	140
M_x	120	120
M_z	110	110
F _z	1500	1500

Accessories RWP-S

Compressed air connection

Item no.	Design	For
1242884 •	Angle	RWP-S-100
1242894 •	Angle	RWP-S-130 / RWP-S-170
1242895 •	Angle	RWP-S-210
1242886 •	Straight	RWP-S-100
1242896 •	Straight	RWP-S-130 / RWP-S-170
1242897	Straight	RWP-S-210

Magnetic field sensors

Item no.	Design	For
1242868 •	Angle / Cable 5m	all sizes
1242869 •	Straight / Cable 5m	all sizes
1242870 •	Angle / Cable 0,3m / Connector M8	all sizes
1242871	Straight / Cable 0,3m / Connector M8	alle Gräßen

Cam-switch and mounting block

Item no.	For
1242975	all sizes

Mounting bracket and cam-switch

Item no.	For
1242976	RWP-S-100
1242977	RWP-S-130
1242978	RWP-S-170
1242979	RWP-S-210

Proximity switch

Item no.	Design	For
1242875	Cable 5 m	all sizes
1242877	Connector M8	all sizes

Connector

Item no.	Design	For
1242872 •	Angle / Cable / Bushing M8	all sizes
1242873	Straight / Cable / Bushing M8	all sizes

Stroke adjustment

Item no.	For
1242983	RWP-S-100
1242980	RWP-S-130
1242981	RWP-S-170
1242982	RWP-S-210

from stock
 4 - 6 weeks

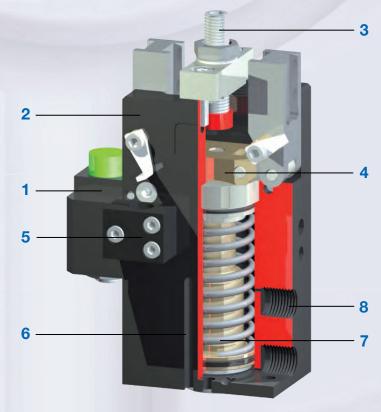


RWP-K-S

Angular gripper with infinitely adjustable stroke and guided knee lever mechanism.



- Guided knee lever mechanism
- Centrical gripping realized by synchronized compulsory guides
- Infinitely variable stroke from 1 180°
- High gripping force up to 4250 N
- Optimum transmission of drive force in gripping force
- Design GA with integrated springs as gripping force safety device
- Up to 5 mil. cycles maintenance free



1. Buffer stop

Absorption for heavy and long gripper jaws

- 2. Robust, lightweight housing Hard coated aluminium alloy
- 3. Stroke adjustment screw Infinitely adjustable opening stroke
- 4. Guided knee lever mechanism Synchronized gripper jaw movement
- **Mounting block** Mounting for inductive proximity switch
- 6. Integrated slot Mounting and positioning of magnetic field
- 7. Integrated gripping force safety device Spring integrated into cylinder as energy storage
- 8. Energy supply At several sides possible



RWP-K-S

Description	Stroke per jaw in °	Gripping force closing max. in N	Gripping moment max. in Nm
RWP-K-S-28	90	70	1,2
RWP-K-S-39	90	150	3
RWP-K-S-50	90	440	10,5
RWP-K-S-65	90	950	27,5
RWP-K-S-79	90	1400	47
RWP-K-S-100	90	3500	150

Design RWP-K-S:

GΑ integrated springs as gripping force safety device for exterior tension, thus increased gripping force



RWP-K-S





Tool group C40 RWP-K-S-28 2-jaw angular gripper air operated

Item no.	1242621 •	1242622 •
Design	RWP-K-S-28	RWP-K-S-28/GA
Gripping force in closing N	70	100
Stroke per jaw °	90	90
Gripping moment Nm	1,2	1,6
Weight kg	0,095	0,12
Width mm	28	28
Height mm	49,7	64,7
Depth mm	19,8	19,8
M_{x}	0,4	0,4
M _z	0,4	0,4
F _z	75	75

Tool group C40 RWP-K-S-39 2-jaw angular gripper air operated

Item no.	1242623 •	1242624 •
Design	RWP-K-S-39	RWP-K-S-39/GA
Gripping force in closing N	150	210
Stroke per jaw °	90	90
Gripping moment Nm	3	4,2
Weight kg	0,225	0,3
Width mm	39	39
Height mm	66,9	86,9
Depth mm	28	28
M _x	1	1
M _z	0,8	0,8
F _z	150	150

Tool group C40 RWP-K-S-50 2-jaw angular gripper air operated

Item no.	1242625 •	1242626 •
Design	RWP-K-S-50	RWP-K-S-50/GA
Gripping force in closing N	440	610
Stroke per jaw °	90	90
Gripping moment Nm	10,5	14,5
Weight kg	0,42	0,58
Width mm	50	50
Height mm	80,4	105,4
Depth mm	34,4	34,4
M_x	4	4
M_z	2,5	2,5
F _z	250	250



2-jaw angular gripper

Tool group C40 RWP-K-S-65 2-jaw angular gripper air operated

Item no.	1242627 •	1242628 •
Design	RWP-K-S-65	RWP-K-S-65/GA
Gripping force in closing N	950	1250
Stroke per jaw °	90	90
Gripping moment Nm	27,5	36,5
Weight kg	0,9	1,2
Width mm	65	65
Height mm	114,5	144,5
Depth mm	39,4	39,4
M_{x}	20	20
M _z	12	12
F _z	400	400

Tool group C40 RWP-K-S-79 2-jaw angular gripper air operated

Item no.	1242629 •	1242630 •
Design	RWP-K-S-79	RWP-K-S-79/GA
Gripping force in closing N	1400	1820
Stroke per jaw °	90	90
Gripping moment Nm	47	62
Weight kg	1,7	2,2
Width mm	79	79
Height mm	137	172
Depth mm	49,4	49,4
M_x	30	30
M _z	17	17
F _z	600	600

Tool group C40 RWP-K-S-100 2-jaw angular gripper air operated

Item no.	1242631	1242632 •
	12.1200	
Design	RWP-K-S-100	RWP-K-S-100/GA
Gripping force in closing N	3500	4250
Stroke per jaw °	90	90
Gripping moment Nm	150	183
Weight kg	3,5	4,1
Width mm	100	100
Height mm	174	214
Depth mm	64	64
M_x	40	40
M _z	28	28
F _z	800	800

Compressed air connection

Accessories RWP-K-S

Buffer stop

Item no.	For
1242984 •	RWP-K-S-28
1242985 •	RWP-K-S-39
1242986	RWP-K-S-50
1242987 •	RWP-K-S-65
1242988	RWP-K-S-79

Item no.	Design	For
1242884 •	Angle	RWP-K-S-28 - RWP-K-S-79
1242894 •	Angle	RWP-K-S-100
1242886 •	Straight	RWP-K-S-28 - RWP-K-S-79
1242896 •	Straight	RWP-K-S-100

Proximity switch

Item no.	Design	For
1242875	Cable 5 m	all sizes
1242893 •	Cable 0,3m / Connector M8	RWP-K-S-28
1242877	Connector M8	RWP-K-S-39 - RWP-K-S-100

Mounting block

Item no.	For
1242989 •	RWP-K-S-28

Connector

Item no.	Design	For
1242872 •	Angle / Cable / Bushing M8	all sizes
1242873	Straight / Cable / Bushing M8	all sizes

Magnetic field sensors

Item no.	Design	For
1242868 •	Angle / Cable 5m	all sizes
1242869 •	Straight / Cable 5m	RWP-K-S-39 - RWP-K-S-100
1242870	Angle / Cable 0,3m / Connector M8	RWP-K-S-65
1242871	Straight / Cable 0,3m / Connector M8	RWP-K-S-39 - RWP-K-S-100

5091 from stock 4 - 6 weeks

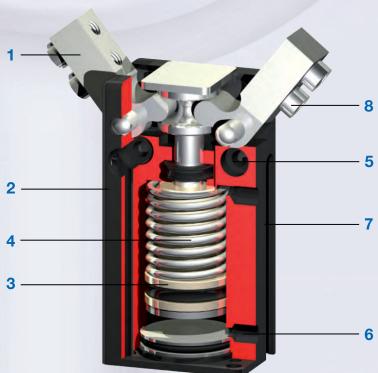


RMWP-S

Compact angular gripper for small parts



- High gripping force as a result of optimal direction change of driving force into gripping force
- Direct piston position sensing via magnetic field sensors
- GA models additionally equipped with spring as mechanical gripping force safety locking device (in case of pressure loss)
- Precise positioning of individual gripping jaws
- Up to 10 mil. cycles maintenance free
- Available on request: High-temperature and corrosion resistant model



- Gripper jaw Individual gripper finger mounting
- Robust, lightweight housing Hard coated aluminium alloy
- 3. Position sensing Permanent magnet for direct position sensing of piston movement (starting from size 20)
- Integrated gripping force safety device Spring integrated into cylinder as energy storage
- Mounting and positioning Mounting possible at several sides for individual positioning of the gripper
- 6. Energy supply At several sides possible
- 7. Integrated slot Mounting and positioning of magnetic field sensors (starting from size 20)
- Removable centering sleeve Quick and economical positioning of the gripper fingers

RMWP-S

Description	Stroke per jaw in °	Gripping moment max. in Nm
RMWP-S-12	37,5	0,03
RMWP-S-16	37,5	0,05
RMWP-S-20	37,5	0,23
RMWP-S-24	37,5	0,41
RMWP-S-30	37,5	1,02
RMWP-S-36	37,5	1,76
RMWP-S-42	37,5	3,3
RMWP-S-48	37,5	4,55

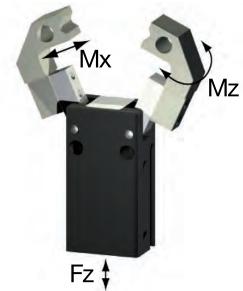
Design RMWP-S:

