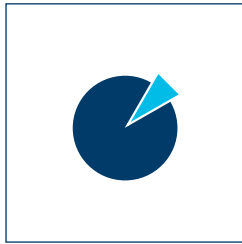
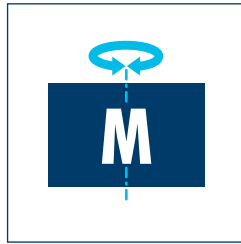




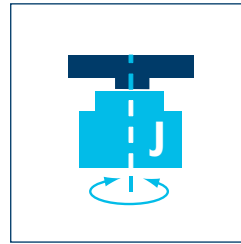
Sizes
60 ... 87



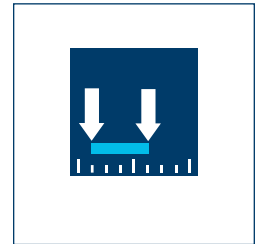
Pitch
4 ... 12



Torque
1.2 Nm ... 3 Nm

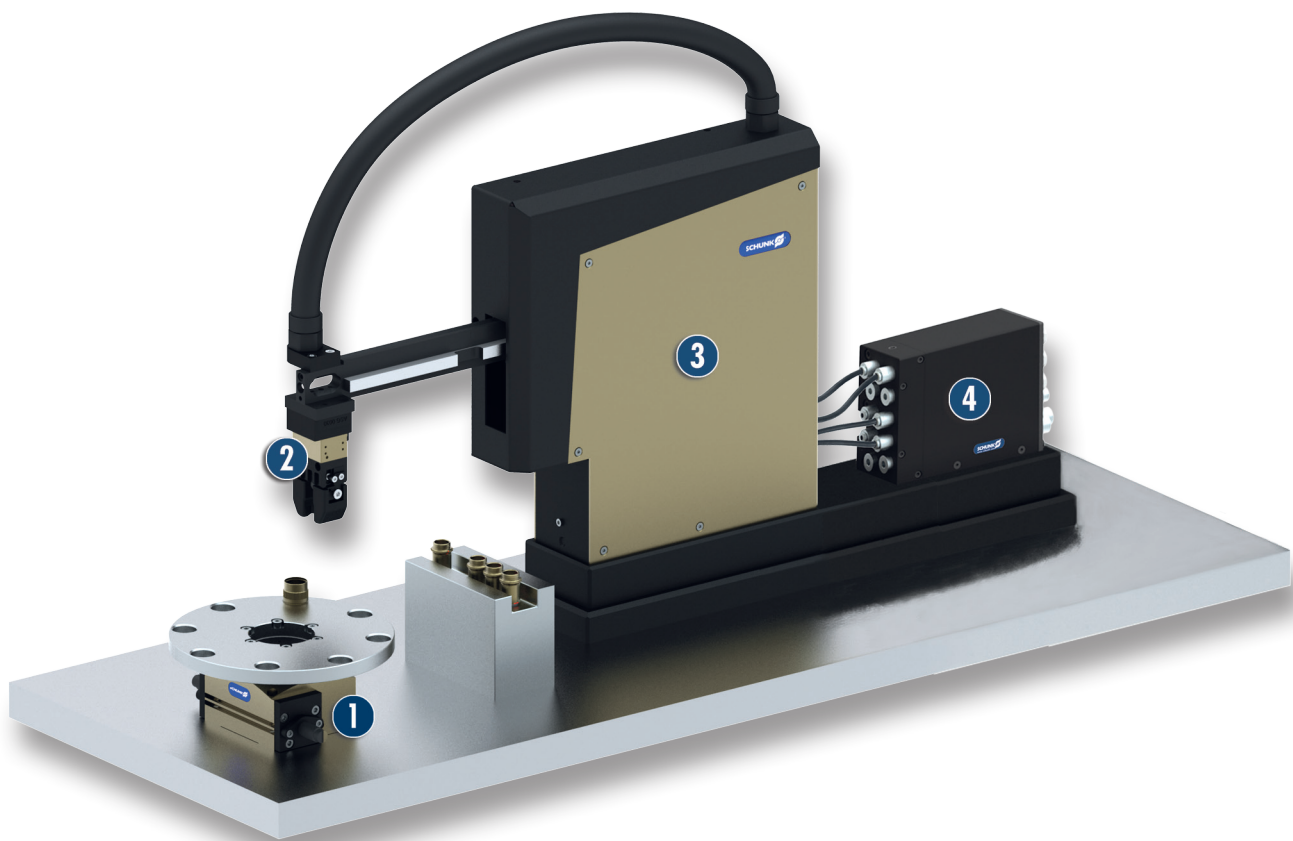


Mass moment of inertia
0.03 kgm² ... 0.08 kgm²



Repeat accuracy
0.06 ° ... 0.09 °

Application example



Pneumatically driven, dual-axis pick-and-place machine for small components

1 Ring indexing table RST-P

2 MPG 32 2-Finger Parallel Gripper

3 PPU-P Pick & Place Unit

Ring indexing tables

Ring indexing unit for endlessly turning with a rotation angle up to 90° per cycle

Field of application

To be used in clean environments such as assembly or packaging area, and wherever fast movement cycles are required. For achieving any point in space you like, freely combineable with linear modules or for rotating or turning workpieces.

