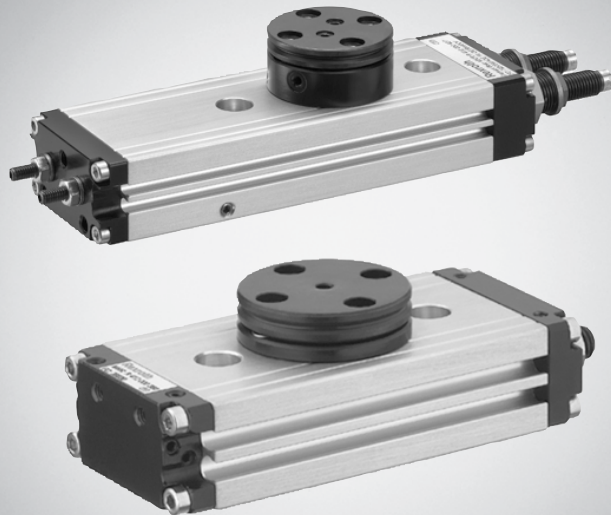


Rotary actuators → Rack-and-pinion gears




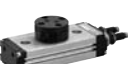




Series RCM

Brochure



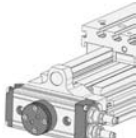



Rotary actuators → Rack-and-pinion gears



Series RCM

	Rotary Compact Module, Series RCM-SE ▶ angle of rotation: 0 - 180 ° ▶ Ø6 - 25 mm ▶ with magnetic piston ▶ double piston with rack ▶ Easy-2-Combine-capable ▶ cushioning: elastic	4
	Rotary Compact Module, Series RCM-SH ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack ▶ Easy-2-Combine-capable ▶ cushioning: hydraulic, non-adjustable	9
	Rotary Compact Module, Series RCM-SE ▶ angle of rotation: 0 - 180 ° ▶ Ø8 - 25 mm ▶ with magnetic piston ▶ double piston with rack ▶ Easy-2-Combine-capable ▶ cushioning: elastic ▶ with air duct	14
	Rotary Compact Module, Series RCM-SH ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack ▶ Easy-2-Combine-capable ▶ cushioning: hydraulic, non-adjustable ▶ with air duct	20
	Rotary Compact Module, Series RCM-SE ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack ▶ Easy-2-Combine-capable ▶ cushioning: elastic ▶ with integrated intermediate position	26
	Rotary Compact Module, Series RCM-SH ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack ▶ Easy-2-Combine-capable ▶ cushioning: hydraulic, non-adjustable ▶ with integrated intermediate position	31
	Rotary Compact Module, Series RCM-SE ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack ▶ Easy-2-Combine-capable ▶ cushioning: elastic ▶ with integrated intermediate position ▶ with air duct	36
	Rotary Compact Module, Series RCM-SH ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack ▶ Easy-2-Combine-capable ▶ cushioning: hydraulic, non-adjustable ▶ with integrated intermediate position ▶ with air duct	42

Accessories**Easy-2-Combine connection kits**




	Easy-2-Combine, Connection kit ▶ For combination: RCM-...-AP / GSP ▶ with air duct	48
	Easy-2-Combine, Connection kit ▶ For combination: MSC / RCM	52
	Easy-2-Combine, Connection kit ▶ For combination: CKP / RCM	53
	Centering rings	54

Sensors and sensor mountings, accessories


	Sensor, Series ST4 ▶ 4 mm groove ▶ with cable ▶ without wire end ferrule, tin-plated	56
	Sensor, Series ST4 ▶ 4 mm groove ▶ with cable ▶ Plug, M8, 3-pin	57

Rotary actuators → Rack-and-pinion gears

Series RCM

	Sensor, Series ST4 ▶ 4 mm groove ▶ with cable ▶ Plug, M8, 3-pin, with knurled screw	58
	Sensors, Series ST4-2P ▶ 4 mm groove ▶ number of switching points:2 ▶ with cable ▶ without wire end ferrule, tin-plated ▶ electronic PNP	60
	Sensors, Series ST4-2P ▶ 4 mm groove ▶ number of switching points:2 ▶ with cable ▶ Plug, M8x1, 4-pin, with knurled screw ▶ electronic PNP	61

Industrial shock absorber

	Industrial shock absorber, Series SA2-RC ▶ for RCM ▶ cushioning: self-compensating ▶ sealing for piston rod: Lip ring ▶ Mounting thread: M8x1 - M14x1,5 ▶ Max. energy absorption/stroke: 4 - 20 Nm	63
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Rotary actuators → Rack-and-pinion gears

Rotary Compact Module, Series RCM-SE

► angle of rotation: 0 - 180 ° ► Ø6 - 25 mm ► with magnetic piston ► double piston with rack ► Easy-2-Combine-capable ► cushioning: elastic



00117211

Working pressure min./max.	2 bar / 8 bar
Ambient temperature min./max.	+5 °C / +60 °C
Medium temperature min./max.	+5 °C / +60 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 mg/m ³ - 1 mg/m ³
Theoretical torque at	6 bar

Materials:	
Housing	Aluminum, anodized
Covers	Aluminum black anodized
Base	Aluminum, black anodized
Seals	Acrylonitrile Butadiene Rubber
Axis	Steel, hardened
Rotary flange	Steel, hardened

Technical Remarks

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of air pressure must remain constant during the life cycle.
- Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.
- The product is a part of the EasyHandling system.

Frame size		RCM-06	RCM-08	RCM-12	RCM-16	RCM-20
Max. permissible axial bearing load	[N]	170	280	330	490	620
Max. permissible radial bearing load	[N]	170	300	360	580	780
Max. permissible mass moment of inertia	[kgcm ²]	0.08	0.25	0.7	1.6	3.2
Repetitive precision	[°]	0.2	0.2	0.2	0.2	0.2
Theoretical torque	[Nm]	0.17	0.33	0.95	1.7	3

Frame size		RCM-25				
Max. permissible axial bearing load	[N]	1160				
Max. permissible radial bearing load	[N]	1480				
Max. permissible mass moment of inertia	[kgcm ²]	6.3				
Repetitive precision	[°]	0.2				
Theoretical torque	[Nm]	6.5				

Rotary actuators → Rack-and-pinion gears

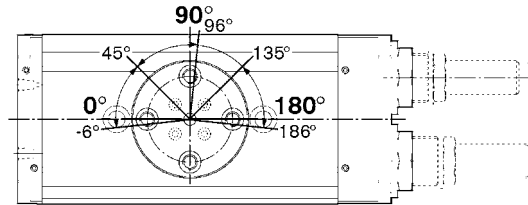
Rotary Compact Module, Series RCM-SE

▶ angle of rotation: 0 - 180 ° ▶ Ø6 - 25 mm ▶ with magnetic piston ▶ double piston with rack ▶ Easy-2-Combine-capable ▶ cushioning: elastic



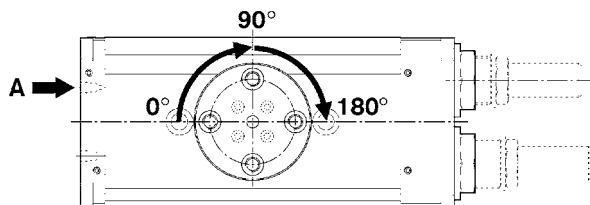
	Frame size	Compressed air connection	angle of rotation	Swivel time min./max.	Air consumption per rotation	Weight	Part No.
			[°]	[s]	[cm ³]	[kg]	
	RCM-06	M3	0 - 90	0.08 / --	1.13	0.13	R412000357
	RCM-06	M3	0 - 180	0.12 / --	2.26	0.13	R412000358
	RCM-08	M3	0 - 90	0.1 / --	2.14	0.18	R412000359
	RCM-08	M3	0 - 180	0.16 / --	4.27	0.18	R412000360
	RCM-12	M5	0 - 90	0.1 / --	5.86	0.42	R412000361
	RCM-12	M5	0 - 180	0.16 / --	11.72	0.42	R412000362
	RCM-16	M5	0 - 90	0.13 / --	10.36	0.7	R412000363
	RCM-16	M5	0 - 180	0.2 / --	20.71	0.7	R412000364
	RCM-20	M5	0 - 90	0.16 / --	17.92	0.91	R412000365
	RCM-20	M5	0 - 180	0.25 / --	35.84	0.91	R412000366
	RCM-25	M5	0 - 90	0.16 / --	38.75	1.73	R412000367
	RCM-25	M5	0 - 180	0.25 / --	77.5	1.73	R412000368

Setting range for end positions 0° / 90° / 180°



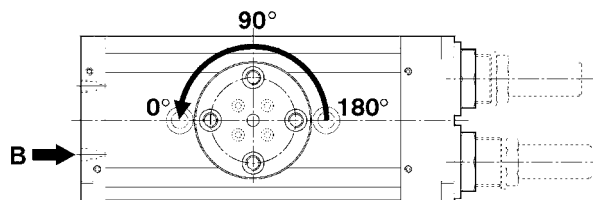
00122055

Movement into end position 90°/180°



00122053

Movement into end position 0°

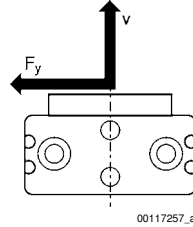


00122054_a

Rotary actuators → Rack-and-pinion gears

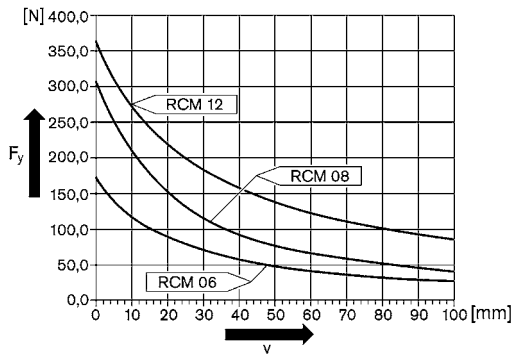
Rotary Compact Module, Series RCM-SE

► angle of rotation: 0 - 180 ° ► Ø6 - 25 mm ► with magnetic piston ► double piston with rack ► Easy-2-Combine-capable ► cushioning: elastic

Maximum permissible radial force F_y [N] as a function of v [mm]

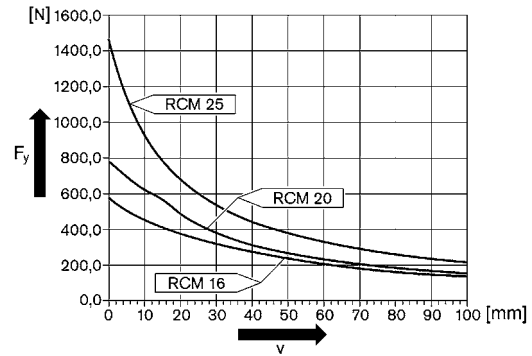
00117257_a

RCM 6 – 12

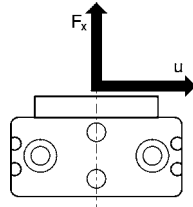


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RCM 16 – 25

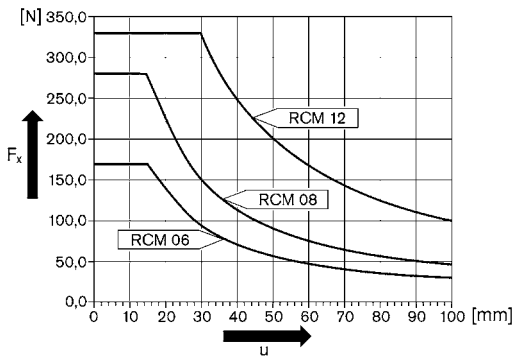


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Maximum permissible axial force F_x [N] as a function of u [mm]

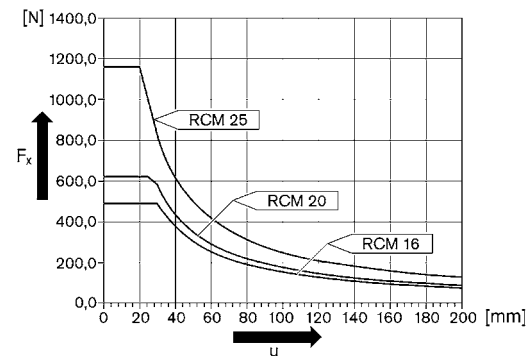
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RCM 6 – 12



00117259_b

RCM 16 – 25



00117260_b

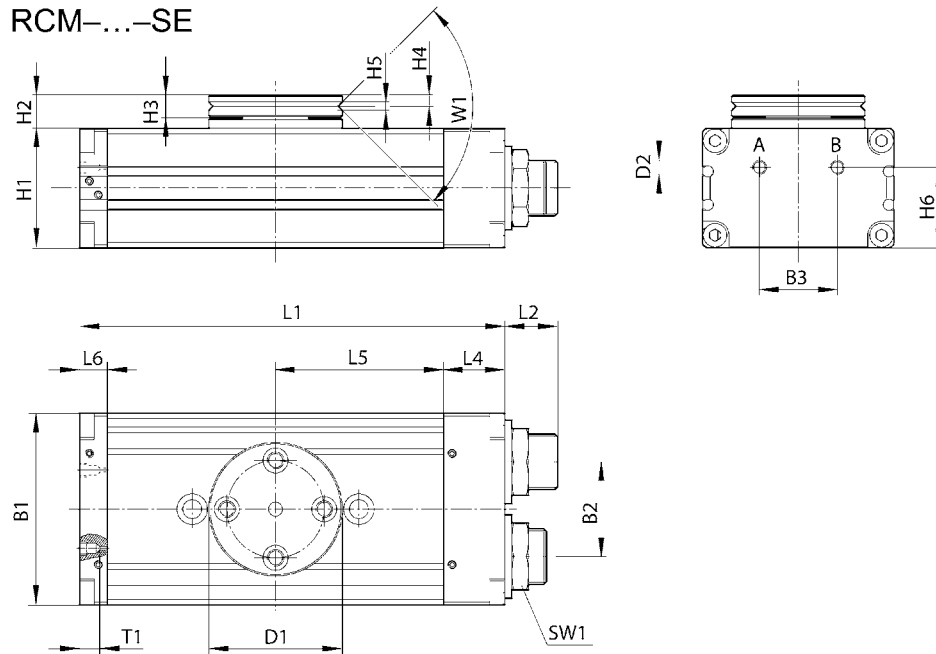
Rotary actuators → Rack-and-pinion gears

Rotary Compact Module, Series RCM-SE

▶ angle of rotation: 0 - 180 ° ▶ Ø6 - 25 mm ▶ with magnetic piston ▶ double piston with rack ▶ Easy-2-Combine-capable ▶ cushioning: elastic



RCM-6/.../-25



00125723

T1 = depth of thread

Frame size	B1	B2	B3	Ø D1	Ø D2	H1	H2	H3	H4	H5	H6	L1	L2
RCM-06	31	13.6	11.6	26	M3	17	7.5	5	2.4	2	12.9	71	9
RCM-08	35	15	13	28	M3	18	8	5	2.4	2	14	77	9.5
RCM-12	43	18	18	35	M5	24	10.5	6	2.9	2.5	18	103	12.5
RCM-16	52	24	20	40	M5	32	10	7	3.3	2.5	21	108	15
RCM-20	58	30	20	42	M5	37	11	7	3.3	3	26	114	15
RCM-25	69	34	28	48	M5	43	12	8	4	3	29	153	19

Frame size	L4	L5	L6	SW1	T1	W1							
RCM-06	7	28.5	7	8	3	90°							
RCM-08	7	31.5	7	10	3	90°							
RCM-12	14	40	9	15	4	90°							
RCM-16	18	40	10	19	4	90°							
RCM-20	19	43	9	19	4	90°							
RCM-25	22	60.5	10	23	4	90°							

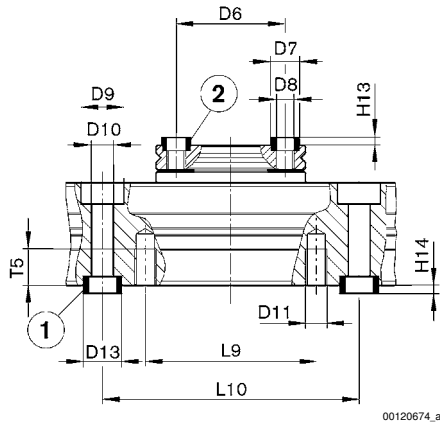
Rotary actuators → Rack-and-pinion gears

Rotary Compact Module, Series RCM-SE

► angle of rotation: 0 - 180 ° ► Ø6 - 25 mm ► with magnetic piston ► double piston with rack ► Easy-2-Combine-capable ► cushioning: elastic

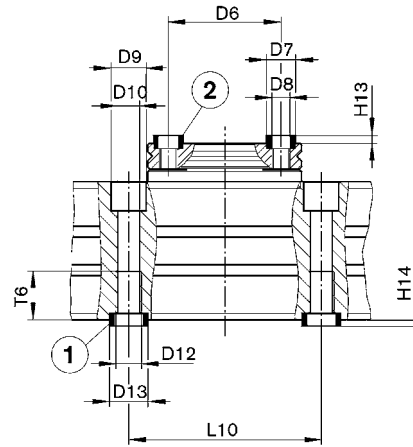


Mounting and assembly, RCM-6/-12



00120674_a

RCM-8/-16/-20/-25



00120675_a

1) centering sleeve, included in the scope of delivery 2) centering sleeve

Frame size	Ø D6 ±0,02	Ø D7 k6	Ø D8	Ø D9	Ø D10	Ø D11	Ø D12	Ø D13 k6	H13 +0,2	H14 +0,2	L9	L10 ± 0,02	T5
RCM-06	18	5	M3	6	3.3	M4	–	5	1.6	1.6	20	40	7
RCM-08	20	5	M3	7.5	4.2	–	M5	7	1.6	1.6	–	40	–
RCM-12	25	7	M4	10	5.1	M5	–	9	1.6	2.1	40	60	8.5
RCM-16	30	7	M5	10	5	–	M6	9	1.6	2.1	–	60	–
RCM-20	30	7	M5	11	6.8	–	M8	12	1.6	2.1	–	60	–
RCM-25	35	9	M6	11	6.8	–	M8	12	2.1	2.1	–	60	–
Frame size	T6												
RCM-06	–												
RCM-08	9.1												
RCM-12	–												
RCM-16	11.1												
RCM-20	15.1												
RCM-25	15.1												

Rotary actuators → Rack-and-pinion gears

Rotary Compact Module, Series RCM-SH

- angle of rotation: 0 - 180 ° ► Ø12 - 25 mm ► with magnetic piston ► double piston with rack
 ► Easy-2-Combine-capable ► cushioning: hydraulic, non-adjustable



00131811

Working pressure min./max.	2 bar / 8 bar
Ambient temperature min./max.	+5 °C / +60 °C
Medium temperature min./max.	+5 °C / +60 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 mg/m ³ - 1 mg/m ³
Theoretical torque at	6 bar

Materials:

Housing	Aluminum, anodized
Covers	Aluminum black anodized
Base	Aluminum, black anodized
Seals	Acrylonitrile Butadiene Rubber
Axis	Steel, hardened
Rotary flange	Steel, hardened

Technical Remarks

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of air pressure must remain constant during the life cycle.
- Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.
- The product is a part of the EasyHandling system.