GΑ integrated springs as gripping force safety device for exterior tension, thus increased gripping force



RMWP-S





Tool group C40
RMWP-S-12
2-jaw angular gripper
air operated

1242633 •
RMWP-S-12
37,5
0,03
0,01
12
20
10
0,2
0,2
37

Tool group C40 RMWP-S-16 2-jaw angular gripper air operated

Item no.	1242634 •
Design	RMWP-S-16
Stroke per jaw °	37,5
Gripping moment Nm	0,05
Weight kg	0,015
Width mm	16
Height mm	23
Depth mm	12
M _x	0,3
M_z	0,3
F _z	60

Tool group C40 RMWP-S-20 2-jaw angular gripper air operated

Item no.	1242635 •	1242636 •
Design	RMWP-S-20	RMWP-S-20/GA
Stroke per jaw °	37,5	37,5
Gripping moment Nm	0,23	0,3
Weight kg	0,025	0,04
Width mm	20	20
Height mm	27	39
Depth mm	14	14
M_{x}	0,4	0,4
M_z	0,4	0,4
F	90	90

Tool group C40 RMWP-S-24 2-jaw angular gripper air operated

Item no.	1242637 •	1242638 •
Design	RMWP-S-24	RMWP-S-24/GA
Stroke per jaw °	37,5	37,5
Gripping moment Nm	0,41	0,5
Weight kg	0,05	0,08
Width mm	24	24
Height mm	32	44
Depth mm	18	18
M_{x}	0,5	0,5
M_z	0,5	0,5
F _z	150	150



2-jaw angular gripper

RMWP-S

Tool group C40 RMWP-S-30 2-jaw angular gripper air operated

Item no.	1242639 •	1242640 •
Design	RMWP-S-30	RMWP-S-30/GA
Stroke per jaw °	37,5	37,5
Gripping moment Nm	1,02	1,1
Weight kg	0,1	0,12
Width mm	30	30
Height mm	40	46,5
Depth mm	23	23
M _x	0,7	0,7
M_z	0,7	0,7
F,	260	260

Tool group C40 RMWP-S-36 2-jaw angular gripper air operated

Item no.	1242641 •	1242642 •
Design	RMWP-S-36	RMWP-S-36/GA
Stroke per jaw °	37,5	37,5
Gripping moment Nm	1,76	2
Weight kg	0,18	0,19
Width mm	36	36
Height mm	49	57
Depth mm	28	28
M _x	1,3	1,3
M_z	1,3	1,3
F _z	430	430

Tool group C40 RMWP-S-42 2-jaw angular gripper air operated

Item no.	1242643 •	1242644 •
Design	RMWP-S-42	RMWP-S-42/GA
Stroke per jaw °	37,5	37,5
Gripping moment Nm	3,3	3,8
Weight kg	0,275	0,31
Width mm	42	42
Height mm	60	69
Depth mm	33	33
M_x	1,6	1,6
M_z	1,6	1,6
F_{z}	500	500

Tool group C40 RMWP-S-48 2-jaw angular gripper air operated

Item no.	1242645 •	1242646 •
Design	RMWP-S-48	RMWP-S-48/GA
Stroke per jaw °	37,5	37,5
Gripping moment Nm	4,55	5,2
Weight kg	0,4	0,45
Width mm	48	48
Height mm	68	77
Depth mm	38	38
M_x	2,3	2,3
M_z	2,3	2,3
F _z	720	720

Accessories RMWP-S

Compressed air connection

Item no.	Design	For
1242883	Angle	RMWP-S-12 / RMWP-S-42
1242884 •	Angle	RMWP-S-48
1242885	Straight	RMWP-S-12 / RMWP-S-42
1242886	Straight	RMWP-S-48

Magnetic field sensors

Item no.	Design	For
1242868 •	Angle / Cable 5m	RMWP-S-20 / RMWP-S-48
1242869 •	Straight / Cable 5m	RMWP-S-20 / RMWP-S-48
1242870 •	Angle / Cable 0,3m / Connector M8	RMWP-S-20 / RMWP-S-48
1242871 •	Straight / Cable 0,3m / Connector M8	RMWP-S-20 / RMWP-S-48

• from stock • 4 - 6 weeks 5095

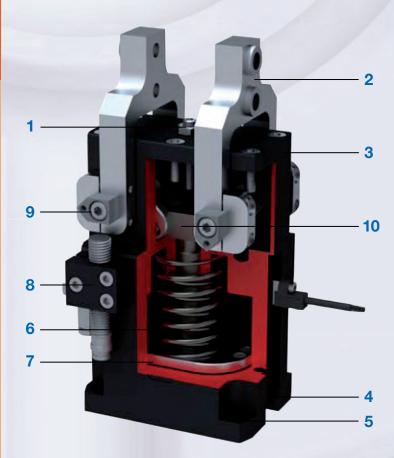


RDWP-S

Angular gripper for rough environment with guided knee lever mechanism and infinitely adjustable stroke.



- Sealed for extreme applications
- Infinitely adjustable jaw stroke up to 90°
- Double acting pneumatic cylinder with integrated mechanical gripping force safety device
- Positively driven lever gearing
- Functional parts made of hardened steel ensure high repeat accurancy
- Up to 10 mil. cycles maintenance free
- Available on request: High-temperature-resistant model (up to 150°C)



Stroke adjustment

Infinitely adjustable opening stroke Adjusting screw included

2. Removable centering sleeve Quick and cost-effective gripping jaw

positioning

3. Robust, lightweight housing Hard coated aluminium alloy

4. Integrated slot

Mounting and positioning of magnetic field sensors

5. Mounting and positioning

Mounting possible at several sides for individual positioning of the gripper

6. Integrated gripping force safety locking

Spring integrated into cylinder as energy storage

7. Drive

Double acting pneumatic cylinder

8. Switch cam and mounting block Position sensing of inductive proximily switch

9. Sealed axis of rotation

Via radial shaft seal

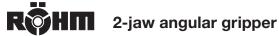
10. Guided knee lever mechanism Synchronized gripping jaw movement

RDWP-S

Description	Stroke per jaw in °	Gripping moment max. in Nm
RDWP-S-44	90	6,5
RDWP-S-55	90	13
RDWP-S-66	90	23
RDWP-S-79	90	46
RDWP-S-95	90	69
RDWP-S-114	90	135

Design RDWP-S:

GΑ integrated springs as gripping force safety device for exterior tension, thus increased gripping force





Tool group C40 RDWP-S-44 2-jaw angular gripper air operated

Item no.	1242647
Design	RDWP-S-44-90/GA
Stroke per jaw °	90
Gripping moment Nm	6,5
Weight kg	0,25
Width mm	44
Height mm	66
Depth mm	32

Tool group C40 RDWP-S-55 2-jaw angular gripper air operated

Item no.	1242649
Design	RDWP-S-55-90/GA
Stroke per jaw °	90
Gripping moment Nm	15
Weight kg	0,5
Width mm	55
Height mm	86,5
Depth mm	40

Tool group C40 RDWP-S-66 2-jaw angular gripper air operated

Item no.	1242651
Design	RDWP-S-66-90/GA
Stroke per jaw °	90
Gripping moment Nm	26
Weight kg	0,85
Width mm	66
Height mm	101
Depth mm	48

Tool group C40 RDWP-S-79 2-jaw angular gripper air operated

Item no.	1242653
Design	RDWP-S-79-90/GA
Stroke per jaw °	90
Gripping moment Nm	60
Weight kg	1,4
Width mm	79
Height mm	117
Depth mm	58



2-jaw angular gripper

RDWP-S

Tool group C40
RDWP 95
2-jaw angular gripper
air operated

Item no.	1242655
Design	RDWP-S-95-90/GA
Stroke per jaw °	90
Gripping moment Nm	95
Weight kg	2,45
Width mm	95
Height mm	138,5
Depth mm	72

Tool group C40 RDWP-S-114 2-jaw angular gripper air operated

Item no.	1242657
Design	RDWP-S-114-90/GA
Stroke per jaw °	90
Gripping moment Nm	200
Weight kg	4,45
Width mm	114
Height mm	179
Depth mm	84

Accessories RDWP-S

Proximity switch

Item no.	Design	For
1242999	Cable 5m	RDWP-S-44
1242875	Cable 5 m	RDWP-S-55 - RDWP-S-114
1243000 •	Cable 0,3m / Connector M8	RDWP-S-44
1242877 •	Connector M8	RDWP-S-55 - RDWP-S-114

Magnetic field sensors

Item no.	Design	For
1242868 •	Angle / Cable 5m	all sizes
1242869 •	Straight / Cable 5m	all sizes
1242870 •	Angle / Cable 0,3m / Connector M8	all sizes
1242871	Straight / Cable 0,3m / Connector M8	all sizes

Connector

Item no.	Design	For
1242872 •	Angle / Cable / Bushing M8	all sizes
1242873 •	Straight / Cable / Bushing M8	all sizes

Compressed air connection

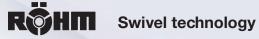
Item no.	Design	For
1242884 •	Angle	RDWP-S-44 - RDWP-S-79
1242894 •	Angle	RDWP-S-95 - RDWP-S-114
1242886 •	Straight	RDWP-S-44 - RDWP-S-79
1242896 •	Angle	RDWP-S-95 - RDWP-S-114

Mounting bracket and cam-switch

Item no.	For
1242996	RDWP-S-44
1242997 •	RDWP-S-55
1242998	RDWP-S-66 - RDWP-S-114

• from stock • 4 - 6 weeks 5099





Overview



Swivel Units RSP

- With high torque
- Compact construction
- Various design





Swivel Jaws RSBP-S

- With precise transfer of power in torque
- Force transfer via gear wheel set



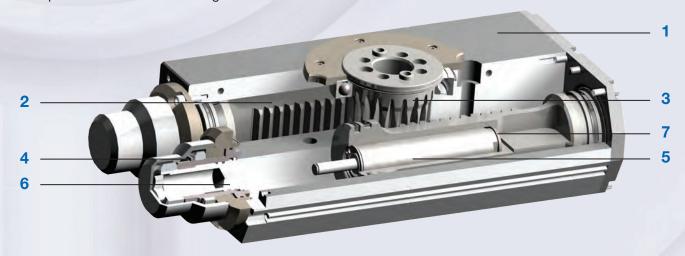
Swivel Heads as Special Solution

On request

1 Swivel units = 2 Damping range.
Swivel unit with high torque and compact construction.
Realise both damping ranges, "hard" and "soft" with one swivel unit!