Your advantages and benefits

Changing cycle to the left, right or alternate via control unit possible.

Total flexibility for your application

High damper performance due to the use of hydraulic shock absorbers

suitable for the use of large rotary tables

Large, fixed center part

for simple addition of further components

Two locking bolts

therefore the drive ring has no backlash

Spacers for modification between the pitch 4, 6 and 12 are available

for fast modification in case of changing requirements

Center bore for media feed-through

for supply of additional components



General note to the series

Principle of function

Rack and pinion principle for a reduced backlash transmission

Housing material

Aluminum alloy, hard-anodized

Actuation

pneumatic, with filtered compressed air (10 microns): dry, lubricated or non-lubricated

Pressure medium: Required quality class of compressed air according to DIN ISO

8573-1: 6 4 4

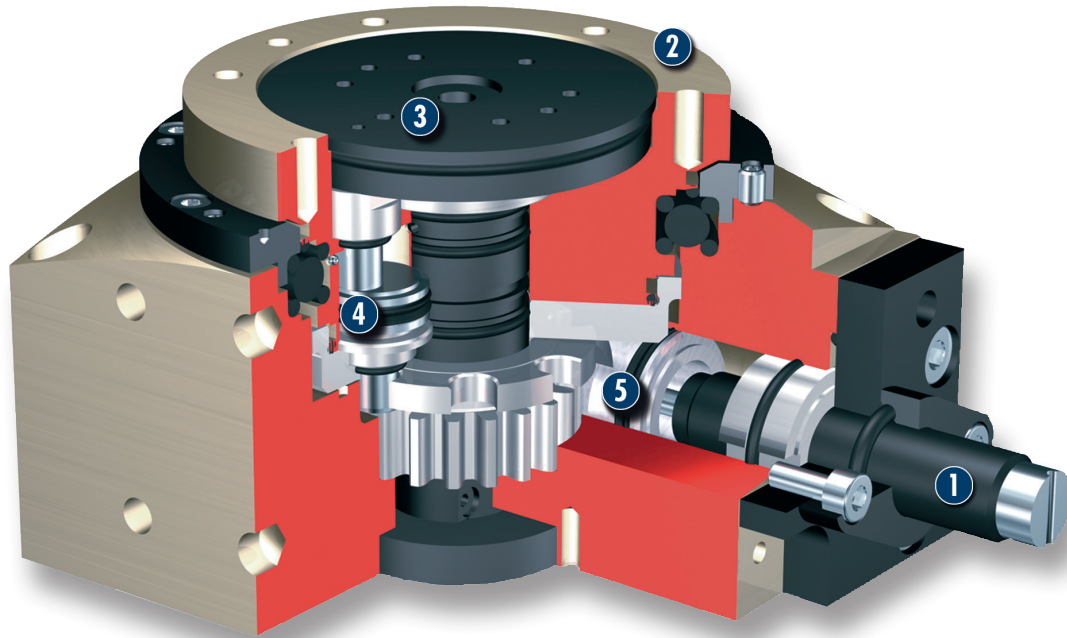
Warranty

24 months (details, general terms and conditions and operation manuals can be downloaded under www.schunk.com)

Scope of delivery

Centering elements, assembly and operating instruction with manufacturer's declaration.

Sectional diagram



- 1 Damping**
to increase the damping performance
- 2 Drive ring**
high-precision seated for a high axial run-out accuracy
- 3 Fixed center part with center bore**
Large center part for simple attachment of further components
- 4 Locking mechanics**
two pneumatic pistons for scope-free locking in the end positions
- 5 Drive**
Rack and pinion principle for a reduced backlash transmission of the driving force into the rotary motion

Functional description

After pressure actuation of the faces, the driving piston linearly moves into the bore, and turns the cycle ring via a laterally attached gear.
After actuation of the locking piston it is indexed, and releases the driving piston for return stroke.

Options and special information

The unit can be ordered ex factory clockwise turning, anti-clockwise turning, or as a unit which can cycle in both directions.
The units can be easily modified by the customer.