Frame size		RCM-12	RCM-16	RCM-20	RCM-25	
Max. permissible axial bearing load	[N]	330	490	620	1160	
Max. permissible radial bearing load	[N]	360	580	780	1480	
Max. permissible mass moment of inertia	[kgcm ²]	10	80	180	450	
Repetitive precision	[°]	0.05	0.05	0.05	0.05	
Theoretical torque	[Nm]	0.95	1.7	3	6.5	

	Frame size	Compressed air connection	angle of rotation	Swivel time min./max.	Air consumption per rotation	Weight	Part No.
			[°]	[s]	[cm ³]	[kg]	
	RCM-12	M5	0 - 90	0.3 / --	5.86	0.46	R412000369
	RCM-12		0 - 180	0.3 / --	11.72	0.46	R412000370
	RCM-16		0 - 90	0.32 / --	10.36	0.77	R412000371
	RCM-16		0 - 180	0.32 / --	20.71	0.77	R412000372
	RCM-20		0 - 90	0.48 / --	17.92	0.96	R412000373
	RCM-20		0 - 180	0.48 / --	35.84	0.96	R412000374
	RCM-25		0 - 90	0.6 / --	38.75	1.85	R412000375
	RCM-25		0 - 180	0.6 / --	77.5	1.85	R412000376

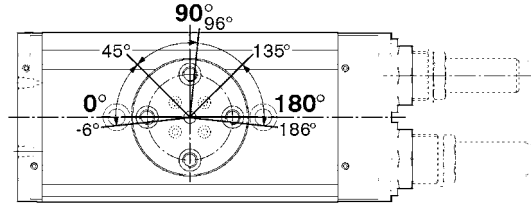
Rotary actuators → Rack-and-pinion gears

Rotary Compact Module, Series RCM-SH

- ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack
- ▶ Easy-2-Combine-capable ▶ cushioning: hydraulic, non-adjustable

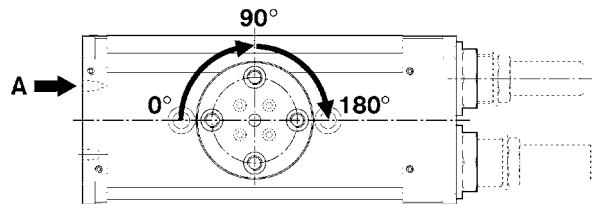


Setting range for end positions 0° / 90° / 180°



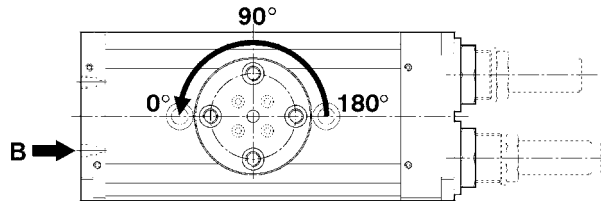
00122055_b

Movement into end position 90°/180°

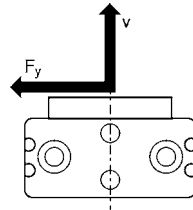


00122053_b

Movement into end position 0°



00122054_c

Maximum permissible radial force F_y [N] as a function of v [mm]

00117257_c

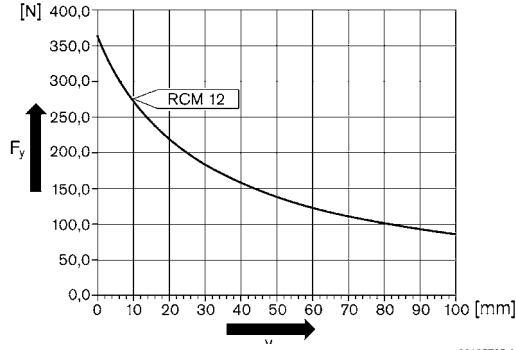
Rotary actuators → Rack-and-pinion gears

Rotary Compact Module, Series RCM-SH

- ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack
- ▶ Easy-2-Combine-capable ▶ cushioning: hydraulic, non-adjustable

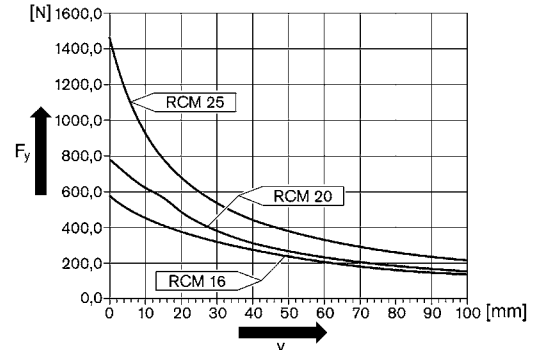


RCM 12



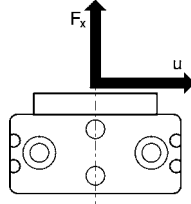
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RCM 16 – 25



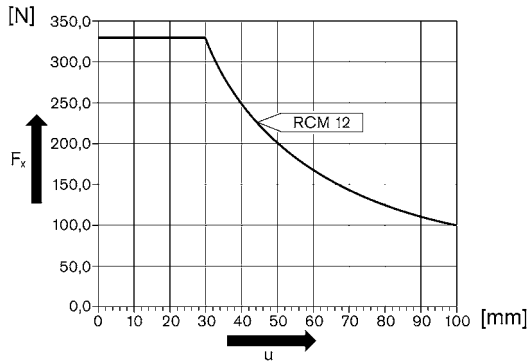
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Maximum permissible axial force F_x [N] as a function of u [mm]



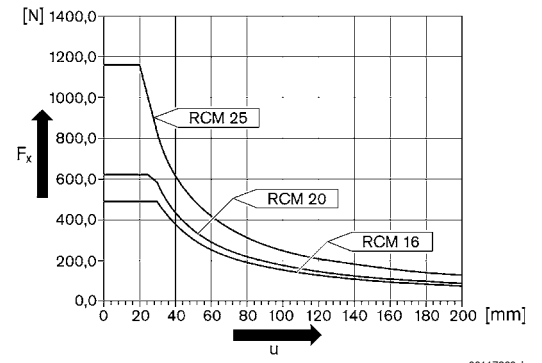
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RCM 12



00125738_b

RCM 16 – 25



00117260_b

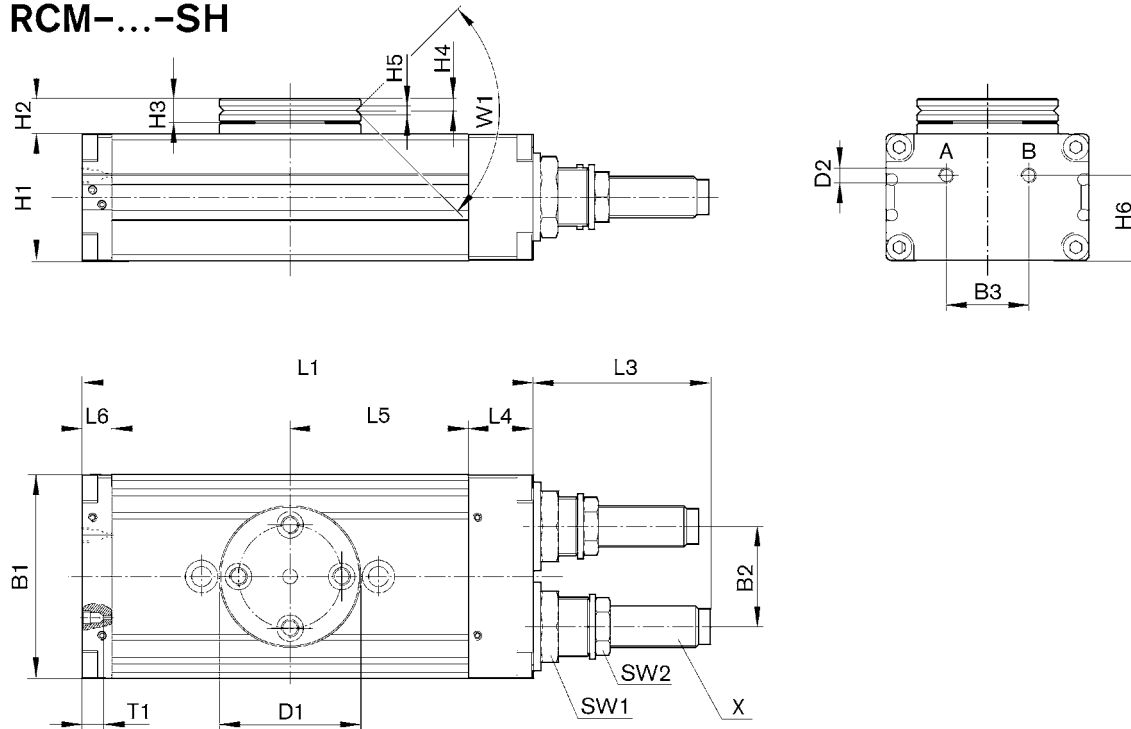
Rotary actuators → Rack-and-pinion gears

Rotary Compact Module, Series RCM-SH

- ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack
- ▶ Easy-2-Combine-capable ▶ cushioning: hydraulic, non-adjustable



RCM-12/.../-25

RCM-...-SH

00125724

T1 = depth of thread

Frame size	B1	B2	B3	Ø D1	Ø D2	H1	H2	H3	H4	H5	H6
RCM-12	43	18	18	35	M5	24	10.5	6	2.9	2.5	18
RCM-16	52	24	20	40	M5	32	10	7	3.3	2.5	21
RCM-20	58	30	20	42	M5	37	11	7	3.3	3	26
RCM-25	69	34	28	48	M5	43	12	8	4	3	29
Frame size	L1	L3	L4	L5	L6	SW1	SW2	T1	W1	X	
RCM-12	103	33.5	14	40	9	15	11	4	90°	M8x1	
RCM-16	108	34	18	40	10	19	13	4	90°	M10x1	
RCM-20	114	48.5	19	43	9	19	15	4	90°	M12x1	
RCM-25	153	60	22	60.5	10	23	17	4	90°	M14x1,5	

Rotary actuators → Rack-and-pinion gears

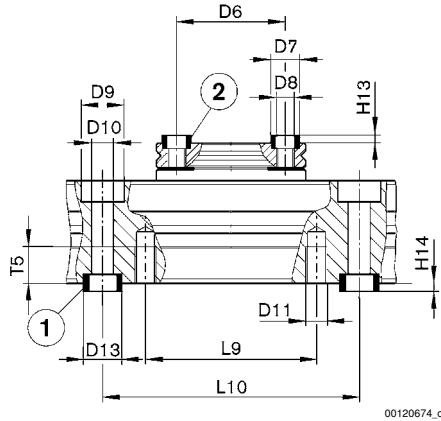
Rotary Compact Module, Series RCM-SH

- ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack
- ▶ Easy-2-Combine-capable ▶ cushioning: hydraulic, non-adjustable

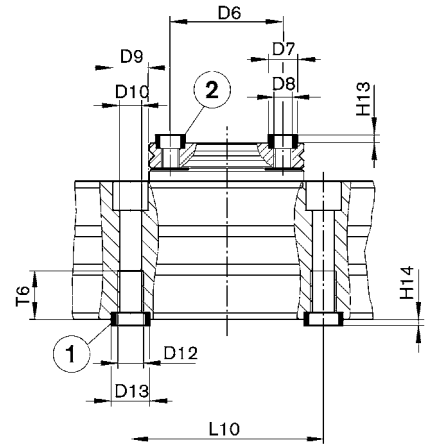


Mounting and assembly, RCM-12

RCM 16 – 25



00120674_c



00120675_c

1) centering sleeve, included in the scope of delivery 2) centering sleeve

Frame size	Ø D6 ±0,02	Ø D7 k6	Ø D8	Ø D9	Ø D10	Ø D11	Ø D12	Ø D13 k6	H13 +0,2	H14 +0,2	L9	L10 ±0,02	T5
RCM-12	25	7	M4	10	5.1	M5	–	9	1.6	2.1	40	60	8.5
RCM-16	30	7	M5	10	5	–	M6	9	1.6	2.1	–	60	–
RCM-20	30	7	M5	11	6.8	–	M8	12	1.6	2.1	–	60	–
RCM-25	35	9	M6	11	6.8	–	M8	12	2.1	2.1	–	60	–
Frame size	T6												
RCM-12	–												
RCM-16	11.1												
RCM-20	15.1												
RCM-25	15.1												

Rotary actuators → Rack-and-pinion gears

Rotary Compact Module, Series RCM-SE

► angle of rotation: 0 - 180 ° ► Ø8 - 25 mm ► with magnetic piston ► double piston with rack ► Easy-2-Combine-capable ► cushioning: elastic ► with air duct



00119187

Working pressure min./max.	See table below
Ambient temperature min./max.	+5 °C / +60 °C
Medium temperature min./max.	+5 °C / +60 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 mg/m ³ - 1 mg/m ³
Theoretical torque at	6 bar

Materials:	
Housing	Aluminum, anodized
Covers	Aluminum black anodized
Base	Aluminum, black anodized
Seals	Acrylonitrile Butadiene Rubber
Axis	Steel, hardened
Rotary flange	Steel, hardened

Technical Remarks

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of air pressure must remain constant during the life cycle.
- Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.
- The product is a part of the EasyHandling system.

Frame size		RCM-08	RCM-12	RCM-16	RCM-20	RCM-25
Number of air ducts		2	2	4	4	4
Max. permissible axial bearing load	[N]	280	330	490	620	1160
Max. permissible radial bearing load	[N]	210	290	400	560	700
Max. permissible mass moment of inertia	[kgcm ²]	0.25	0.7	1.6	3.2	6.3
Repetitive precision	[°]	0.2	0.2	0.2	0.2	0.2
Theoretical torque	[Nm]	0.33	0.95	1.7	3	6.5

	Frame size	Compressed air connection	angle of rotation	Swivel time min./max.	Working pressure min./max.	Air consumption per rotation	Weight	Part No.
			[°]	[s]	[bar]	[cm ³]	[kg]	
	RCM-08	M3	0 - 90	0.2 / --	3.5 / 8	2.14	0.19	R412000377
	RCM-08	M3	0 - 180	0.28 / --	3.5 / 8	4.27	0.19	R412000378
	RCM-12	M5	0 - 90	0.2 / --	2.5 / 8	5.86	0.46	R412000379
	RCM-12	M5	0 - 180	0.28 / --	2.5 / 8	11.72	0.46	R412000380
	RCM-16	M5	0 - 90	0.2 / --	2 / 8	10.36	0.76	R412000381
	RCM-16	M5	0 - 180	0.25 / --	2 / 8	20.71	0.76	R412000382
	RCM-20	M5	0 - 90	0.22 / --	2 / 8	17.92	0.99	R412000383
	RCM-20	M5	0 - 180	0.3 / --	2 / 8	35.84	0.99	R412000384
	RCM-25	M5	0 - 90	0.22 / --	2 / 8	38.75	1.83	R412000385
	RCM-25	M5	0 - 180	0.3 / --	2 / 8	77.5	1.83	R412000386

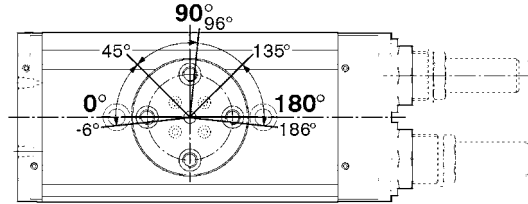
Rotary actuators → Rack-and-pinion gears

Rotary Compact Module, Series RCM-SE

▶ angle of rotation: 0 - 180 ° ▶ Ø8 - 25 mm ▶ with magnetic piston ▶ double piston with rack ▶ Easy-2-Combine-capable ▶ cushioning: elastic ▶ with air duct

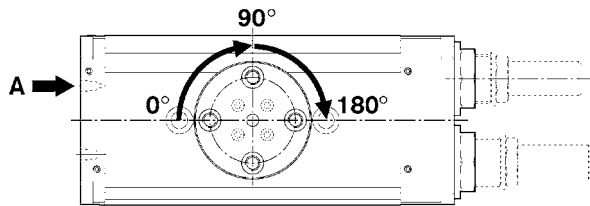


Setting range for end positions 0° / 90° / 180°



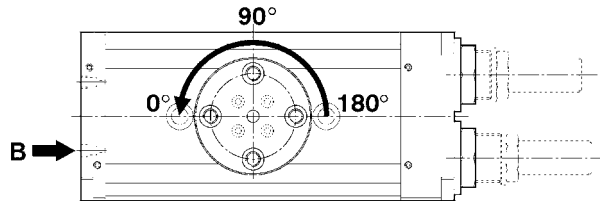
00122055_a

Movement into end position 90°/180°



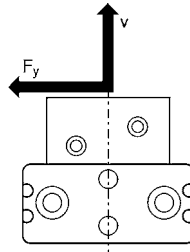
00122053_a

Movement into end position 0°



00122054_b

Maximum permissible radial force F_y [N] as a function of v [mm]



00117405

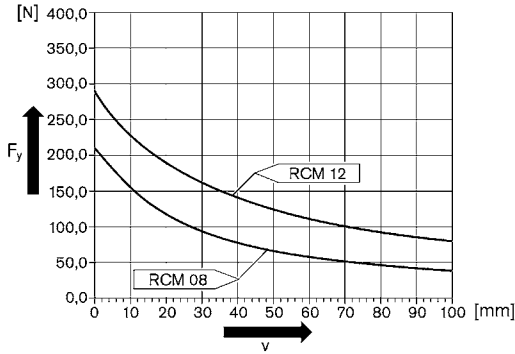
Rotary actuators → Rack-and-pinion gears

Rotary Compact Module, Series RCM-SE

► angle of rotation: 0 - 180 ° ► Ø8 - 25 mm ► with magnetic piston ► double piston with rack ► Easy-2-Combine-capable ► cushioning: elastic ► with air duct

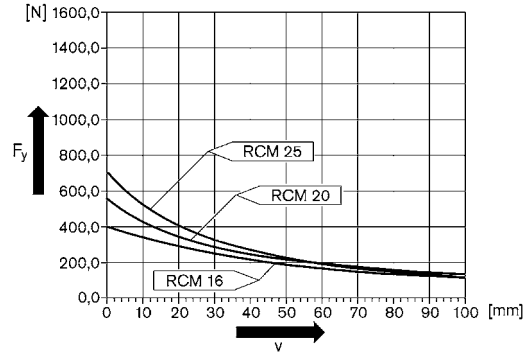


RCM 8 – 12



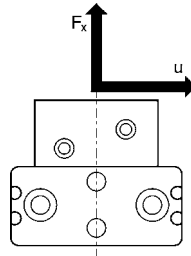
00117406_b

RCM 16 – 25



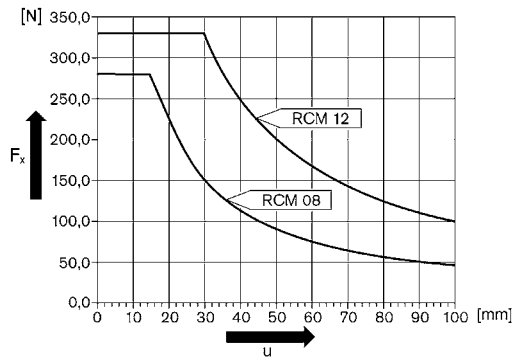
00117407_b

Maximum permissible radial force F_y [N] as a function of v [mm]



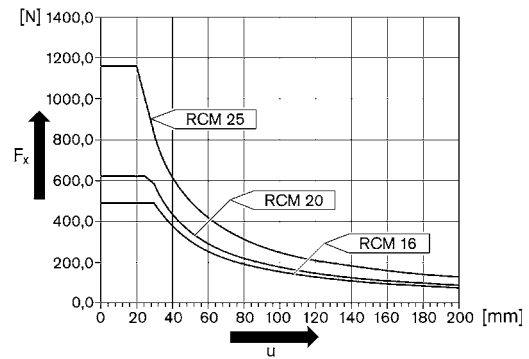
00117404

RCM 8 – 12



00122092_b

RCM 16 – 25



00117260_b

Rotary actuators → Rack-and-pinion gears

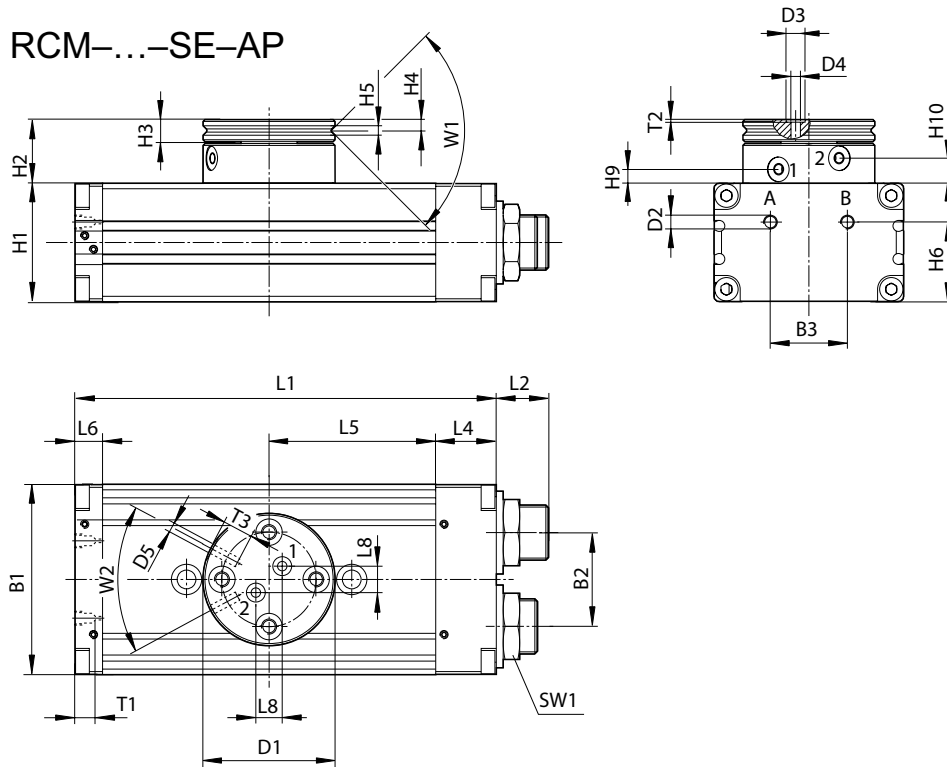
Rotary Compact Module, Series RCM-SE

▶ angle of rotation: 0 - 180 ° ▶ Ø8 - 25 mm ▶ with magnetic piston ▶ double piston with rack ▶ Easy-2-Combine-capable ▶ cushioning: elastic ▶ with air duct



RCM-8/-12

RCM-...-SE-AP



00125725

T1 = depth of thread

Frame size	B1	B2	B3	Ø D1	Ø D2	Ø D3	Ø D4	Ø D5	H1	H2	H3	H4	H5
RCM-08	35	15	13	28	M3	3	1.5	M3	18	16.5	5	2.4	2
RCM-12	43	18	18	35	M5	5	2.5	M3	24	17	6	2.9	2.5
Frame size	H6	H9 ±0,2	H10 ±0,2	L1	L2	L4	L5	L6	L8	SW1	T1	T2	T3
RCM-08	14	4.3	7.2	77	9.5	7	31.5	7	4	10	3	0.35	4
RCM-12	18	3.8	6.7	103	12.5	14	40	9	7	15	4	0.7	4
Frame size	W1	W2											
RCM-08	90°	60°											
RCM-12	90°	56°											

