

Rotary actuators ▶ Rack-and-pinion gears

Series RCM






Brochure



Rotary actuators ▶ Rack-and-pinion gears



Series RCM

Metric version


	<p>Rotary Compact Module, Series RCM-SE</p> <p>▶ angle of rotation: 0 - 180 ° ▶ Ø6 - 25 mm ▶ with magnetic piston ▶ double piston with rack ▶ Easy-2-Combine-capable ▶ cushioning: elastic</p>	4
	<p>Rotary Compact Module, Series RCM-SH</p> <p>▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack ▶ Easy-2-Combine-capable ▶ cushioning: hydraulic, non-adjustable</p>	9
	<p>Rotary Compact Module, Series RCM-SE</p> <p>▶ angle of rotation: 0 - 180 ° ▶ Ø8 - 25 mm ▶ with magnetic piston ▶ double piston with rack ▶ Easy-2-Combine-capable ▶ cushioning: elastic ▶ with air duct</p>	13
	<p>Rotary Compact Module, Series RCM-SH</p> <p>▶ 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</p>	19
	<p>Rotary Compact Module, Series RCM-SE</p> <p>▶ 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</p>	25
	<p>Rotary Compact Module, Series RCM-SH</p> <p>▶ 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</p>	30
	<p>Rotary Compact Module, Series RCM-SE</p> <p>▶ 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</p>	35
	<p>Rotary Compact Module, Series RCM-SH</p> <p>▶ 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</p>	41

Metric accessories






Easy-2-Combine connection kits

	<p>Easy-2-Combine, Connection kit</p> <p>▶ For combination: MSC / RCM</p>	47
	<p>Centering rings</p>	48

Sensors and sensor mountings, accessories

	<p>Sensor, Series ST4</p> <p>▶ 4 mm groove ▶ with cable ▶ open cable ends, 3-pin</p>	49
--	--	----

Rotary actuators ▶ Rack-and-pinion gears
Series RCM

	<p>Sensor, Series ST4 ▶ 4 mm groove ▶ with cable ▶ Plug, M8, 3-pin</p>	<p>50</p>
	<p>Sensor, Series ST4 ▶ 4 mm groove ▶ with cable ▶ Plug, M8, 3-pin, with knurled screw</p>	<p>52</p>
	<p>Sensors, Series ST4-2P ▶ 4 mm groove ▶ number of switching points:2 ▶ with cable ▶ without wire end ferrule, tin-plated, 4-pin ▶ electronic PNP</p>	<p>53</p>
	<p>Sensors, Series ST4-2P ▶ 4 mm groove ▶ number of switching points:2 ▶ with cable ▶ Plug, M8x1, 4-pin, with knurled screw ▶ electronic PNP</p>	<p>54</p>
<p>Industrial shock absorber</p>		
	<p>Industrial shock absorber, Series SA2-RC</p>	<p>56</p>

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.	29 psi / 116 psi
Ambient temperature min./max.	+41 °F / +140 °F
Medium temperature min./max.	+41 °F / +140 °F
Medium	Compressed air
Oil content of compressed air	0 mg/m ³ - 1 mg/m ³
Theoretical torque at	87 PSI

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 27 °F under ambient and medium temperature and may not exceed 37 °F.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

Frame size		RCM-06	RCM-08	RCM-12	RCM-16	RCM-20
Max. permissible axial bearing load	[lbf]	38.22	62.94	74.18	110.15	139.38
Max. permissible radial bearing load	[lbf]	38.22	67.44	80.93	130.38	175.34
Max. permissible mass moment of inertia	[lbf]	0.02	0.08	0.23	0.54	1.09
Repetitive precision	[°]	0.2	0.2	0.2	0.2	0.2
Theoretical torque	[in.lbs.]	0.13	0.24	0.7	1.25	2.21

Frame size		RCM-25				
Max. permissible axial bearing load	[lbf]	260.77				
Max. permissible radial bearing load	[lbf]	332.7				
Max. permissible mass moment of inertia	[lbf]	2.15				
Repetitive precision	[°]	0.2				
Theoretical torque	[in.lbs.]	4.79				

	Frame size	Compressed air connection	angle of rotation	Swivel time min./max.	Weight	Part No.
			[°]	[s]	[lbs]	
	RCM-06	M3	0 - 90	0.08 / --	0.2865	R412000357
	RCM-06	M3	0 - 180	0.12 / --	0.2865	R412000358
	RCM-08	M3	0 - 90	0.1 / --	0.3968	R412000359
	RCM-08	M3	0 - 180	0.16 / --	0.3968	R412000360
	RCM-12	M5	0 - 90	0.1 / --	0.9259	R412000361
	RCM-12	M5	0 - 180	0.16 / --	0.9259	R412000362
	RCM-16	M5	0 - 90	0.13 / --	1.54	R412000363
	RCM-16	M5	0 - 180	0.2 / --	1.54	R412000364
	RCM-20	M5	0 - 90	0.16 / --	2.01	R412000365
	RCM-20	M5	0 - 180	0.25 / --	2.01	R412000366
	RCM-25	M5	0 - 90	0.16 / --	3.81	R412000367
	RCM-25	M5	0 - 180	0.25 / --	3.81	R412000368

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

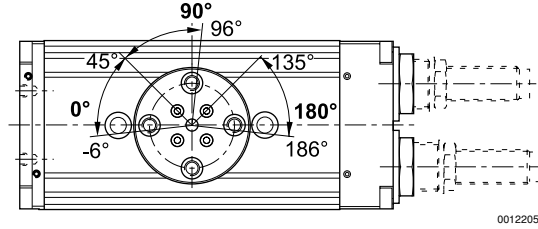
Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

Rotary actuators ▶ Rack-and-pinion gears

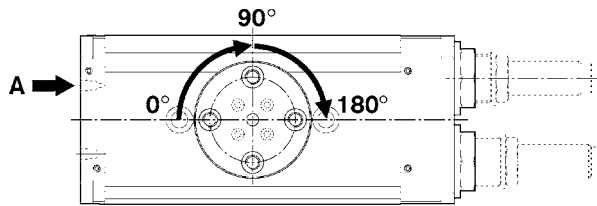
Rotary Compact Module, Series RCM-SE

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

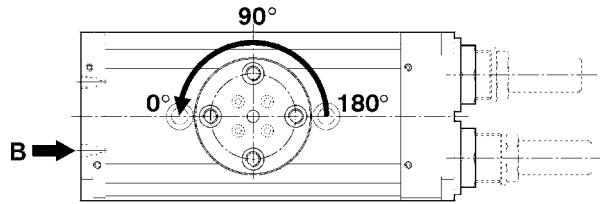
Setting range for end positions 0° / 90° / 180°



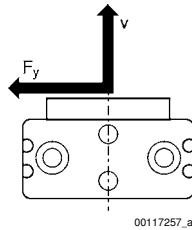
Movement into end position 90°/180°



Movement into end position 0°



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



All dimensions in mm, unless specified otherwise.

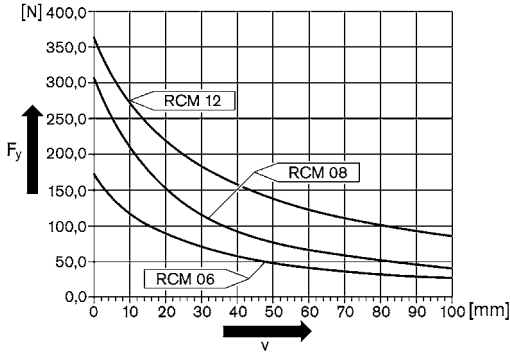
Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

Rotary Compact Module, Series RCM-SE

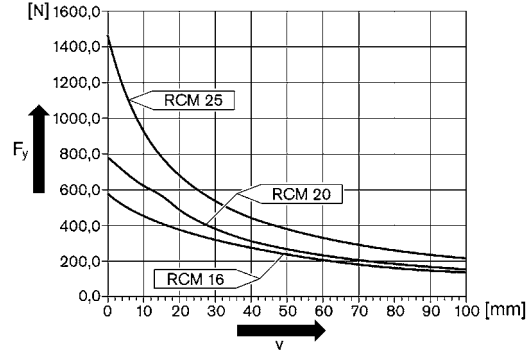
▶ angle of rotation: 0 - 180 ° ▶ Ø6 - 25 mm ▶ with magnetic piston ▶ double piston with rack ▶ Easy-2-Combine-capable ▶ cushioning: elastic

RCM 6 – 12



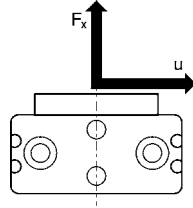
00117261_b

RCM 16 – 25



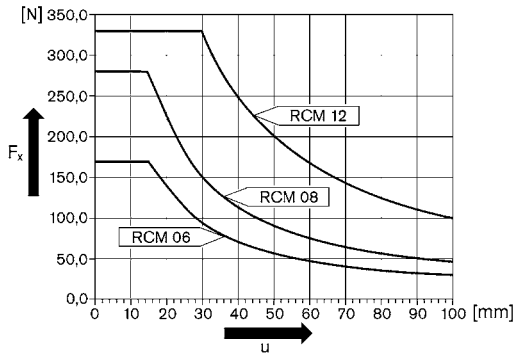
00117262_b

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



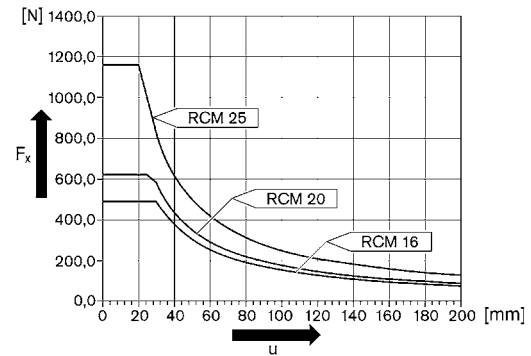
00117258_a

RCM 6 – 12



00117259_b

RCM 16 – 25



00117260_b

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

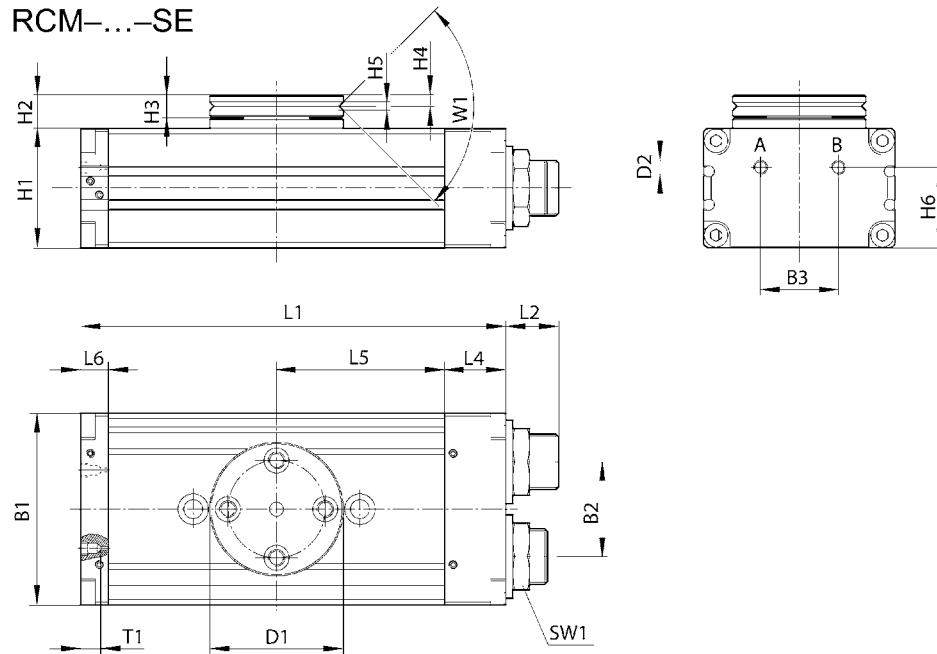
Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

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°							

All dimensions in mm, unless specified otherwise.

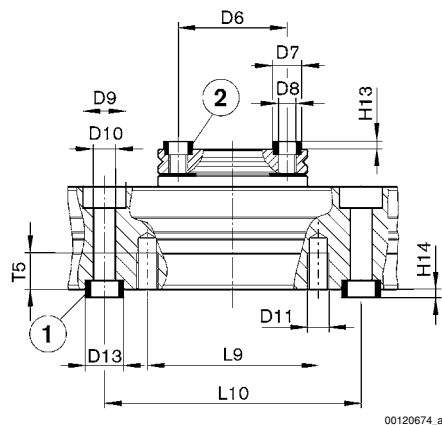
Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

Rotary Compact Module, Series RCM-SE

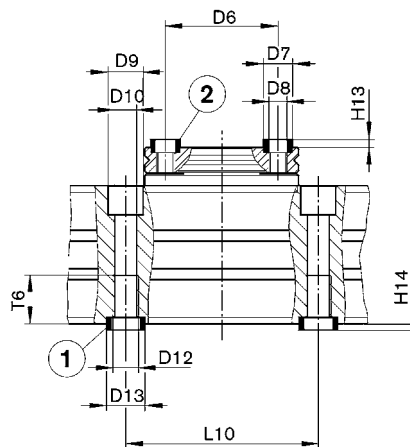
▶ angle of rotation: 0 - 180 ° ▶ Ø6 - 25 mm ▶ with magnetic piston ▶ double piston with rack ▶ Easy-2-Combine-capable ▶ cushioning: elastic

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												

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

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.	29 psi / 116 psi
Ambient temperature min./max.	+41 °F / +140 °F
Medium temperature min./max.	+41 °F / +140 °F
Medium	Compressed air
Oil content of compressed air	0 mg/m ³ - 1 mg/m ³
Theoretical torque at	87 PSI

Materials:

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

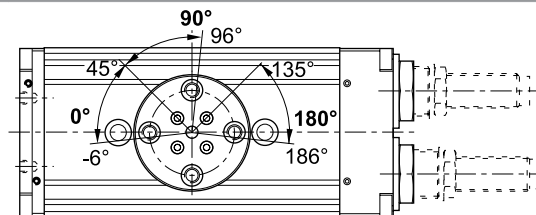
Technical Remarks

- The pressure dew point must be at least 27 °F under ambient and medium temperature and may not exceed 37 °F.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

Frame size		RCM-12	RCM-16	RCM-20	RCM-25
Max. permissible axial bearing load	[lbf]	74.18	110.15	139.38	260.77
Max. permissible radial bearing load	[lbf]	80.93	130.38	175.34	332.7
Max. permissible mass moment of inertia	[lbf]	3.41	27.33	61.5	153.77
Repetitive precision	[°]	0.05	0.05	0.05	0.05
Theoretical torque	[in.lbs.]	0.7	1.25	2.21	4.79

	Frame size	Compressed air connection	angle of rotation	Swivel time min./max.	Weight	Part No.
			[°]	[s]	[lbs]	
	RCM-12	M5	0 - 90	0.3 / --	1.01	R412000369
	RCM-12		0 - 180	0.3 / --	1.01	R412000370
	RCM-16		0 - 90	0.32 / --	1.7	R412000371
	RCM-16		0 - 180	0.32 / --	1.7	R412000372
	RCM-20		0 - 90	0.48 / --	2.12	R412000373
	RCM-20		0 - 180	0.48 / --	2.12	R412000374
	RCM-25		0 - 90	0.6 / --	4.08	R412000375
	RCM-25		0 - 180	0.6 / --	4.08	R412000376

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



00122055

All dimensions in mm, unless specified otherwise.