Accessories

Accessories from SCHUNK – the suitable supplement for maximum functionality, reliability and performance of all automation modules.

Magnetic Switches



Inductive proximity switches



Sensor cables



Sensor Distributor



Centering sleeves



Pressure maintenance valve



Fittings



① For the exact size of the required accessories, availability of this size and the designation and ID, please refer to the additional views at the end of the size in question. You will find more detailed information on our accessory range in the "Accessories" catalog section.

General note to the series

Repeat accuracy

is defined as the spread of the limit position after 100 consecutive strokes.

Drive ring

The position of the drive ring is always drawn in „home position“. From here, the ring turns clockwise or anti-clockwise.

Cycle time

Cycle times are the rotation times of pinion/flange around the nominal rotation angle. Valve switching time, hose filling times or PLC reaction times are not included, and have to be considered in calculations of the cycle times.

Reference sensor

For monitoring the basic position, an inductive sensor can be attached, which will be actuated every 360°. It can be used for reference run or for checking if the control unit has counted correctly.

Swivel time depending on the payload

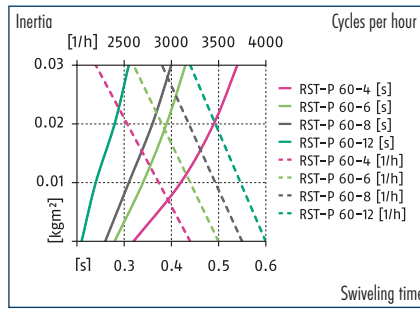
The shown diagrams are valid for nominal rotation angles, for the use with vertical swivel axis, or for central payloads with horizontal swivel axes, and at an operating pressure of 6 bar.

The diagrams show the expected swivel time, and allows cycle per hour depending on the mass moments of inertia.

The swiveling times need to be adjusted by using throttle valves, otherwise the life time could be reduced. Please contact us for calculations of other applications and further information.

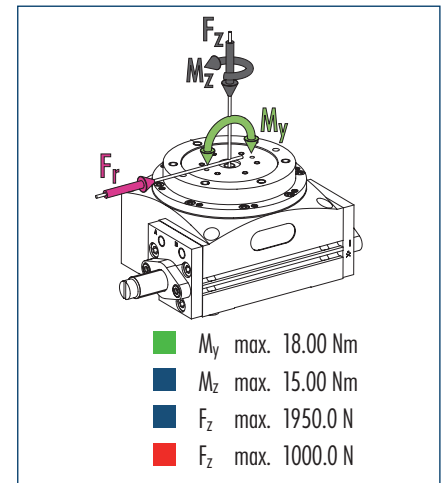


Swiveling time



① The diagrams are valid for applications with vertical rotary axis or for absolutely centric loads with horizontal rotary axis and with a pneumatic working pressure of 6 bars. The swiveling times need to be adjusted by using throttle valves, otherwise the life time could be reduced. Please contact us for calculations of other applications and further information.

Payload of the drive ring



① The indicated moments and forces are statical values and should not appear simultaneously. In case of heavy attachments or ones with high mass moments of inertia, the speed must be restricted to ensure that the rotary movement occurs without any hitting or bouncing. Service life may be reduced.