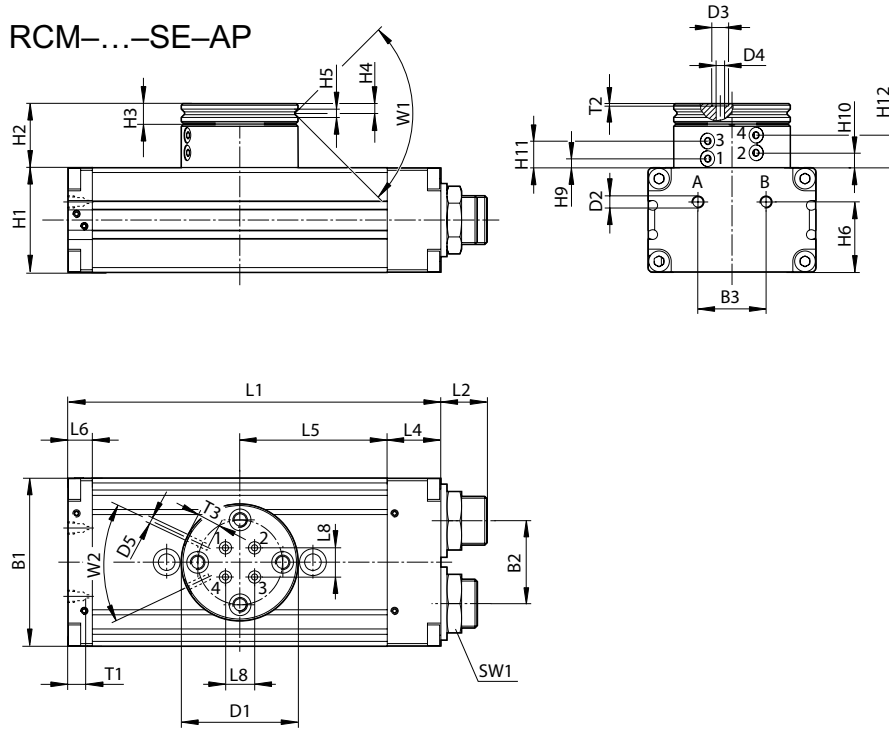
Rotary actuators → Rack-and-pinion gears

Rotary Compact Module, Series RCM-SE

► angle of rotation: 0 - 180 ° ► Ø8 - 25 mm ► with magnetic piston ► double piston with rack ► Easy-2-Combine-capable ► cushioning: elastic ► with air duct



RCM-16/.../-25



T1 = depth of thread

00125727

Frame size	B1	B2	B3	Ø D1	Ø D2	Ø D3	Ø D4	Ø D5	H1	H2	H3	H4	H5
RCM-16	52	24	20	40	M5	5	2.5	M3	32	25.5	7	3.3	2.5
RCM-20	58	30	20	42	M5	5	2.5	M3	37	26	7	3.3	3
RCM-25	69	34	28	48	M5	5	2.5	M3	43	26.5	8	4	3
Frame size	H6	H9 ±0,2	H10 ±0,2	H11 ±0,2	H12 ±0,2	L1	L2	L4	L5	L6	L8	SW1	T1
RCM-16	21	3.9	6.5	11.1	13.7	108	15	18	40	10	6	19	4
RCM-20	26	4.4	7	11.6	14.2	114	15	19	43	9	10	19	4
RCM-25	29	3.9	6.5	11.1	13.7	153	19	22	60.5	10	12	23	4
Frame size	T2	T3	W1	W2									
RCM-16	0.7	4	90°	50°									
RCM-20	0.7	4	90°	50°									
RCM-25	0.7	4	90°	50°									

Rotary actuators → Rack-and-pinion gears

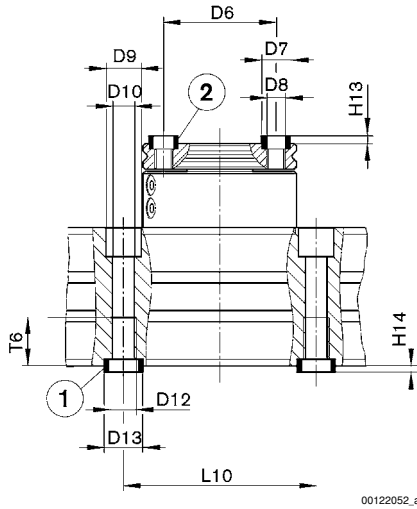
Rotary Compact Module, Series RCM-SE

▶ angle of rotation: 0 - 180 ° ▶ Ø8 - 25 mm ▶ with magnetic piston ▶ double piston with rack ▶ Easy-2-Combine-capable ▶ cushioning: elastic ▶ with air duct

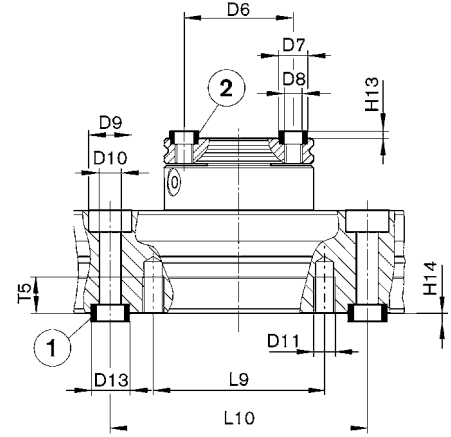


Mounting and assembly, RCM-8/-16/-20/-25

RCM 12



00122052_a



00122049_c

1) centering sleeve, included in the scope of delivery 2) centering sleeve

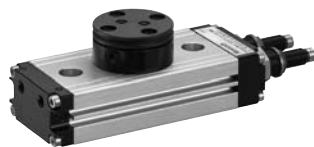
Frame size	Ø D6 ±0,02	Ø D7 k6	Ø D8	Ø D9	Ø D10	Ø D11	Ø D12	Ø D13 k6	H13 +0,2	H14 +0,2	L9	L10 ± 0,02	T5
RCM-08	20	5	M3	7.5	4.2	-	M5	7	1.6	1.6	-	40	-
RCM-12	25	7	M4	10	5.1	M5	-	9	1.6	2.1	40	60	8.5
RCM-16	30	7	M5	10	5	-	M6	9	1.6	2.1	-	60	-
RCM-20	30	7	M5	11	6.8	-	M8	12	1.6	2.1	-	60	-
RCM-25	35	9	M6	11	6.8	-	M8	12	2.1	2.1	-	60	-

Frame size	T6												
RCM-08	9.1												
RCM-12	-												
RCM-16	11.1												
RCM-20	15.1												
RCM-25	15.1												

Rotary actuators → Rack-and-pinion gears

Rotary Compact Module, Series RCM-SH

► angle of rotation: 0 - 180 ° ► Ø12 - 25 mm ► with magnetic piston ► double piston with rack
 ► Easy-2-Combine-capable ► cushioning: hydraulic, non-adjustable ► with air duct



00131809

Working pressure min./max.	See table below
Ambient temperature min./max.	+5 °C / +60 °C
Medium temperature min./max.	+5 °C / +60 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 mg/m ³ - 1 mg/m ³
Theoretical torque at	6 bar

Materials:	
Housing	Aluminum, anodized
Covers	Aluminum black anodized
Base	Aluminum, black anodized
Seals	Acrylonitrile Butadiene Rubber
Axis	Steel, hardened
Rotary flange	Steel, hardened

Technical Remarks

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of air pressure must remain constant during the life cycle.
- Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.
- The product is a part of the EasyHandling system.

Frame size		RCM-12	RCM-16	RCM-20	RCM-25
Number of air ducts		2	4	4	4
Max. permissible axial bearing load	[N]	330	490	620	1160
Max. permissible radial bearing load	[N]	290	400	560	700
Max. permissible mass moment of inertia	[kgcm ²]	10	80	180	450
Repetitive precision	[°]	0.05	0.05	0.05	0.05
Theoretical torque	[Nm]	0.95	1.7	3	6.5

	Frame size	Compressed air connection	angle of rotation	Swivel time min./max.	Working pressure min./max.	Air consumption per rotation	Weight	Part No.
			[°]	[s]	[bar]	[cm ³]	[kg]	
	RCM-12	M5	0 - 90	0.3 / --	2.5 / 8	5.86	0.5	R412000387
	RCM-12		0 - 180	0.3 / --	2.5 / 8	11.72	0.5	R412000388
	RCM-16		0 - 90	0.32 / --	2 / 8	10.36	0.84	R412000389
	RCM-16		0 - 180	0.32 / --	2 / 8	20.71	0.84	R412000390
	RCM-20		0 - 90	0.48 / --	2 / 8	17.92	1.04	R412000391
	RCM-20		0 - 180	0.48 / --	2 / 8	35.84	1.04	R412000392
	RCM-25		0 - 90	0.6 / --	2 / 8	38.75	1.95	R412000393
	RCM-25		0 - 180	0.6 / --	2 / 8	77.5	1.95	R412000394

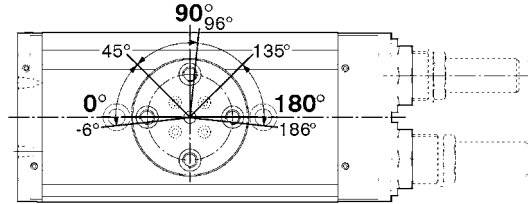
Rotary actuators → Rack-and-pinion gears

Rotary Compact Module, Series RCM-SH

- ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack
- ▶ Easy-2-Combine-capable ▶ cushioning: hydraulic, non-adjustable ▶ with air duct

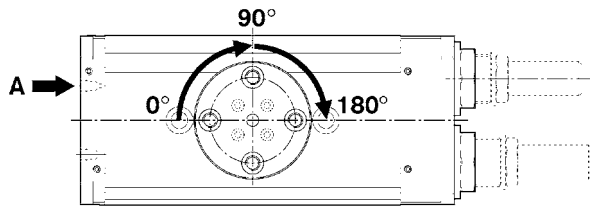


Setting range for end positions 0° / 90° / 180°



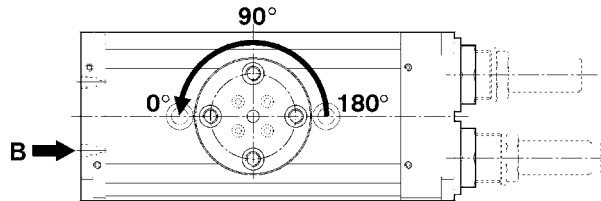
00122055_c

Movement into end position 90°/180°



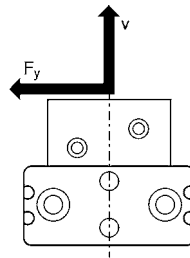
00122053_c

Movement into end position 0°



00122054

Maximum permissible radial force F_y [N] as a function of v [mm]



00117405_a

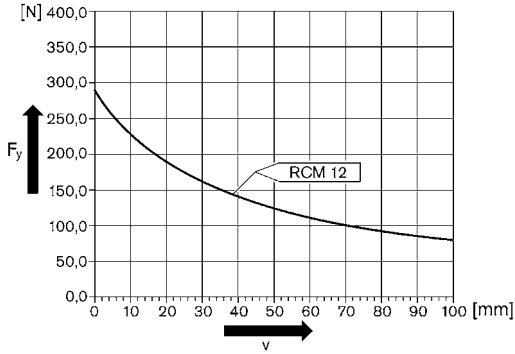
Rotary actuators → Rack-and-pinion gears

Rotary Compact Module, Series RCM-SH

- ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack
- ▶ Easy-2-Combine-capable ▶ cushioning: hydraulic, non-adjustable ▶ with air duct

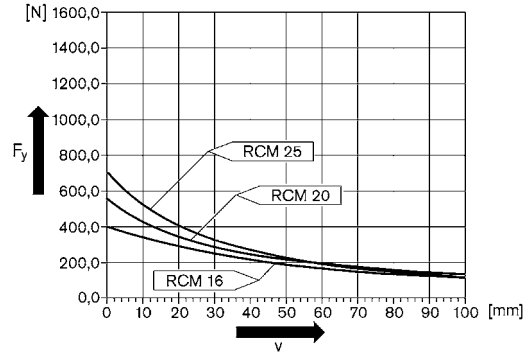


RCM-12



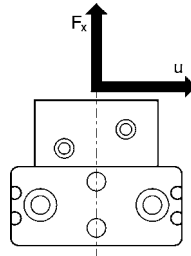
00125737_b

RCM 16 – 25



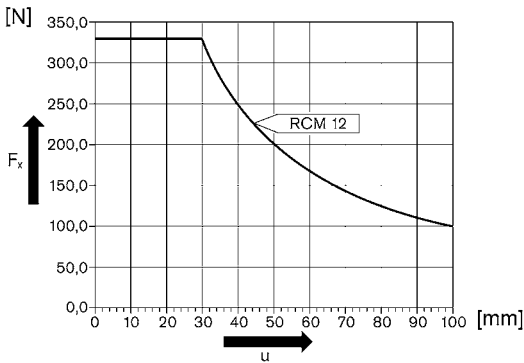
00117407_b

Maximum permissible axial force F_x [N] as a function of u [mm]



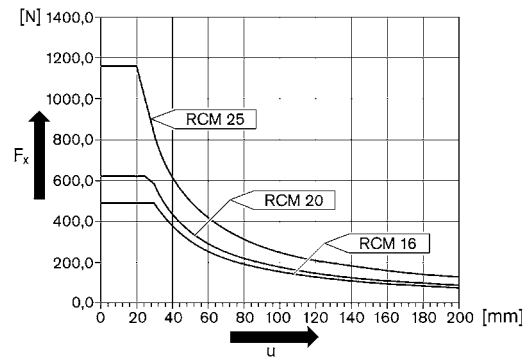
00117404_b

RCM-12



00125738_b

RCM 16 – 25



00117260_b

Rotary actuators → Rack-and-pinion gears

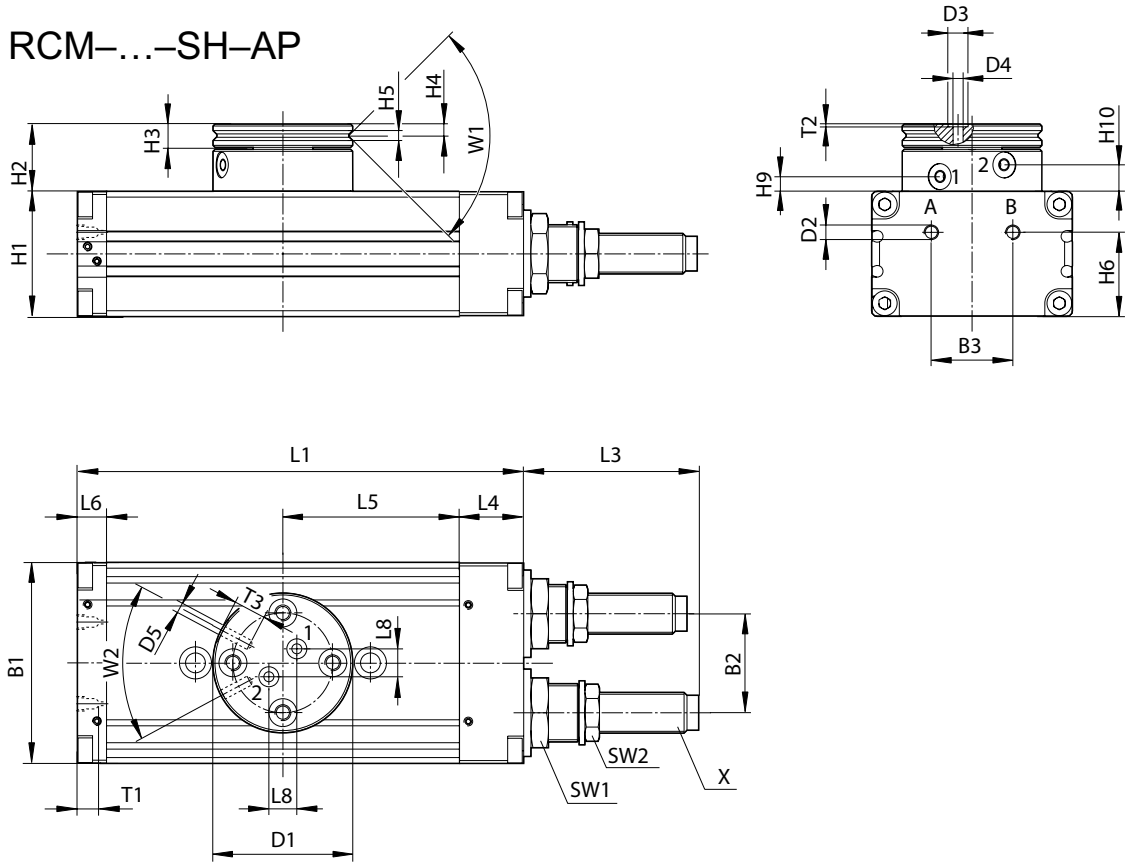
Rotary Compact Module, Series RCM-SH

- ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack
- ▶ Easy-2-Combine-capable ▶ cushioning: hydraulic, non-adjustable ▶ with air duct



RCM-12

RCM-...-SH-AP



00125726

T1 = depth of thread

Frame size	B1	B2	B3	Ø D1	Ø D2	Ø D3	Ø D4	Ø D5	H1	H2	H3	H4	H5
RCM-12	43	18	18	35	M5	5	2.5	M3	24	17	6	2.9	2.5
Frame size	H6	H9 ±0,2	H10 ±0,2	L1	L3	L4	L5	L6	L8	SW1	SW2	T1	T2
RCM-12	18	3.8	6.7	103	33.5	14	40	9	7	15	11	4	0.7
Frame size	T3	W1	W2	X									
RCM-12	4	90°	56°	M8x1									

Rotary actuators → Rack-and-pinion gears

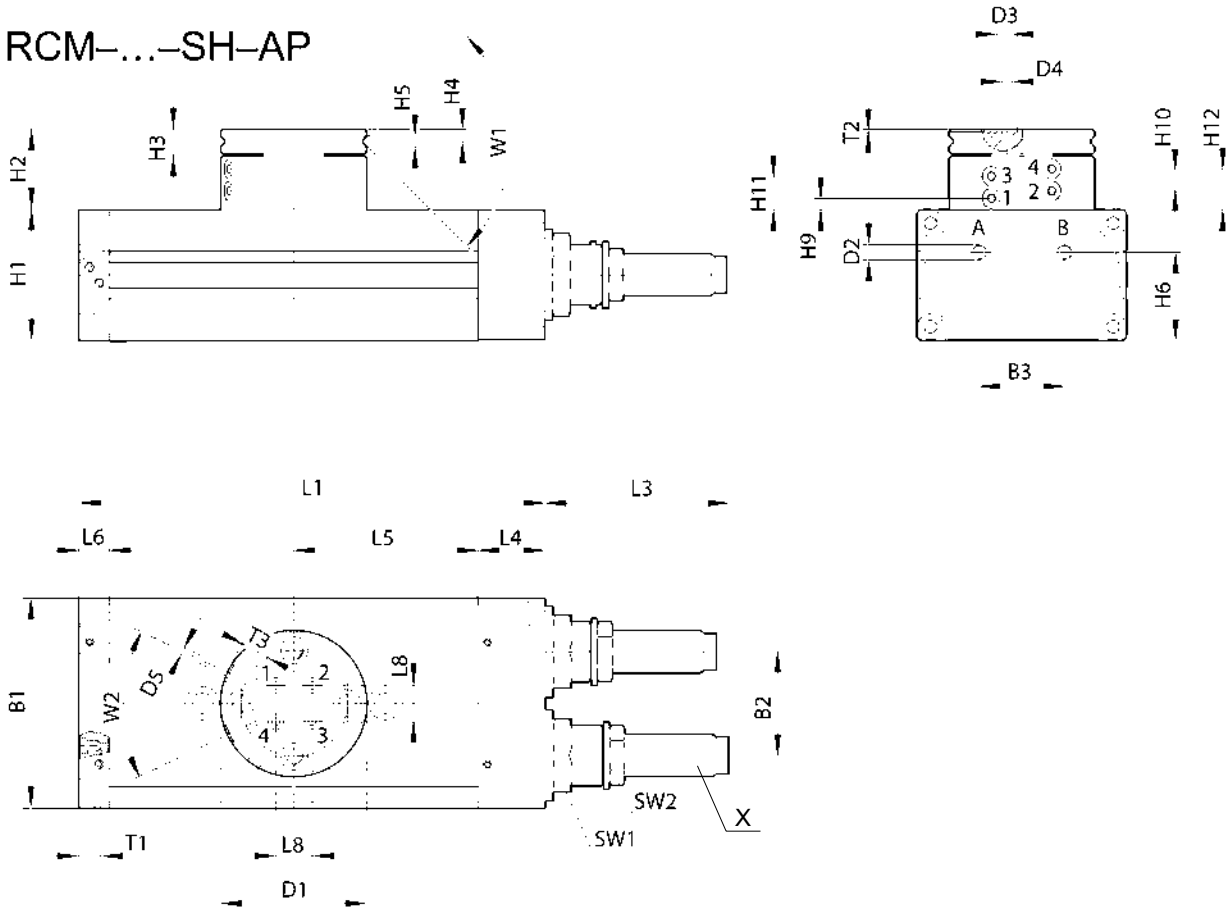
Rotary Compact Module, Series RCM-SH

- ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack
- ▶ Easy-2-Combine-capable ▶ cushioning: hydraulic, non-adjustable ▶ with air duct