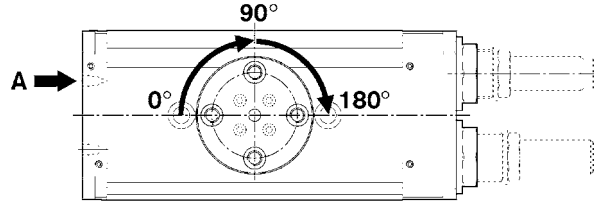
Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

Rotary Compact Module, Series RCM-SH

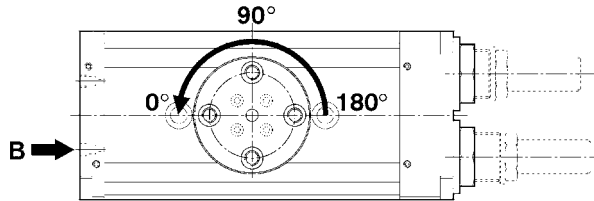
▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack ▶ Easy-2-Combine-capable ▶ cushioning: hydraulic, non-adjustable

Movement into end position 90°/180°



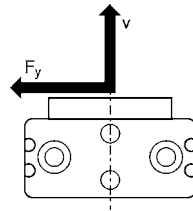
00122053_b

Movement into end position 0°



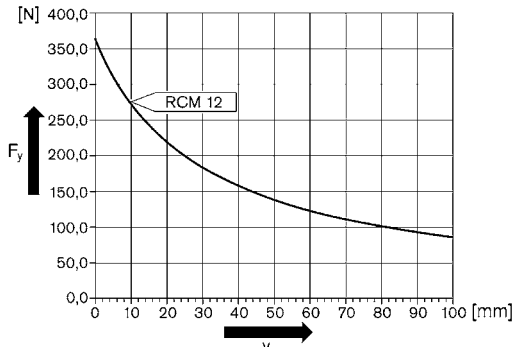
00122054_c

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



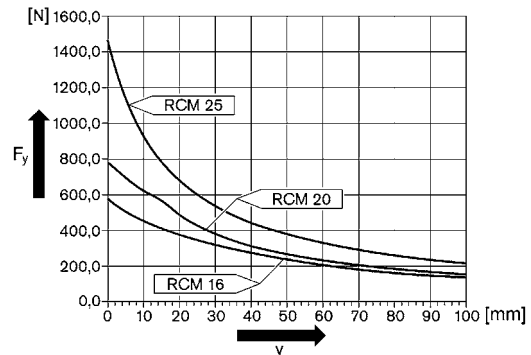
00117257_c

RCM 12



00125735_b

RCM 16 – 25



00117262_b

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

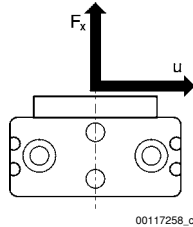
Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

Rotary actuators ▶ Rack-and-pinion gears

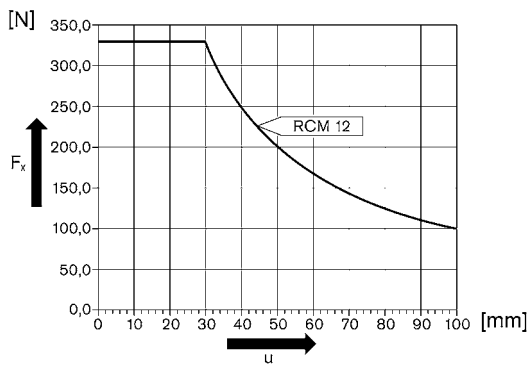
Rotary Compact Module, Series RCM-SH

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

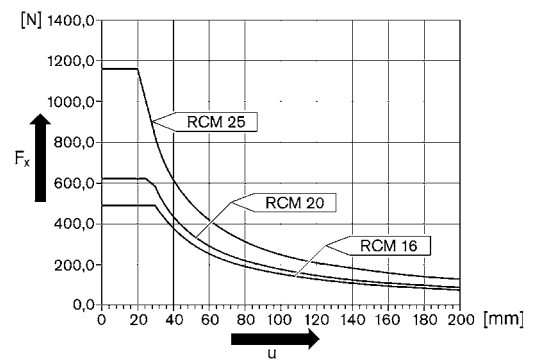
Maximum permissible axial force F_x [N] as a function of u [mm]



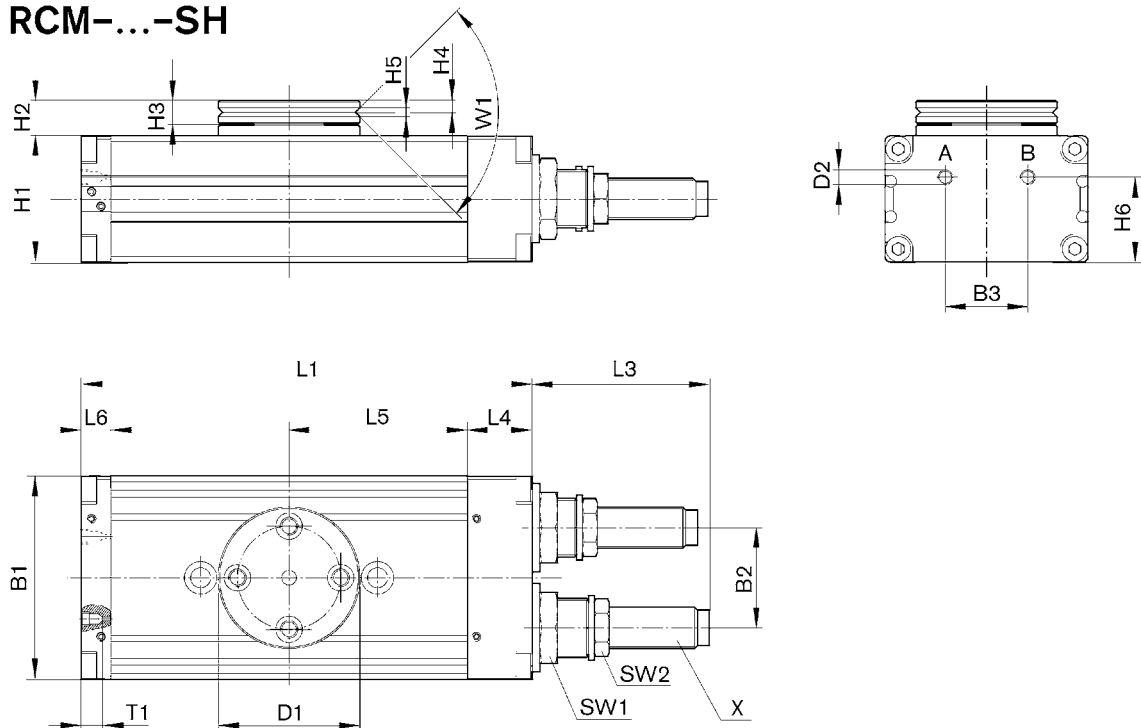
00117258_c

RCM 12


00125738_b

RCM 16 – 25


00117260_b

RCM-12/.../-25
RCM-...-SH


00125724

$T1$ = depth of thread

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

Rotary Compact Module, Series RCM-SH

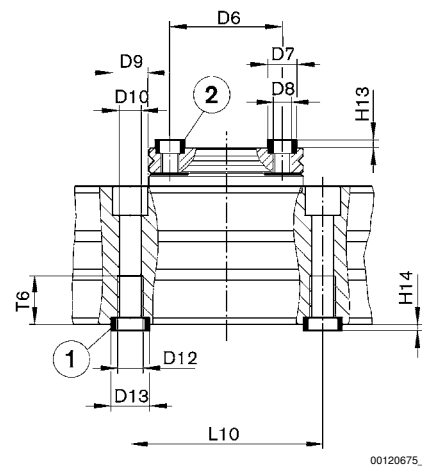
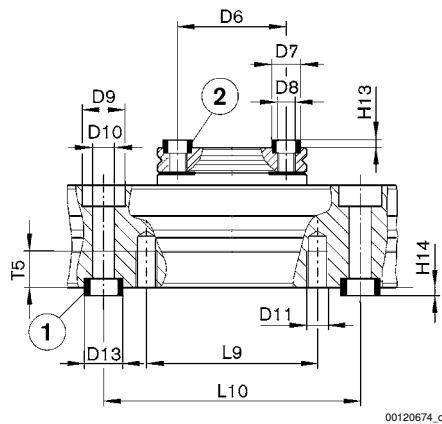
▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack ▶ Easy-2-Combine-capable ▶ cushioning: hydraulic, non-adjustable

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

Mounting and assembly, RCM-12

RCM 16 – 25



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											

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

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.	+41 °F / +140 °F
Medium temperature min./max.	+41 °F / +140 °F
Medium	Compressed air
Oil content of compressed air	0 mg/m ³ - 1 mg/m ³
Theoretical torque at	87 PSI

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 27 °F under ambient and medium temperature and may not exceed 37 °F.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

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	[lbf]	62.94	74.18	110.15	139.38	260.77
Max. permissible radial bearing load	[lbf]	47.21	65.19	89.92	125.89	157.36
Max. permissible mass moment of inertia	[lbf]	0.08	0.23	0.54	1.09	2.15
Repetitive precision	[°]	0.2	0.2	0.2	0.2	0.2
Theoretical torque	[in.lbs.]	0.24	0.7	1.25	2.21	4.79

	Frame size	Compressed air connection	angle of rotation	Swivel time min./max.	Working pressure min./max.	Weight	Part No.
			[°]	[s]	[psi]	[lbs]	
	RCM-08	M3	0 - 90	0.2 / --	51 / 116	0.4188	R412000377
	RCM-08	M3	0 - 180	0.28 / --	51 / 116	0.4188	R412000378
	RCM-12	M5	0 - 90	0.2 / --	37 / 116	1.01	R412000379
	RCM-12	M5	0 - 180	0.28 / --	37 / 116	1.01	R412000380
	RCM-16	M5	0 - 90	0.2 / --	29 / 116	1.68	R412000381
	RCM-16	M5	0 - 180	0.25 / --	29 / 116	1.68	R412000382
	RCM-20	M5	0 - 90	0.22 / --	29 / 116	2.18	R412000383
	RCM-20	M5	0 - 180	0.3 / --	29 / 116	2.18	R412000384
	RCM-25	M5	0 - 90	0.22 / --	29 / 116	4.03	R412000385
	RCM-25	M5	0 - 180	0.3 / --	29 / 116	4.03	R412000386

All dimensions in mm, unless specified otherwise.

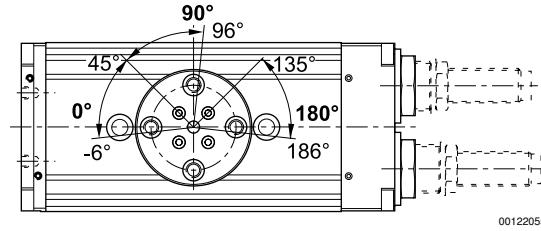
Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

Rotary Compact Module, Series RCM-SE

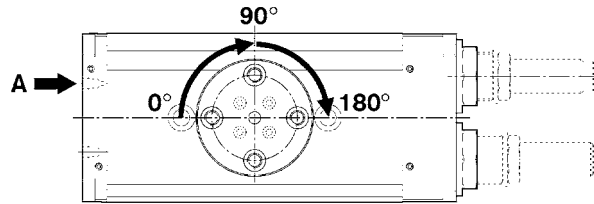
▶ angle of rotation: 0 - 180 ° ▶ Ø8 - 25 mm ▶ with magnetic piston ▶ double piston with rack ▶ Easy-2-Combine-capable ▶ cushioning: elastic ▶ with air duct

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



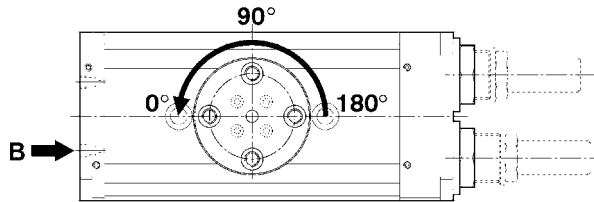
00122055

Movement into end position 90°/180°



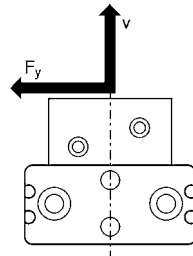
00122053_a

Movement into end position 0°



00122054_b

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



00117405

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

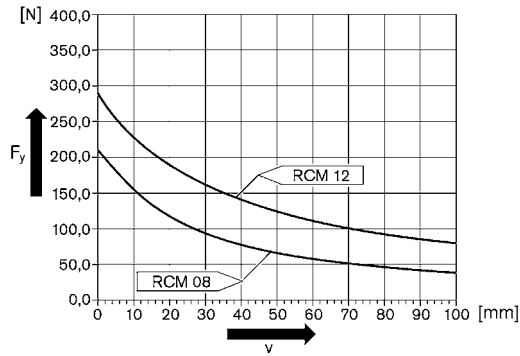
Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