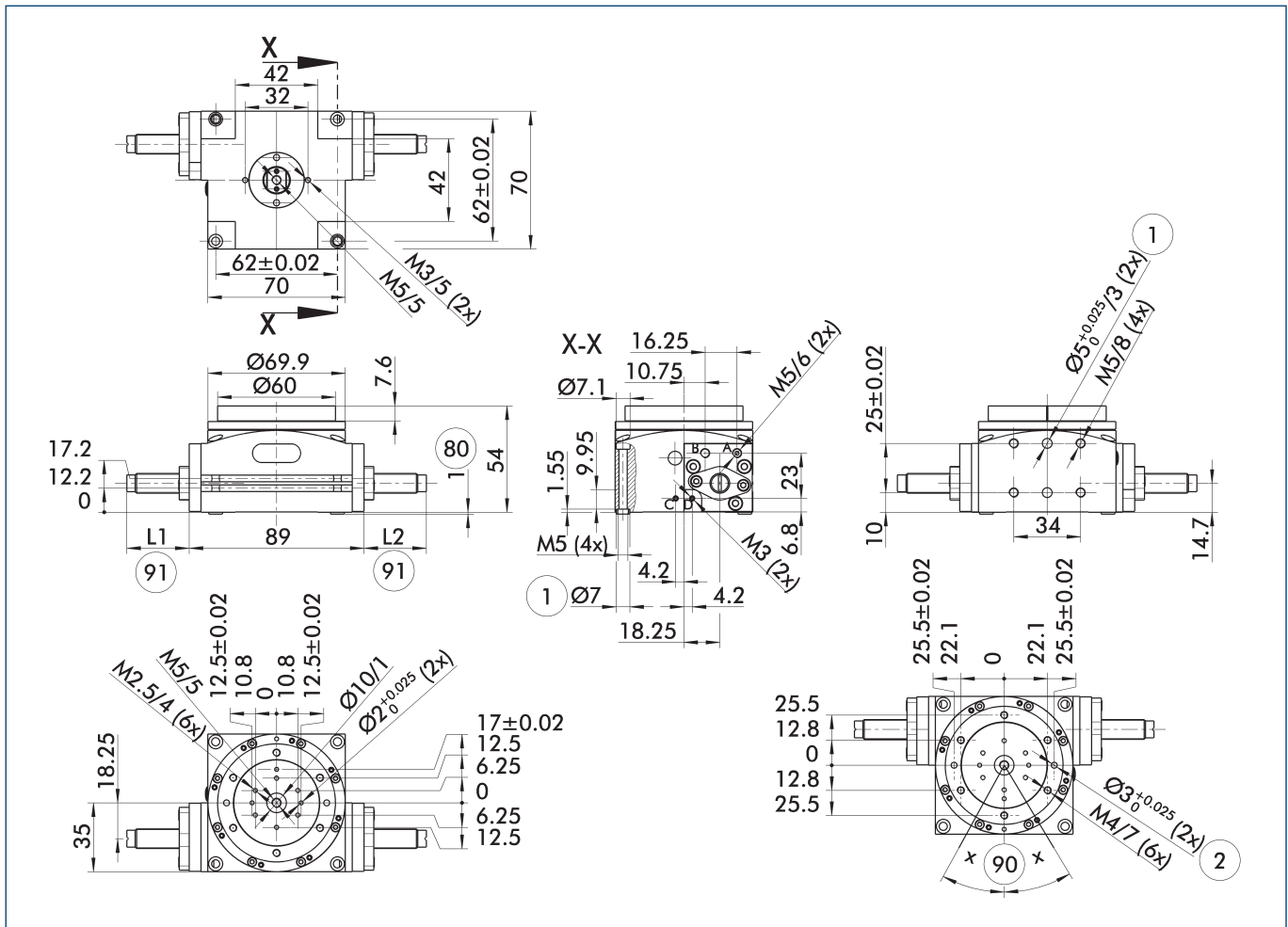
Technical data

Description	RST-P 60-4-R	RST-P 60-6-R	RST-P 60-8-R	RST-P 60-12-R
ID	0314511	0314514	0314517	0314520
Angle of rotation	90	60	45	30
Pitch	4	6	8	12
Direction of rotation	UZS	UZS	UZS	UZS
Torque	1.2	1.2	1.2	1.2
Weight	0.9	0.9	0.9	0.9
IP class	54	54	54	54
Locking time	0.03	0.03	0.03	0.03
Unlocking time	0.03	0.03	0.03	0.03
Min./max. ambient temperature	5/60	5/60	5/60	5/60
Min./max. operating pressure	8/5	8/5	8/5	8/5
Nominal operating pressure	6	6	6	6
Air consumption per double stroke	10.8	7.5	5.8	4.1
Repeat accuracy	0.09	0.09	0.09	0.09
Run-out cycle ring	0.02	0.02	0.02	0.02
Axial run-out cycle ring	0.02	0.02	0.02	0.02
Parallelism cycle ring	0.04	0.04	0.04	0.04
Number of hydraulic shock absorbers	1	1	1	1
L_1	27	21	18	14
L_2	6	6	6	6

OPTIONS and their characteristics

Description	RST-P 60-4-L	RST-P 60-6-L	RST-P 60-8-L	RST-P 60-12-L
ID	0314510	0314513	0314516	0314519
Direction of rotation	GUZS	GUZS	GUZS	GUZS
L_1	6	6	6	6
L_2	27	21	18	14
Description	RST-P 60-4-B	RST-P 60-6-B	RST-P 60-8-B	RST-P 60-12-B
ID	0314512	0314515	0314518	0314521
Direction of rotation	on both sides	on both sides	on both sides	on both sides
Number of hydraulic shock absorbers	2	2	2	2
L_1	27	21	18	14
L_2	27	27	27	27