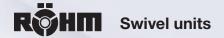


- Body made of high-strength hard-coated aluminium
- Steering racks and driver made of hardened steel
- High repeat accuracy, compact design, high torque
- Optional automated operation
- Uniform end-of-stroke damping
- Two damping ranges (hard / soft) realisable with one swivel unit
- Vernier adjustment of dampers at the end position settings
- Usable in all positions
- Seperation of the piston chamber in a few simple stemps
- Continuously variable end position between ±3° or ±90°
- Inductive or magnetic positioning sensors.
- Ideal bearing of turn table for many millions of cycles
- Optional tubeless, direct screw connection for power supply.
- Up to 8-fold fluidfeeder
- Up to 9-fold cable feed-through



- 1. Body
- 2. Steering rack
- 3. Driver
- 4. Stop

- 5. Shockabsorber
- 6. Shock absorber setting
- 7. Rough adjustment shock absorbers



Universal design is delivered with hard damping range as standard!

Only a few steps to the right swivel unit. The designation of the swivel unit RSP will help you to find the correct product quick and easy. Please see below how easy it works:



- 1. Choose the size (32 / 42 / 52)
- 2. Define the damping range (-U / -W)
- 3. Select the swivel angle (-90°/ -180°)
- 4. Define the end position adjustability 3° or 90°
- 5. Fluid feeder yes / no?
- 6. Cable feed-through yes / no?
- 7. Proximity switch yes / no?

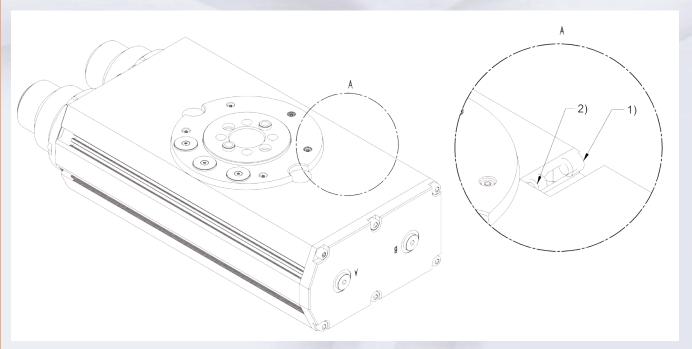
Meaning:

"Pneumatic controlled swivel unit; Size 52; universal damping range (hard damping range presetted), swivel angle 180°; end position adjustability 3°; fluid feeder 8-fold; cable feed-through M8 sensor connector; proximity switch"





Seperation of piston chamber



- Unscrew the threaded pin (1) from the body of the swivel unit.
- Afterwards screw the threaded pin (2) into the internal threaded hole as far as it will go
- Close the external hole of the swivel unit's body again with the threaded pin (1)

Product advantages:

- Easy seperation of piston chamber possible by closing the branch canal with the threaded pin
- Compressed air only reaches the areas where the total torque is needed due to the seperation of the piston chamber:
 - During many applications, a workpiece is turned or swiveled from position A to position B. On the way
 back to the starting position the swivel movement usually happens without a workpiece. This means,
 the total torque is not needed anymore.
- Torque is divided in halves after seperation of the piston chamber
- · Reduction of air consumption per swivel movement by half
- Saving expensive compressed air



With only a few hand movements you decide whether your swivel unit is damped hard or soft.

Rough adjustment of the shock absorber hardness of universal swivel units.



- Adapting of the damping range possible by moving an adjusting disc
- Swiveling from A to B with workpiece at high torque of inertia: hard damping range (adjusting disc behind the shock absorber)
- Swiveling from B to A without workpiece at low torque of inertia: soft damping range (adjusting disc in front of the shock absorber)
- Up to 50% higher pulsing due to adapting of damping range
- Reduction of spares inventory since both damping ranges, hard and soft, can be managed
- Optimal for applications with overlapping hard and soft damping ranges
- Variation of the operation field at customer specific applicationchanges



Tool group C40 RSP 32 - basic unit air operated



Item no.	171666 •	171158 •	171159 •
Design Universal	RSP32-U-90-J3	RSP32-U-180-J3	RSP32-U-180-J90
Item no.	173368 •	173369 •	173370 •
Design Soft	RSP32-W-90-J3	RSP32-W-180-J3	RSP32-W-180-J90
Pivot angle °	90	180	180
End position adjustability °	3	3	90
Torque at 6 bar Nm	10,5	10,5	10,5
Operating pressure min./max. bar	3-8	3-8	3-8
Connecting hose-ø	6,0	6,0	6,0
Operating temperature min./max. °C	5-60	5-60	5-60
Repeat accurancy mm	0,05	0,05	0,05

Tool group C40 RSP 32 - basic unit with fluid feeder air operated



Item no.	171667 •	171160 •	171161 •
Design Universal	RSP32-U-90-J3-F4	RSP32-U-180-J3-F4	RSP32-U-180-J90-F4
Item no.	173374 •	171175 •	173376 •
Design Soft	RSP32-W-90-J3-F4	RSP32-W-180-J3-F4	RSP32-W-180-J90-F4
Pivot angle °	90	180	180
End position adjustability °	3	3	90
Torque at 6 bar Nm	10	10	10
Operating pressure min./max. bar	3-8	3-8	3-8
Connecting hose-ø	6,0	6,0	6,0
Operating temperature min./max. °C	5-60	5-60	5-60
Repeat accurancy mm	0,05	0,05	0,05
Number fluid feeders	4	4	4
Compression fluid feeder max. bar	8	8	8

Universal design is delivered with hard damping range as standard!



Tool group C40
RSP 32 - basic unit with fluid
feeder and cable feed-through
air operated

Item no.	171978 •	171972 •	171973 •
Design Universal	RSP32-U-90-J3-F4-KD8	RSP32-U-180-J3-F4-KD8	RSP32-U-180-J90-F4-KD8
Item no.	173380 •	173381 •	173382 •
Design Soft	RSP32-W-90-J3-F4-KD8	RSP32-W-180-J3-F4-KD8	RSP32-W-180-J90-F4-KD8
Pivot angle °	90	180	180
End position adjustability °	3	3	90
Torque at 6 bar Nm	10	10	10
Operating pressure min./max. bar	3-8	3-8	3-8
Connecting hose-ø	6,0	6,0	6,0
Operating temperature min./max. °C	5-60	5-60	5-60
Repeat accurancy mm	0,05	0,05	0,05
Number fluid feeders	4	4	4
Compression fluid feeder max. bar	8	8	8
Number of wire	10	10	10
Voltage max. V	24	24	24
Current per wire max. A	1	1	1
Total current A	1	1	1
Number of E-connectors tool-side 3-pin	4	4	4
Number of E-connectors tool-side 4-pin	2	2	2
Size E-connectors tool-side	M8	M8	M8
Size E-connectors machine-side	M16	M16	M16

Tool group C40 RSP 32 - basic unit with fluid feeder, cable feed-through and proximity switch air operated

B			
Item no.	172457 •	172458 •	172459 •
Design Universal	RSP32-U-90-J3-F4-KD8-AS	RSP32-U-180-J3-F4-KD8-AS	RSP32-U-180-J90-F4-KD8-AS
Item no.	173386 •	173387 •	173388 •
Design Soft	RSP32-W-90-J3-F4-KD8-AS	RSP32-W-180-J3-F4-KD8-AS	RSP32-W-180-J90-F4-KD8-AS
Pivot angle °	90	180	180
End position adjustability °	3	3	90
Torque at 6 bar Nm	10	10	10
Operating pressure min./max. bar	3-8	3-8	3-8
Connecting hose-ø	6,0	6,0	6,0
Operating temperature min./max. °C	5-60	5-60	5-60
Repeat accurancy mm	0,05	0,05	0,05
Number fluid feeders	4	4	4
Compression fluid feeder max. bar	8	8	8
Number of wire	10	10	10
Voltage max. V	24	24	24
Current per wire max. A	1	1	1
Total current A	1	1	1
Number of E-connectors tool-side 3-pin	4	4	4
Number of E-connectors tool-side 4-pin	2	2	2
Size E-connectors tool-side	M8	M8	M8
Size E-connectors machine-side	M16	M16	M16
Number of holders for proximity switch	3	3	3

Universal design is delivered with hard damping range as standard!