Rotary actuators ▶ Rack-and-pinion gears

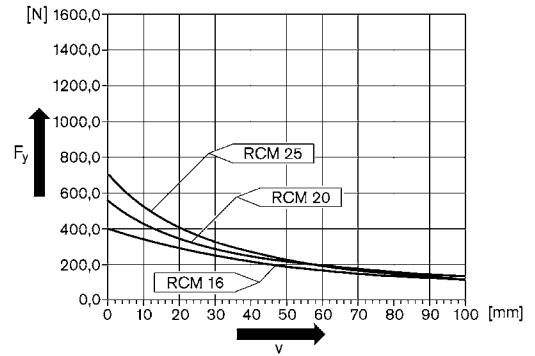
Rotary Compact Module, Series RCM-SE

▶ 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 16 – 25**

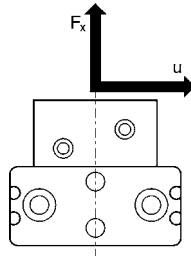


00117406_b



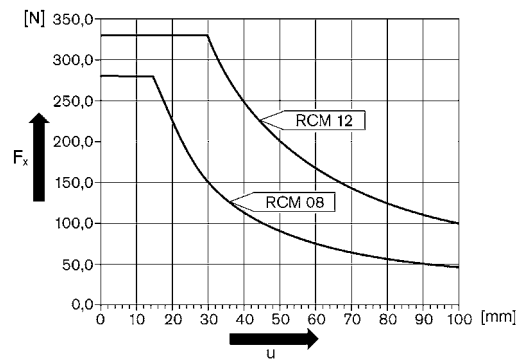
00117407_b

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

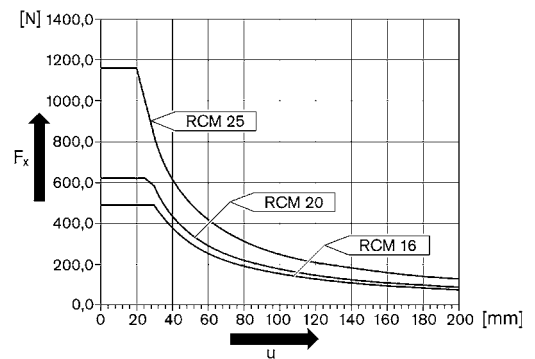


00117404

RCM 8 – 12 | **RCM 16 – 25**



00122092_b



00117260_b

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

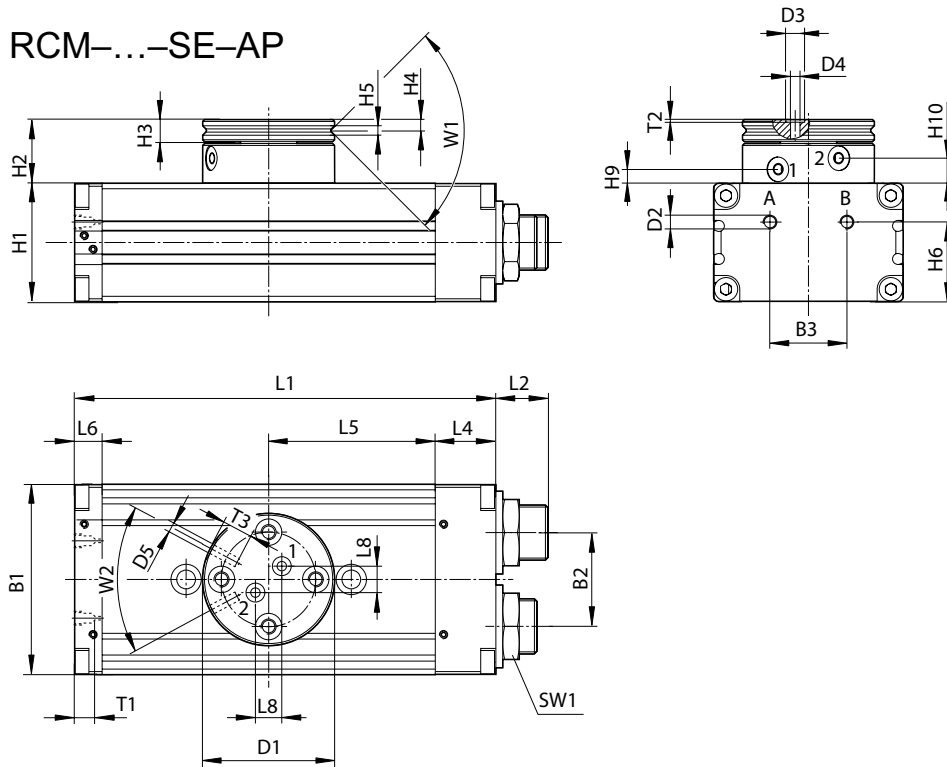
Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

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



T1 = depth of thread

00125725

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°											

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

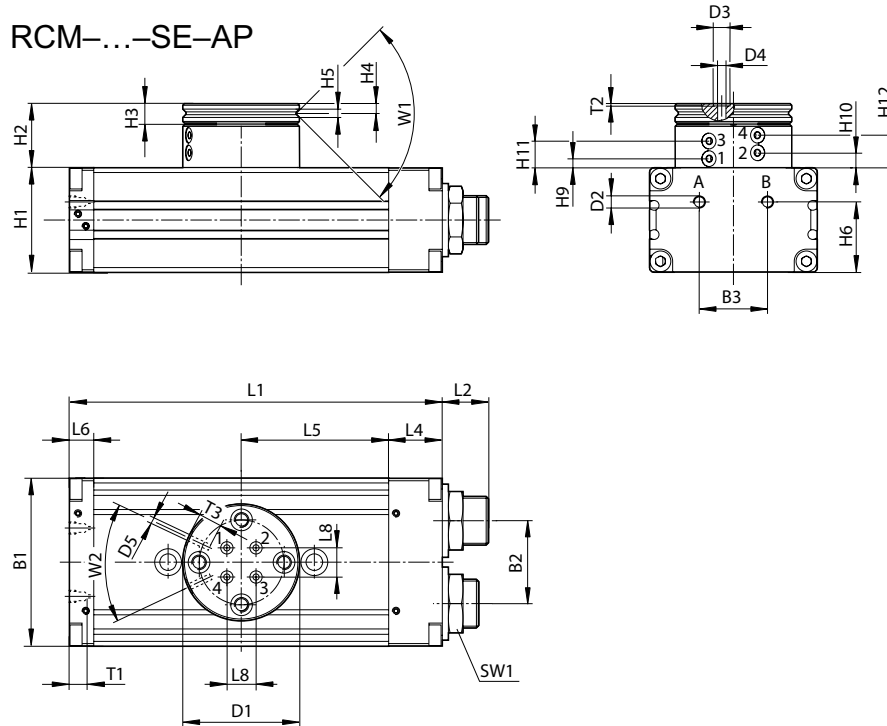
Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

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°									

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

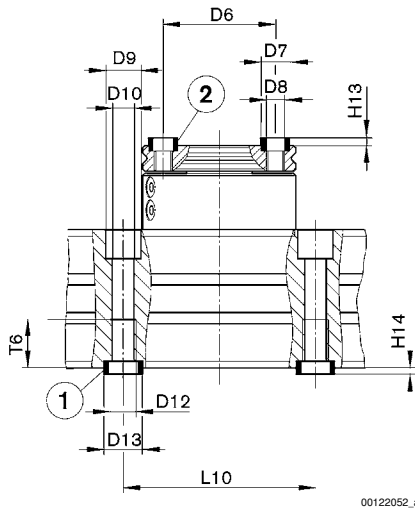
Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

Rotary Compact Module, Series RCM-SE

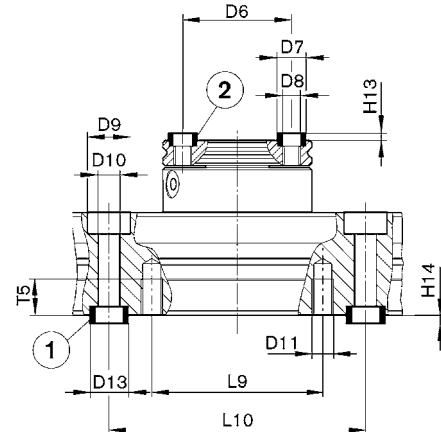
▶ angle of rotation: 0 - 180 ° ▶ Ø8 - 25 mm ▶ with magnetic piston ▶ double piston with rack ▶ Easy-2-Combine-capable ▶ cushioning: elastic ▶ with air duct

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												

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

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.	+41 °F / +140 °F
Medium temperature min./max.	+41 °F / +140 °F
Medium	Compressed air
Oil content of compressed air	0 mg/m ³ - 1 mg/m ³
Theoretical torque at	87 PSI

Materials:

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

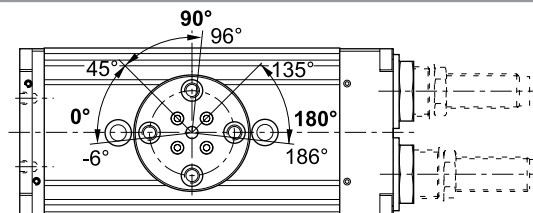
Technical Remarks

- The pressure dew point must be at least 27 °F under ambient and medium temperature and may not exceed 37 °F.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

Frame size		RCM-12	RCM-16	RCM-20	RCM-25
Number of air ducts		2	4	4	4
Max. permissible axial bearing load	[lbf]	74.18	110.15	139.38	260.77
Max. permissible radial bearing load	[lbf]	65.19	89.92	125.89	157.36
Max. permissible mass moment of inertia	[lbf]	3.41	27.33	61.5	153.77
Repetitive precision	[°]	0.05	0.05	0.05	0.05
Theoretical torque	[in.lbs.]	0.7	1.25	2.21	4.79

	Frame size	Compressed air connection	angle of rotation	Swivel time min./max.	Working pressure min./max.	Weight	Part No.
			[°]	[s]	[psi]	[lbs]	
	RCM-12	M5	0 - 90	0.3 / --	37 / 116	1.1	R412000387
	RCM-12		0 - 180	0.3 / --	37 / 116	1.1	R412000388
	RCM-16		0 - 90	0.32 / --	29 / 116	1.85	R412000389
	RCM-16		0 - 180	0.32 / --	29 / 116	1.85	R412000390
	RCM-20		0 - 90	0.48 / --	29 / 116	2.29	R412000391
	RCM-20		0 - 180	0.48 / --	29 / 116	2.29	R412000392
	RCM-25		0 - 90	0.6 / --	29 / 116	4.3	R412000393
	RCM-25		0 - 180	0.6 / --	29 / 116	4.3	R412000394

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



00122055

All dimensions in mm, unless specified otherwise.

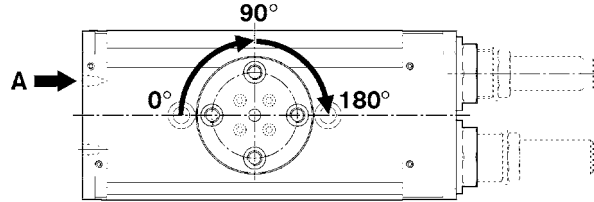
Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

Rotary Compact Module, Series RCM-SH

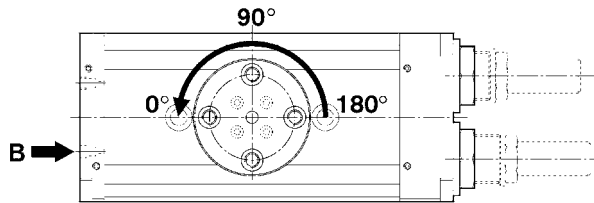
▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack ▶ Easy-2-Combine-capable ▶ cushioning: hydraulic, non-adjustable ▶ with air duct

Movement into end position 90°/180°



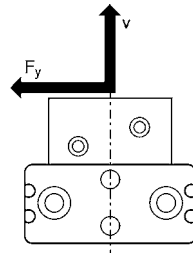
00122053_c

Movement into end position 0°



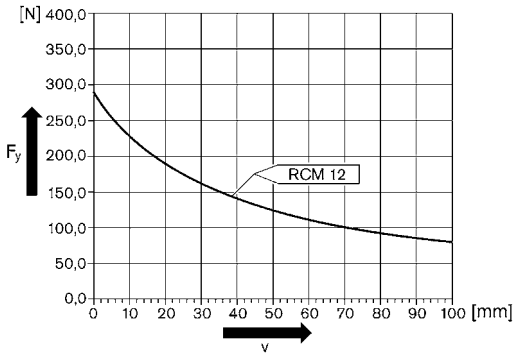
00122054

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



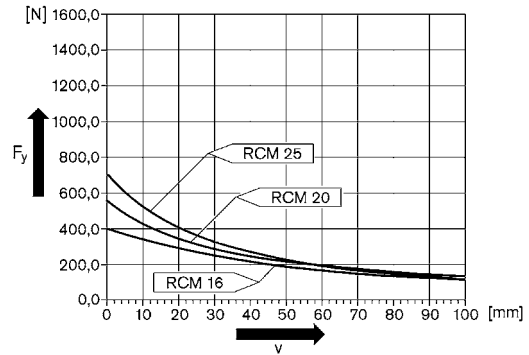
00117405_a

RCM-12



00125737_b

RCM 16 – 25



00117407_b

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

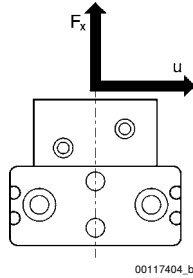
Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

Rotary actuators ▶ Rack-and-pinion gears

Rotary Compact Module, Series RCM-SH

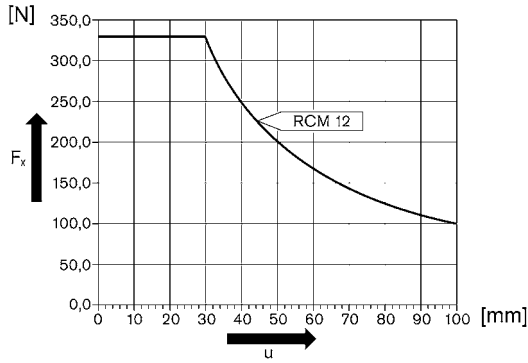
▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack ▶ Easy-2-Combine-capable ▶ cushioning: hydraulic, non-adjustable ▶ with air duct

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



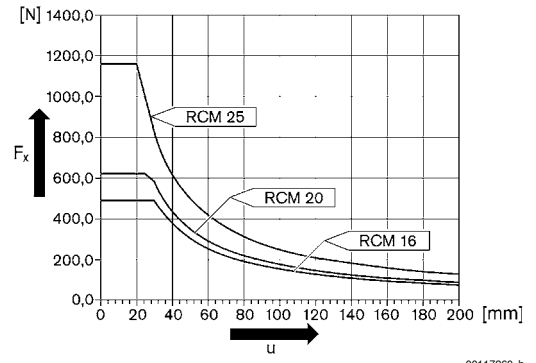
00117404_b

RCM-12



00125738_b

RCM 16 – 25



00117260_b

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

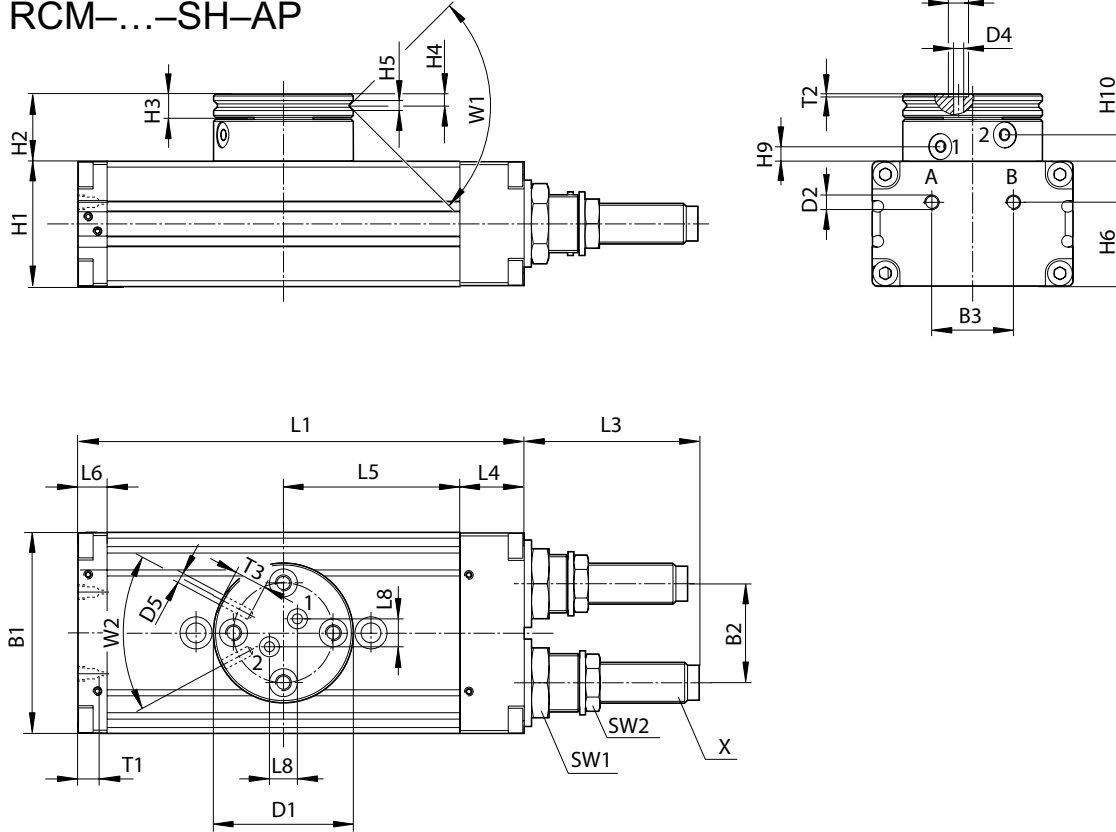
Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