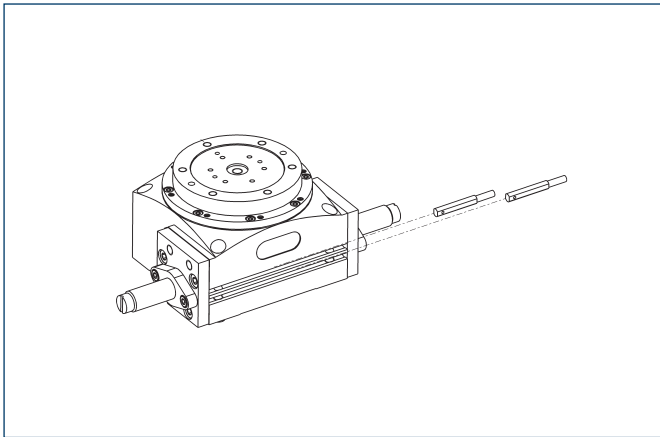
Main view



The drawing shows the unit in standard design, without considering any dimensions of the options described below.

- A, a Air connection ring indexing table, clockwise turning
- B, b Air connection ring indexing table, anti-clockwise turning
- C, c Air connection ring indexing table unlocked
- D, d Air connection ring indexing table locked
- ① Rotary actuator connection
- ② Attachment connection
- 80 Depth of the centering sleeve hole in the matching part
- 90 Rotation angle „X“ see technical data
- 91 Variable dimensions see technical data

Electronic magnetic switches

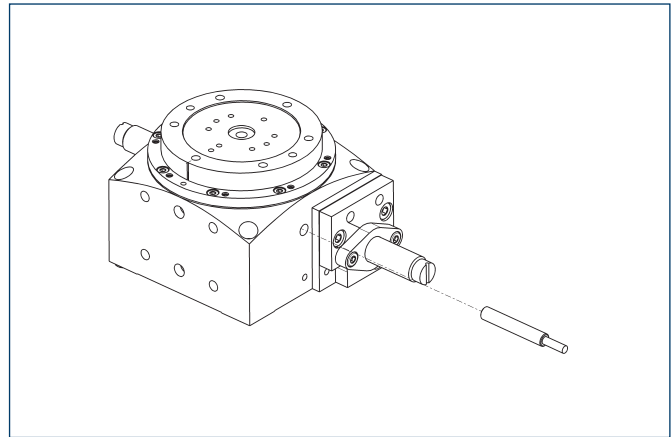


End position monitoring for mounting in the C-slot

Description	ID	Recommended product
Electronic magnetic switches		
MMS 22-S-M5-PNP	0301038	
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M8-PNP	0301032	•
MMS 22-S-M8-NPN	0301433	
MMSK 22-S-PNP	0301034	
MMSK 22-S-NPN	0301435	
Electronic magnetic switches with lateral cable outlet		
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M8-PNP-SA	0301442	•
MMS 22-S-M8-NPN-SA	0301443	
MMSK 22-S-PNP-SA	0301444	
MMSK 22-S-NPN-SA	0301445	
Connection cables		
KA BG05-L 3P-0300	0301652	
KA BG08-L 3P-0300-PNP	0301622	
KA BG08-L 3P-0500-PNP	0301623	
KA BW05-L 3P-0300	0301650	
KA BW08-L 3P-0300-NPN	0301602	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-NPN	9641116	
KA BW08-L 3P-0500-PNP	0301502	
Cable extensions		
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	

- ① Never separate the cable between the sensor and the plug connector.
- ① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