• from stock 4 - 6 weeks 5107



Tool group C40 RSP 42 - basic unit air operated



Item no.	172468	171166 •	171167 •
Design Universal	RSP42-U-90-J3	RSP42-U-180-J3	RSP42-U-180-J90
Item no.	173392 •	173393 •	173394 •
Design Soft	RSP42-W-90-J3	RSP42-W-180-J3	RSP42-W-180-J90
Pivot angle °	90	180	180
End position adjustability °	3	3	90
Torque at 6 bar Nm	24	24	24
Operating pressure min./max. bar	3-8	3-8	3-8
Connecting hose-ø	6,0	6,0	6,0
Operating temperature min./max. °C	5-60	5-60	5-60
Repeat accurancy mm	0,05	0,05	0,05

Tool group C40 RSP 42 - basic unit with fluid feeder air operated



Item no.	171669 •	171168 •	171169 •
Design Universal	RSP42-U-90-J3-F8	RSP42-U-180-J3-F8	RSP42-U-180-J90-F8
Item no.	173398 •	173399 •	173400 •
Design Soft	RSP42-W-90-J3-F8	RSP42-W-180-J3-F8	RSP42-W-180-J90-F8
Pivot angle °	90	180	180
End position adjustability °	3	3	90
Torque at 6 bar Nm	23	23	23
Operating pressure min./max. bar	3-8	3-8	3-8
Connecting hose-ø	6,0	6,0	6,0
Operating temperature min./max. °C	5-60	5-60	5-60
Repeat accurancy mm	0,05	0,05	0,05
Number fluid feeders	8	8	8
Compression fluid feeder max, bar	8	8	8

Universal design is delivered with hard damping range as standard!



Tool group C40
RSP 42 - basic unit with fluid
feeder and cable feed-through
air operated



Item no.	171979 •	171974 •	171975 •
Design Universal	RSP42-U-90-J3-F8-KD8	RSP42-U-180-J3-F8-KD8	RSP42-U-180-J90-F8-KD8
Item no.	173404 •	173405 •	173406 •
Design Soft	RSP42-W-90-J3-F8-KD8	RSP42-W-180-J3-F8-KD8	RSP42-W-180-J90-F8-KD8
Pivot angle °	90	180	180
End position adjustability °	3	3	90
Torque at 6 bar Nm	23	23	23
Operating pressure min./max. bar	3-8	3-8	3-8
Connecting hose-ø	6,0	6,0	6,0
Operating temperature min./max. °C	5-60	5-60	5-60
Repeat accurancy mm	0,05	0,05	0,05
Number fluid feeders	8	8	8
Compression fluid feeder max. bar	8	8	8
Number of wire	12	12	12
Voltage max. V	24	24	24
Current per wire max. A	1	1	1
Total current A	1	1	1
Number of E-connectors tool-side 3-pin	8	8	8
Number of E-connectors tool-side 4-pin	1	1	1
Size E-connectors tool-side	M8	M8	M8
Size E-connectors machine-side	M16	M16	M16

Tool group C40
RSP 42 - basic unit with fluid
feeder, cable feed-through and
proximity switch
air operated



Item no.	172464 •	172465 •	172466 •
Design Universal	RSP42-U-90-J3-F8-KD8-AS	RSP42-U-180-J3-F8-KD8-AS	RSP42-U-180-J90-F8-KD8-AS
Item no.	173410 •	173411 •	173412 •
Design Soft	RSP42-W-90-J3-F8-KD8-AS	RSP42-W-180-J3-F8-KD8-AS	RSP42-W-180-J90-F8-KD8-AS
Pivot angle °	90	180	180
End position adjustability °	3	3	90
Torque at 6 bar Nm	23	23	23
Operating pressure min./max. bar	3-8	3-8	3-8
Connecting hose-ø	6,0	6,0	6,0
Operating temperature min./max. °C	5-60	5-60	5-60
Repeat accurancy mm	0,05	0,05	0,05
Number fluid feeders	8	8	8
Compression fluid feeder max. bar	8	8	8
Number of wire	12	12	12
Voltage max. V	24	24	24
Current per wire max. A	1	1	1
Total current A	1	1	1
Number of E-connectors tool-side 3-pin	8	8	8
Number of E-connectors tool-side 4-pin	1	1	1
Size E-connectors tool-side	M8	M8	M8
Size E-connectors machine-side	M16	M16	M16
Number of holders for proximity switch	3	3	3

Universal design is delivered with hard damping range as standard!

• from stock • 4 - 6 weeks 5109



Tool group C40 RSP 52 - basic unit air operated



Item no.	171670 •	171174 •	171175 •
Design Universal	RSP52-U-90-J3	RSP52-U-180-J3	RSP52-U-180-J90
ldNr.	173416 •	173417 •	173418 •
Design Soft	RSP52-W-90-J3	RSP52-W-180-J3	RSP52-W-180-J90
Pivot angle °	90	180	180
End position adjustability °	3	3	90
Torque at 6 bar Nm	60	60	60
Operating pressure min./max. bar	3-8	3-8	3-8
Connecting hose-ø	6,0	6,0	6,0
Operating temperature min./max. °C	5-60	5-60	5-60
Repeat accurancy mm	0,05	0,05	0,05

Tool group C40 RSP 52 - basic unit with fluid feeder air operated



Item no.	171671 •	171176 •	171177 •
Design Universal	RSP52-U-90-J3-F8	RSP52-U-180-J3-F8	RSP52-U-180-J90-F8
Item no.	173422 •	173423 •	173424 •
Design Soft	RSP52-W-90-J3-F8	RSP52-W-180-J3-F8	RSP52-W-180-J90-F8
Pivot angle °	90	180	180
End position adjustability °	3	3	90
Torque at 6 bar Nm	58	58	58
Operating pressure min./max. bar	3-8	3-8	3-8
Connecting hose-ø	6,0	6,0	6,0
Operating temperature min./max. °C	5-60	5-60	5-60
Repeat accurancy mm	0,05	0,05	0,05
Number fluid feeders	8	8	8
Compression fluid feeder max. bar	8	8	8

Universal design is delivered with hard damping range as standard!



Tool group C40
RSP 52 - basic unit with fluid
feeder and cable feed-through
air operated



Item no.	171980 •	171976 •	171977 •
Design Universal	RSP52-U-90-J3-F8-KD8	RSP52-U-180-J3-F8-KD8	RSP52-180-J90-F8-KD8
Item no.	173428 •	173429 •	173430 •
Design Soft	SP52-W-90-J3-F8-KD8	RSP52-W-180-J3-F8-KD8	RSP52-W-180-J90-F8-KD8
Pivot angle °	90	180	180
End position adjustability °	3	3	90
Torque at 6 bar Nm	58	58	58
Operating pressure min./max. bar	3-8	3-8	3-8
Connecting hose-ø	6,0	6,0	6,0
Operating temperature min./max. °C	5-60	5-60	5-60
Repeat accurancy mm	0,05	0,05	0,05
Number fluid feeders	8	8	8
Compression fluid feeder max. bar	8	8	8
Number of wire	12	12	12
Voltage max. V	24	24	24
Current per wire max. A	1	1	1
Total current A	1	1	1
Number of E-connectors tool-side 3-pin	8	8	8
Number of E-connectors tool-side 4-pin	1	1	1
Size E-connectors tool-side	M8	M8	M8
Size E-connectors machine-side	M16	M16	M16

Tool group C40 RSP 52 - basic unit with fluid feeder, cable feed-through and proximity switch air operated



Item no.	172420 •	172421 •	172422 •
Design Universal	RSP52-U-90-J3-F8-KD8-AS	RSP52-U-180-J3-F8-KD8-AS	RSP52-U-180-J90-F8-KD8-AS
Item no.	173434 •	173435 •	173436 •
Design Soft	RSP52-W-90-J3-F8-KD8-AS	RSP52-W-180-J3-F8-KD8-AS	RSP52-W-180-J90-F8-KD8-AS
Pivot angle °	90	180	180
End position adjustability °	3	3	90
Torque at 6 bar Nm	58	58	58
Operating pressure min./max. bar	3-8	3-8	3-8
Connecting hose-ø	6,0	6,0	6,0
Operating temperature min./max. °C	5-60	5-60	5-60
Repeat accurancy mm	0,05	0,05	0,05
Number fluid feeders	8	8	8
Compression fluid feeder max. bar	8	8	8
Number of wire	12	12	12
Voltage max. V	24	24	24
Current per wire max. A	1	1	1
Total current A	1	1	1
Number of E-connectors tool-side 3-pin	8	8	8
Number of E-connectors tool-side 4-pin	1	1	1
Size E-connectors tool-side	M8	M8	M8
Size E-connectors machine-side	M16	M16	M16
Number of holders for proximity switch	3	3	3

Universal design is delivered with hard damping range as standard!



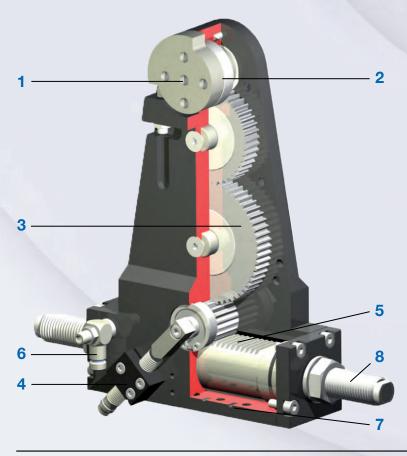


RSBP-S

Swivel jaws with precise transfer of power in torque. Force transfer via gear wheel set.