RCM-16/.../-25

RCM-...-SH-AP



T1 = depth of thread

00125728

Frame size	B1	B2	B3	Ø D1	Ø D2	Ø D3	Ø D4	Ø D5	H1	H2	H3	H4	H5
RCM-16	52	24	20	40	M5	5	2.5	M3	32	25.5	7	3.3	2.5
RCM-20	58	30	20	42	M5	5	2.5	M3	37	26	7	3.3	3
RCM-25	69	34	28	48	M5	5	2.5	M3	43	26.5	8	4	3
Frame size	H6	H9 ±0,2	H10 ±0,2	H11 ±0,2	H12 ±0,2	L1	L3	L4	L5	L6	L8	SW1	SW2
RCM-16	21	3.9	6.5	11.1	13.7	108	34	18	40	10	6	19	13
RCM-20	26	4.4	7	11.6	14.2	114	48.5	19	43	9	10	19	15
RCM-25	29	3.9	6.5	11.1	13.7	153	60	22	60.5	10	12	23	17
Frame size	T1	T2	T3	W1	W2	X							
RCM-16	4	0.7	4	90°	50°	M10x1							
RCM-20	4	0.7	4	90°	50°	M12x1							
RCM-25	4	0.7	4	90°	50°	M14x1,5							

Rotary actuators → Rack-and-pinion gears

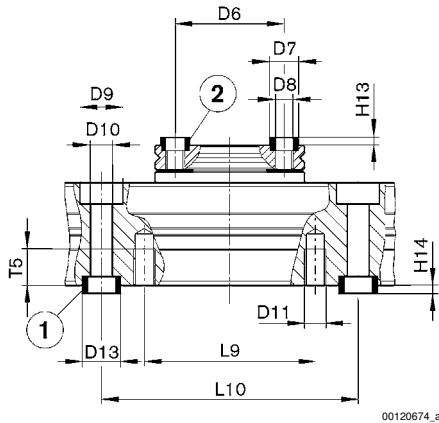
Rotary Compact Module, Series RCM-SH

- ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack
- ▶ Easy-2-Combine-capable ▶ cushioning: hydraulic, non-adjustable ▶ with air duct

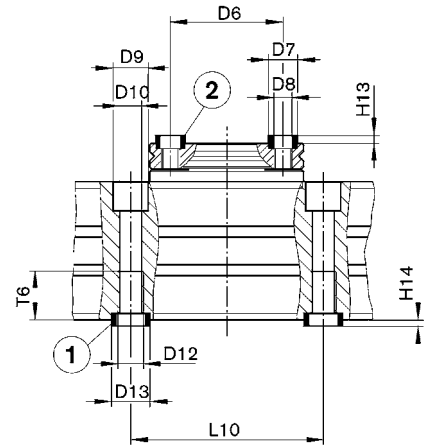


Mounting and assembly, RCM-12

RCM-6/.../-25



00120674_a



00120675_a

1) centering sleeve, included in the scope of delivery 2) centering sleeve

Frame size	Ø D6 ±0,02	Ø D7 k6	Ø D8	Ø D9	Ø D10	Ø D11	Ø D12	Ø D13 k6	H13 +0,2	H14 +0,2	L9	L10 ±0,02	T5
RCM-12	25	7	M4	10	5.1	M5	-	9	1.6	2.1	40	60	8.5
RCM-16	30	7	M5	10	5	-	M6	9	1.6	2.1	-	60	-
RCM-20	30	7	M5	11	6.8	-	M8	12	1.6	2.1	-	60	-
RCM-25	35	9	M6	11	6.8	-	M8	12	2.1	2.1	-	60	-

Frame size	T6												
RCM-12	-												
RCM-16	11.1												
RCM-20	15.1												
RCM-25	15.1												

Rotary actuators → Rack-and-pinion gears

Rotary Compact Module, Series RCM-SE

- angle of rotation: 0 - 180 ° ► Ø12 - 25 mm ► with magnetic piston ► double piston with rack
 ► Easy-2-Combine-capable ► cushioning: elastic ► with integrated intermediate position



00121315

Working pressure min./max.	4 bar / 8 bar
Ambient temperature min./max.	+5 °C / +60 °C
Medium temperature min./max.	+5 °C / +60 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 mg/m ³ - 1 mg/m ³
Theoretical torque at	6 bar

Materials:

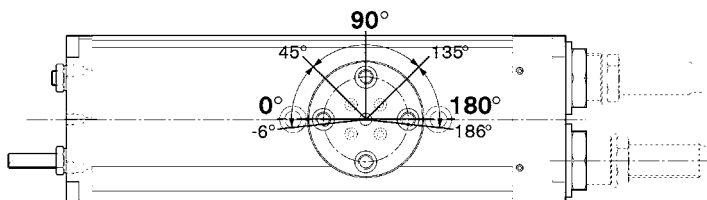
Housing	Aluminum, anodized
Covers	Aluminum black anodized
Base	Aluminum, black anodized
Seals	Acrylonitrile Butadiene Rubber
Axis	Steel, hardened
Rotary flange	Steel, hardened

Technical Remarks

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of air pressure must remain constant during the life cycle.
- Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.
- NOTICE:For positioning without overswing in the intermediate position, it is recommended to limit the mass moment of inertia to 40% of the maximum permissible value!
- The product is a part of the EasyHandling system.

Frame size		RCM-12	RCM-16	RCM-20	RCM-25	
Max. permissible axial bearing load	[N]	330	490	620	1160	
Max. permissible radial bearing load	[N]	360	580	780	1480	
Max. permissible mass moment of inertia	[kgcm ²]	0.7	1.6	3.2	6.3	
Repetitive precision	[°]	0.2	0.2	0.2	0.2	
Theoretical torque	[Nm]	0.95	1.7	3	6.5	

	Frame size	Compressed air connection	angle of rotation	Swivel time min./max.	Air consumption per rotation	Weight	Part No.
			[°]	[s]	[cm ³]	[kg]	
	RCM-12	M5	0 - 180	0.28 / --	13.29	0.48	R412000395
	RCM-16			0.25 / --	22.14	0.79	R412000396
	RCM-20			0.3 / --	37.83	1.12	R412000397
	RCM-25			0.3 / --	80.72	2.1	R412000398

Setting range for end positions 0°/180° and intermediate position 90°

00122059

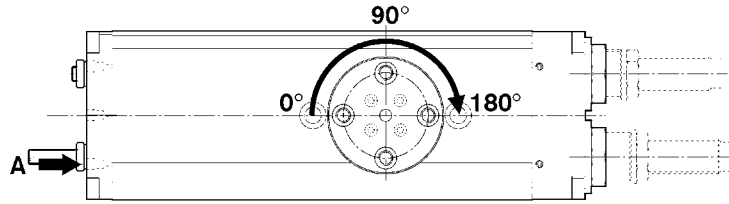
Rotary actuators → Rack-and-pinion gears

Rotary Compact Module, Series RCM-SE

- ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack
- ▶ Easy-2-Combine-capable ▶ cushioning: elastic ▶ with integrated intermediate position

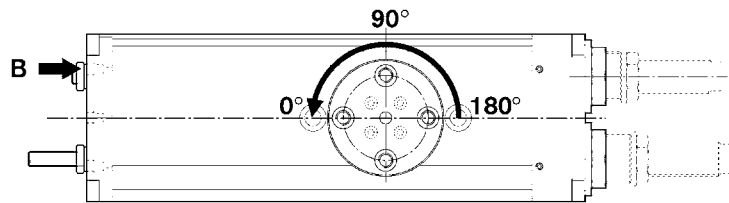


Movement into end position 180°



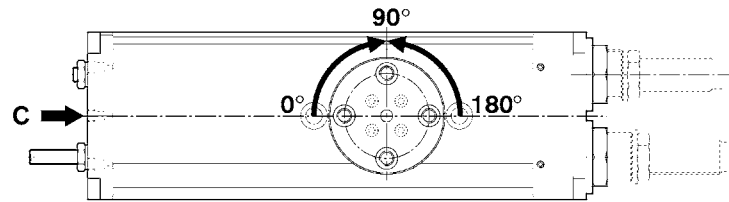
00122056

Movement into end position 0°



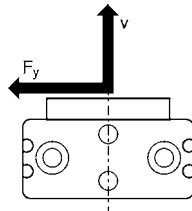
00122057

Movement into intermediate position 90°



00122058

Maximum permissible radial force F_y [N] as a function of v [mm]



00117257_b

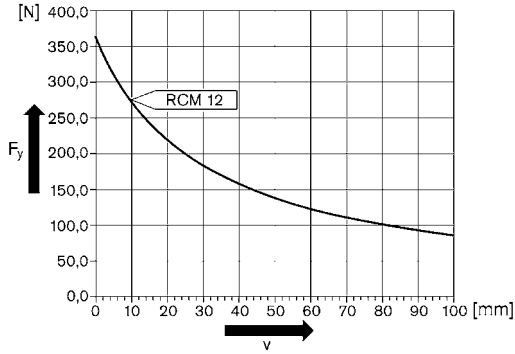
Rotary actuators → Rack-and-pinion gears

Rotary Compact Module, Series RCM-SE

- ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack
- ▶ Easy-2-Combine-capable ▶ cushioning: elastic ▶ with integrated intermediate position

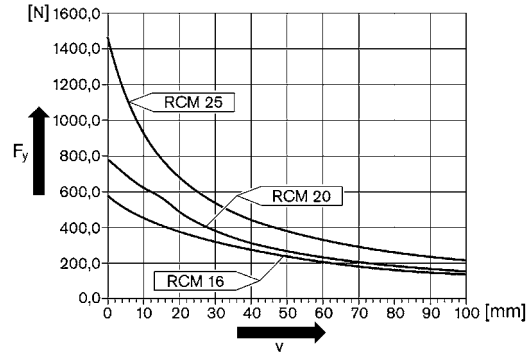


RCM 12



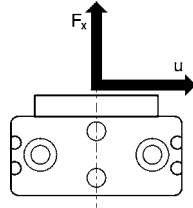
00122095_b

RCM 16 – 25



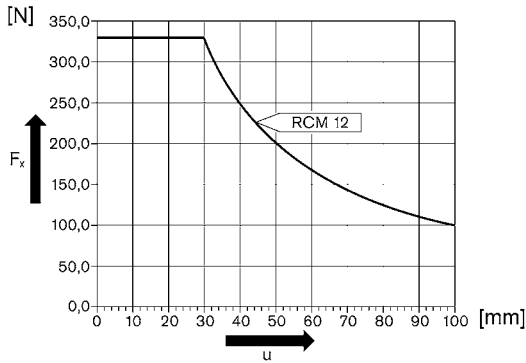
00117262_b

Maximum permissible radial force Fy [N] as a function of v [mm]



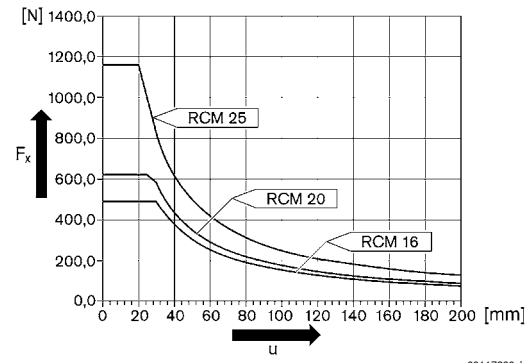
00117258_b

RCM 12



00125738_b

RCM 16 – 25



00117260_b

Rotary actuators → Rack-and-pinion gears

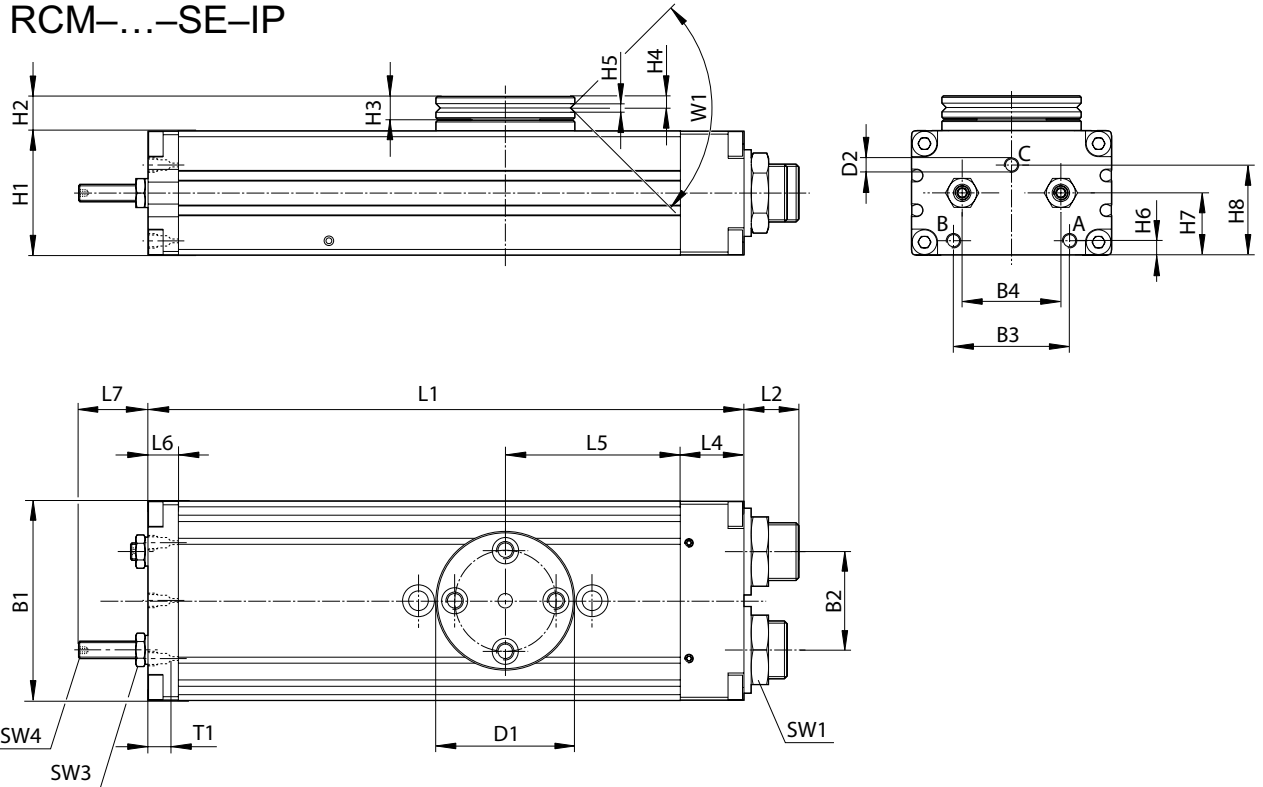
Rotary Compact Module, Series RCM-SE

- ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack
- ▶ Easy-2-Combine-capable ▶ cushioning: elastic ▶ with integrated intermediate position



RCM-12/.../-25

RCM-...-SE-IP



T1 = depth of thread

00125729

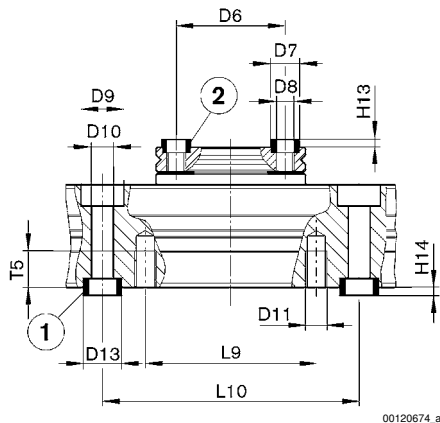
Frame size	B1	B2	B3	B4	Ø D1	Ø D2	H1	H2	H3	H4	H5	H6	H7
RCM-12	43	18	24	18	35	M5	24	10.5	6	2.9	2.5	3.7	12.5
RCM-16	52	24	29	24	40	M5	32	10	7	3.3	2.5	5	16
RCM-20	58	30	30	30	42	M5	37	11	7	3.3	3	5.5	19
RCM-25	69	34	40	34	48	M5	43	12	8	4	3	5	21.5

Frame size	H8	L1	L2	L4	L5	L6	L7	SW1	SW3	SW4	T1	W1
RCM-12	18.1	136	12.5	14	40	8.5	17	15	7	2	4	90°
RCM-16	21.1	140	15.5	18	40	8.5	17	19	7	2	4	90°
RCM-20	27.1	156	15	19	43	8.5	22	19	8	2.5	4	90°
RCM-25	31.1	206	19	22	60.5	10.5	24	23	10	3	4	90°

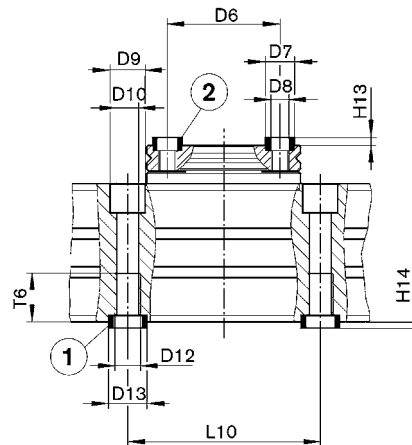
Rotary actuators → Rack-and-pinion gears

Rotary Compact Module, Series RCM-SE

- ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack
- ▶ Easy-2-Combine-capable ▶ cushioning: elastic ▶ with integrated intermediate position

**Mounting and assembly, RCM-12****RCM-16/.../-25**

00120674_a



00120675_a

1) centering sleeve, included in the scope of delivery 2) centering sleeve

Frame size	Ø D6 ±0,02	Ø D7 k6	Ø D8	Ø D9	Ø D10	Ø D11	Ø D12	Ø D13 k6	H13 +0,2	H14 +0,2	L9	L10 ± 0,02	T5
RCM-12	25	7	M4	10	5.1	M5	–	9	1.6	2.1	40	60	8.5
RCM-16	30	7	M5	10	5	–	M6	9	1.6	2.1	–	60	–
RCM-20	30	7	M5	11	6.8	–	M8	12	1.6	2.1	–	60	–
RCM-25	35	9	M6	11	6.8	–	M8	12	2.1	2.1	–	60	–

Frame size	T6												
RCM-12	–												
RCM-16	11.1												
RCM-20	15.1												
RCM-25	15.1												

Rotary actuators → Rack-and-pinion gears

Rotary Compact Module, Series RCM-SH

- ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack
- ▶ Easy-2-Combine-capable ▶ cushioning: hydraulic, non-adjustable ▶ with integrated intermediate position



00131807

Working pressure min./max.	4 bar / 8 bar
Ambient temperature min./max.	+5 °C / +60 °C
Medium temperature min./max.	+5 °C / +60 °C
Medium	Compressed air
Max. particle size	5 μm
Oil content of compressed air	0 mg/m ³ - 1 mg/m ³
Theoretical torque at	6 bar

Materials:

Housing	Aluminum, anodized
Covers	Aluminum black anodized
Base	Aluminum, black anodized
Seals	Acrylonitrile Butadiene Rubber
Axis	Steel, hardened
Rotary flange	Steel, hardened

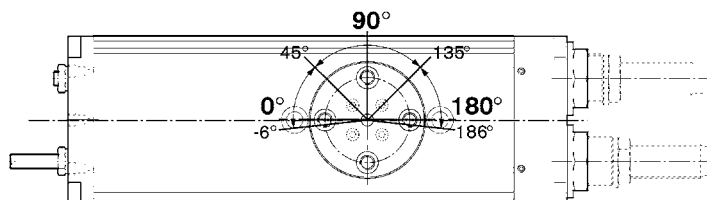
Technical Remarks

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of air pressure must remain constant during the life cycle.
- Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.
- NOTICE:For positioning without overswing in the intermediate position, it is recommended to limit the mass moment of inertia to 40% of the maximum permissible value!
- The product is a part of the EasyHandling system.