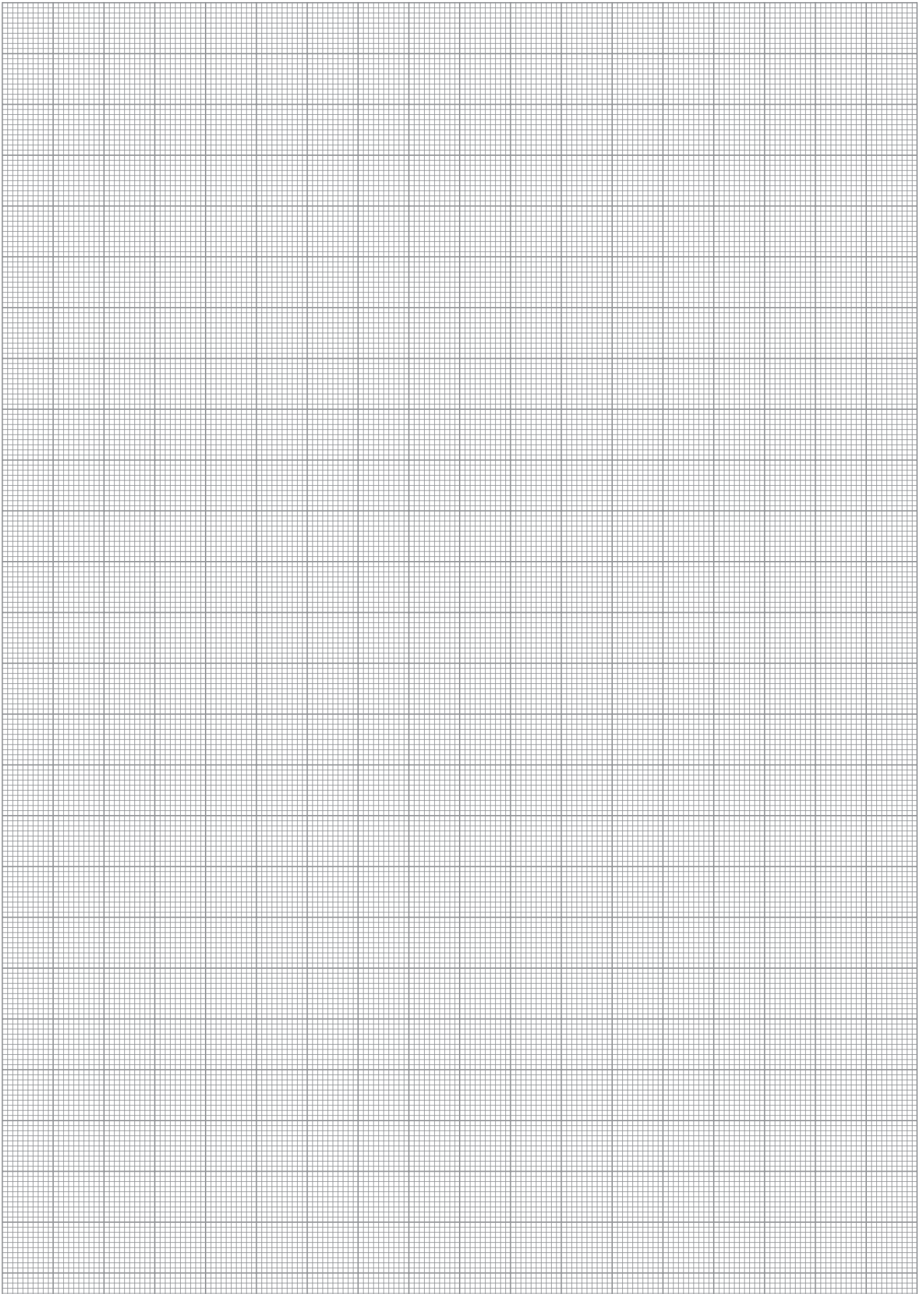
Inductive proximity switches



Reference sensor for monitoring the home position.

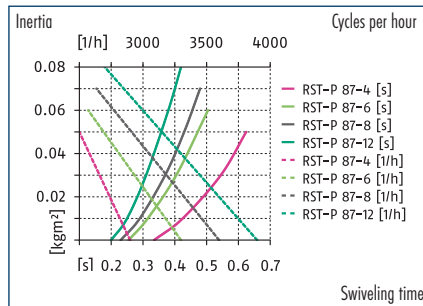
Description	ID	Scope of delivery	Recommended product
Inductive proximity switches			
IN 50-S-M8	0301568		•
IN 50-S-M12	0301575		
INK 50-S	0301560		
Connection cables			
KA BG08-L 3P-0300-PNP	0301622		
KA BG08-L 3P-0500-PNP	0301623		
KA BG12-L 3P-0500-PNP	30016369		
KA BW08-L 3P-0300-PNP	0301594		
KA BW08-L 3P-0500-PNP	0301502		
KA BW12-L 3P-0300-PNP	0301503		
KA BW12-L 3P-0500-PNP	0301507		
Cable extensions			
KV BG12-SG12 3P-0030-PNP	0301999		
KV BG12-SG12 3P-0060-PNP	0301998		
KV BW08-SG08 3P-0030-PNP	0301495		
KV BW08-SG08 3P-0100-PNP	0301496		
KV BW08-SG08 3P-0200-PNP	0301497		
KV BW12-SG12 3P-0030-PNP	0301595		
KV BW12-SG12 3P-0100-PNP	0301596		
KV BW12-SG12 3P-0200-PNP	0301597		

- ① Never separate the cable between the sensor and the plug connector.
- ① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