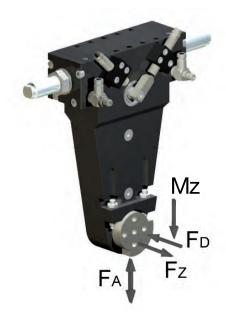


- Force transfer via gear wheel set
- Precise steering of drive force in torque
- Multi way ball bearing for high torque intake
- End position damping
- Up to 10 mil. swivel cycles maintenance free



- Two way bearing drive shaft
 High force and moment capacity
- 2. Drive flange
 Large size drive flange with end stop and
 large central hole (from RSPB-S 50)
- 3. Force transfer
 Stable gear wheel set
 Precise, reliable, durable
- 4. Position inquiry
 Inquiry of end position 0° and 90°
 (or 180°) via inductive proximity switch
- Drive Double acting pneumatic cylinder
- **6. Air flow control valve**For speed (included in the delivery)
- 7. Mounting and positioning Alternate on several sides for individual assembly of the swivel jaws
- 8. Integrated and patented shock absorbers Adjustable end position damping





Tool group C40 RSBP-S-20 - Swivel jaws air operated

Item no.	1242659	1242660	1242661
Design	RSBP-S-20-90	RSBP-S-20-180	RSBP-S-20G
Pivot angle °	90	180	
Torque per jaw Nm	1,2	1,2	0
Weight kg	750	750	450
Width mm	92	92	92
Height mm	116	116	116
Depth mm	32	32	32
F _a	1720	1720	1720
F _d	860	860	860
F _z	630	630	630
M_{z}	15	15	15

Tool group C40 RSBP-S-30 - Swivel jaws air operated

Item no.	1242662	1242663	1242664
Design	RSBP-S-30-90	RSBP-S-30-180	RSBP-S-30G
Pivot angle °	90	180	
Torque per jaw Nm	3,5	3,5	0
Weight kg	1,7	1,7	1,1
Width mm	118	118	118
Height mm	179,5	179,5	179,5
Depth mm	40	40	40
Fa	2400	2400	2400
F _d	1200	1200	1200
F _z	630	630	630
M_z	20	20	20

Tool group C40 RSBP-S-40 - Swivel jaws air operated

Item no.	1242665	1242666	1242667
Design	RSBP-S-40-90	RSBP-S-40-180	RSBP-S-40G
Pivot angle °	90	180	
Torque per jaw Nm	10	10	0
Weight kg	4	4	1,5
Width mm	162	162	162
Height mm	228	228	228
Depth mm	54	54	54
Fa	4000	4000	4000
F _d	2000	2000	2000
F _z	1200	1200	1200
M_{z}	70	70	70

RSBP-S

Tool group C40 RSBP-S-50 - Swivel jaws air operated

Item no.	1242668	1242669	1242670
Design	RSBP-S-50-90	RSBP-S-50-180	RSBP-S-50G
Pivot angle °	90	180	
Torque per jaw Nm	23	23	0
Weight kg	11	11	6,5
Width mm	247	247	247
Height mm	298	298	298
Depth mm	78	78	78
Fa	15000	15000	15000
F _d	7500	7500	7500
F _z	3700	3700	3700
M_z	270	270	270

Tool group C40 RSBP-S-70 - Swivel jaws air operated

Item no.	1242671	1242672	1242673
Design	RSBP-S-70-90	RSBP-S-70-180	RSBP-S-70G
Pivot angle °	90	180	
Torque per jaw Nm	57	57	0
Weight kg	28	28	19,5
Width mm	335	335	335
Height mm	423	423	423
Depth mm	98	98	98
F _a	25000	25000	25000
F_d	12500	12500	12500
F _z	6100	6100	6100
M_z	600	600	600



Overview

Tool Changer



Automatic Tool Changers RSWE-S

- For high handling weights
- Integrated pitch circle EN ISO 9409-1 for a direct connection to the robot flange

Manual Quick Changing RHSWE-S

- For high handling weights
- Integrated pitch circle EN ISO 9409-1 for a direct connection to the robot

Rotary Distributor



Rotary Distributor

- Integrated electrical and pneumatic media feed through
- Extremely lightweight construction
- Unlimited multiple turning



Rotary Distributor RDV-S

- Integrated electrical and pneumatic media feed through
- Integrated pitch circle EN ISO 9409-1 for a direct connection to the robot flange

Axis Compensation Modules



Axis Compensation Mudules RAE-S

- With precise and robust linear guiding
- Integrated pitch circle EN ISO 9409-1 for a direct connection to the robot flange



Axis Compensation Mudules RAR-S

- With locking function
- Integrated pitch circle EN ISO 9409-1 for a direct connection to the robot flange



Axis Compensation Mudules RFG-S

- With eccentric clamping and centering function
- Integrated pitch circle EN ISO 9409-1 for a direct connection to the robot flange

Crash Protection



Crash protection RKS-S

- With overload detection
- Integrated pitch circle EN ISO 9409-1 for a direct connection to the robot flange

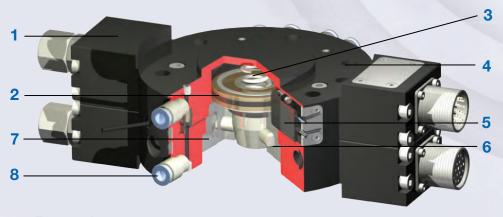


RSWE-S

Automatic tool changer for high handling weights.
Integrated pitch circle EN ISO 9409-1 for a direct connection to the robot flange.



- Double acting pneumatic cylinder with integrated pressure spring
- Direct position sensoring of the locking piston and of the loose part via proximity switch
- Positive connection due to clamping sleeve fitted index bolts
- Up to 10 pneumatic feed-through
- Housing extremely flat design and weight optimised
- Mechanical emergency release in case of collision
- Up to 5 mil. cycles maintenance free



1. Energy element

Available as accessory

2. Drive

Double-acting pneumatic cylinder

3. Integrated spring

Energy storage in case of drop in pressure

4. Robot flange

Partial mounting circle in accordance with EN ISO 9409-1

5. Piston position sensing

Via magnetic field sensors (available as accessory)

6. Locking bolts

Adapted to the clamping sleeve

7. Locking sleeve

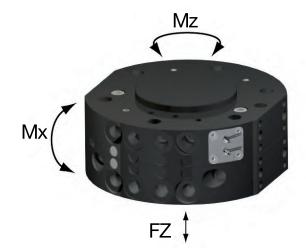
High moment capacity

8. Integrated air feed-through

Air transfer from fix to loose part, tubeless control possible







Tool group C40 RSWE-S-40 -Tool changers air operated

Item no.	1242674 •	1242675 •
Design	RSWE-S-40F	RSWE-S-40L
Connecting Flange to EN ISO 9409-1 TK	40	40
Recommended handling weight kg	20	-
Pneumatic energy transfer	4x	4x
Electrical energy transfer	optional	optional
Locking stroke mm	0,3	-
Moment of inertia kg/cm ²	0,3	0,28
Weight kg	0,13	0,9
Ømm	50	50
Height mm	19	18
Height in locked position mm	37	37
M_z	70	70
M_{x}	90	90
F _z	3800	3800

Tool group C40 RSWE-S-50 -Tool changers air operated

Item no.	1242676 •	1242677 •
Design	RSWE-S-50F	RSWE-S-50L
Connecting Flange to EN ISO 9409-1 TK	50	50
Recommended handling weight kg	30	-
Pneumatic energy transfer	4x	4x
Electrical energy transfer	optional	optional
Locking stroke mm	0,3	0
Moment of inertia kg/cm ²	0,8	0,7
Weight kg	0,19	0,15
Ømm	63	63
Height mm	19	18
Height in locked position mm	37	37
M _z	100	100
M _x	105	105
F _z	4000	4000

Tool group C40 RSWE-S-63 -Tool changers air operated

Item no.	1242678 •	1242679 •
Design	RSWE-S-63F	RSWE-S-63L
Connecting Flange to EN ISO 9409-1 TK	63	63
Recommended handling weight kg	50	-
Pneumatic energy transfer	6x	6x
Electrical energy transfer	optional	optional
Locking stroke mm	1	-
Moment of inertia kg/cm ²	2,3	2,2
Weight kg	0,37	0,28
Ømm	80	80
Height mm	22,5	22,5
Height in locked position mm	45	45
M _z	200	200
M _x	300	300
F _z	7600	7600

RSWE-S

Tool group C40
RSWE-S-80 - Tool changers
air operated

Item no.	1242680 •	1242681 •
Design	RSWE-S-80F	RSWE-S-80L
Connecting Flange to EN ISO 9409-1 TK	80	80
Recommended handling weight kg	70	-
Pneumatic energy transfer	6x	6x
Electrical energy transfer	optional	optional
Locking stroke mm	1	0
Moment of inertia kg/cm ²	5,6	5,5
Weight kg	0,58	0,45
Ømm	100	100
Height mm	22,5	22,5
Height in locked position mm	45	45
M _z	300	300
M_{x}	600	600
F _z	9150	9150

Tool group C40 RSWE-S-100 - Tool changers air operated

Item no.	1242682 •	1242683 •
Design	RSWE-S-100F	RSWE-S-100L
Connecting Flange to EN ISO 9409-1 TK	100	100
Recommended handling weight kg	120	-
Pneumatic energy transfer	6x	6x
Electrical energy transfer	optional	optional
Locking stroke mm	1,2	0
Moment of inertia kg/cm ²	14	13,9
Weight kg	0,96	0,725
Ømm	125	125
Height mm	24,5	24,5
Height in locked position mm	49	49
M_z	600	600
M_{x}	850	850
F _z	16000	16000

Tool group C40 RSWE-S-125 - Tool changers air operated

Item no.	1242684 •	1242685 •
Design	RSWE-S-125F	RSWE-S-125L
Connecting Flange to EN ISO 9409-1 TK	125	125
Recommended handling weight kg	230	-
Pneumatic energy transfer	10x	10x
Electrical energy transfer	optional	optional
Locking stroke mm	1,3	0
Moment of inertia kg/cm ²	48	42
Weight kg	2,1	1,45
Ømm	160	160
Height mm	32,5	32,5
Height in locked position mm	65	65
M_z	1500	1500
M_{x}	1700	1700
F _z	26000	26000

Tool group C40
RSWE-S-160 - Tool changers
air operated

Item no.	1242686	1242687
Design	RSWE-S-160F	RSWE-S-160L
Connecting Flange to EN ISO 9409-1 TK	160	160
Recommended handling weight kg	300	-
Pneumatic energy transfer	10x	10x
Electrical energy transfer	optional	optional
Locking stroke mm	1,5	0
Moment of inertia kg/cm ²	134	132
Weight kg	3,7	2,6
Ø mm	200	200
Height mm	32,5	32,5
Height in locked position mm	65	65
M_z	2000	2000
M_{x}	2200	2200
F,	30000	30000