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



T1 = depth of thread

00125726

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									

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

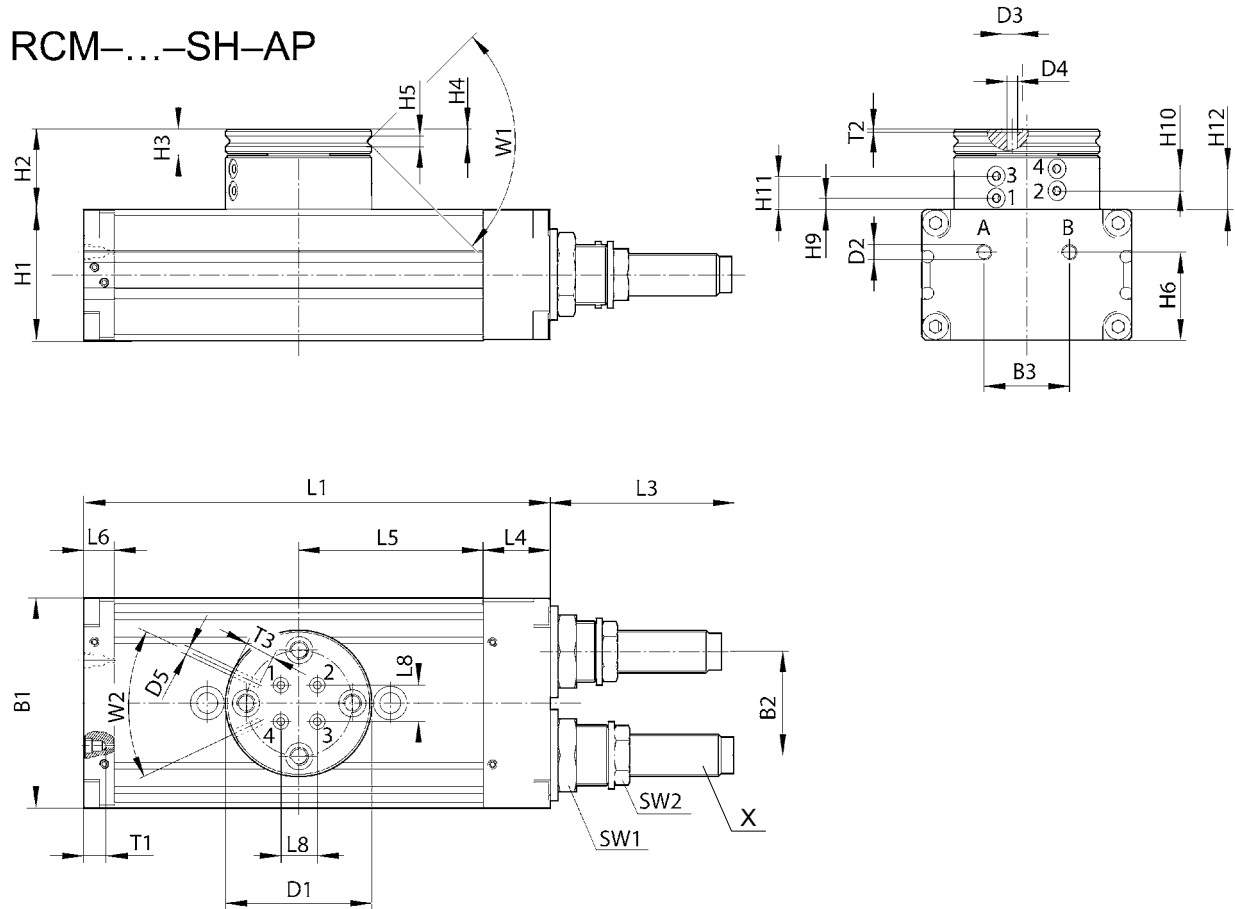
Rotary actuators ▶ Rack-and-pinion gears

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							

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

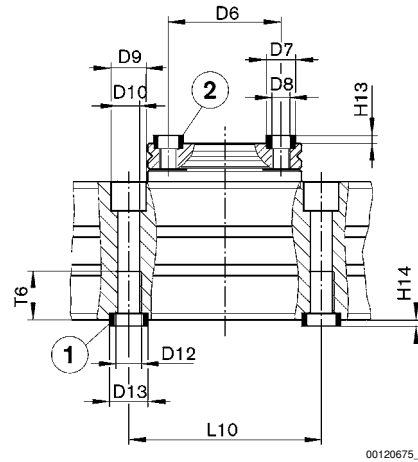
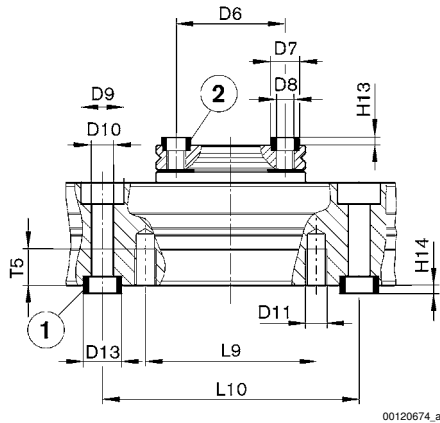
Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

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



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												

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

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.	58 psi / 116 psi
Ambient temperature min./max.	+41 °F / +140 °F
Medium temperature min./max.	+41 °F / +140 °F
Medium	Compressed air
Oil content of compressed air	0 mg/m ³ - 1 mg/m ³
Theoretical torque at	87 PSI

Materials:

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

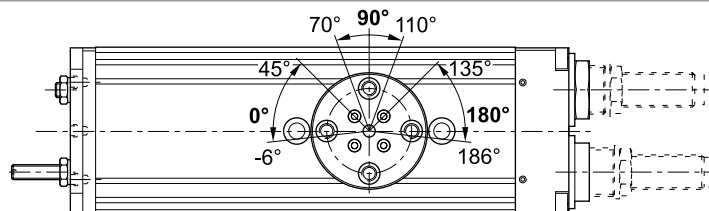
Technical Remarks

- The pressure dew point must be at least 27 °F under ambient and medium temperature and may not exceed 37 °F.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, 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!

Frame size		RCM-12	RCM-16	RCM-20	RCM-25
Max. permissible axial bearing load	[lbf]	74.18	110.15	139.38	260.77
Max. permissible radial bearing load	[lbf]	80.93	130.38	175.34	332.7
Max. permissible mass moment of inertia	[lbf]	0.23	0.54	1.09	2.15
Repetitive precision	[°]	0.2	0.2	0.2	0.2
Theoretical torque	[in.lbs.]	0.7	1.25	2.21	4.79

	Frame size	Compressed air connection	angle of rotation	Swivel time min./max.	Air consumption per rotation	Weight	Part No.
			[°]	[s]	[in.]	[lbs]	
	RCM-12	M5	0 - 180	0.28 / --	0.45	1.06	R412000395
	RCM-16			0.25 / --	0.75	1.74	R412000396
	RCM-20			0.3 / --	1.28	2.47	R412000397
	RCM-25			0.3 / --	2.73	4.63	R412000398

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



00122059

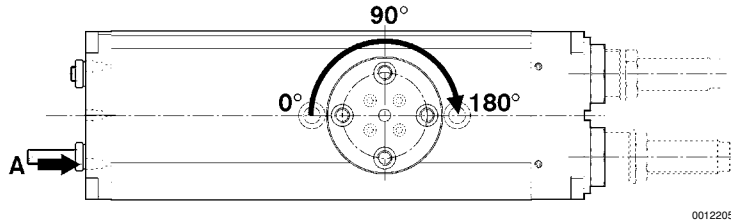
All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

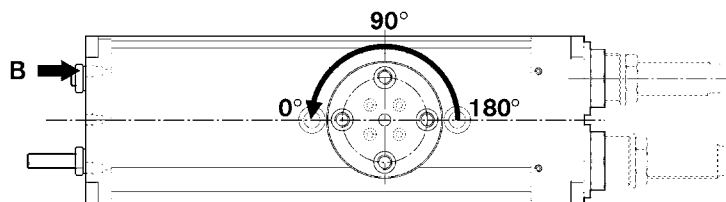
Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

Rotary Compact Module, Series RCM-SE

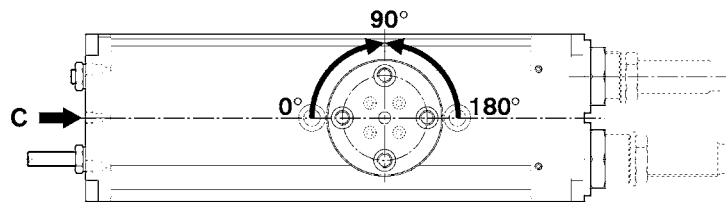
▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack ▶ Easy-2-Combine-capable ▶ cushioning: elastic ▶ with integrated intermediate position

Movement into end position 180°


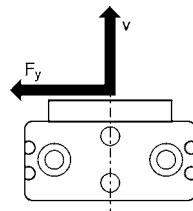
00122056

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

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

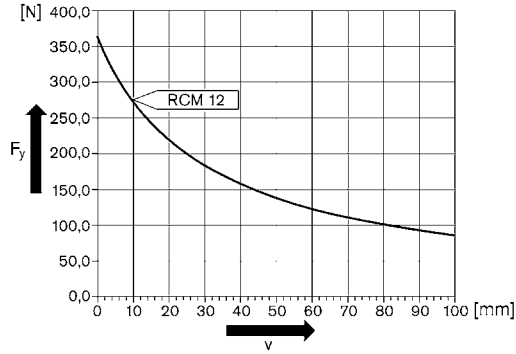
Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

Rotary actuators ▶ Rack-and-pinion gears

Rotary Compact Module, Series RCM-SE

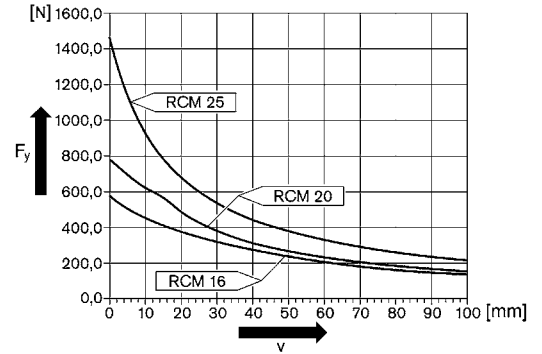
▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack ▶ Easy-2-Combine-capable ▶ cushioning: elastic ▶ with integrated intermediate position

RCM 12



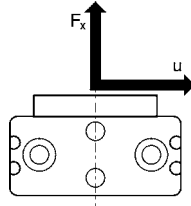
00122095_b

RCM 16 - 25



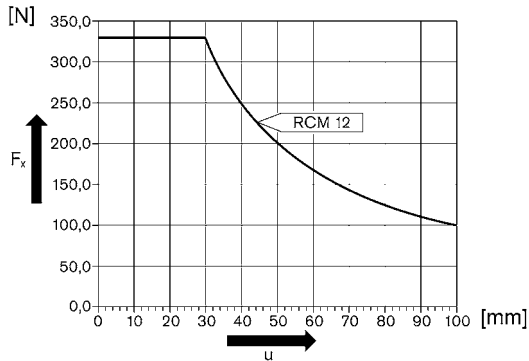
00117262_b

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



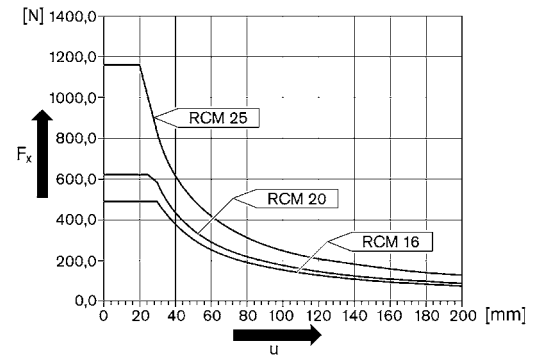
00117258_b

RCM 12



00125738_b

RCM 16 - 25



00117260_b

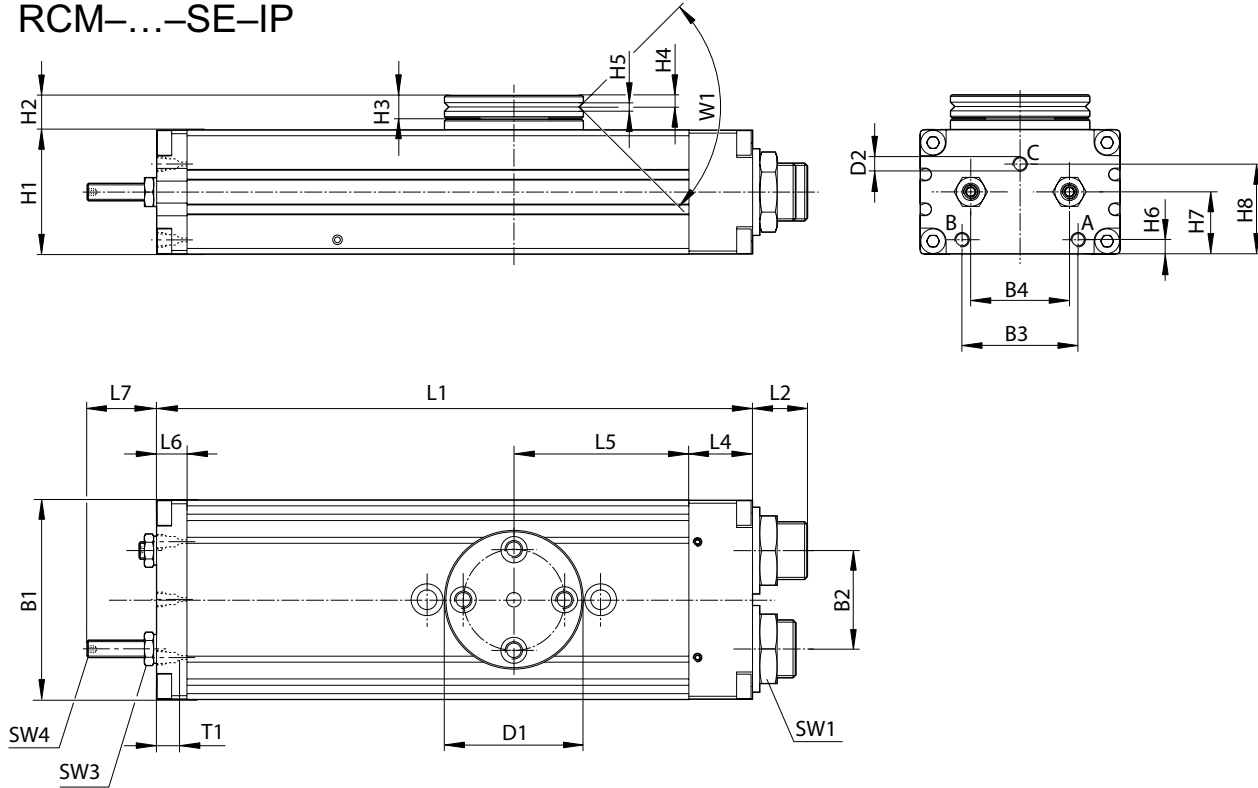
All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