Frame size		RCM-12	RCM-16	RCM-20	RCM-25
Max. permissible axial bearing load	[N]	330	490	620	1160
Max. permissible radial bearing load	[N]	360	580	780	1480
Max. permissible mass moment of inertia	[kgcm ²]	10	80	180	450
Repetitive precision	[°]	0.05	0.05	0.05	0.05
Theoretical torque	[Nm]	0.95	1.7	3	6.5

	Frame size	Compressed air connection	angle of rotation	Swivel time min./max.	Air consumption per rotation	Weight	Part No.
			[°]	[s]	[cm ³]	[kg]	
	RCM-12	M5	0 - 180	0.3 / --	13.29	0.5	R412000399
	RCM-16			0.32 / --	22.14	0.82	R412000400
	RCM-20			0.48 / --	37.83	1.18	R412000401
	RCM-25			0.6 / --	80.72	2.23	R412000402

Setting range for end positions 0°/180° and intermediate position 90°

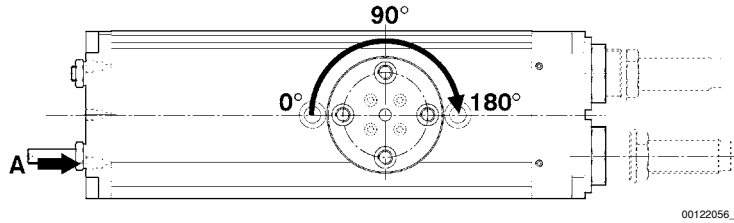


00122059_a

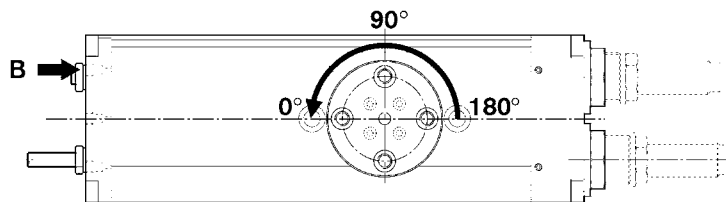
Rotary actuators → Rack-and-pinion gears

Rotary Compact Module, Series RCM-SH

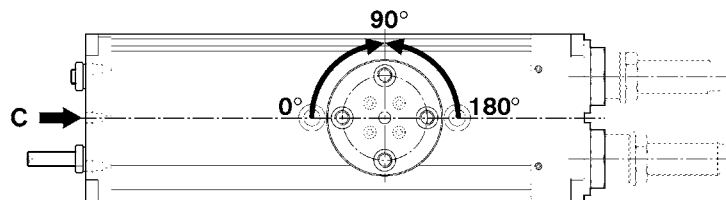
- ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack
- ▶ Easy-2-Combine-capable ▶ cushioning: hydraulic, non-adjustable ▶ with integrated intermediate position

**Movement into end position 180°**

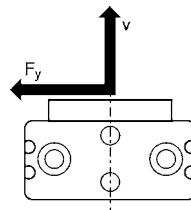
00122056_a

Movement into end position 0°

00122057_a

Movement into intermediate position 90°

00122058_a

Maximum permissible radial force F_y [N] as a function of v [mm]

00117257

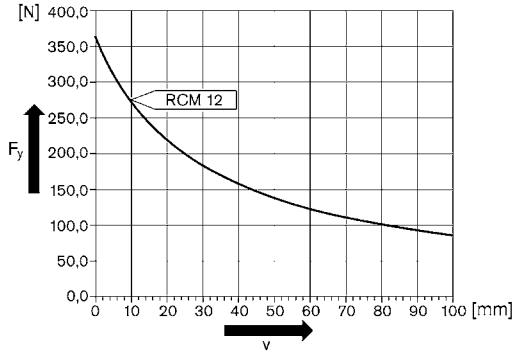
Rotary actuators → Rack-and-pinion gears

Rotary Compact Module, Series RCM-SH

- ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack
- ▶ Easy-2-Combine-capable ▶ cushioning: hydraulic, non-adjustable ▶ with integrated intermediate position

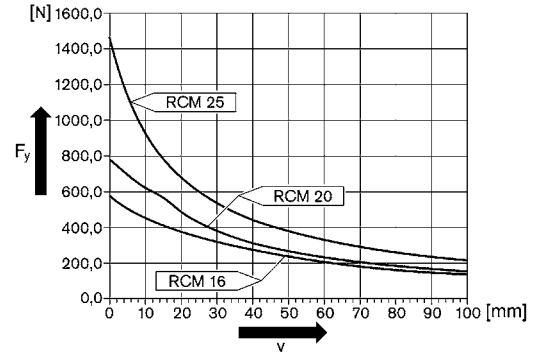


RCM 12



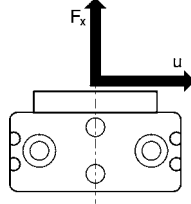
00122095_b

RCM 16 – 25



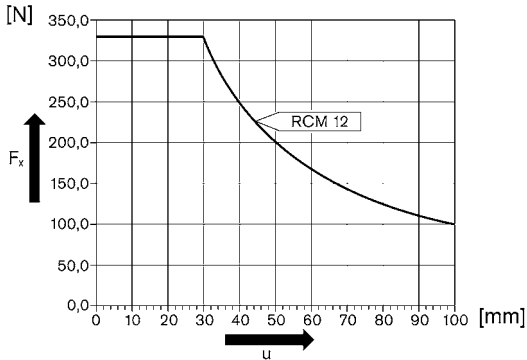
00117262_b

Maximum permissible radial force F_y [N] as a function of v [mm]



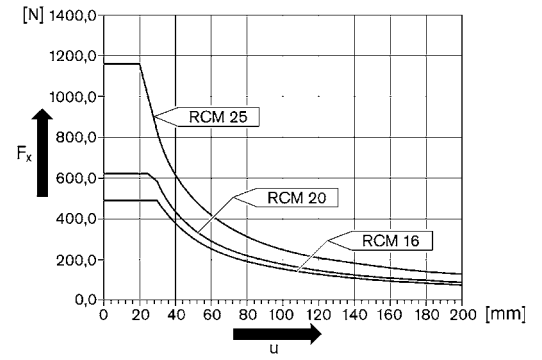
00117258

RCM 12



00125738_b

RCM 16 – 25



00117260_b

Rotary actuators → Rack-and-pinion gears

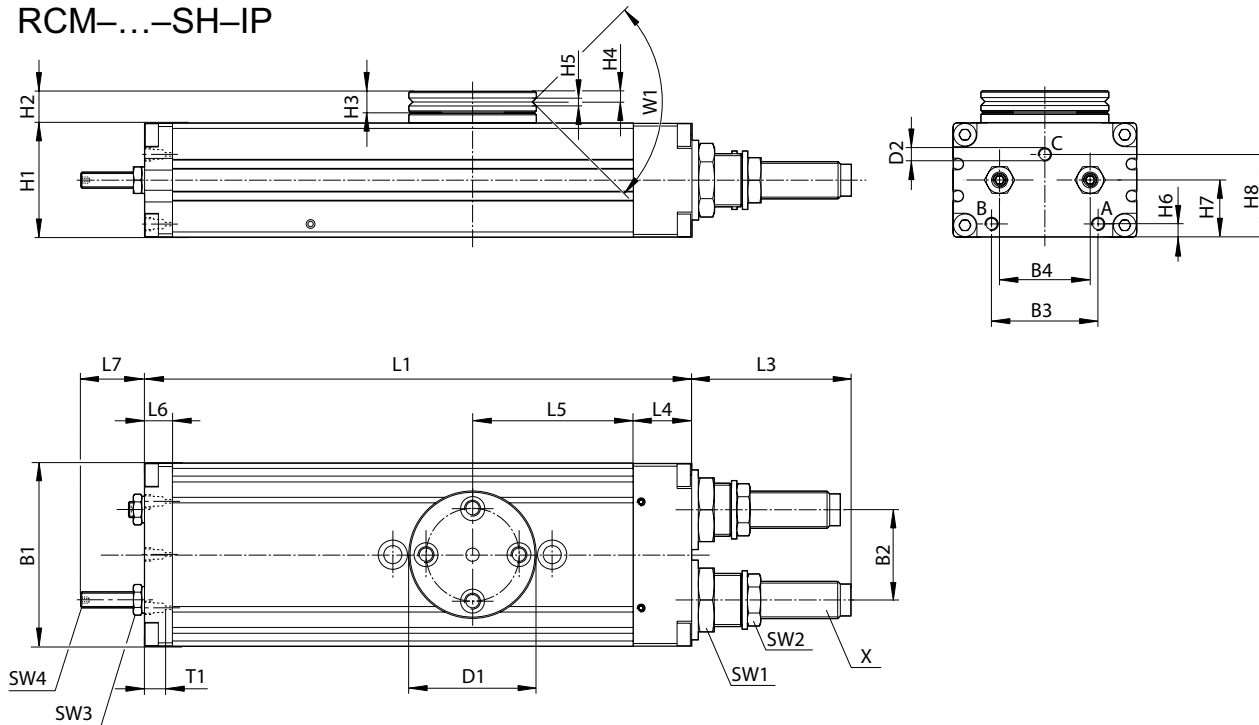
Rotary Compact Module, Series RCM-SH

- ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack
- ▶ Easy-2-Combine-capable ▶ cushioning: hydraulic, non-adjustable ▶ with integrated intermediate position



RCM-12/.../-25

RCM-...-SH-IP



T1 = depth of thread

00125730

Frame size	B1	B2	B3	B4	Ø D1	Ø D2	H1	H2	H3	H4	H5	H6	H7
RCM-12	43	18	24	18	35	M5	24	10.5	6	2.9	2.5	3.7	12.5
RCM-16	52	24	29	24	40	M5	32	10	7	3.3	2.5	5	16
RCM-20	58	30	30	30	42	M5	37	11	7	3.3	3	5.5	19
RCM-25	69	34	40	34	48	M5	43	12	8	4	3	5	21.5

Frame size	H8	L1	L3	L4	L5	L6	L7	SW1	SW2	SW3	SW4	T1	W1
RCM-12	18.1	136	33.5	14	40	8.5	17	15	11	7	2	4	90°
RCM-16	21.1	140	34	18	40	8.5	17	19	13	7	2	4	90°
RCM-20	27.1	156	48.5	19	43	8.5	22	19	15	8	2.5	4	90°
RCM-25	31.1	206	60	22	60.5	10.5	24	23	17	10	3	4	90°

Frame size	X												
RCM-12	M8x1												
RCM-16	M10x1												
RCM-20	M12x1												
RCM-25	M14x1,5												

Rotary actuators → Rack-and-pinion gears

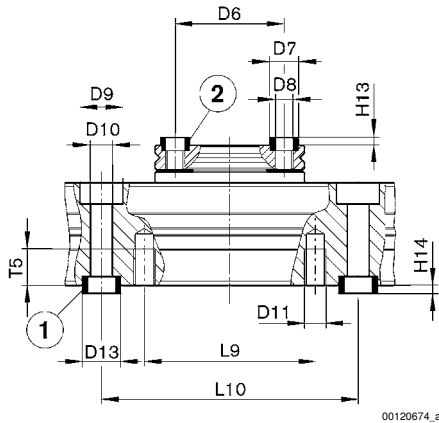
Rotary Compact Module, Series RCM-SH

- ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack
- ▶ Easy-2-Combine-capable ▶ cushioning: hydraulic, non-adjustable ▶ with integrated intermediate position

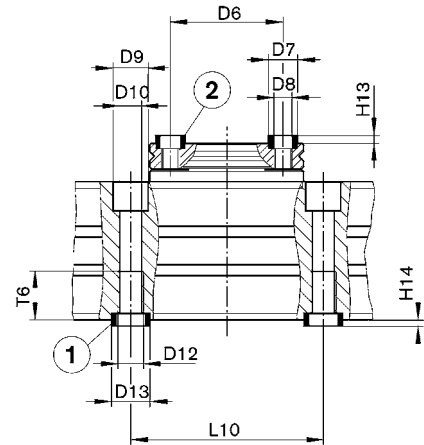


Mounting and assembly, RCM 12

RCM-16/.../-25



00120674_a



00120675_a

1) centering sleeve, included in the scope of delivery 2) centering sleeve

Frame size	Ø D6 ±0,02	Ø D7 k6	Ø D8	Ø D9	Ø D10	Ø D11	Ø D12	Ø D13 k6	H13 +0,2	H14 +0,2	L9	L10 ± 0,02	T5
RCM-12	25	7	M4	10	5.1	M5	-	9	1.6	2.1	40	60	8.5
RCM-16	30	7	M5	10	5	-	M6	9	1.6	2.1	-	60	-
RCM-20	30	7	M5	11	6.8	-	M8	12	1.6	2.1	-	60	-
RCM-25	35	9	M6	11	6.8	-	M8	12	2.1	2.1	-	60	-

Frame size	T6												
RCM-12	-												
RCM-16	11.1												
RCM-20	15.1												
RCM-25	15.1												

Rotary actuators → Rack-and-pinion gears

Rotary Compact Module, Series RCM-SE

► angle of rotation: 0 - 180 ° ► Ø12 - 25 mm ► with magnetic piston ► double piston with rack
 ► Easy-2-Combine-capable ► cushioning: elastic ► with integrated intermediate position ► with air duct



00121302

Working pressure min./max.	4 bar / 8 bar
Ambient temperature min./max.	+5 °C / +60 °C
Medium temperature min./max.	+5 °C / +60 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 mg/m ³ - 1 mg/m ³
Theoretical torque at	6 bar

Materials:	
Housing	Aluminum, anodized
Covers	Aluminum black anodized
Base	Aluminum, black anodized
Seals	Acrylonitrile Butadiene Rubber
Axis	Steel, hardened
Rotary flange	Steel, hardened

Technical Remarks

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of air pressure must remain constant during the life cycle.
- Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.
- NOTICE:For positioning without overswing in the intermediate position, it is recommended to limit the mass moment of inertia to 40% of the maximum permissible value!
- The product is a part of the EasyHandling system.

Frame size		RCM-12	RCM-16	RCM-20	RCM-25	
Number of air ducts		2	4	4	4	
Max. permissible axial bearing load	[N]	330	490	620	1160	
Max. permissible radial bearing load	[N]	290	400	560	700	
Max. permissible mass moment of inertia	[kgcm ²]	0.7	1.6	3.2	6.3	
Repetitive precision	[°]	0.2	0.2	0.2	0.2	
Theoretical torque	[Nm]	0.95	1.7	3	6.5	

	Frame size	Compressed air connection	angle of rotation	Swivel time min./max.	Air consumption per rotation	Weight	Part No.
			[°]	[s]	[cm ³]	[kg]	
	RCM-12	M5	0 - 180	0.32 / --	13.29	0.52	R412000403
	RCM-16			0.3 / --	22.14	0.85	R412000404
	RCM-20			0.35 / --	37.83	1.2	R412000405
	RCM-25			0.35 / --	80.72	2.2	R412000406

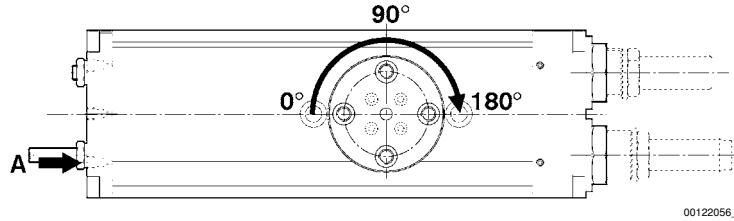
Rotary actuators → Rack-and-pinion gears

Rotary Compact Module, Series RCM-SE

- ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack
- ▶ Easy-2-Combine-capable ▶ cushioning: elastic ▶ with integrated intermediate position ▶ with air duct

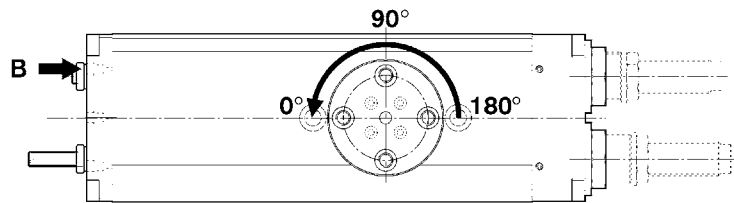


Movement into end position 180°



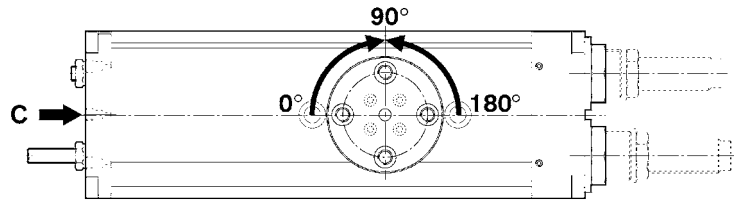
00122056_b

Movement into end position 0°



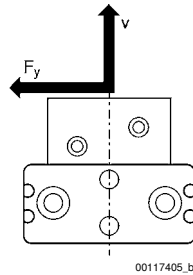
00122057_b

Movement into intermediate position 90°



00122058_b

Maximum permissible radial force F_y [N] as a function of v [mm]



00117405_b

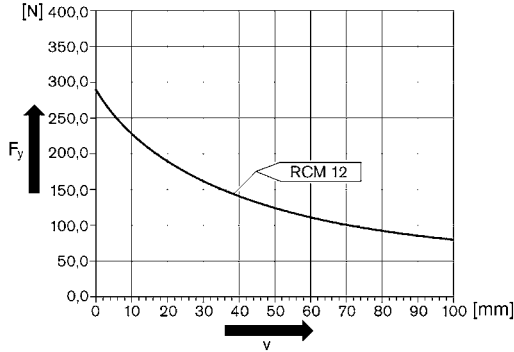
Rotary actuators → Rack-and-pinion gears

Rotary Compact Module, Series RCM-SE

- ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack
- ▶ Easy-2-Combine-capable ▶ cushioning: elastic ▶ with integrated intermediate position ▶ with air duct

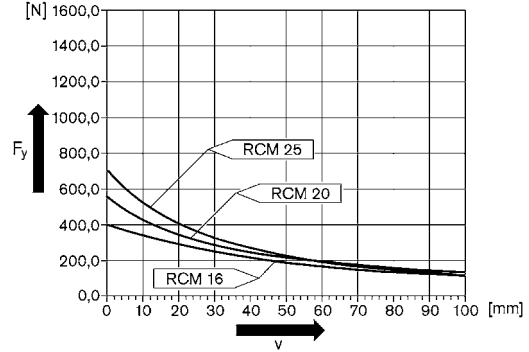


RCM 12



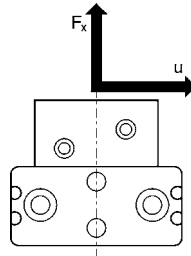
00122094_b

RCM 16 – 25



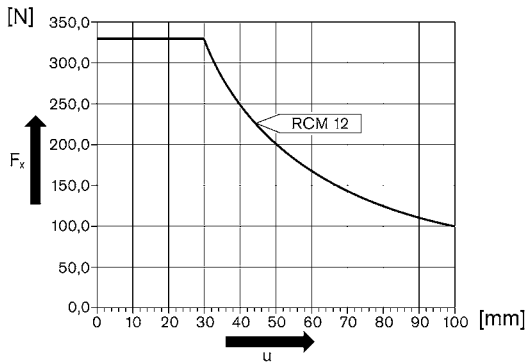
00117407_b

Maximum permissible axial force F_x [N] as a function of u [mm]



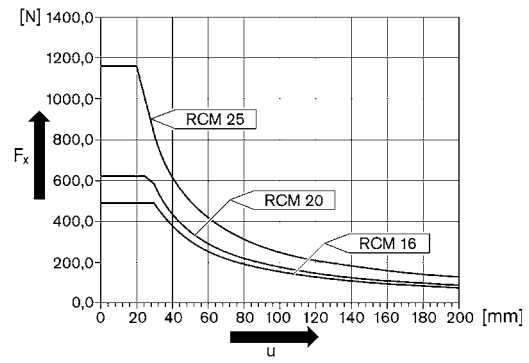
00117404_a

RCM 12



00125738_b

RCM 16 – 25



00117260_b

Rotary actuators → Rack-and-pinion gears

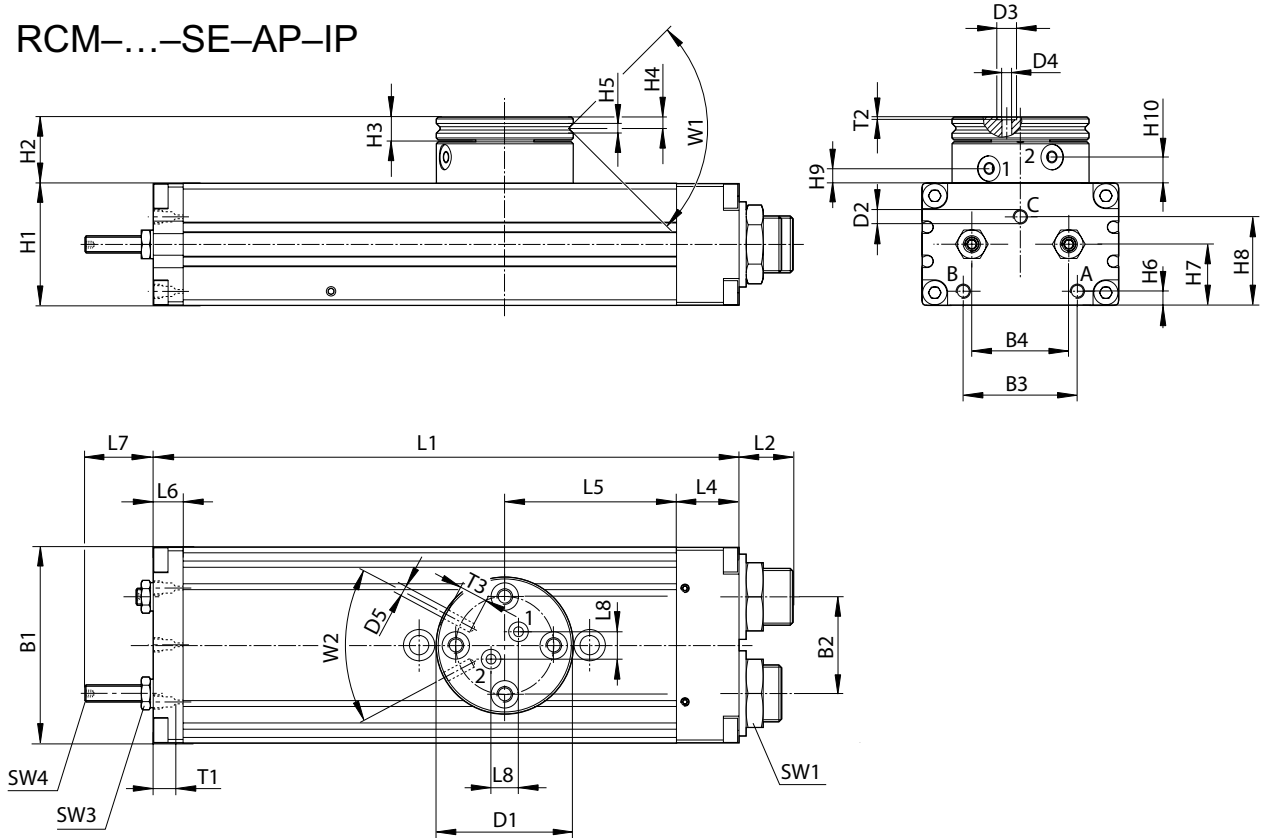
Rotary Compact Module, Series RCM-SE

- ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack
- ▶ Easy-2-Combine-capable ▶ cushioning: elastic ▶ with integrated intermediate position ▶ with air duct