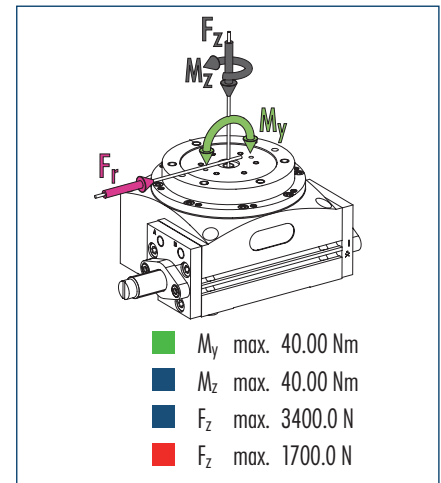




Swiveling time



Payload of the drive ring



① The indicated moments and forces are static values and should not appear simultaneously. In case of heavy attachments or ones with high mass moments of inertia, the speed must be restricted to ensure that the rotary movement occurs without any hitting or bouncing. Service life may be reduced.

Technical data

Description	RST-P 87-4-R	RST-P 87-6-R	RST-P 87-8-R	RST-P 87-12-R
ID	0314523	0314526	0314529	0314532
Angle of rotation [°]	90	60	45	30
Pitch	4	6	8	12
Direction of rotation	UZS	UZS	UZS	UZS
Torque [Nm]	3	3	3	3
Weight [kg]	2.5	2.5	2.5	2.5
IP class	54	54	54	54
Locking time [s]	0.03	0.03	0.03	0.03
Unlocking time [s]	0.03	0.03	0.03	0.03
Min./max. ambient temperature [°C]	5/60	5/60	5/60	5/60
Min./max. operating pressure [bar]	8/5	8/5	8/5	8/5
Nominal operating pressure [bar]	6	6	6	6
Air consumption per double stroke [cm³]	27.3	18.8	14.5	10.3
Repeat accuracy [°]	0.06	0.06	0.06	0.06
Run-out cycle ring [mm]	0.02	0.02	0.02	0.02
Axial run-out cycle ring [mm]	0.02	0.02	0.02	0.02
Parallelism cycle ring [mm]	0.04	0.04	0.04	0.04
Number of hydraulic shock absorbers	1	1	1	1
L_1 [mm]	20	20	20	20
L_2 [mm]	8.5	8.5	8.5	8.5

OPTIONS and their characteristics

Description	RST-P 87-4-L	RST-P 87-6-L	RST-P 87-8-L	RST-P 87-12-L
ID	0314522	0314525	0314528	0314531
Direction of rotation	GUZS	GUZS	GUZS	GUZS
L_1 [mm]	8.5	8.5	8.5	8.5
L_2 [mm]	20	20	20	20
Description	RST-P 87-4-B	RST-P 87-6-B	RST-P 87-8-B	RST-P 87-12-B
ID	0314524	0314527	0314530	0314533
Direction of rotation	on both sides	on both sides	on both sides	on both sides
Number of hydraulic shock absorbers	2	2	2	2
L_1 [mm]	20	20	20	20
L_2 [mm]	20	20	20	20

Technical drawing of the 3000 series pressure washer, showing four views: front, side, top, and bottom. The drawing includes detailed dimensions and specifications for various components and connections.

Front View (Top Left): Shows the main body with dimensions: 60, 52, 60, 89±0.02, 100, 100. Connections: G1/8 /12, M4/7 (2x).

Side View (Middle Left): Shows the side profile with dimensions: 23, 18, 0, 10, 74, 3, 80, 130, 10, 91, 91. Connections: Ø99.6, Ø87.

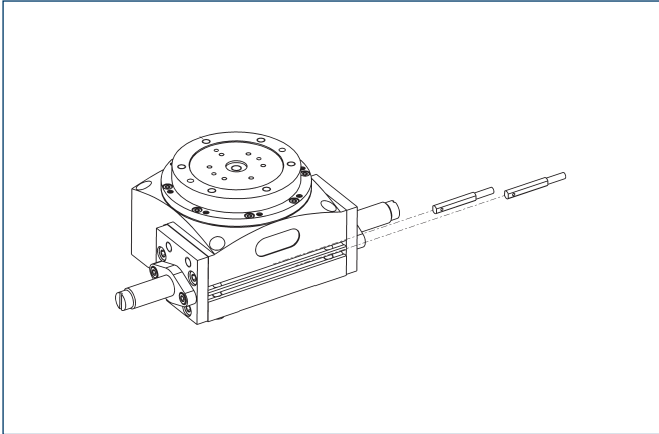
Top View (Bottom Left): Shows the top of the unit with dimensions: 50, 27, 20±0.02, 17.32, 0, 17.32, 20±0.02, 27±0.02, 20, 10, 0, 10, 20. Connections: Ø20/15, M4 (6x), G1/8 /12, Ø3^{+0.025}₀ (2x).