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°

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

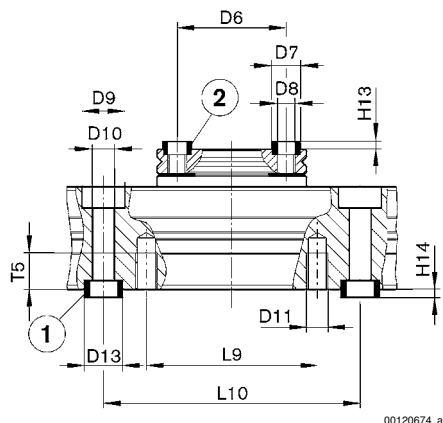
Rotary actuators ▶ Rack-and-pinion gears

Rotary Compact Module, Series RCM-SE

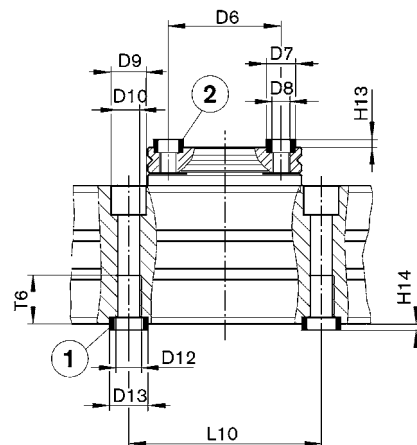
▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack ▶ Easy-2-Combine-capable ▶ cushioning: elastic ▶ with integrated intermediate position

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												

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

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.	58 psi / 116 psi
Ambient temperature min./max.	+41 °F / +140 °F
Medium temperature min./max.	+41 °F / +140 °F
Medium	Compressed air
Oil content of compressed air	0 mg/m ³ - 1 mg/m ³
Theoretical torque at	87 PSI

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

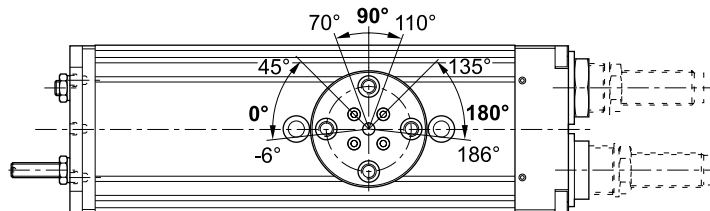
Technical Remarks

- The pressure dew point must be at least 27 °F under ambient and medium temperature and may not exceed 37 °F.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, 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!

Frame size		RCM-12	RCM-16	RCM-20	RCM-25
Max. permissible axial bearing load	[lbf]	74.18	110.15	139.38	260.77
Max. permissible radial bearing load	[lbf]	80.93	130.38	175.34	332.7
Max. permissible mass moment of inertia	[lbf]	3.41	27.33	61.5	153.77
Repetitive precision	[°]	0.05	0.05	0.05	0.05
Theoretical torque	[in.lbs.]	0.7	1.25	2.21	4.79

	Frame size	Compressed air connection	angle of rotation	Swivel time min./max.	Air consumption per rotation	Weight	Part No.
			[°]	[s]	[in.]	[lbs]	
	RCM-12	M5	0 - 180	0.3 / --	0.45	1.1	R412000399
	RCM-16			0.32 / --	0.75	1.81	R412000400
	RCM-20			0.48 / --	1.28	2.6	R412000401
	RCM-25			0.6 / --	2.73	4.92	R412000402

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



00122059

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

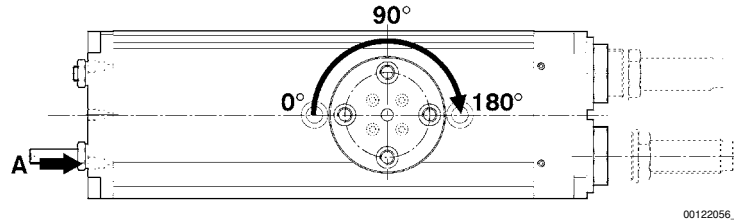
Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

Rotary actuators ▶ Rack-and-pinion gears

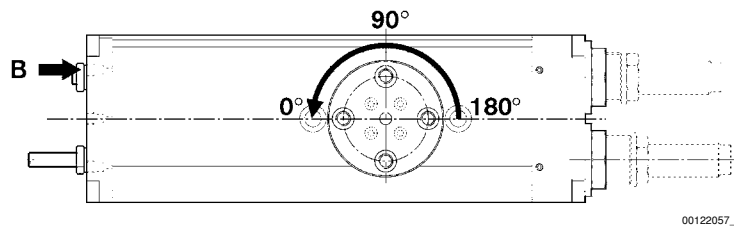
Rotary Compact Module, Series RCM-SH

▶ 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

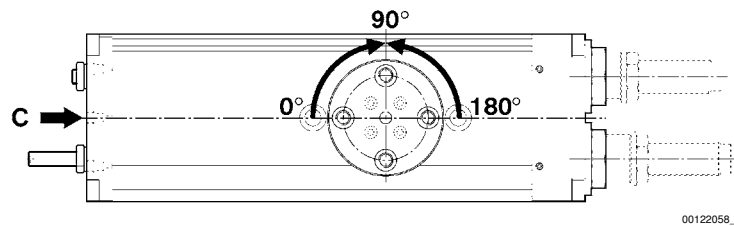
Movement into end position 180°



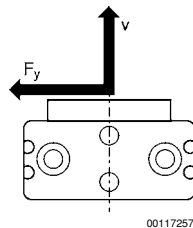
Movement into end position 0°



Movement into intermediate position 90°



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



All dimensions in mm, unless specified otherwise.

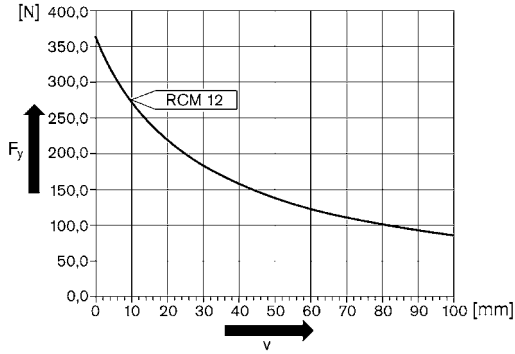
Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

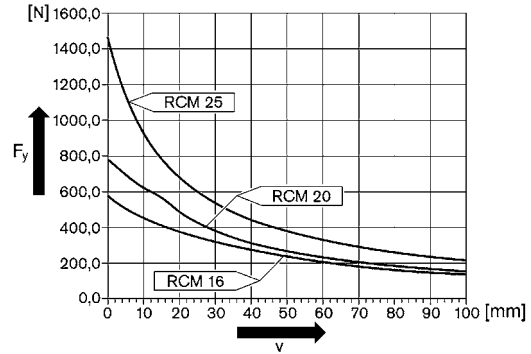
Rotary Compact Module, Series RCM-SH

▶ 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 | **RCM 16 – 25**

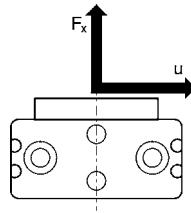


00122095_b



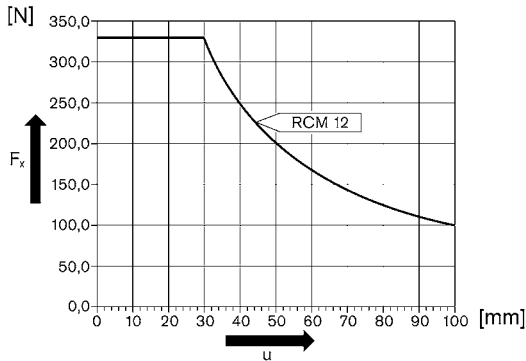
00117262_b

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

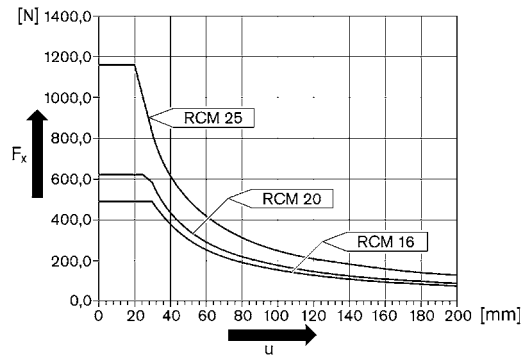


00117258

RCM 12 | **RCM 16 – 25**



00125738_b



00117260_b

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

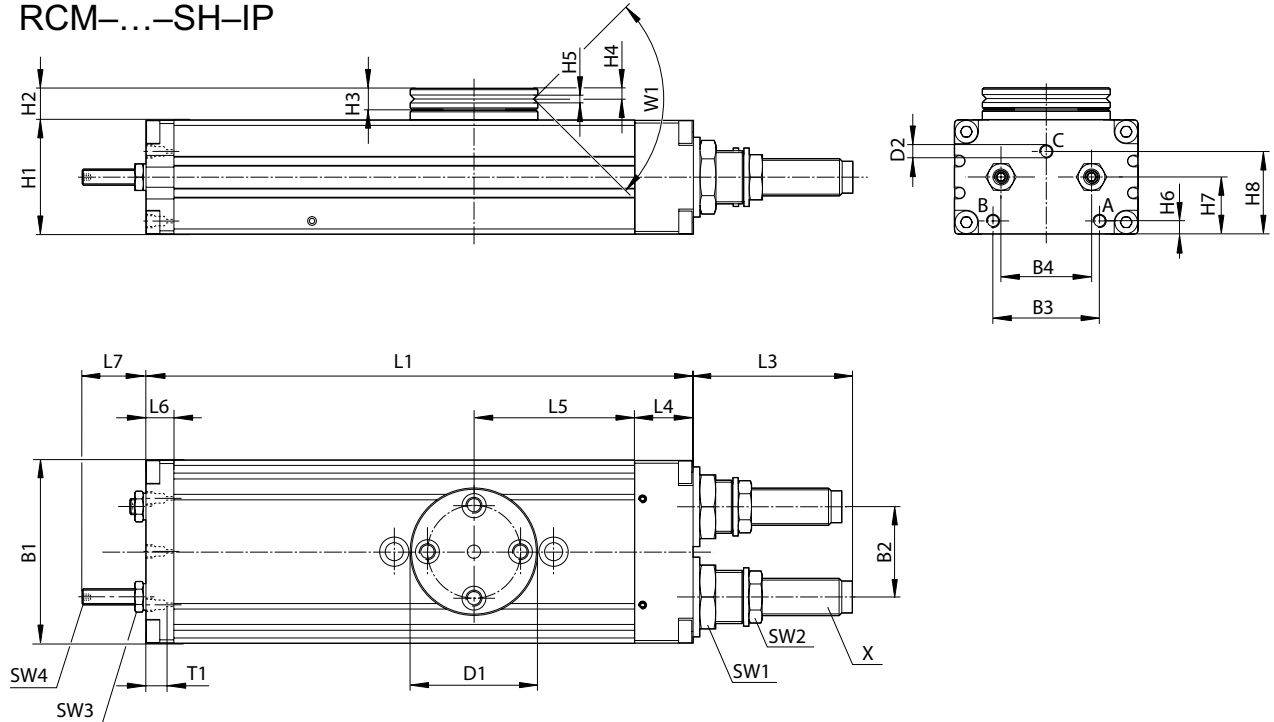
Rotary actuators ▶ Rack-and-pinion gears

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												

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

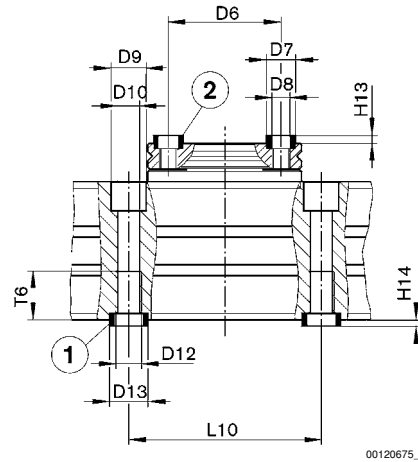
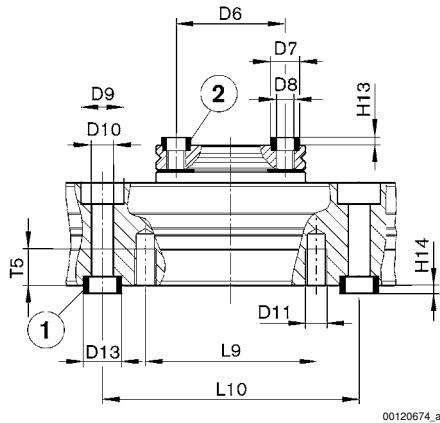
Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

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



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												

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

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.	58 psi / 116 psi
Ambient temperature min./max.	+41 °F / +140 °F
Medium temperature min./max.	+41 °F / +140 °F
Medium	Compressed air
Oil content of compressed air	0 mg/m ³ - 1 mg/m ³
Theoretical torque at	87 PSI

Materials:

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

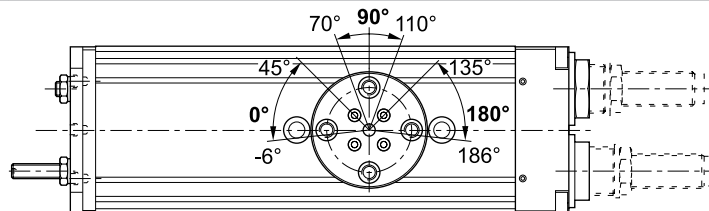
Technical Remarks

- The pressure dew point must be at least 27 °F under ambient and medium temperature and may not exceed 37 °F.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, 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!