RCM-12

RCM-...-SE-AP-IP



T1 = depth of thread

00125731

Frame size	B1	B2	B3	B4	Ø D1	Ø D2	Ø D3	Ø D4	Ø D5	H1	H2	H3	H4
RCM-12	43	18	24	18	35	M5	5	2.5	M3	24	17	6	2.9
Frame size	H5	H6	H7	H8	H9	H10	L1	L2	L4	L5	L6	L7	L8
RCM-12	2.5	3.7	12.5	18.1	±0,2 3.8	±0,2 6.7	136	12.5	14	40	8.5	17	7
Frame size	SW1	SW3	SW4	T1	T2	T3	W1	W2					
RCM-12	15	7	2	4	0.7	4	90°	56°					

Rotary actuators → Rack-and-pinion gears

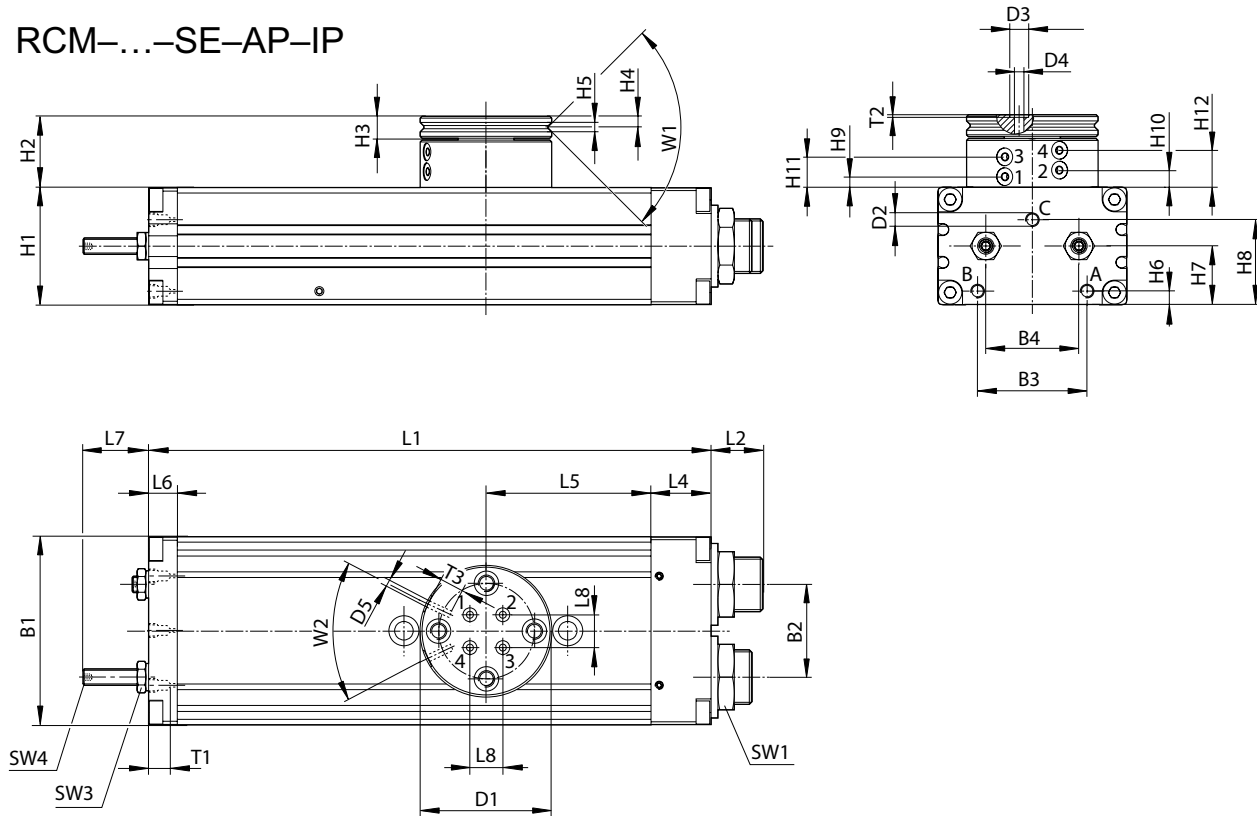
Rotary Compact Module, Series RCM-SE

- ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack
- ▶ Easy-2-Combine-capable ▶ cushioning: elastic ▶ with integrated intermediate position ▶ with air duct



RCM-16/.../-25

RCM-...-SE-AP-IP



T1 = depth of thread

00125733

Frame size	B1	B2	B3	B4	Ø D1	Ø D2	Ø D3	Ø D4	Ø D5	H1	H2	H3	H4
RCM-16	52	24	29	24	40	M5	5	2.5	M3	32	25.5	7	3.3
RCM-20	58	30	30	30	42	M5	5	2.5	M3	37	26	7	3.3
RCM-25	69	34	40	34	48	M5	5	2.5	M3	43	26.5	8	4
Frame size	H5	H6	H7	H8	H9 ±0,2	H10 ±0,2	H11 ±0,2	H12 ±0,2	L1	L2	L4	L5	L6
RCM-16	2.5	5	16	21.1	3.9	6.5	11.1	13.7	140	15.5	18	40	8.5
RCM-20	3	5.5	19	27.1	4.4	7	11.6	14.2	156	15	19	43	8.5
RCM-25	3	5	21.5	31.1	3.9	6.5	11.1	13.7	206	19	22	60.5	10.5
Frame size	L7	L8	SW1	SW3	SW4	T1	T2	T3	W1	W2			
RCM-16	17	6	19	7	2	4	0.7	4	90°	50°			
RCM-20	22	10	19	8	2.5	4	0.7	4	90°	50°			
RCM-25	24	12	23	10	3	4	0.7	4	90°	50°			

Rotary actuators → Rack-and-pinion gears

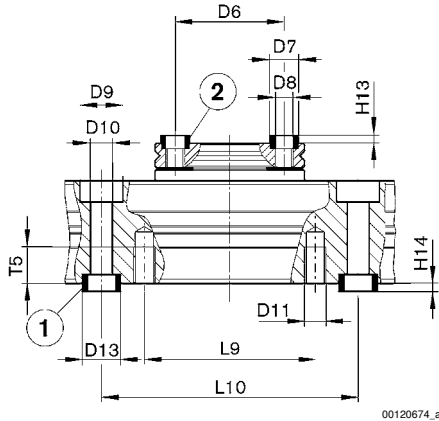
Rotary Compact Module, Series RCM-SE

- ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack
- ▶ Easy-2-Combine-capable ▶ cushioning: elastic ▶ with integrated intermediate position ▶ with air duct

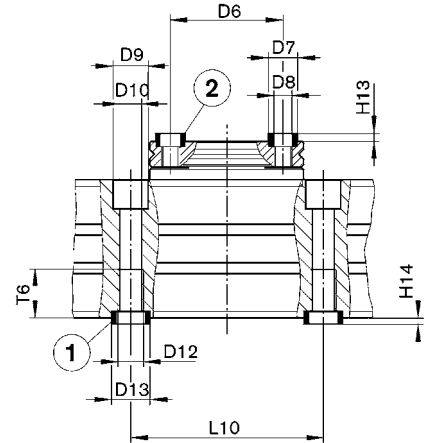


Mounting and assembly, RCM-12

RCM-16/.../-25



00120674_a



00120675_a

1) centering sleeve, included in the scope of delivery 2) centering sleeve

Frame size	Ø D6 ±0,02	Ø D7 k6	Ø D8	Ø D9	Ø D10	Ø D11	Ø D12	Ø D13 k6	H13 +0,2	H14 +0,2	L9	L10 ±0,02	T5
RCM-12	25	7	M4	10	5.1	M5	-	9	1.6	2.1	40	60	8.5
RCM-16	30	7	M5	10	5	-	M6	9	1.6	2.1	-	60	-
RCM-20	30	7	M5	11	6.8	-	M8	12	1.6	2.1	-	60	-
RCM-25	35	9	M6	11	6.8	-	M8	12	2.1	2.1	-	60	-

Frame size	T6												
RCM-12	-												
RCM-16	11.1												
RCM-20	15.1												
RCM-25	15.1												

Rotary actuators → Rack-and-pinion gears

Rotary Compact Module, Series RCM-SH

► angle of rotation: 0 - 180 ° ► Ø12 - 25 mm ► with magnetic piston ► double piston with rack
 ► Easy-2-Combine-capable ► cushioning: hydraulic, non-adjustable ► with integrated intermediate position ► with air duct



00131805

Working pressure min./max.	4 bar / 8 bar
Ambient temperature min./max.	+5 °C / +60 °C
Medium temperature min./max.	+5 °C / +60 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 mg/m ³ - 1 mg/m ³
Theoretical torque at	6 bar

Materials:

Housing	Aluminum, anodized
Covers	Aluminum black anodized
Base	Aluminum, black anodized
Seals	Acrylonitrile Butadiene Rubber
Axis	Steel, hardened
Rotary flange	Steel, hardened

Technical Remarks

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of air pressure must remain constant during the life cycle.
- Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.
- NOTICE:For positioning without overswing in the intermediate position, it is recommended to limit the mass moment of inertia to 40% of the maximum permissible value!
- The product is a part of the EasyHandling system.

Frame size		RCM-12	RCM-16	RCM-20	RCM-25	
Number of air ducts		2	4	4	4	
Max. permissible axial bearing load	[N]	330	490	620	1160	
Max. permissible radial bearing load	[N]	290	400	560	700	
Max. permissible mass moment of inertia	[kgcm ²]	10	80	180	450	
Repetitive precision	[°]	0.05	0.05	0.05	0.05	
Theoretical torque	[Nm]	0.95	1.7	3	6.5	

	Frame size	Compressed air connection	angle of rotation	Swivel time min./max.	Air consumption per rotation	Weight	Part No.
			[°]	[s]	[cm ³]	[kg]	
	RCM-12	M5	0 - 180	0.3 / --	13.29	0.56	R412000407
	RCM-16			0.32 / --	22.14	0.93	R412000408
	RCM-20			0.48 / --	37.83	1.25	R412000409
	RCM-25			0.65 / --	80.72	2.33	R412000410

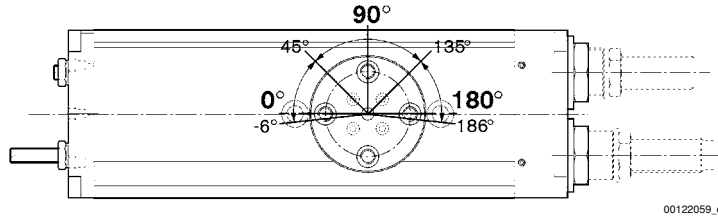
Rotary actuators → Rack-and-pinion gears

Rotary Compact Module, Series RCM-SH

- ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack
- ▶ Easy-2-Combine-capable ▶ cushioning: hydraulic, non-adjustable ▶ with integrated intermediate position ▶ with air duct

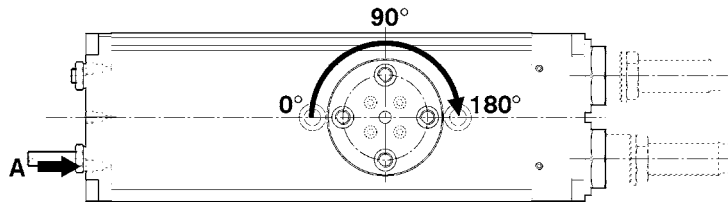


Setting range for end positions 0°/180° and intermediate position 90°



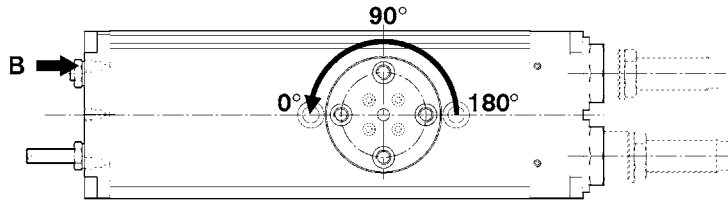
00122059_c

Movement into end position 180°



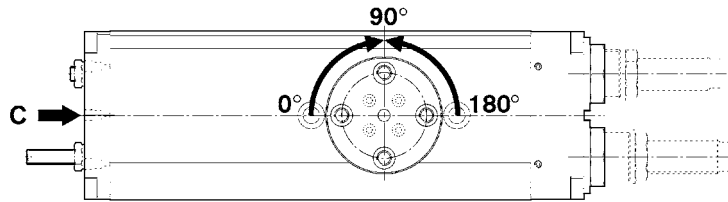
00122056_c

Movement into end position 0°



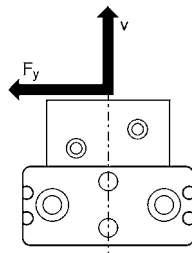
00122057_c

Movement into intermediate position 90°



00122058_c

Maximum permissible radial force F_y [N] as a function of v [mm]



00117405_c

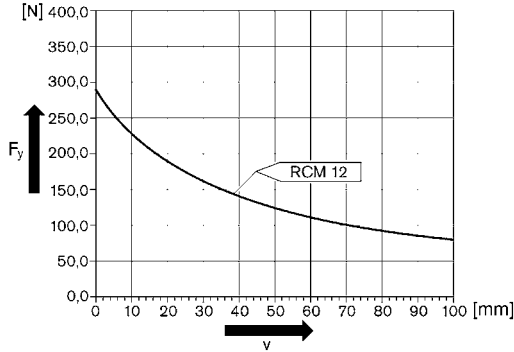
Rotary actuators → Rack-and-pinion gears

Rotary Compact Module, Series RCM-SH

- ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack
- ▶ Easy-2-Combine-capable ▶ cushioning: hydraulic, non-adjustable ▶ with integrated intermediate position ▶ with air duct

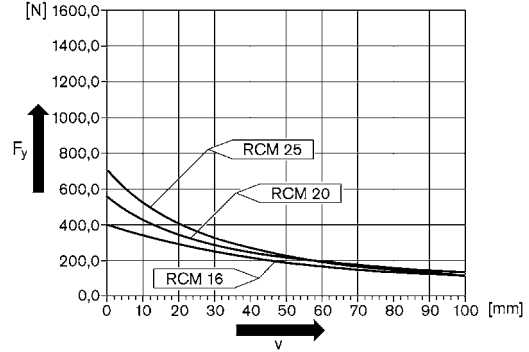


RCM 12



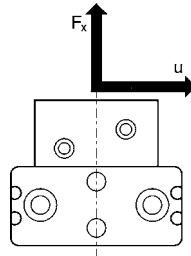
00122094_b

RCM 16 – 25



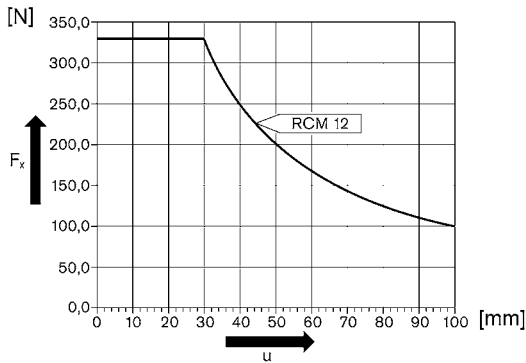
00117407_b

Maximum permissible axial force F_x [N] as a function of u [mm]



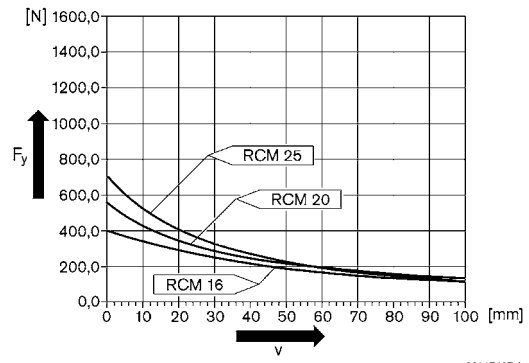
00117404_c

RCM 12



00125738_b

RCM 16 – 25



00117407_b

Rotary actuators → Rack-and-pinion gears

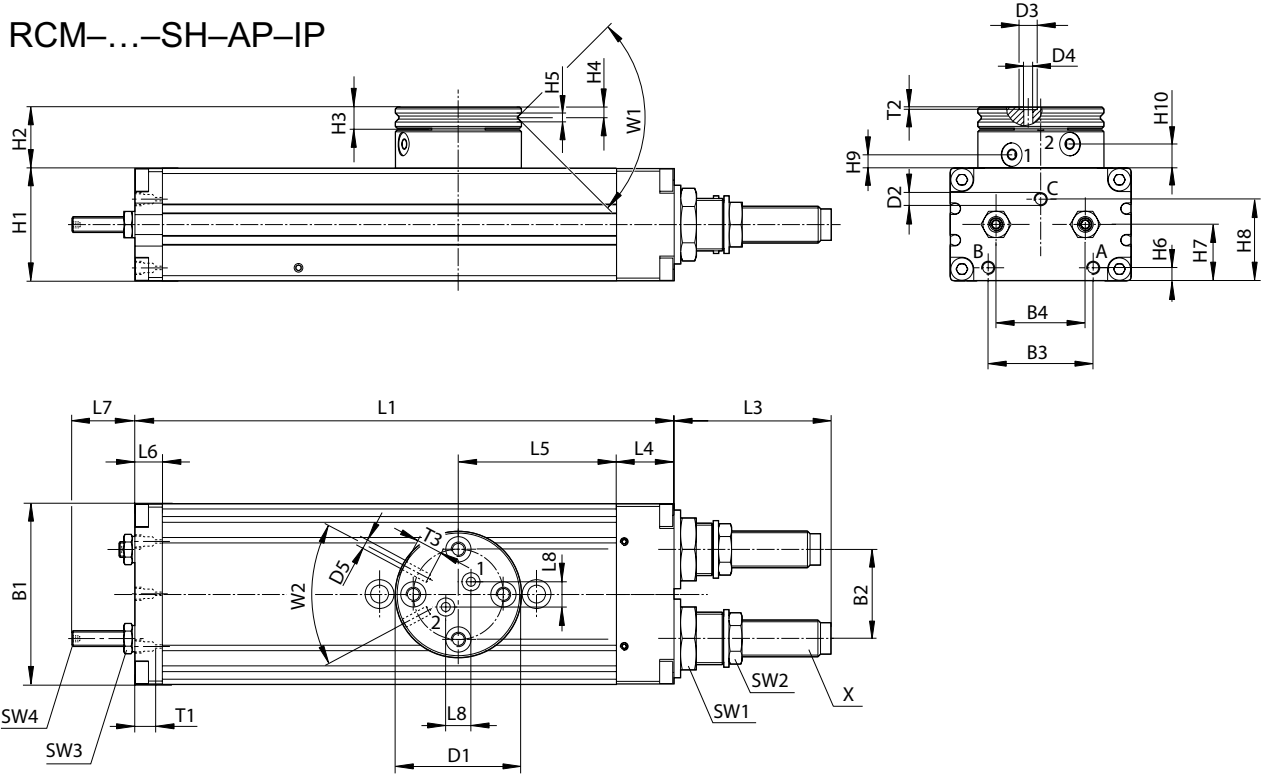
Rotary Compact Module, Series RCM-SH

- ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack
- ▶ Easy-2-Combine-capable ▶ cushioning: hydraulic, non-adjustable ▶ with integrated intermediate position ▶ with air duct



RCM-12

RCM-...-SH-AP-IP



T1 = depth of thread

00125732

Frame size	B1	B2	B3	B4	Ø D1	Ø D2	Ø D3	Ø D4	Ø D5	H1	H2	H3	H4
RCM-12	43	18	24	18	35	M5	5	2.5	M3	24	17	6	2.9
Frame size	H5	H6	H7	H8	H9	H10	L1	L3	L4	L5	L6	L7	L8
RCM-12	2.5	3.7	12.5	18.1	3.8 ±0,2	6.7 ±0,2	136	33.5	14	40	8.5	17	7
Frame size	SW1	SW2	SW3	SW4	T1	T2	T3	W1	W2	X			
RCM-12	15	11	7	2	4	0.7	4	90°	56°	M8x1			