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RSWE-S

Tool group C40
RSWE-S-1160 -Tool changers
air operated

Item no.	1242688	1242689
Design	RSWE-S-1160F	RSWE-S-1160L
Recommended handling weight kg	500	-
Electrical energy transfer	optional	optional
Locking stroke mm	1	-
Weight kg	9	6
Ømm	275	275
Height mm	37,5	47,5
Height in locked position mm	85	85
M_z	6000	6000
M _x	6000	6000
F _z	35000	35000

Tool group C40 RSWE-S-1200 - Tool changers air operated

Item no.	1242690	1242691
Design	RSWE-S-1200F	RSWE-S-1200L
Recommended handling weight kg	1000	-
Electrical energy transfer	optional	optional
Locking stroke mm	1	-
Weight kg	15	8,5
Ø mm	315	315
Height mm	37,5	47,5
Height in locked position mm	85	85
M_z	12000	12000
M _x	12000	12000
F _z	75000	75000

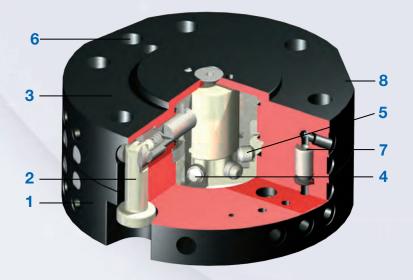


RHSWE-S

Manual tool changer for high handling weights. Integrated pitch circle EN ISO 9409-1 for a direct connection to the robot flange.



- Positive connection between locking bolts and clamping sleeve
- High force and moment load
- High handling weight
- Maintenance free



1. Loose part

For tool side assembly

2. Locking lever

With spring supported snap in function

3. Fix part

For robot side assembly

4. Locking bolt

Adapted to the clamping sleeve

5. Locking stroke

Re-adjustable via locking sleeve

6. Robot flange

Partial mounting circle in an accordance with EN ISO 9409-1

7. Integrated air feed-through

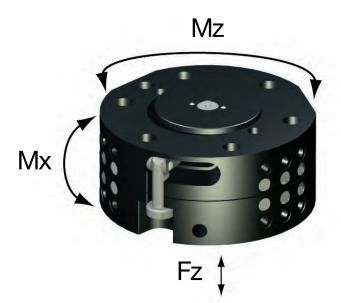
Air transfer from fix to loose part, tubeless control possible

8. Pre-assembled standard energy element



RHSWE-S





Tool group C40 RHSWE-S-31 - Tool changers air operated

Item no.	1242692 •	1242693 •
Design	RHSWE-S-31F	RHSWE-S-31L
Pneumatic energy transfer	4x	4x
Electrical energy transfer	optional	optional
Locking stroke mm	4	-
Moment of inertia kg/cm ²	0,13	0,10
Weight kg	0,09	0,042
Ømm	40	40
Height mm	20	17
Height in locked position mm	37	37
M _z	30	30
M _x	25	25
F _z	1000	1000

Tool group C40 RHSWE-S-40 - Tool changers air operated

Item no.	1242694 •	1242695 •
Design	RHSWE-S-40F	RHSWE-S-40L
Pneumatic energy transfer	4x	4x
Electrical energy transfer	optional	optional
Locking stroke mm	4	-
Moment of inertia kg/cm ²	0,33	0,26
Weight kg	0,145	0,071
Ømm	50	50
Height mm	20	17
Height in locked position mm	37	37
M _z	55	55
M _x	50	50
F _z	1200	1200

Tool group C40 RHSWE-S-50 - Tool changers air operated

Item no.	1242696 •	1242697 •
Design	RHSWE-S-50F	RHSWE-S-50L
Pneumatic energy transfer	8x	8x
Electrical energy transfer	optional	optional
Locking stroke mm	4	-
Moment of inertia kg/cm ²	0,86	0,67
Weight kg	0,232	0,115
Ø mm	63	63
Height mm	20	17
Height in locked position mm	37	37
M _z	80	80
M_{x}	70	70
F _z	1600	1600

RHSWE-S

Tool group C40 RHSWE-S-63 - Tool changers air operated

Item no.	1242698 •	1242699 •
Design	RHSWE-S-63F	RHSWE-S-63L
Connecting Flange to EN ISO 9409-1 TK	63	63
Recommended handling weight kg	50	50
Pneumatic energy transfer	6x	6x
Electrical energy transfer	Optional	Optional
Locking stroke mm	1	-
Moment of inertia kg/cm ²	3,8	2,6
Weight kg	0,45	0,3
Ø mm	80	80
Height mm	22,5	22,5
Height in locked position mm	45	45
M_z	200	200
M _x	200	200
F _z	1200	1200

Tool group C40 RHSWE-S-80 - Tool changers air operated

Item no.	1242700 •	1242701 •
Design	RHSWE-S-80F	RHSWE-S-80L
Connecting Flange to EN ISO 9409-1 TK	80	80
Recommended handling weight kg	50	50
Pneumatic energy transfer	6x	6x
Electrical energy transfer	Optional	Optional
Locking stroke mm	1	-
Moment of inertia kg/cm ²	3,36	2,8
Weight kg	0,66	0,48
Ø mm	100	100
Height mm	22,5	22,5
Height in locked position mm	45	45
M _z	300	300
M_{x}	300	300
F.	1500	1500

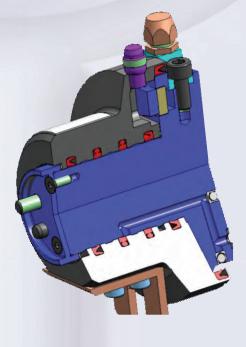
Rotary distributor

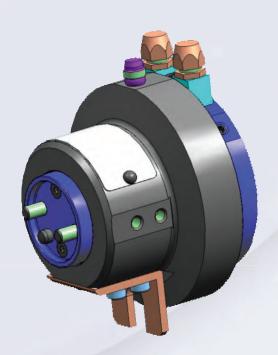
Triple air distributor with data transmission system. For robot-applications with endless-turn movements. Turn execution pneumatic and electric.



- Particularly smooth due to use of special materials
- For unlimited multiple turning of the connected robotgrip technology
- The power supply occurs through built-in glide ring contacts and air holes
- Up to 4 feeds at max. 10 bar (pneumatic)
- Up to 10 electrical signals at 60 V and 1 A via glide ring (electric)
- Assembly option without additional adapter plates

- Maximum speed: 100 rpmMax. air pressure: 8 bar
- Max. torque: 2.5 NmWeight: approx. 430 g
- Minimal maintenance
- Any mounting position
- · Assembly at most robot types without additional adaptor plates
- Safe initiation of torque due to torque support
- Environmental temperature of 5°C to 60°C
- ISO-interface for direct assembly at robot







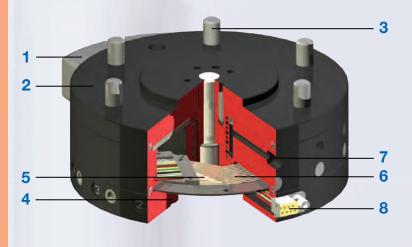
Rotary distributor

RDV-S

Rotary distributor with integrated electrical and pneumatic media feed through. Integrated pitch circle EN ISO 9409-1 for a direct connection to the robot flange.



- With integrated electrical and pneumatic media feed through
- Vacuum suitable
- Partial circuit produced in accordance with EN ISO 9409-1
- Products with same EN ISO flange can be combined and exchanged
- Up to 10 mil. rotations maintenance free



1. Torque brace

Supports the rotor during rotation (movement)

2. Robust housing

Hard coated aluminium alloy

Nitrated steel

3. Robot flange

Partial mounting circle in accordance with EN ISO 9409-1

4. Direct air connection

To RSWE-S series

5. Spring system

From size RDV-S-50 double fitting

6. Collector ring

Hard gold coated

Transferable to finest currents

7. Up to 8 way integrated air feed-through

For tubeless air transfer

Hose package must not be pivoted

Up to 12 pole energy transfer

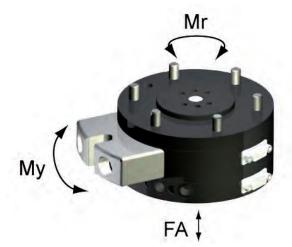
For cable-free signal transfer

No cables are subjected to torsion



RDV-S





Tool group C40 RDV-S-40 - Rotary distributors

Item no.	1242702
Design	RDV-S-40F4
Connecting Flange to EN ISO 9409-1 TK	40
Recommended handling weight kg	15
Pneumatic energy transfer	4x
Electrical energy transfer	4-polig
Moment of inertia kg/cm ²	0,7
Max. current A	3
Voltage max. V	24
Weight kg	0,2
Ø mm	50
Height mm	38
M_z	60
M_x	60
F _z	800

Tool group C40 RDV-S-50 - Rotary distributors

Item no.	1242703
Design	RDV-S-50F4
Connecting Flange to EN ISO 9409-1 TK	50
Recommended handling weight kg	15
Pneumatic energy transfer	4x
Electrical energy transfer	4-polig
Moment of inertia kg/cm ²	8,1
Max. current A	3
Voltage max. V	24
Weight kg	0,6
Ø mm	63
Height mm	38
M_z	60
M_{x}	60
F_z	800

Tool group C40 RDV-S-63 - Rotary distributors

Item no.	1242704
Design	RDV-S-63F6
Connecting Flange to EN ISO 9409-1 TK	63
Recommended handling weight kg	50
Pneumatic energy transfer	6x
Electrical energy transfer	4-polig
Moment of inertia kg/cm ²	10,5
Max. current A	6
Voltage max. V	250
Weight kg	1,2
Ø mm	80
Height mm	53
M_z	300
M_x	300
F _z	1500