Frame size		RCM-12	RCM-16	RCM-20	RCM-25
Number of air ducts		2	4	4	4
Max. permissible axial bearing load	[lbf]	74.18	110.15	139.38	260.77
Max. permissible radial bearing load	[lbf]	65.19	89.92	125.89	157.36
Max. permissible mass moment of inertia	[lbft]	0.23	0.54	1.09	2.15
Repetitive precision	[°]	0.2	0.2	0.2	0.2
Theoretical torque	[in.lbs.]	0.7	1.25	2.21	4.79

	Frame size	Compressed air connection	angle of rotation	Swivel time min./max.	Air consumption per rotation	Weight	Part No.
			[°]	[s]	[in.]	[lbs]	
	RCM-12	M5	0 - 180	0.32 / --	0.45	1.15	R412000403
	RCM-16			0.3 / --	0.75	1.87	R412000404
	RCM-20			0.35 / --	1.28	2.65	R412000405
	RCM-25			0.35 / --	2.73	4.85	R412000406

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



00122059

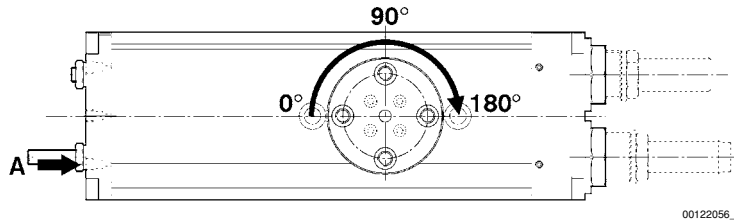
All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

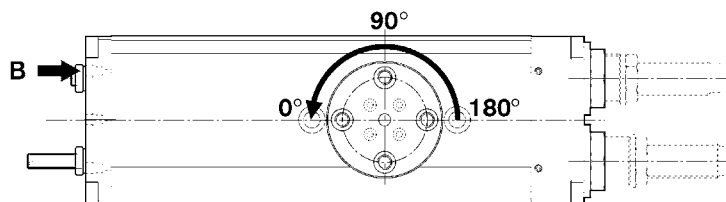
Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

Rotary Compact Module, Series RCM-SE

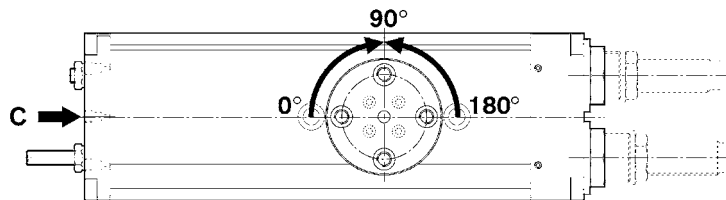
▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack ▶ Easy-2-Combine-capable ▶ cushioning: elastic ▶ with integrated intermediate position ▶ with air duct

Movement into end position 180°


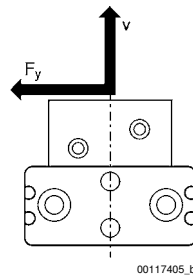
00122056_b

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

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

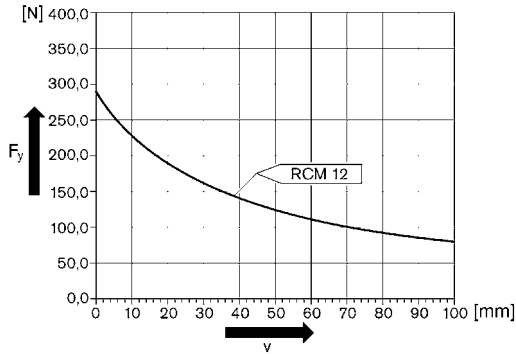
Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

Rotary actuators ▶ Rack-and-pinion gears

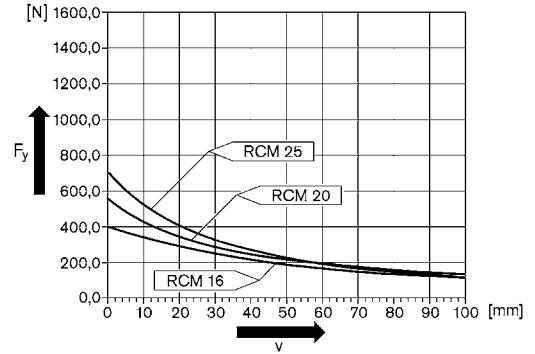
Rotary Compact Module, Series RCM-SE

▶ 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 16 – 25**

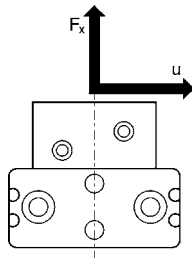


00122094_b



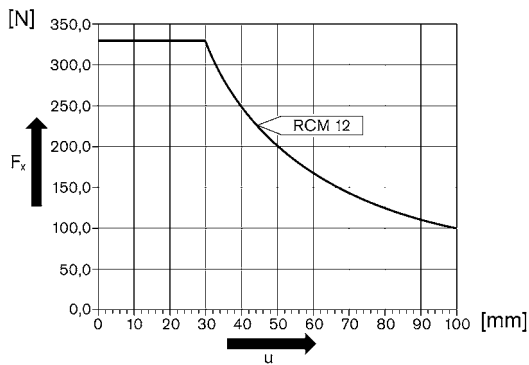
00117407_b

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

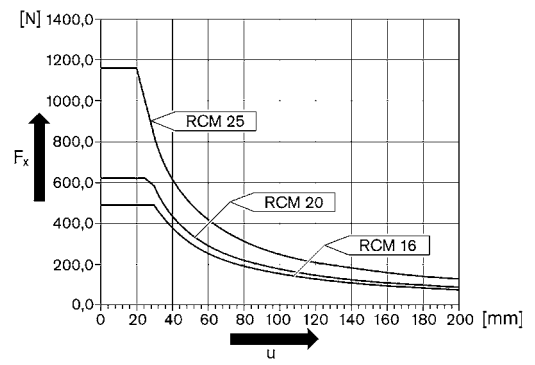


00117404_a

RCM 12 | **RCM 16 – 25**



00125738_b



00117260_b

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

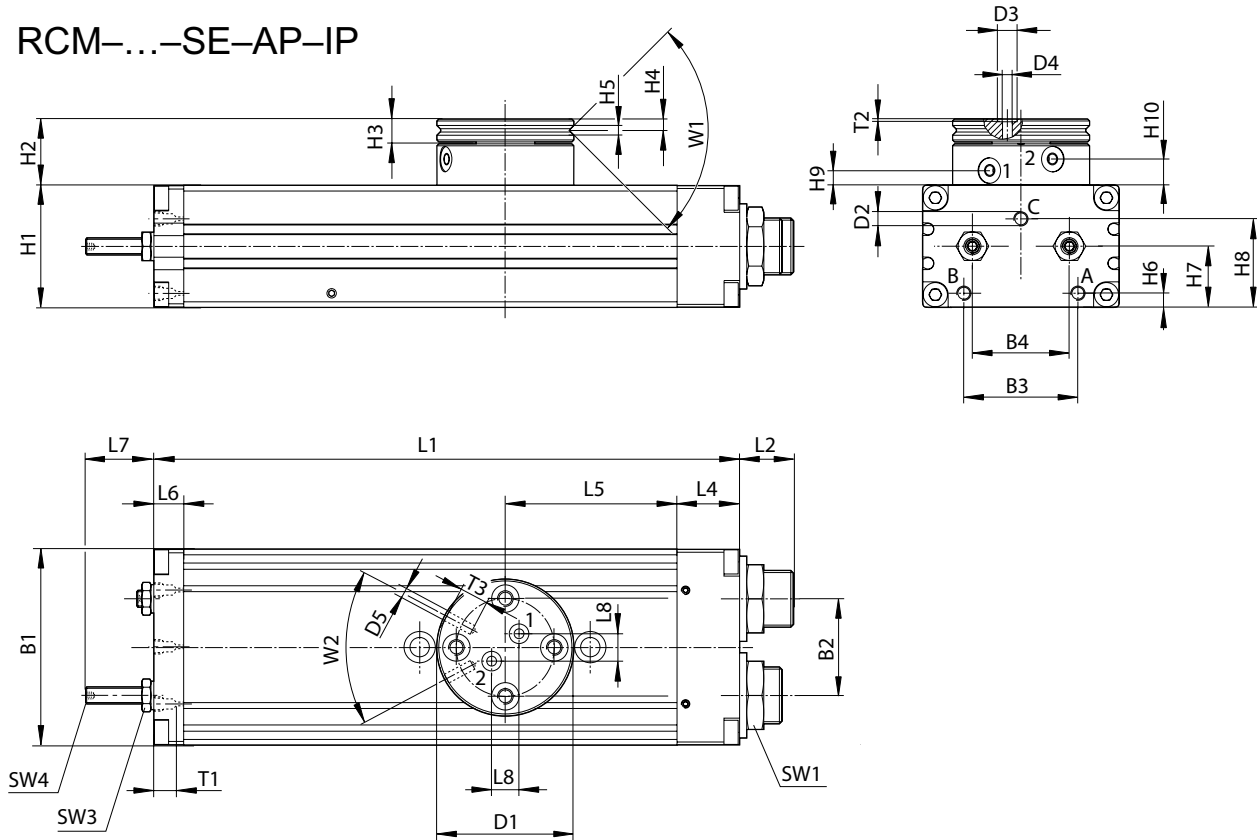
Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

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	3.8 ±0,2	6.7 ±0,2	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°					

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

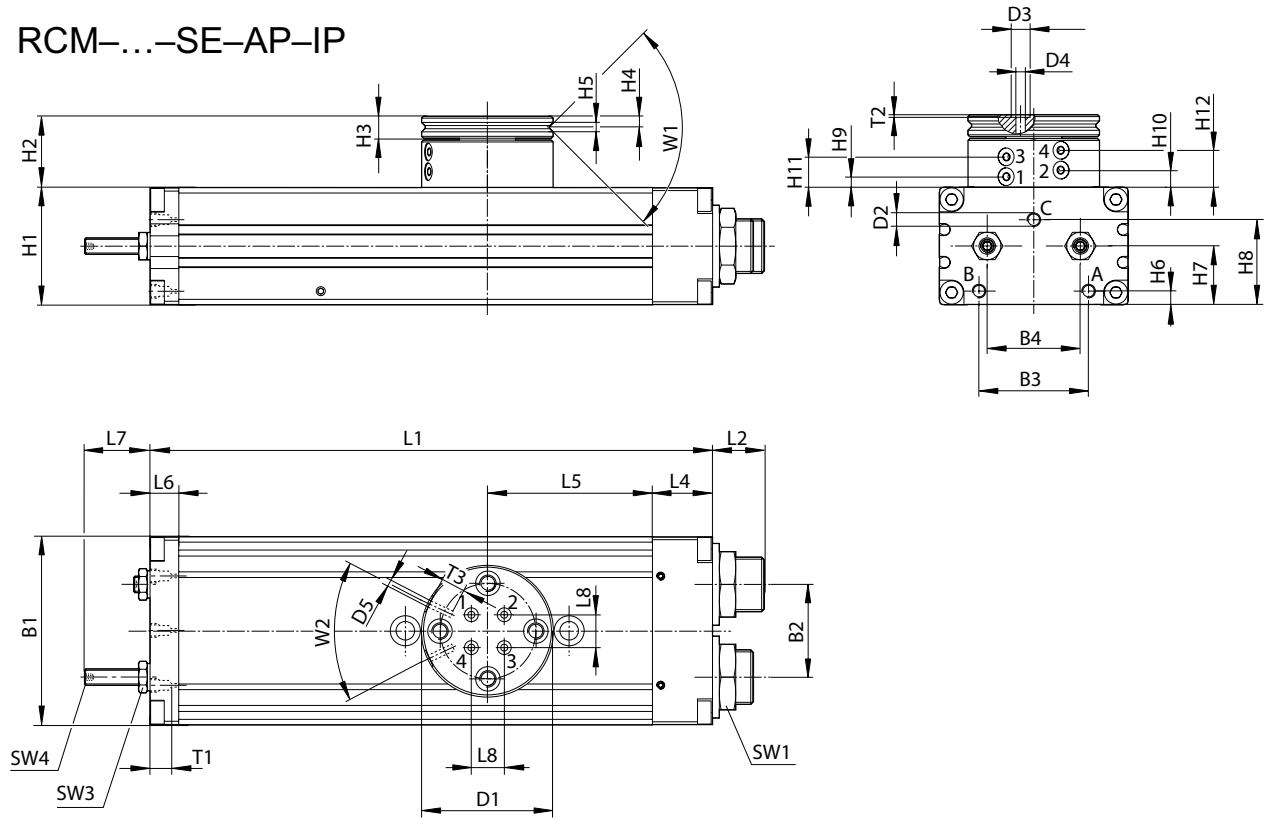
Rotary actuators ▶ Rack-and-pinion gears

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°			

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

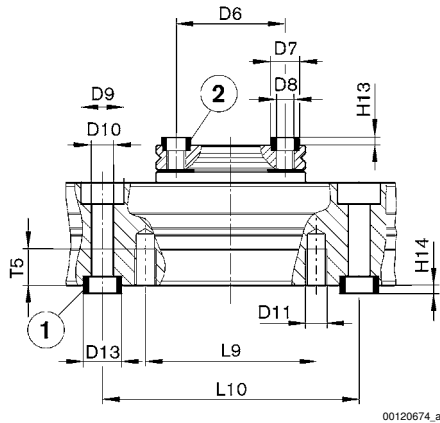
Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

Rotary Compact Module, Series RCM-SE

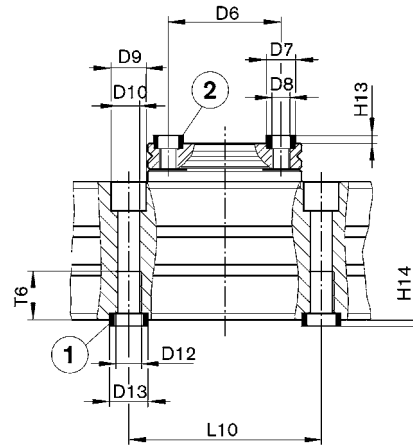
▶ angle of rotation: 0 - 180 ° ▶ Ø12 - 25 mm ▶ with magnetic piston ▶ double piston with rack ▶ Easy-2-Combine-capable ▶ cushioning: elastic ▶ with integrated intermediate position ▶ with air duct

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												

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

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.	58 psi / 116 psi
Ambient temperature min./max.	+41 °F / +140 °F
Medium temperature min./max.	+41 °F / +140 °F
Medium	Compressed air
Oil content of compressed air	0 mg/m ³ - 1 mg/m ³
Theoretical torque at	87 PSI

Materials:

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

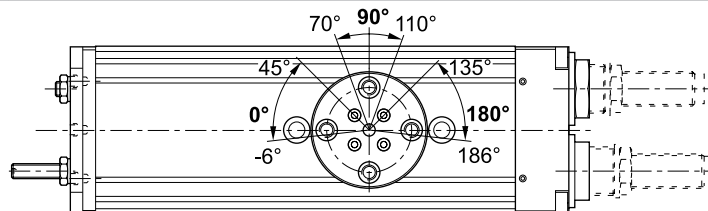
Technical Remarks

- The pressure dew point must be at least 27 °F under ambient and medium temperature and may not exceed 37 °F.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, 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!

Frame size		RCM-12	RCM-16	RCM-20	RCM-25
Number of air ducts		2	4	4	4
Max. permissible axial bearing load	[lbf]	74.18	110.15	139.38	260.77
Max. permissible radial bearing load	[lbf]	65.19	89.92	125.89	157.36
Max. permissible mass moment of inertia	[lbf]	3.41	27.33	61.5	153.77
Repetitive precision	[°]	0.05	0.05	0.05	0.05
Theoretical torque	[in.lbs.]	0.7	1.25	2.21	4.79

	Frame size	Compressed air connection	angle of rotation	Swivel time min./max.	Air consumption per rotation	Weight	Part No.
			[°]	[s]	[in.]	[lbs]	
	RCM-12	M5	0 - 180	0.3 / --	0.45	1.23	R412000407
	RCM-16			0.32 / --	0.75	2.05	R412000408
	RCM-20			0.48 / --	1.28	2.76	R412000409
	RCM-25			0.65 / --	2.73	5.14	R412000410

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



00122059

All dimensions in mm, unless specified otherwise.