Rotary actuators → Rack-and-pinion gears

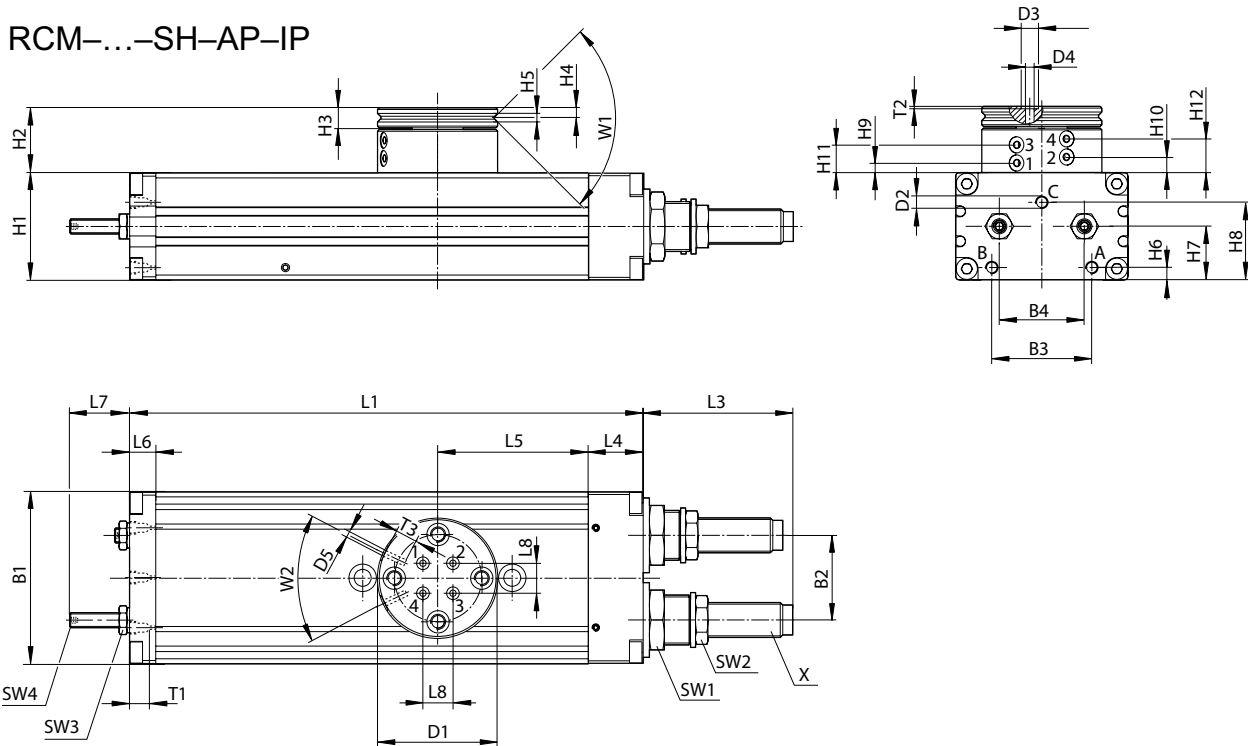
Rotary Compact Module, Series RCM-SH

- ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack
- ▶ Easy-2-Combine-capable ▶ cushioning: hydraulic, non-adjustable ▶ with integrated intermediate position ▶ with air duct



RCM-16/.../-25

RCM-...-SH-AP-IP



00125734

T1 = depth of thread

Frame size	B1	B2	B3	B4	Ø D1	Ø D2	Ø D3	Ø D4	Ø D5	H1	H2	H3	H4
RCM-16	52	24	29	24	40	M5	5	2.5	M3	32	25.5	7	3.3
RCM-20	58	30	30	30	42	M5	5	2.5	M3	37	26	7	3.3
RCM-25	69	34	40	34	48	M5	5	2.5	M3	43	26.5	8	4

Frame size	H5	H6	H7	H8	H9 ±0,2	H10 ±0,2	H11 ±0,2	H12 ±0,2	L1	L3	L4	L5	L6
RCM-16	2.5	5	16	21.1	3.9	6.5	11.1	13.7	140	34	18	40	8.5
RCM-20	3	5.5	19	27.1	4.4	7	11.6	14.2	156	48.5	19	43	8.5
RCM-25	3	5	21.5	31.1	3.9	6.5	11.1	13.7	206	60	22	60.5	10.5

Frame size	L7	L8	SW1	SW2	SW3	SW4	T1	T2	T3	W1	W2	X
RCM-16	17	6	19	13	7	2	4	0.7	4	90°	50°	M10x1
RCM-20	22	10	19	15	8	2.5	4	0.7	4	90°	50°	M12x1
RCM-25	24	12	23	17	10	3	4	0.7	4	90°	50°	M14x1,5

Rotary actuators → Rack-and-pinion gears

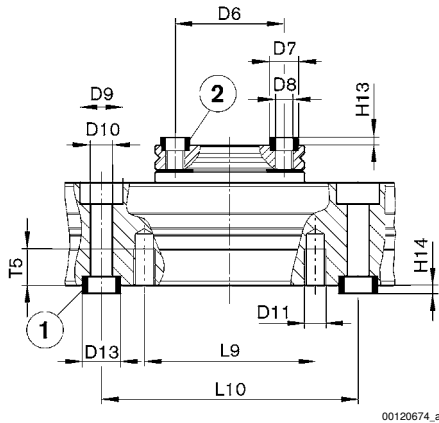
Rotary Compact Module, Series RCM-SH

- ▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack
- ▶ Easy-2-Combine-capable ▶ cushioning: hydraulic, non-adjustable ▶ with integrated intermediate position ▶ with air duct

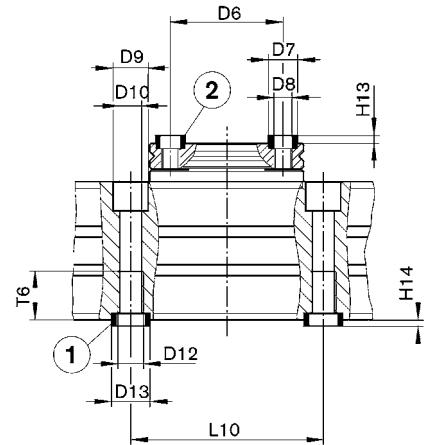


Mounting and assembly, RCM-12

RCM-16/.../-25



00120674_a



00120675_a

1) centering sleeve, included in the scope of delivery 2) centering sleeve

Frame size	Ø D6 ±0,02	Ø D7 k6	Ø D8	Ø D9	Ø D10	Ø D11	Ø D12	Ø D13 k6	H13 +0,2	H14 +0,2	L9	L10 ±0,02	T5
RCM-12	25	7	M4	10	5.1	M5	-	9	1.6	2.1	40	60	8.5
RCM-16	30	7	M5	10	5	-	M6	9	1.6	2.1	-	60	-
RCM-20	30	7	M5	11	6.8	-	M8	12	1.6	2.1	-	60	-
RCM-25	35	9	M6	11	6.8	-	M8	12	2.1	2.1	-	60	-

Frame size	T6												
RCM-12	-												
RCM-16	11.1												
RCM-20	15.1												
RCM-25	15.1												

Rotary actuators → Rack-and-pinion gears

Series RCM

Accessories

Easy-2-Combine, Connection kit

► For combination: RCM-...-AP / GSP ► with air duct



00123233

Threaded pins 2)
Centering sleeve
Subbase
Screws 1)

Steel, black oxidized
Stainless steel
Aluminum, anodized
Steel, galvanized

1) ISO 4762:2004
2) DIN EN ISO 4027:2004

Technical Remarks

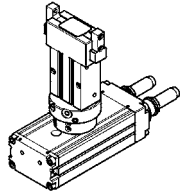
- The product is a part of the EasyHandling system.

Easy-2-Combine basic	Easy-2-Combine add-on part	Easy-2-Combine kit	Weight [kg]	Part No.
RCM-08	GSP-P-08	CK1-RO-106	0.03	R412005785
RCM-12	GSP-A-10, GSP-P-10, GSP-R-10	CK1-RO-108	0.04	R412005787
RCM-16	GSP-A-16, GSP-P-16, GSP-R-16	CK1-RO-110	0.06	R412005789
RCM-08	GSP-A-10, GSP-P-10, GSP-R-10	CK1-RO-107	0.03	R412005786
RCM-12	GSP-A-16, GSP-P-16, GSP-R-16	CK1-RO-109	0.04	R412005788
RCM-16	GSP-P-20	CK1-RO-111	0.08	R412005790
	GSP-Z-16	CK1-RO-116	0.05	R412005796
	GSP-A-25, GSP-R-25	CK1-RO-121	0.08	R412005801
RCM-20	GSP-Z-16	CK1-RO-117	0.06	R412005797
	GSP-P-20	CK1-RO-112	0.07	R412005791
	GSP-A-25, GSP-P-25, GSP-R-25	CK1-RO-113	0.07	R412005792
	GSP-A-32, GSP-R-32	CK1-RO-115	0.11	R412005794
RCM-25	GSP-Z-32	CK1-RO-118	0.1	R412005798
	GSP-P-25	CK1-RO-114	0.08	R412005793
	GSP-A-32, GSP-R-32	CK1-RO-122	0.17	R412005802
RCM-25	GSP-Z-32	CK1-RO-119	0.16	R412005799
	GSP-Z-50	CK1-RO-120	0.19	R412005800

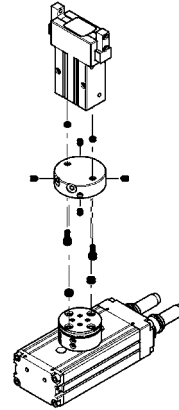
Rotary actuators → Rack-and-pinion gears

Series RCM Accessories

flange mounting: GSP-A/-P/-R



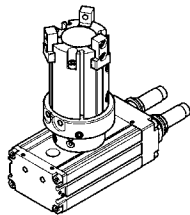
00123234



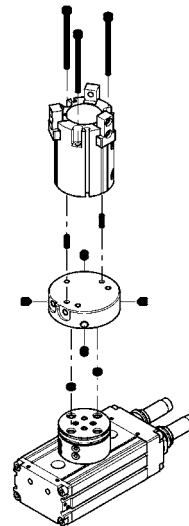
00123235

Note the positions of the air duct connections on the rotary flange (rotary compact module, RCM-...-AP series). Fittings and pipes not included in scope of delivery! Use appropriate plastic fittings, QR1 mini series and pipes, TU... series, from Chapter 12, assembly material.

flange mounting: GSP-Z



00123236



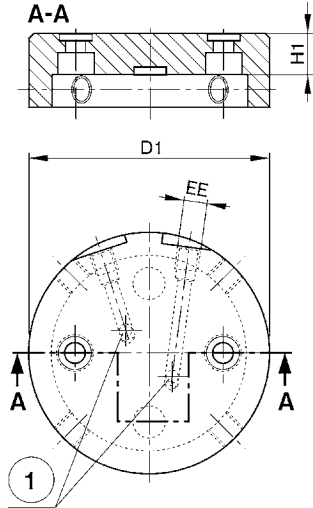
00123237

Note the positions of the air duct connections on the rotary flange (rotary compact module, RCM-...-AP series). Fittings and pipes not included in scope of delivery! Use appropriate plastic fittings, QR1 mini series and pipes, TU... series, from Chapter 12, assembly material.

Rotary actuators → Rack-and-pinion gears

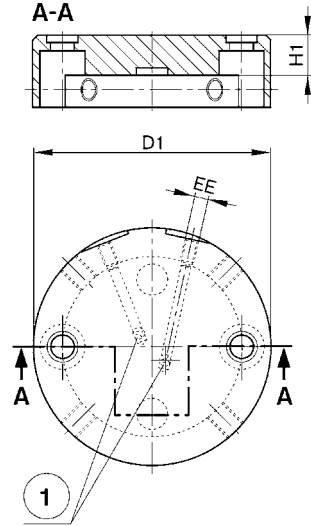
Series RCM
Accessories

CK1-RO-106 / ... / -112



00123238

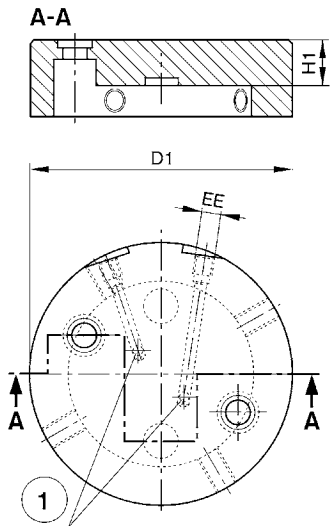
CK1-RO-113 / -114 / -121



00123239

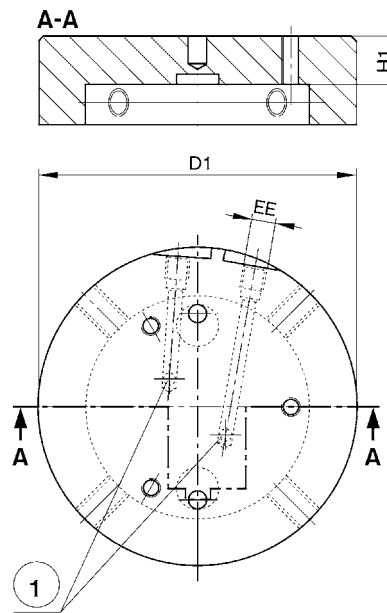
1) "air duct" connections

CK1-RO-115 / -122



00123240

CK1-RO-116 / -117 / -119



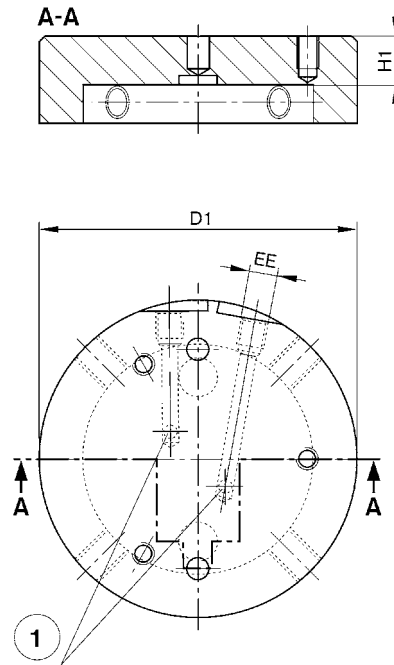
00123241

1) "air duct" connections

Rotary actuators → Rack-and-pinion gears

Series RCM
Accessories

CK1-RO-118 / -120



00123242

1) "air duct" connections

Easy-2-Combine kit	D1	EE	H1						
CK1-RO-106	35	M3	6,9						
CK1-RO-108	43	M3	6,9						
CK1-RO-110	53	M3	6,9						
CK1-RO-107	35	M3	6,9						
CK1-RO-109	43	M3	6,9						
CK1-RO-111	53	M3	8,9						
CK1-RO-116	48	M5	6,9						
CK1-RO-121	53	M3	8,9						
CK1-RO-117	52	M3	6,9						
CK1-RO-112	52	M5	8,9						
CK1-RO-113	52	M5	8,9						
CK1-RO-115	58	M5	10,9						
CK1-RO-118	58	M5	8,9						
CK1-RO-114	58	M5	8,9						
CK1-RO-122	68	M5	11,9						
CK1-RO-119	68	M5	10,3						
CK1-RO-120	70	M5	10,3						

Scope of delivery: A) connection plate B) screws C) centering sleeves D) threaded pins

Easy-2-Combine kit	A	B 1)	C	D 2)			
CK1-RO-106	1 x	2 x M3x10	4 x Ø 5	4 x M4x5			

1) tightening torque M3 = 2,2 Nm ± 10%; M4 = 3,5 Nm ± 10%; M5 = 6,0 Nm ± 10%; M6 = 10 Nm ± 10%
 2) tightening torque M4 = 1,2 Nm ± 10%; M5 = 2,8 Nm ± 10%; M6 = 4,8 Nm ± 10%

Rotary actuators → Rack-and-pinion gears

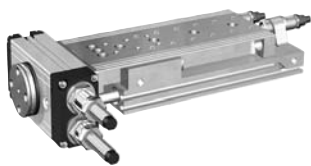
Series RCM
Accessories

Easy-2-Combine kit	A	B 1)	C	D 2)			
CK1-RO-108	1 x	2 x M3x10	2 x Ø 5; 2 x Ø 7	4 x M5x6			
CK1-RO-110	1 x	2 x M3x10	2 x Ø 5; 2 x Ø 7	4 x M5x6			
CK1-RO-107	1 x	2 x M3x10	4 x Ø 5	4 x M4x5			
CK1-RO-109	1 x	2 x M3x10	2 x Ø 5; 2 x Ø 7	4 x M5x6			
CK1-RO-111	1 x	2 x M4x12	4 x Ø 7	4 x M5x6			
CK1-RO-116	1 x	3 x M3x45	2 x Ø 7	4 x M5x6			
CK1-RO-121	1 x	2 x M5x12	4 x Ø 7	4 x M5x6			
CK1-RO-117	1 x	3 x M3x45	2 x Ø 7	4 x M6x6			
CK1-RO-112	1 x	2 x M4x12	4 x Ø 7	4 x M6x6			
CK1-RO-113	1 x	2 x M5x12	4 x Ø 7	4 x M6x6			
CK1-RO-115	1 x	2 x M6x16	2 x Ø 7; 2 x Ø 9	4 x M6x6			
CK1-RO-118	1 x	3 x M4x55	2 x Ø 7	4 x M6x6			
CK1-RO-114	1 x	2 x M5x12	2 x Ø 7; 2 x Ø 9	4 x M6x6			
CK1-RO-122	1 x	2 x M6x16	4 x Ø 9	4 x M6x10			
CK1-RO-119	1 x	3 x M4x55	2 x Ø 9	4 x M6x6			
CK1-RO-120	1 x	3 x M6x75	2 x Ø 9	4 x M6x6			

1) tightening torque M3 = 2,2 Nm ± 10%; M4 = 3,5 Nm ± 10%; M5 = 6,0 Nm ± 10%; M6 = 10 Nm ± 10%
2) tightening torque M4 = 1,2 Nm ± 10%; M5 = 2,8 Nm ± 10%; M6 = 4,8 Nm ± 10%

Easy-2-Combine, Connection kit

► For combination: MSC / RCM



Screws 1)

Steel, galvanized

1) ISO 4762:2004

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Technical Remarks

- The product is a part of the EasyHandling system.

A) product 1, B) product 2, C) screws

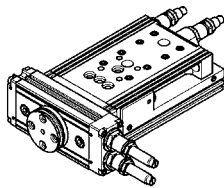
A	B	C				
RCM-06	MSC-08	2 x M3x20				
RCM-08	MSC-12	2 x M4x20				
RCM-12	MSC-16	2 x M5x30				
RCM-12	MSC-20	2 x M5x30				

Rotary actuators → Rack-and-pinion gears

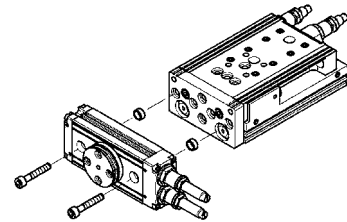
Series RCM
Accessories

A	B	C				
RCM-16	MSC-16	2 x M5x35				
RCM-16	MSC-20	2 x M5x35				
RCM-20	MSC-25	2 x M6x40				
RCM-25	MSC-25	2 x M6x45				

front mounting: transverse



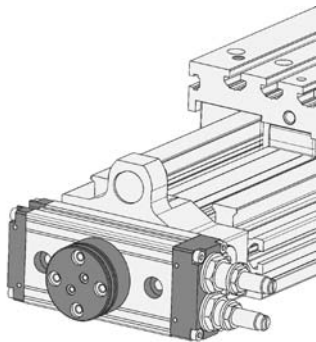
00120597



00120598

Easy-2-Combine, Connection kit

► For combination: CKP / RCM



00130810

- | | |
|------------------|-------------------|
| centering pins | Steel, galvanized |
| Centering sleeve | Stainless steel |
| Subbase | Aluminum |
| Screws | Steel, galvanized |

connection kit consisting of:
base plate, end face plate, centering pins, screws, centering rings

Technical Remarks

- The product is a part of the EasyHandling system.