Side View (Middle Right): Shows the side profile with dimensions: 4, 12, 23, 17.5, 19.5, 27.5, 11.6, 7.7, 27, 3.3, 6, 12, 4, 1, Ø10, M6 (4x), M5 (2x), M5/6 (2x).

Bottom View (Bottom Right): Shows the bottom of the unit with dimensions: 38.5±0.02, 33.34, 0, 33.34, 38.5±0.02, 38.5, 19.25, 0, 19.25, 38.5, 3, 80, 90, 3, 1, Ø4^{+0.025}₀ (2x), M5/6.5 (6x), M6/13 (4x), Ø10/4 (4x), 70±0.02, 20.5, 35±0.02, 10.

A, a	Air connection ring indexing table, clockwise turning	②	Attachment connection
B, b	Air connection ring indexing table, anti-clockwise turning	⑧0	Depth of the centering sleeve hole in the matching part
C, c	Air connection ring indexing table unlocked	⑨0	Rotation angle „X“ see technical data
D, d	Air connection ring indexing table locked	⑨1	Variable dimensions see technical data
①	Rotary actuator connection		

Electronic magnetic switches

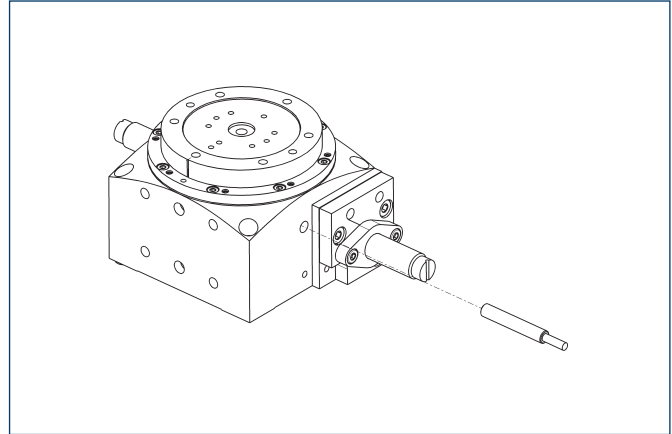


End position monitoring for mounting in the C-slot

Description	ID	Recommended product
Electronic magnetic switches		
MMS 22-S-M5-PNP	0301038	
MMS 22-S-M5-NPN	0301439	
MMS 22-S-M8-PNP	0301032	•
MMS 22-S-M8-NPN	0301433	
MMSK 22-S-PNP	0301034	
MMSK 22-S-NPN	0301435	
Electronic magnetic switches with lateral cable outlet		
MMS 22-S-M5-PNP-SA	0301448	
MMS 22-S-M5-NPN-SA	0301449	
MMS 22-S-M8-PNP-SA	0301442	•
MMS 22-S-M8-NPN-SA	0301443	
MMSK 22-S-PNP-SA	0301444	
MMSK 22-S-NPN-SA	0301445	
Connection cables		
KA BG05-L 3P-0300	0301652	
KA BG08-L 3P-0300-PNP	0301622	
KA BG08-L 3P-0500-PNP	0301623	
KA BW05-L 3P-0300	0301650	
KA BW08-L 3P-0300-NPN	0301602	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-NPN	9641116	
KA BW08-L 3P-0500-PNP	0301502	
Cable extensions		
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	

- ① Never separate the cable between the sensor and the plug connector.
- ① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

Inductive proximity switches



Reference sensor for monitoring the home position.

Description	ID	Scope of delivery	Recommended product
Inductive proximity switches			
IN 50-S-M8	0301568		•
IN 50-S-M12	0301575		
INK 50-S	0301560		
Connection cables			
KA BG08-L 3P-0300-PNP	0301622		
KA BG08-L 3P-0500-PNP	0301623		
KA BG12-L 3P-0500-PNP	30016369		
KA BW08-L 3P-0300-PNP	0301594		
KA BW08-L 3P-0500-PNP	0301502		
KA BW12-L 3P-0300-PNP	0301503		
KA BW12-L 3P-0500-PNP	0301507		
Cable extensions			
KV BG12-SG12 3P-0030-PNP	0301999		
KV BG12-SG12 3P-0060-PNP	0301998		
KV BW08-SG08 3P-0030-PNP	0301495		
KV BW08-SG08 3P-0100-PNP	0301496		
KV BW08-SG08 3P-0200-PNP	0301497		
KV BW12-SG12 3P-0030-PNP	0301595		
KV BW12-SG12 3P-0100-PNP	0301596		
KV BW12-SG12 3P-0200-PNP	0301597		

- ① Never separate the cable between the sensor and the plug connector.
- ① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.