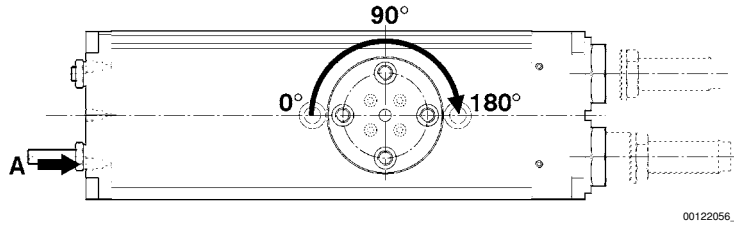
Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

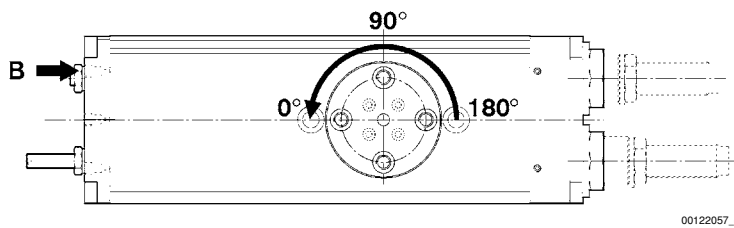
Rotary Compact Module, Series RCM-SH

▶ 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

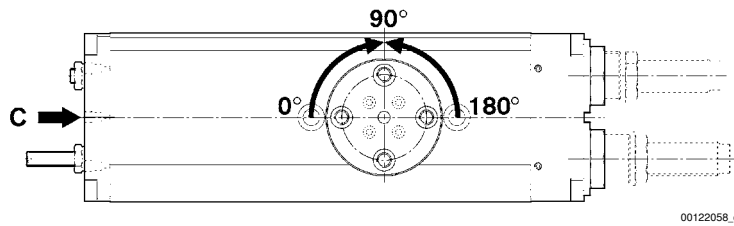
Movement into end position 180°



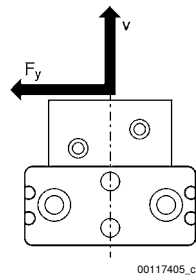
Movement into end position 0°



Movement into intermediate position 90°



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



All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

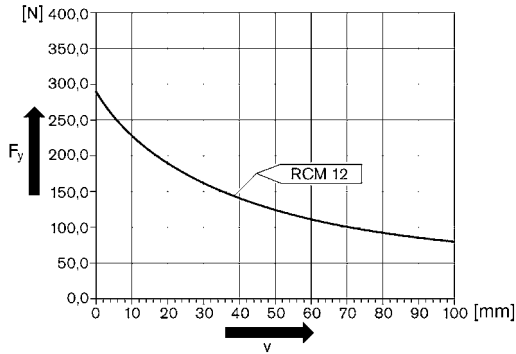
Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

Rotary actuators ▶ Rack-and-pinion gears

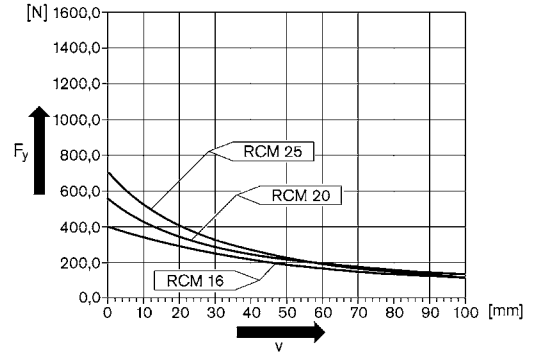
Rotary Compact Module, Series RCM-SH

▶ 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 16 – 25**

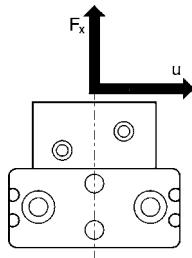


00122094_b



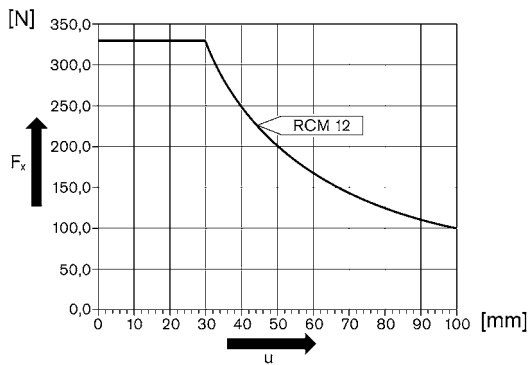
00117407_b

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

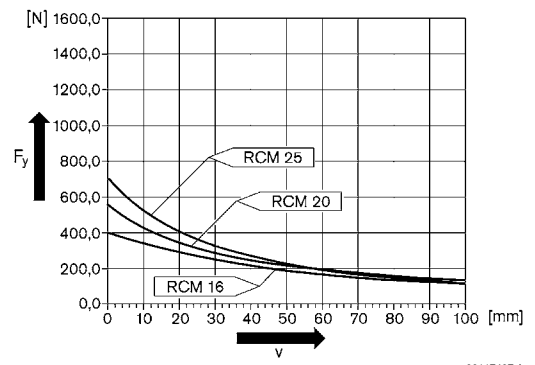


00117404_c

RCM 12 | **RCM 16 – 25**



00125738_b



00117407_b

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

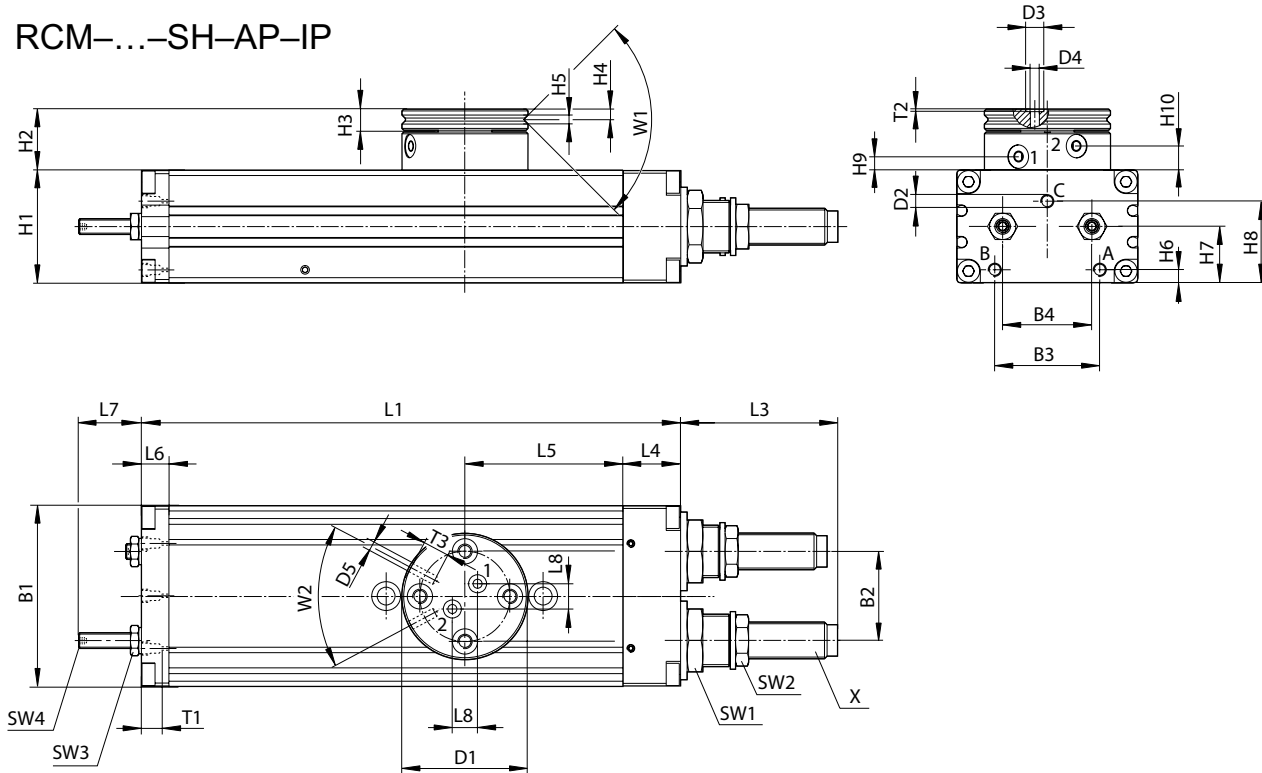
Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

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	±0,2	±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			

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

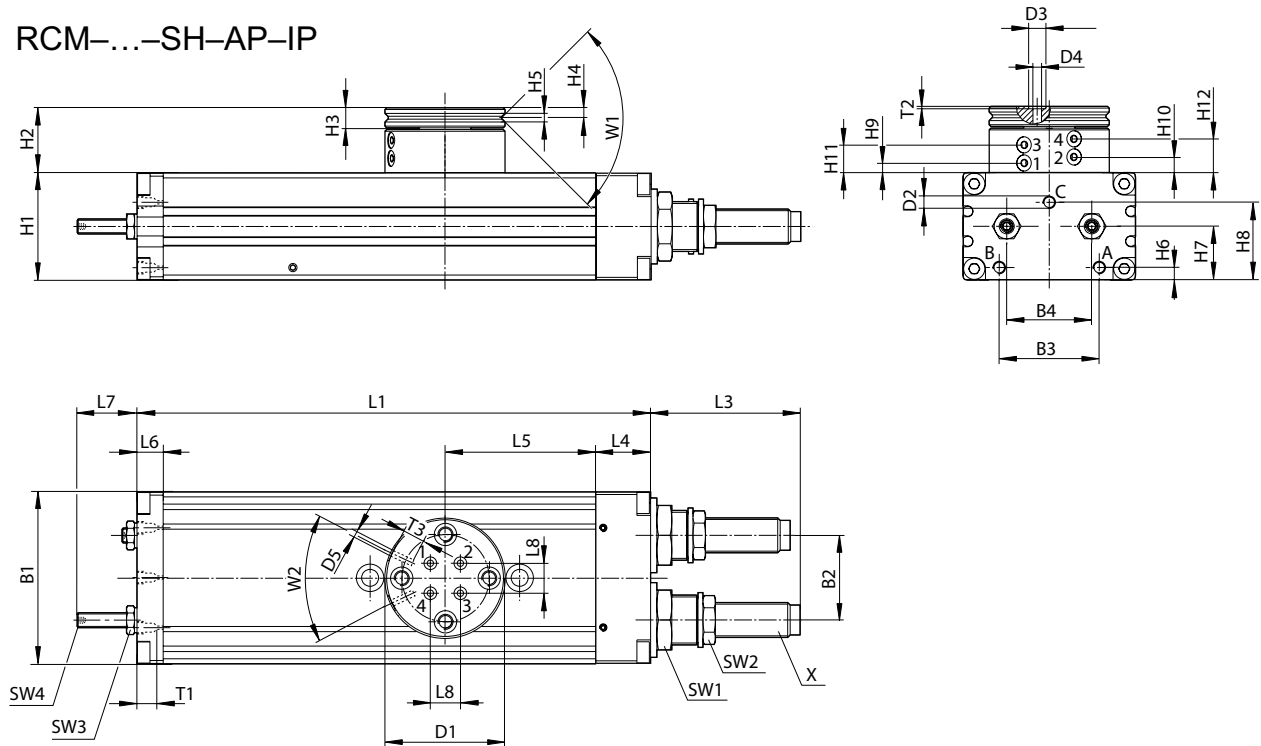
Rotary actuators ▶ Rack-and-pinion gears

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



T1 = depth of thread

00125734

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

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

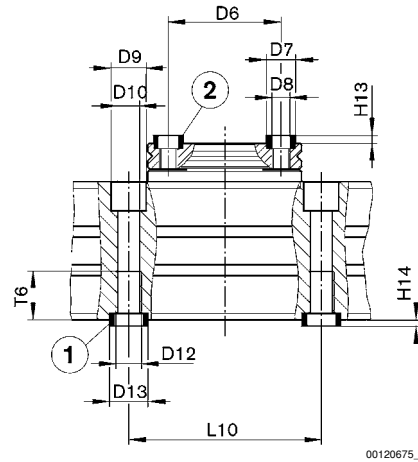
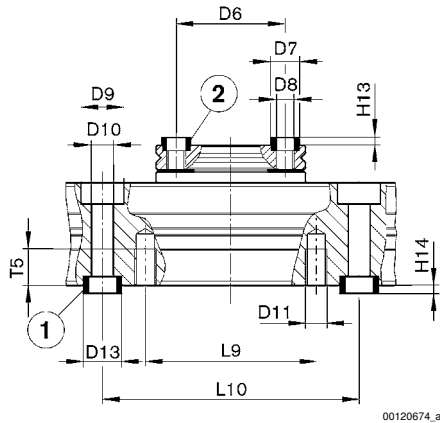
Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

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



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												

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

Rotary actuators ▶ Rack-and-pinion gears

Series RCM
Accessories

Easy-2-Combine, Connection kit
▶ For combination: MSC / RCM



Materials:
Screws 1)

Steel, galvanized

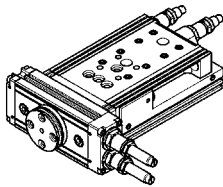
1) ISO 4762:2004

00120646

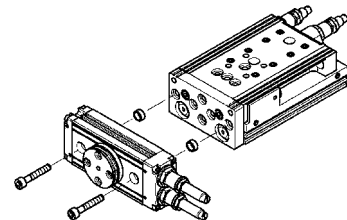
A) product 1, B) product 2, C) screws

A	B	C				
RCM-06	MSC-08	2 x M3x20				
RCM-08	MSC-12	2 x M4x22				
RCM-12	MSC-16	2 x M5x30				
RCM-12	MSC-20	2 x M5x30				
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

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

Series RCM Accessories

Centering rings



00112657

Fig. 1

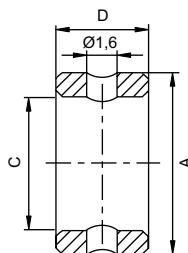
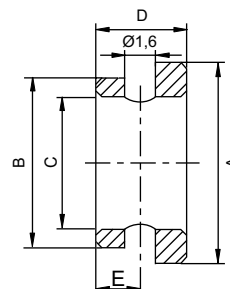


Fig. 2



00119489_a

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

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

Rotary actuators ▶ Rack-and-pinion gears

Series RCM Accessories

Sensor, Series ST4

▶ 4 mm groove ▶ with cable ▶ open cable ends, 3-pin



21304

Certificates	UL (Underwriters Laboratories)
Ambient temperature min./max.	-22°F / +176°F
Protection class	IP65, IP67
Switching point precision [mm]	±0,1
Switching logic	NO (make contact)
Display	LED
LED status display	Yellow
Vibration resistance	10 - 55 Hz, 1 mm
Shock resistance	30 g / 11 ms
Mounting screw	Combination: slotted and hexagon socket
Materials:	
Housing	Polyamide, fiber-glass reinforced
Cable sheath	Polyurethane

Technical Remarks

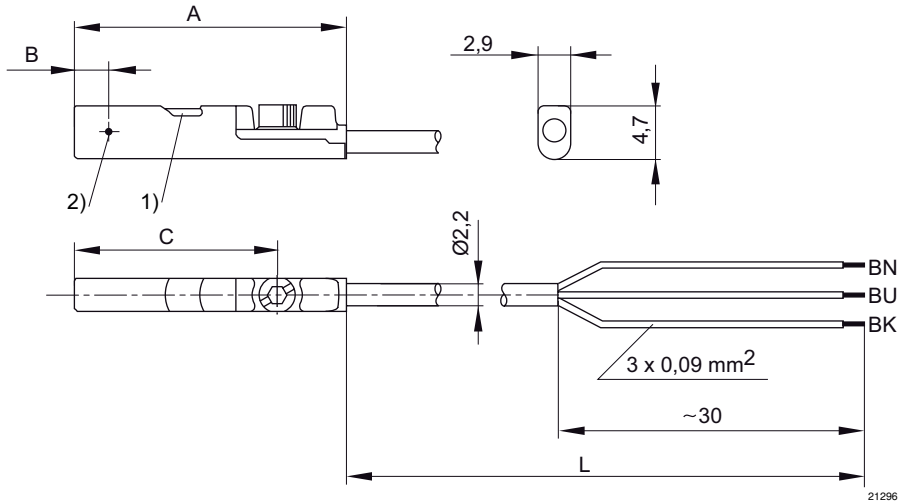
- The max. switching capacity must not be exceeded.