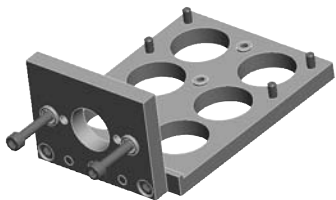
Easy-2-Combine basic	Easy-2-Combine add-on part	Weight	Part No.
		[kg]	
CKP-16	RCM-12	0.45	R039120182
	RCM-20		R039120183
	RCM-25		R039120184

Rotary actuators → Rack-and-pinion gears

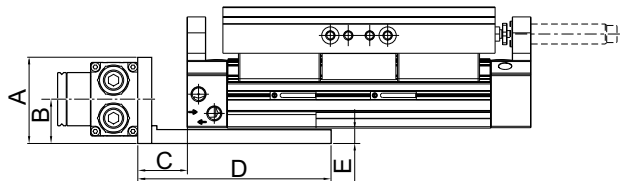
Series RCM
Accessories

Easy-2-Combine basic	Easy-2-Combine add-on part	Weight	Part No.
		[kg]	
CKP-25	RCM-12	0.5	R039120185
	RCM-20		R039120186
	RCM-25		R039120187
CKP-32	RCM-12	0.63	R039120188
	RCM-20		R039120189
	RCM-25		R039120190

end face connection of Rotary Compact Module RCM to CKP



00129077



00129086

Part No.	A	B	C	D	E								
R039120182	68	35	66	141	11								
R039120183	68	35	66	141	11								
R039120184	68	35	66	141	11								
R039120185	68	35	77	152	11								
R039120186	68	35	77	152	11								
R039120187	68	35	77	152	11								
R039120188	68	35	88	163	11								
R039120189	68	35	88	163	11								
R039120190	68	35	88	163	11								

m = mass

Centering rings



00112657

Fig. 1

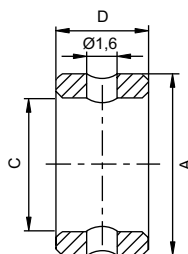
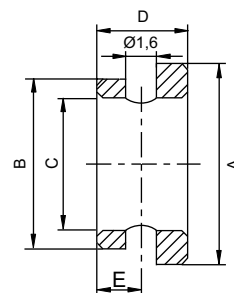


Fig. 2



00119489_a

Rotary actuators → Rack-and-pinion gears

Series RCM
Accessories

Part No.	Ø	A k6	B k6	C ±0,1	D -0,2	E +0,2	Material	Delivery quantity [Piece]	Fig.
R412000669	5	5	-	3,4	3	-	Stainless steel	6	Fig. 1
R412000668	7	7	-	5,5	3	-	Stainless steel	6	Fig. 1
R412000670	9	9	-	6,6	4	-	Stainless steel	6	Fig. 1
R412000671	12	12	-	9,0	4	-	Stainless steel	6	Fig. 1
R402003731	16	16	-	11	6	-	Stainless steel	6	Fig. 1
R412004030	5-7	7	5	3,4	3	1,5	Stainless steel	6	Fig. 2
R412004032	5-9	9	5	3,4	3,5	1,5	Stainless steel	6	Fig. 2
R412004033	7-9	9	7	5,5	3,5	1,5	Stainless steel	6	Fig. 2
R412004034	9-12	12	9	6,6	4,0	2	Stainless steel	6	Fig. 2
R402003736	12-16	16	12	9	5	2	Stainless steel	6	Fig. 2

Rotary actuators → Rack-and-pinion gears

Series RCM

Accessories




Sensor, Series ST4

► 4 mm groove ► with cable ► without wire end ferrule, tin-plated



00118444_A

Certificates	UL (Underwriters Laboratories)
Ambient temperature min./max.	-25 °C / +75 °C
Protection class	IP 65, IP 67
Switching point precision [mm]	±0,1
LED status display	Yellow
Vibration resistance	10 - 55 Hz, 1 mm
Shock resistance	30 g / 11 ms
Materials:	
Housing	Polyamide
Cable sheath	Polyurethane

	Type of contact	Cable length	DC operating voltage min./max.	Operational voltage AC min./max.	DC switching current, max.	AC switching current, max.	Voltage drop U at I _{max}	Part No.
		[m]	[V]	[V]	[A]	[A]	[V]	
	Reed	3 5	10 / 30	10 / 30	0.1	0.1	I*Rs	0830100640 0830100641
	electronic PNP	3 5	10 / 30	-	0.1	-	≤ 2,0	0830100642 0830100643
	electronic NPN	3 5	10 / 30	-	0.1	-	≤ 2,0	R412004989 R412004990

Part No.	Protective resistor for reed	Max. switching frequency	Operating current, not switched	Operating current, switched	Note
	[Ω]	[kHz]	[mA]	[mA]	
0830100640 0830100641	15	0,5	-	< 5	1); 2)
0830100642 0830100643	-	1,0	< 5	< 8	3)
R412004989 R412004990	-	1,0	< 5	< 8	3)

1) Switching capacity: 3 W / 3 VA

2) Protected against polarity reversal

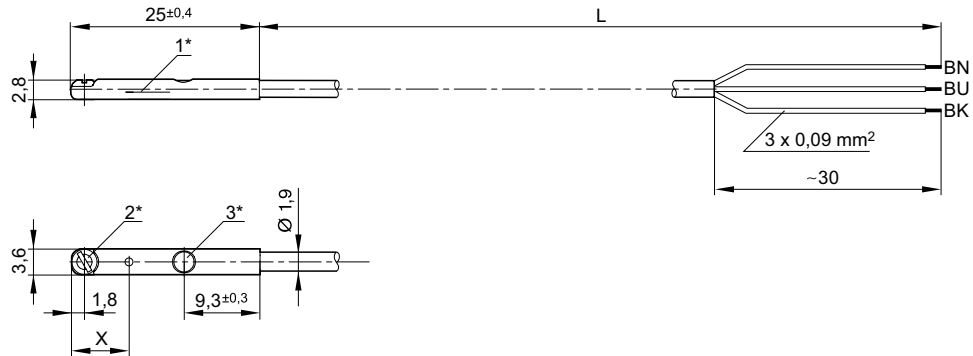
3) short circuit resistant; Protected against polarity reversal

interfaces: without wire end ferrule, tin-plated

Rotary actuators → Rack-and-pinion gears

Series RCM
Accessories

Dimensions



00123231_a

1* = switching point 2* = clamping screw 3* = LED
 L = cable length
 BN = brown, BK = black, BU = blue
 X = electronic: 6 mm, Reed: 10 mm

Sensor, Series ST4

► 4 mm groove ► with cable ► Plug, M8, 3-pin



00118444_c

Certificates	UL (Underwriters Laboratories)
Ambient temperature min./max.	-25°C / +75°C
Protection class	IP 65, IP 67
Switching point precision [mm]	±0,1
LED status display	Yellow
Vibration resistance	10 - 55 Hz, 1 mm
Shock resistance	30 g / 11 ms
Materials:	
Housing	Polyamide
Cable sheath	Polyurethane

	Type of contact	Cable length	DC operating voltage min./max.	Operational voltage AC min./max.	DC switching current, max.	AC switching current, max.	Voltage drop U at I _{max}	Part No.
		[m]	[V]	[V]	[A]	[A]	[V]	
	Reed	0.3	10 / 30	10 / 30	0.1	0.1	I*Rs	0830100440
	electronic PNP	0.3	10 / 30	-	0.1	-	≤ 2,0	0830100441
	electronic NPN	0.3	10 / 30	-	0.1	-	≤ 2,0	R412004988

Part No.	Protective resistor for reed	Max. switching frequency	Operating current, not switched	Operating current, switched	Note
	[Ω]	[kHz]	[mA]	[mA]	
0830100440	15	0,5	-	< 5	1); 2)

1) Switching capacity: 3 W / 3 VA
 2) Protected against polarity reversal
 3) short circuit resistant; Protected against polarity reversal
 interfaces: Plug; M8; 3-pin

Rotary actuators → Rack-and-pinion gears

Series RCM

Accessories

Part No.	Protective resistor for reed	Max. switching frequency	Operating current, not switched	Operating current, switched	Note
	[Ω]	[kHz]	[mA]	[mA]	
0830100441	-	1,0	< 5	< 8	3)
R412004988	-	1,0	< 5	< 8	3)

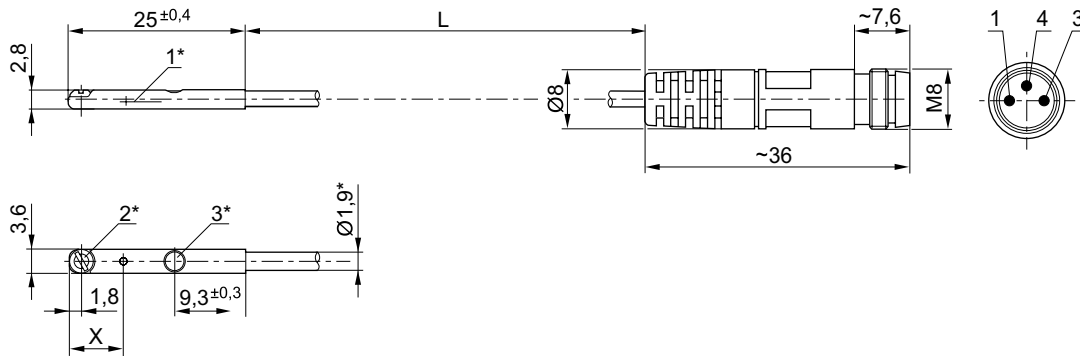
1) Switching capacity: 3 W / 3 VA

2) Protected against polarity reversal

3) short circuit resistant; Protected against polarity reversal

interfaces: Plug; M8; 3-pin

Dimensions



00123231_b

1* = switching point 2* = clamping screw 3* = LED

L = cable length

X = electronic: 6 mm, Reed: 10 mm

Pin assignment: 1 = (+), 3 = (-), 4 = (OUT), EN 60947-5-2:1998

* Ø 2,9 cable polyvinylchlorid

Sensor, Series ST4

▶ 4 mm groove ▶ with cable ▶ Plug, M8, 3-pin, with knurled screw



00118444_B

Certificates

Ambient temperature min./max.

Protection class

Switching point precision [mm]

LED status display

Vibration resistance

Shock resistance

Materials:

Housing

Cable sheath

UL (Underwriters Laboratories)

-25 °C / +75 °C

IP 65, IP 67

±0,1

Yellow

10 - 55 Hz, 1 mm

30 g / 11 ms


Polyamide

Polyurethane

	Type of contact	Cable length	DC operating voltage min./max.	Operational voltage AC min./max.	DC switching current, max.	AC switching current, max.	Voltage drop U at I _{max}	Part No.
		[m]	[V]	[V]	[A]	[A]	[V]	
	Reed	0.3 0.5	10 / 30	10 / 30	0.1	0.1	I*Rs	R412004577 R412004578

Rotary actuators → Rack-and-pinion gears

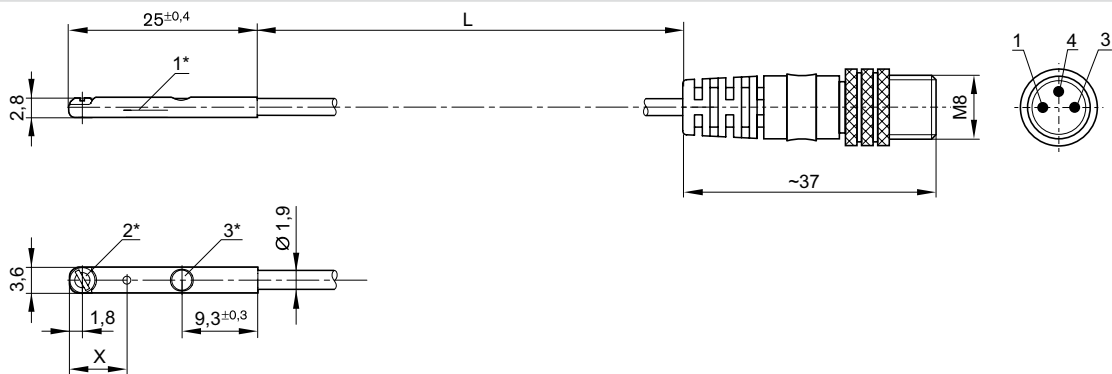
Series RCM
Accessories

	Type of contact	Cable length	DC operating voltage min./max.	Operational voltage AC min./max.	DC switching current, max.	AC switching current, max.	Voltage drop U at I _{max}	Part No.
		[m]	[V]	[V]	[A]	[A]	[V]	
	electronic PNP	0.3 0.5	10 / 30	-	0.1	-	≤ 2,0	R412004580 R412004581

Part No.	Protective resistor for reed	Max. switching frequency	Operating current, not switched	Operating current, switched	Note
	[Ω]	[kHz]	[mA]	[mA]	
R412004577 R412004578	15	0,5	-	< 5	1); 2)
R412004580 R412004581	-	1,0	< 5	< 8	3)

- 1) Switching capacity: 3 W / 3 VA
 2) Protected against polarity reversal
 3) short circuit resistant; Protected against polarity reversal
 interfaces: Plug; M8; 3-pin; with knurled screw

Dimensions



1* = switching point 2* = clamping screw 3* = LED
 L = cable length
 X = PNP: 6 mm, reed: 10 mm
 Pin assignment: 1 = (+), 3 = (-), 4 = (OUT), EN 60947-5-2:1998

00123231_c

Rotary actuators → Rack-and-pinion gears

Series RCM

Accessories

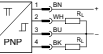
Sensors, Series ST4-2P

► 4 mm groove ► number of switching points:2 ► with cable ► without wire end ferrule, tin-plated ► electronic PNP



00133721

Ambient temperature min./max.	-20 °C / +75 °C
Protection class	IP 65, IP 67
Output signal	2 x PNP
Local power consumption	<15 mA
Repetitive precision % FSR (max. measuring range)	0,1 mT
Hysteresis	1 mT
Switching logic	NO (make contact)
Display	LED
LED status display	Yellow
Display	2 LED
Vibration resistance	10 - 55 Hz, 1 mm
Shock resistance	30 g / 11 ms
Mounting screw	with hexagon socket
Materials:	
Housing	Polyamide
Cable sheath	Polyurethane

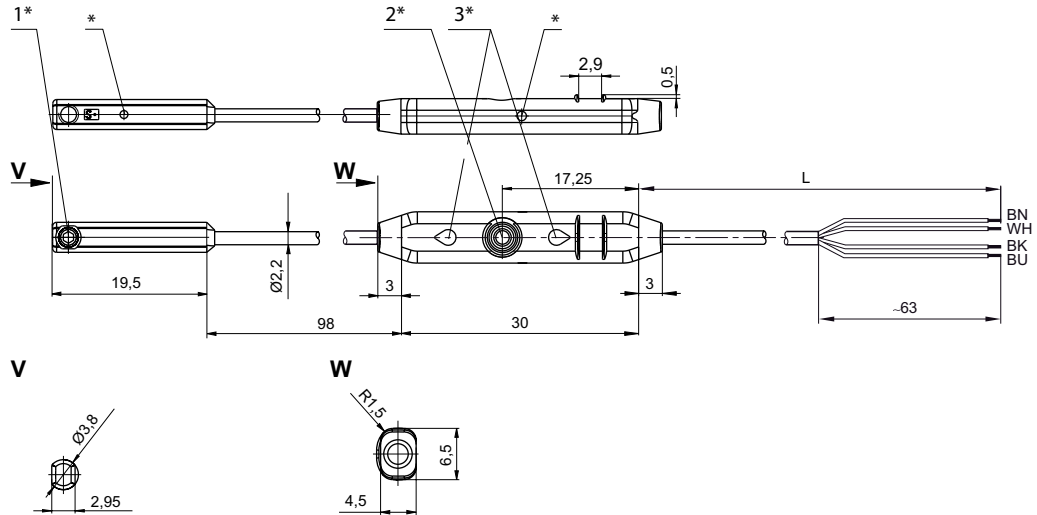
	Type of contact	Cable length	Detection range Max.	DC operating voltage min./max.	DC switching current, max.	Voltage drop U at I _{max}	Part No.
		[m]	[mm]	[V]	[A]	[V]	
	electronic PNP	2	50	12 / 30	0,15	≤ 2,2	R412010139

interfaces: without wire end ferrule, tin-plated
short circuit resistant; Protected against polarity reversal

Rotary actuators → Rack-and-pinion gears

Series RCM
Accessories

Dimensions



1* = mounting screw 2* = teach button 3* = LED
 L = cable length
 (1) BN=brown (2) WH=white (3) BU=blue (4) BK=black
 * Switching point

00133789

Sensors, Series ST4-2P

► 4 mm groove ► number of switching points:2 ► with cable ► Plug, M8x1, 4-pin, with knurled screw ► electronic PNP



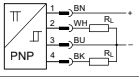
00133721

Ambient temperature min./max.	-20°C / +75°C
Protection class	IP 65, IP 67
Output signal	2 x PNP
Local power consumption	<15 mA
Repetitive precision % FSR (max. measuring range)	0,1 mT
Hysteresis	1 mT
Switching logic	NO (make contact)
Display	LED
LED status display	Yellow
Display	2 LED
Vibration resistance	10 - 55 Hz, 1 mm
Shock resistance	30 g / 11 ms
Mounting screw	with hexagon socket
Materials:	
Housing	Polyamide
Cable sheath	Polyurethane

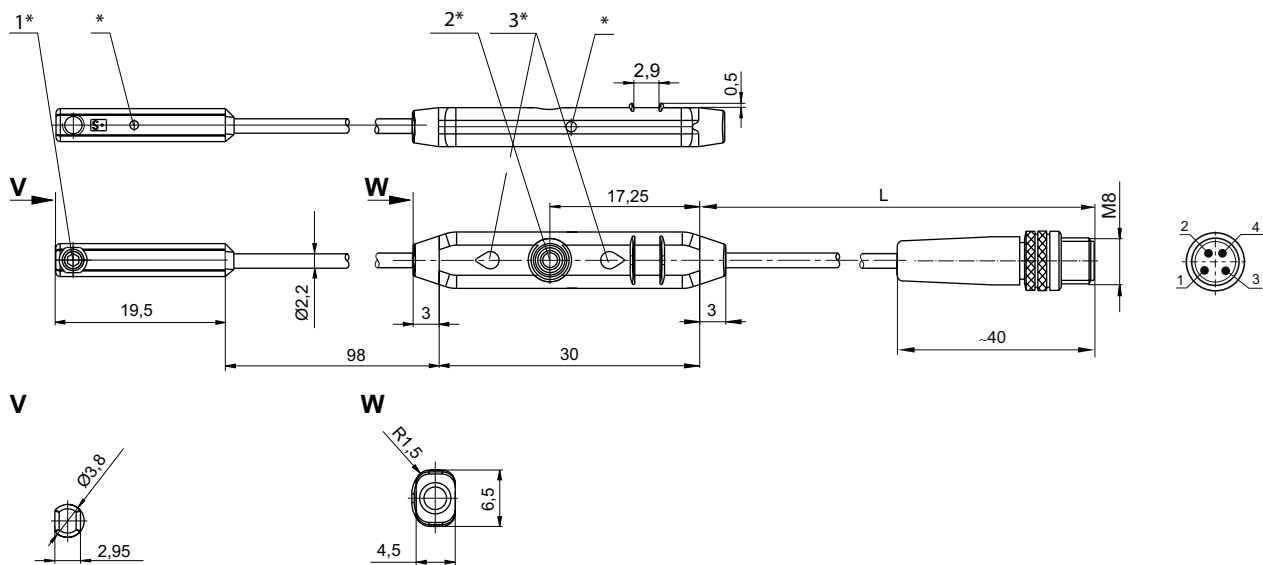
Rotary actuators → Rack-and-pinion gears

Series RCM

Accessories

	Type of contact	Cable length	Detection range Max.	DC operating voltage min./max.	Voltage drop U at I _{max}	Part No.
		[m]	[mm]	[V]	[V]	
	electronic PNP	0.3	50	12 / 30	≤ 2,2	R412010140
interfaces: Plug; M8x1; 4-pin; with knurled screw short circuit resistant; Protected against polarity reversal						

Dimensions



00133790

1* = mounting screw 2* = teach button 3* = LED
 L = cable length
 Pin assignment: 1 = (+), 2 = (OUT), 3 = (-), 4 = (OUT)
 * Switching point

Rotary actuators → Rack-and-pinion gears

Series RCM
Accessories

Industrial shock absorber, Series SA2-RC

- ▶ for RCM ▶ cushioning: self-compensating ▶ sealing for piston rod: Lip ring ▶ Mounting thread: M8x1 - M14x1,5
- ▶ Max. energy absorption/stroke: 4 - 20 Nm



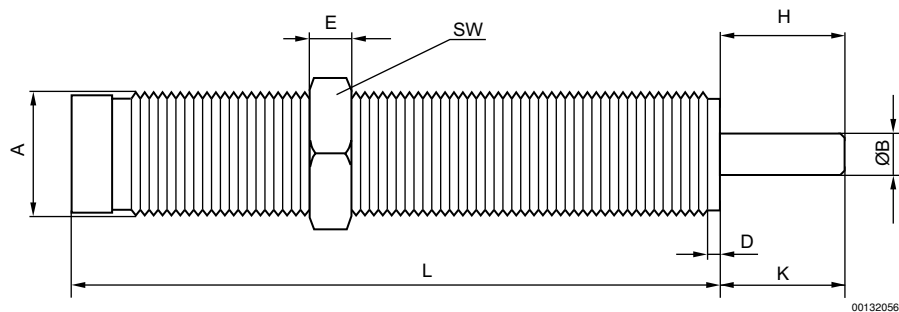
00135329

Ambient temperature min./max.	+0°C / +60°C
Medium	Oil
Mounting	Lock nut
Materials:	
Cylinder tube	Steel, bronzed
Piston rod	Stainless steel, hardened
Lock nut	Steel, bronzed

	Type	Stroke	Effective mass me min./max.	Return spring force min./max.	Max. energy ab- sorption/stroke	Max. energy ab- sorption/hour	Part No.
		[mm]	[kg]	[N]	[Nm]	[Nm/h]	
	SA2-RC	6	2.8 / 70	2.5 / 6	4	14400	R412004751
		6	6 / 280	3.5 / 8	9	21000	R412004752
		8.5	17 / 510	3.5 / 7	16	30000	R412004753
		9.5	100 / 420	23 / 35	20	40000	R412010089

Part No.	impact speed min./max.	Mounting thread	for	Weight	Delivery unit
	[m/s]			[kg]	
R412004751	-	M8x1	RCM	0.01	1
R412004752	-	M10x1		0.02	
R412004753	-- / 0.65	M12x1		0.035	
R412010089	-	M14x1,5		0.06	

Dimensions



00132056

H = stroke
A = mounting thread

Part No.	Type	Mounting thread	ØB	D	E	H	K	L	SW
R412004751	SA2-RC	M8x1	2.5	2.5	3	9	9	44	11
R412004752	SA2-RC	M10x1	3	2.5	3	9	9	49.5	13

Rotary actuators → Rack-and-pinion gears

Series RCM
Accessories

Part No.	Type	Mounting thread	ØB	D	E	H	K	L	SW		
R412004753	SA2-RC	M12x1	4	2.5	4	11	11	65	14		
R412010089	SA2-RC	M14x1,5	4	2.5	5	14	14	69	17		

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