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Rotary distributors

Tool group C40
RDV-S-80 - Rotary distributors

Item no.	1242705
Design	RDV-S-80F6
Connecting Flange to EN ISO 9409-1 TK	80
Recommended handling weight kg	50
Pneumatic energy transfer	6x
Electrical energy transfer	6-polig
Moment of inertia kg/cm ²	27
Max. current A	6
Voltage max. V	250
Weight kg	2
Ømm	100
Height mm	53
M_z	300
M_x	300
F _z	1500

Tool group C40
RDV-S-100 - Rotary distributors

Item no.	1242706	1242707
Design	RDV-S-100F4	RDV-S-100F8
Connecting Flange to EN ISO 9409-1 TK	100	100
Recommended handling weight kg	90	90
Pneumatic energy transfer	4x	8x
Electrical energy transfer	8-polig	8-polig
Moment of inertia kg/cm ²	86	100
Max. current A	6	6
Voltage max. V	250	250
Weight kg	3,8	4,5
Ømm	125	125
Height mm	58	82
M _z	500	500
M_{x}	500	500
F _z	2100	2100

Tool group C40 RDV-S-125 - Rotary distributors

Item no.	1242708	1242709
Design	RDV-S-125F4	RDV-S-125F8
Connecting Flange to EN ISO 9409-1 TK	125	125
Recommended handling weight kg	200	200
Pneumatic energy transfer	4x	8x
Electrical energy transfer	12-polig	12-polig
Moment of inertia kg/cm ²	220	225
Max. current A	6	6
Voltage max. V	250	250
Weight kg	5,9	7
Ø mm	160	160
Height mm	58	82
M _z	900	900
M _x	900	900
F _z	7000	7000

Tool group C40 RDV-S-160 - Rotary distributors

Item no.	1242710	1242711
Design	RDV-S-160F4	RDV-S-160F8
Connecting Flange to EN ISO 9409-1 TK	160	160
Recommended handling weight kg	200	200
Pneumatic energy transfer	4x	8x
Electrical energy transfer	12-polig	12-polig
Moment of inertia kg/cm ²	480	580
Max. current A	6	6
Voltage max. V	250	250
Weight kg	9,1	11
Ømm	200	200
Height mm	58	82
M_z	900	900
M _x	900	900
F _z	7000	7000

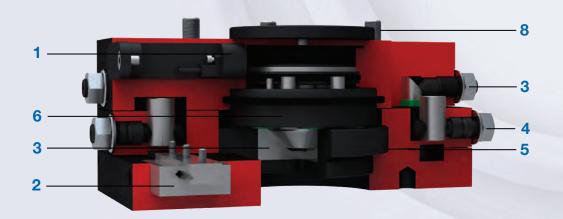


RAE-S

Axis compensation modules with precise and robust linear guiding. Integrated pitch circle EN ISO 9409-1 for a direct connection to the robot flange.



- Precise and robust linear guide
- Compensation force and compensation stroke continuously adjustable
- Maintenance of any position via friction element
- Centre position secured by cone
- Several sensing options available
- Up to 5 mil. cycles maintenance free



1. Piston sensing

Via magnetic field senors (available as accessories)

2. Robust, lightweight housing

Hard coated aluminium alloy

Partial mounting circle in accordance with EN ISO 9409-1 Lowest overall height

3. Compensation force

Adjustable via adjustment screw

4. Compensation stroke

Infinitely variable

5. Locking piston

Centrical via cone

6. Eccentrical locking

Via pneumatic piston with frictional contact

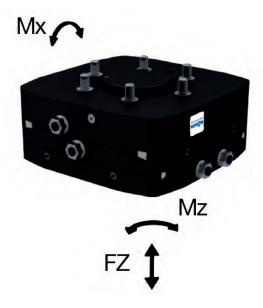
7. Linear guide

For highest force and moments capacity

8. Compensation plate

To balance position errors in XY- direction





Tool group C40
RAE-S-63 - Axis compensation

Item no.	1242718
Design	RAE-S-63
Connecting Flange to EN ISO 9409-1 TK	63
Recommended handling weight kg	7
Moment of inertia kg/cm ²	38,8
Stroke (adjustable) +/- mm	3
Retention force centred N	300
Retention force decentred N	100
Weight kg	2
Width mm	105
Height mm	55,8
Depth mm	105
M_z	50
M_x	50
F _z	625

Tool group C40
RAE-S-80 - Axis compensation

Item no.	1242719
Design	RAE-S-80
Connecting Flange to EN ISO 9409-1 TK	80
Recommended handling weight kg	15
Moment of inertia kg/cm ²	82,5
Stroke (adjustable) +/- mm	5
Retention force centred N	450
Retention force decentred N	200
Weight kg	3
Width mm	130
Height mm	57,8
Depth mm	130
M _z	70
M_x	70
F _z	1150

Tool group C40
RAE-S-100 - Axis compensation

Item no.	1242720
Design	RAE-S-100
Connecting Flange to EN ISO 9409-1 TK	100
Recommended handling weight kg	28
Moment of inertia kg/cm ²	231
Stroke (adjustable) +/- mm	5
Retention force centred N	600
Retention force decentred N	350
Weight kg	5,3
Width mm	164,7
Height mm	66,8
Depth mm	164,7
M_z	100
M_{x}	100
F_z	2300



Axis compensation

RAE-S

Tool group C40
RAE-S-125 - Axis compensation

Item no.	1242721
Design	RAE-S-125
Connecting Flange to EN ISO 9409-1 TK	125
Recommended handling weight kg	45
Moment of inertia kg/cm ²	585
Stroke (adjustable) +/- mm	8
Retention force centred N	900
Retention force decentred N	500
Weight kg	8,9
Width mm	203
Height mm	73,8
Depth mm	203
M _z	150
M_x	150
F _z	3600

Tool group C40 RAE-S-160 - Axis compensation

Item no.	1242722
Design	RAE-S-160
Connecting Flange to EN ISO 9409-1 TK	160
Recommended handling weight kg	75
Moment of inertia kg/cm ²	1005
Stroke (adjustable) +/- mm	10
Retention force centred N	1200
Retention force decentred N	800
Weight kg	11,7
Width mm	235
Height mm	75,8
Depth mm	235
M_z	250
M_{x}	250
F,	3600



RFG-S

Axis compensation modules with eccentric clamping and centering function. Integrated pitch circle EN ISO 9409-1 for a direct connection to the robot flange.



- Three single-acting pneumatic cylinders with cone pistons at 120° distance
- Single-acting pneumatic cylinder with friction disc
- Function parts from nitrided steel high wear resistance
- Up to 5 mil. cycles maintenance free



 Energy feed Centering

2. Robust, lightweight housing Hard coated aluminium alloy

3. Robot flange
Graduated circle (TK) in accordance with EN ISO 9409-1

4. Drive eccentric mountingSingle effect pneumatic cylinder with friction disc

5. Drive centring-acting Three single pneumatic cylinders with cone pistons at 120° distance

Direct and low-loss via cone/friction disc

Compensation
 Force-free compensation of position inaccuracies
 Up to +/- 4 mm stroke compensating stroke







Tool group
RFG-S-40 - Axis compensation

Item no.	1242723 •
Design	RFG-S-40
Connecting Flange to EN ISO 9409-1 TK	40
Recommended handling weight kg	10
Retention force centred N	120
Retention force decentred N	50
Horizontal deviation +/- mm	2
Rotation angle max. °	12
Weight kg	0,9
Ø mm	79
Height mm	51,5
M_z	5
M _x	10
F ₂	1000

Tool group
RFG-S-50 - Axis compensation

Item no.	1242724 •
Design	RFG-S-50
Connecting Flange to EN ISO 9409-1 TK	50
Recommended handling weight kg	20
Retention force centred N	250
Retention force decentred N	200
Horizontal deviation +/- mm	4
Rotation angle max. °	9
Weight kg	1,7
Ø mm	100
Height mm	68
M_{z}	6
M_x	13
F _z	1000

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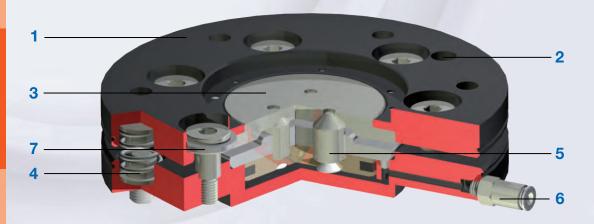


RAR-S

Axis compensation element with precise and robust linear guiding. Integrated pitch circle EN ISO 9409-1 for a direct connection to the robot flange.