	Type of contact	Cable length	DC operating voltage min./max.	Voltage drop U at I _{max}	DC switching current, max.	Part No.
		[ft.]	[V]	[V]	[A]	
	electronic PNP	9.84	10 / 30	≤ 2,5	0.1	R412019680
		16.4				R412019681
	electronic NPN	9.84	10 / 30	≤ 2,5	0.1	R412019684
		16.4				R412019685

interfaces: open cable ends; 3-pin
short circuit resistant; Protected against polarity reversal

Series RCM Accessories

Dimensions



1) LED 2) Switching point

L = cable length

BN = brown, BK = black, BU = blue

Part No.	A	B	C									
R412019680	23.7	2.8	17.7									
R412019681	23.7	2.8	17.7									
R412019684	23.7	2.8	17.7									
R412019685	23.7	2.8	17.7									

Sensor, Series ST4

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



21305

Certificates	UL (Underwriters Laboratories)
Ambient temperature min./max.	-22°F / +176°F
Protection class	IP65, IP67
Switching point precision [mm]	±0,1
Switching logic	NO (make contact)
Display	LED
LED status display	Yellow
Vibration resistance	10 - 55 Hz, 1 mm
Shock resistance	30 g / 11 ms
Mounting screw	Combination: slotted and hexagon socket
Materials:	
Housing	Polyamide, fiber-glass reinforced
Cable sheath	Polyurethane

Technical Remarks

- The max. switching capacity must not be exceeded.

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

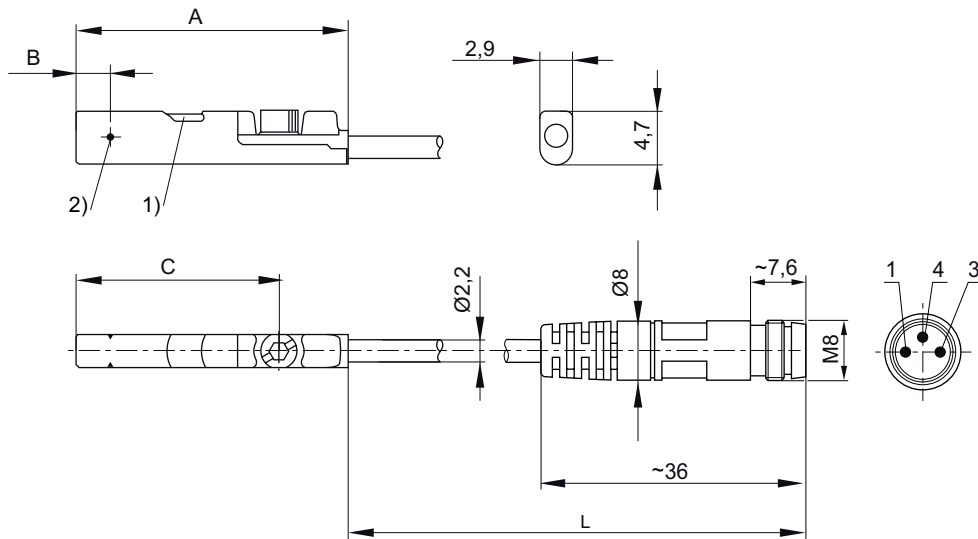
Rotary actuators ▶ Rack-and-pinion gears

Series RCM Accessories

	Type of contact	Cable length	DC operating voltage min./max.	Voltage drop U at I _{max}	DC switching current, max.	Part No.
		[ft.]	[V]	[V]	[A]	
	electronic PNP	0.98	10 / 30	≤ 2,5	0.1	R412019683
	electronic NPN	0.98	10 / 30	≤ 2,5	0.1	R412019694

interfaces: Plug; M8; 3-pin
short circuit resistant; Protected against polarity reversal

Dimensions



21297

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

Part No.	A	B	C								
R412019683	23.7	2.8	17.7								
R412019694	23.7	2.8	17.7								

Series RCM Accessories

Sensor, Series ST4

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



21306

Certificates	UL (Underwriters Laboratories)
Ambient temperature min./max.	-22°F / +176°F
Protection class	IP65, IP67
Switching point precision [mm]	±0,1
Switching logic	NO (make contact)
Display	LED
LED status display	Yellow
Vibration resistance	10 - 55 Hz, 1 mm
Shock resistance	30 g / 11 ms
Mounting screw	Combination: slotted and hexagon socket
Materials:	
Housing	Polyamide, fiber-glass reinforced
Cable sheath	Polyurethane

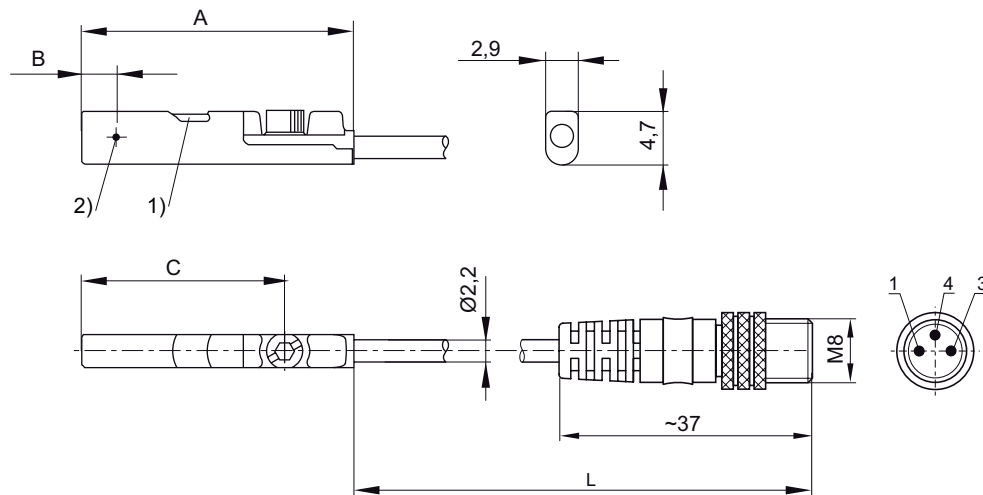
Technical Remarks

- The max. switching capacity must not be exceeded.

	Type of contact	Cable length	DC operating voltage min./max.	Voltage drop U at I _{max}	DC switching current, max.	Part No.
		[ft.]	[V]	[V]	[A]	
	electronic PNP	0.98	10 / 30	≤ 2,5	0.1	R412019493
		1.64				R412019687

interfaces: Plug; M8; 3-pin; with knurled screw
short circuit resistant; Protected against polarity reversal

Dimensions



21298

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

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

Rotary actuators ▶ Rack-and-pinion gears

Series RCM Accessories

Part No.	A	B	C								
R412019493	23.7	2.8	17.7								
R412019687	23.7	2.8	17.7								

Sensors, Series ST4-2P

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



00133721

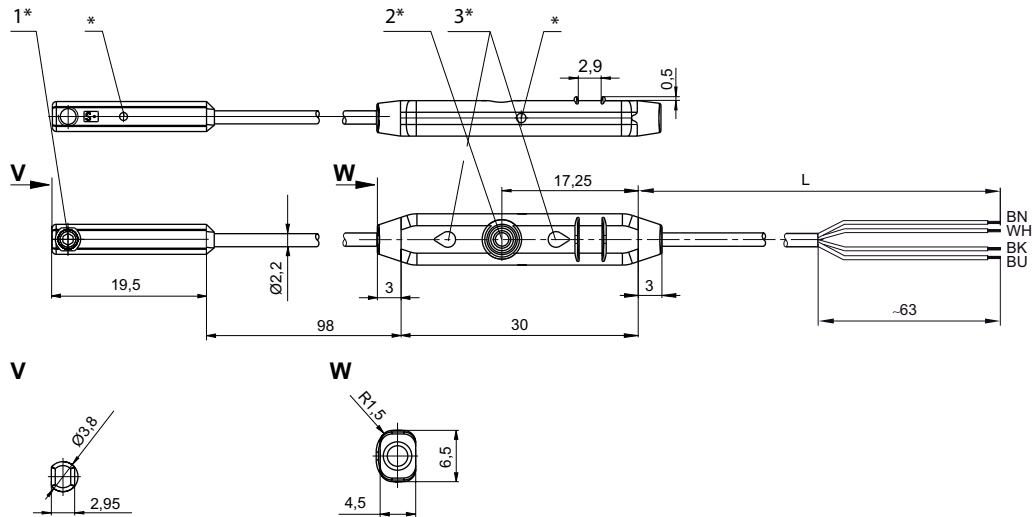
Ambient temperature min./max.	-4°F / +167°F
Protection class	IP65, IP67
Local power consumption	<15 mA
DC operating voltage min./max.	12 V - 30 V
Repetitive precision max. measuring range	0,1 mT
Hysteresis	1 mT
Switching logic	NO (make contact)
Display	LED
LED status display	Yellow
Display	2 LED
Vibration 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.	Voltage drop U at I _{max}	DC switching current, max.	Part No.
		[ft.]	[inch]	[V]	[A]	
	electronic PNP	6.56	1.96	≤ 2,2	0,15	R412010139

interfaces: without wire end ferrule, tin-plated; 4-pin
short circuit resistant; Protected against polarity reversal

Series RCM Accessories

Dimensions



00133789

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

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.	-4°F / +167°F
Protection class	IP65, IP67
Local power consumption	<15 mA
DC operating voltage min./max.	12 V - 30 V
Repetitive precision 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

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

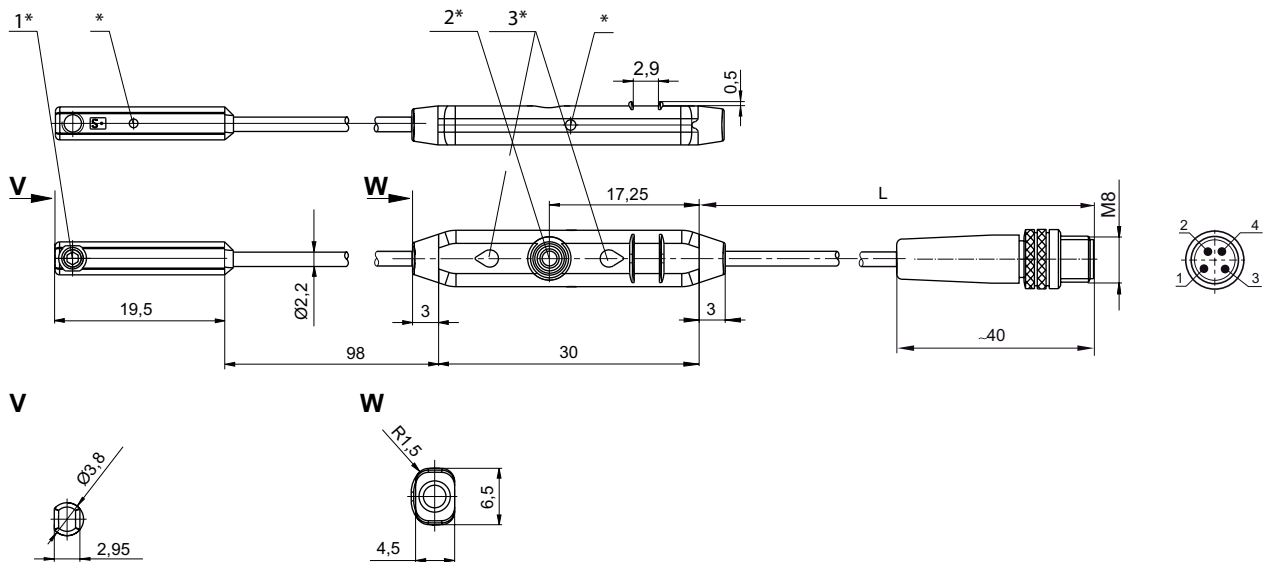
Rotary actuators ▶ Rack-and-pinion gears

Series RCM Accessories

	Type of contact	Cable length		Detection range Max.		Voltage drop U at I _{max} [V]	Part No.
		[ft.]	[inch]	[inch]	[V]		
	electronic PNP	0.98	1.96			≤ 2,2	R412010140

interfaces: Plug; M8x1; 4-pin; with knurled screw
short circuit resistant; Protected against polarity reversal

Dimensions



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

00133790

Series RCM Accessories

Industrial shock absorber, Series SA2-RC



00135329

Ambient temperature min./max.
Medium

+32°F / +140°F
Oil

Materials:

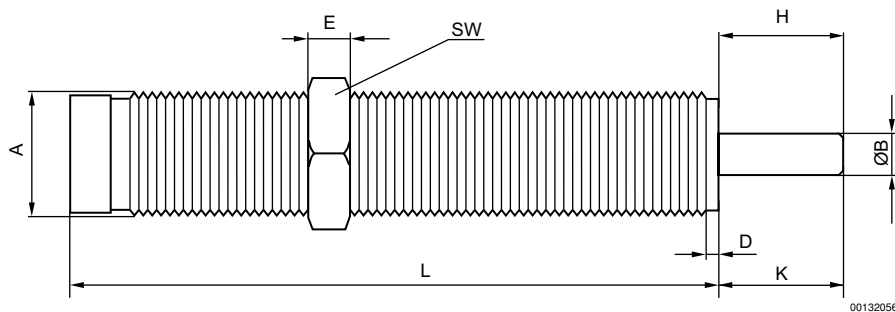
Cylinder tube
Piston rod
Lock nut

Steel, bronzed
Stainless steel, hardened
Steel, bronzed

	Type	Stroke [inch]	for	Effective mass me	Return spring	impact speed	Part No.
				min./max. [lbs]	force min./max. [lbf]	min./max. [ft./s]	
	SA2-RC	0.24	RCM-12	6.17 / 154.32	0.56 / 1.35	-	R412004751
		0.24	RCM-16	13.23 / 617.29	0.79 / 1.8	-	R412004752
		0.33	RCM-20	37.48 / 1124.35	0.79 / 1.57	-- / 2.13	R412004753
		0.37	RCM-25	220.46 / 925.93	5.17 / 7.87	-	R412010089

Part No.	Mounting	Mounting thread	Delivery unit
R412004751 R412004752 R412004753 R412010089	Lock nut	M8x1 M10x1 M12x1 M14x1,5	1

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
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

All dimensions in mm, unless specified otherwise.

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

Pneumatics catalog, online PDF, as of 2015-04-23, ©AVENTICS S.a.r.l., subject to change

AVENTICS GmbH
Ulmer Straße 4
30880 Laatzen
Phone +49 511 2136-0
Fax +49 511 2136-269
www.aventics.com
info@aventics.com



Find more contact information at
www.aventics.com/contact

Only use the AVENTICS products shown in industrial applications. Read the product documentation completely and carefully before using the product.

Observe the applicable regulations and laws of the respective country. When integrating the product into applications, note the system manufacturer's specifications for safe use of the product.

The data specified only serve to describe the product.

No statements concerning a certain condition or suitability for a certain application can be derived from our information.

The information given does not release the user from the obligation of own judgment and verification.

It must be remembered that the products are subject to a natural process of wear and aging.

23-04-2015