- To compensate misalignments at loading of chucks, at unloading from fixtures or at assembling of components
- Low own weight, thus higher extension load possible on robot
- Partial mounting circle in accordance with EN ISO 9409-1
- Up to 5 mil. deviation maintenance free
- Single effect pneumatic cylinder with spring return



1. Robust, lightweight housing

Hard coated aluminium alloy

2. Robot connecting flange

Partial mounting circle in accordance with EN ISO 9409-1

3. Locking

3 locking pistons

Nitrated steel

4. Spring package

Version size 63, stronger one is available Version size 100, 3 springs can be removed

5. Locking drive

Single-acting pneumatic cylinder

6. Energy feed

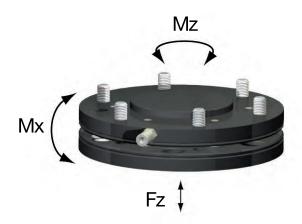
7. Guiding bolts with taper washer

Nitrated steel



RAR-S





Tool group
RAR-S-40 - Axis compensation

Item no.	1242725
Design	RAR-S-40
Connecting Flange to EN ISO 9409-1 TK	40
Recommended handling weight kg	3
Moment of inertia kg/cm ²	0,5
Horizontal deviation +/- mm	2/1
Vertical deviation +/- mm	2/1
Centering force when locking N	170
Weight kg	0,15
Ømm	50
Height mm	21,5
M_z	60
M_x	60
F_z	800

Tool group
RAR-S-50 - Axis compensation

Item no.	1242726
Design	RAR-S-50
Connecting Flange to EN ISO 9409-1 TK	50
Recommended handling weight kg	4
Moment of inertia kg/cm ²	1,1
Horizontal deviation +/- mm	2/1
Vertical deviation +/- mm	2/1
Centering force when locking N	170
Weight kg	0,22
Ømm	63
Height mm	21,5
M_{z}	60
M_{x}	60
F _z	800

Tool group
RAR-S-63 - Axis compensation

Item no.	1242727
Design	RAR-S-63
Connecting Flange to EN ISO 9409-1 TK	63
Recommended handling weight kg	15
Moment of inertia kg/cm ²	2,8
Horizontal deviation +/- mm	2/1
Vertical deviation +/- mm	2/1
Centering force when locking N	600
Weight kg	0,36
Ø mm	80
Height mm	24
M_z	300
M _x	300
F _z	1500



Tool group
RAR-S-80 - Axis compensation

Item no.	1242728
Design	RAR-S-80
Connecting Flange to EN ISO 9409-1 TK	80
Recommended handling weight kg	15
Moment of inertia kg/cm ²	6,2
Horizontal deviation +/- mm	2/1
Vertical deviation +/- mm	2/1
Centering force when locking N	600
Weight kg	0,5
Ømm	100
Height mm	24
M_z	300
M_x	300
F _z	1500

Tool group
RAR-S-100 - Axis compensation

Item no.	1242729
Design	RAR-S-100
Connecting Flange to EN ISO 9409-1 TK	100
Recommended handling weight kg	30
Moment of inertia kg/cm ²	17
Horizontal deviation +/- mm	2/1
Vertical deviation +/- mm	2/1
Centering force when locking N	1400
Weight kg	0,85
Ømm	125
Height mm	26
M_z	500
M _x	500
F _z	2100

Tool group RAR-S-125 - Axis compensation

Item no.	1242730
Design	RAR-S-125
Connecting Flange to EN ISO 9409-1 TK	125
Recommended handling weight kg	50
Moment of inertia kg/cm ²	61
Horizontal deviation +/- mm	2/1
Vertical deviation +/- mm	2/1
Centering force when locking N	3000
Weight kg	1,9
Ømm	160
Height mm	28
M_z	900
M _x	900
F _z	7000

Tool group RAR-S-160 - Axis compensation

Item no.	1242731
Design	RAR-S-160
Connecting Flange to EN ISO 9409-1 TK	160
Recommended handling weight kg	60
Moment of inertia kg/cm ²	115
Horizontal deviation +/- mm	2/1
Vertical deviation +/- mm	2/1
Centering force when locking N	3000
Weight kg	5,6
Ømm	200
Height mm	28
M_{z}	900
M _x	900
F _z	7000



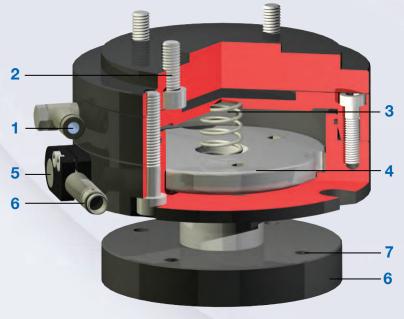
RKS-S

Crash protection with overload detection.

Integrated pitch circle EN ISO 9409-1 for a direct connection to the robot flange.



- Overload recognition in Z direction up to 18 mm stroke
- In horizontal direction up to 12.5°
- On rotation around the Z axis 360°



1. Energy feed

2. Robot connecting flange

Partial mounting circle in accordance with EN ISO-9409-1

3. Drive

Single-acting pneumatic cylinder Response sensitivity adjustable via operating pressure With integrated spring

4. Force transfer

Direct and low-loss at piston surface

5. Pressure differential switch

Indirect overload recognition

6 Sensors

Inductive proximity switch generates a signal which can be used to recognise an overload situation

Generates an automatic emergency off system situation

Included in the delivery: inductive proximity switch Ø 8 mm with cable connection M8x1

7. Connecting flange

Partial mounting circle in accordance with EN ISO 9409-1

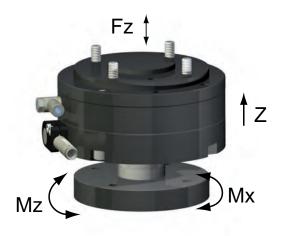
8. Overload recognition and compensation

In Z-direction up to 18 mm stroke Angular defection up to 12.5° On rotation around the Z axis 360°



RKS-S





Tool group C40 RKS-S-50 - Crash protection

Item no.	1242712 •
	1242112
Design	RKS-S-50
Connecting Flange to EN ISO 9409-1 TK	50
Recommended handling weight kg	6
Horizontal deviation +/- mm	12,5
Deviation Z mm	12,5
Weight kg	0,7
Ømm	79
Height mm	71

Tool group C40 RKS-S-63 - Crash protection

Item no.	1242713 •
Design	RKS-S-63
Connecting Flange to EN ISO 9409-1 TK	63
Recommended handling weight kg	12
Horizontal deviation +/- mm	12,5
Deviation Z mm	10,5
Weight kg	1,1
Ømm	99
Height mm	78

Tool group C40 RKS-S-80 - Crash protection

Item no.	1242714 •
Design	RKS-S-80
Connecting Flange to EN ISO 9409-1 TK	80
Recommended handling weight kg	35
Horizontal deviation +/- mm	9
Deviation Z mm	14
Weight kg	1,5
Ømm	124
Height mm	78,5

Tool group C40 RKS-S-100 - Crash protection

Item no.	1242715
Design	RKS-S-100
Connecting Flange to EN ISO 9409-1 TK	100
Recommended handling weight kg	60
Horizontal deviation +/- mm	9
Deviation Z mm	18
Weight kg	3,3
Ømm	159
Height mm	97,5

Crash protection

RKS-S

Tool group C40 RKS-S-125 - Crash protection

Item no.	1242716
Design	RKS-S-125
Connecting Flange to EN ISO 9409-1 TK	125
Recommended handling weight kg	100
Horizontal deviation +/- mm	9
Deviation Z mm	23
Weight kg	8
Ø mm	208
Height mm	136

Tool group C40 RKS-S-160 - Crash protection

Item no.	1242717
Design	RKS-S-160
Connecting Flange to EN ISO 9409-1TK	160
Recommended handling weight kg	150
Horizontal deviation +/- mm	9
Deviation Z mm	28
Weight kg	15,2
Ø mm	276
Height mm	161



RRMP

Individual, cost-effective, lightweight.

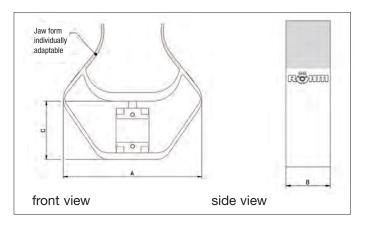


The ideal solution for light workpieces:

- Jaws can be designed with free-form surfaces
- Ideal for complex formes and sensitive workpieces
- · Individually adapted to your workpiece
- Extremly light in weight
- · External and internal clamping possible

Tested fatigue strength:

- More than 10 mio gripping cycles without any signs of wear
- · Entirely maintenance-free



Size		2	3	4
A	mm	77	114	168
В	mm	25	35	50
C	mm	33	48	71
Operating pressure max.	bar	6	6	6
Pneumatic connection		M5	M5	M5
Stroke	mm	9	15	22
Clamping force max.	N	25	55	80

Connection geometry and jaws individually adaptable

Variant 1: Mounting at flange



- With draw-down effect
- Image shows the application with internal clamping

Variant 2: Mounting at bar



- Little draw-down effect
- Image shows the application in the RÖHM drill chuck production (External clamping)





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.





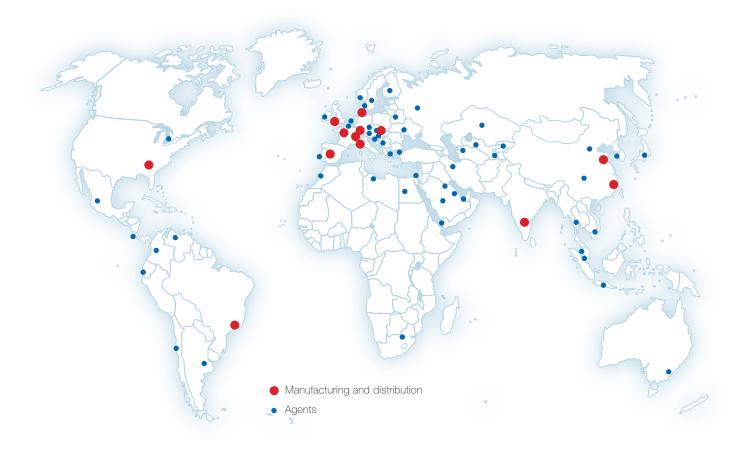
Dillingen/Danube

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. The RÖHM manufacturing and distribution bases:



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Brazil



China



RÖHM Værktoj A.S. Denmark



RÖHM S.A.R.L. France



ROHM (Great Britain) LTD. RÖHM SLOVAKIA S.R.O. Great Britain Slovakia





ROHM INDIA PVT. LTD. India



RÖHM Italia S.R.L. Italy



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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

§ 3 Modalities of Payment

- 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 over-
- reached, 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

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

- 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 purpose the greater selection." 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.
- 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.



General conditions of sale and delivery

- 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.

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
- 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
- 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 fartherreaching 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.
- 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.
- 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

- 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
- 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
- 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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We offer real partnership.

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