

## Series RCM

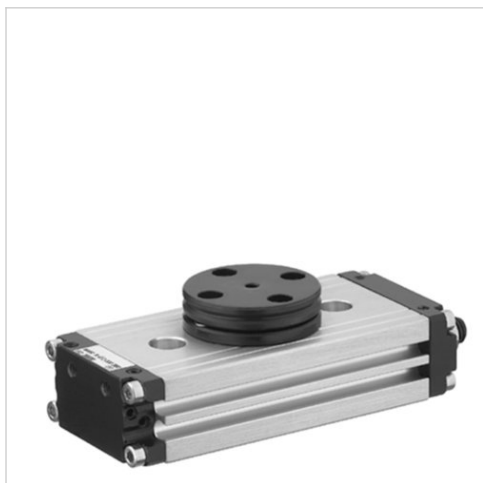


AVENTICS™ Series RCM

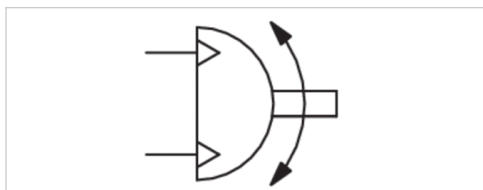


# Rotary Compact Module, Series RCM-SE

- angle of rotation max. 90 180 °
- Ø 6-25 mm
- with magnetic piston
- double piston with rack
- Easy2Combine capable
- Cushioning elastic



Working pressure min./max.	2 ... 8 bar
Ambient temperature min./max.	5 ... 60 °C
Medium temperature min./max.	5 ... 60 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 ... 1 mg/m <sup>3</sup>
Cushioning	elastic
Theoretical torque at	6 bar
Weight	See table below



## Technical data

Part No.	Frame size	Compressed air connection	angle of rotation	Min. swivel times
		G		
R412000357	RCM-06	M3	0-90 °	0.08 s
R412000358	RCM-06	M3	0-180 °	0.12 s
R412000359	RCM-08	M3	0-90 °	0.1 s
R412000360	RCM-08	M3	0-180 °	0.16 s
R412000361	RCM-12	M5	0-90 °	0.1 s
R412000362	RCM-12	M5	0-180 °	0.16 s
R412000363	RCM-16	M5	0-90 °	0.13 s
R412000364	RCM-16	M5	0-180 °	0.2 s
R412000365	RCM-20	M5	0-90 °	0.16 s
R412000366	RCM-20	M5	0-180 °	0.25 s
R412000367	RCM-25	M5	0-90 °	0.16 s
R412000368	RCM-25	M5	0-180 °	0.25 s

Part No.	Air consumption per rotation	Weight
R412000357	1.13 cm <sup>3</sup>	0.13 kg
R412000358	2.26 cm <sup>3</sup>	0.13 kg
R412000359	2.14 cm <sup>3</sup>	0.18 kg

Part No.	Air consumption per rotation	Weight
R412000360	4.27 cm <sup>3</sup>	0.18 kg
R412000361	5.86 cm <sup>3</sup>	0.42 kg
R412000362	11.72 cm <sup>3</sup>	0.42 kg
R412000363	10.36 cm <sup>3</sup>	0.7 kg
R412000364	20.71 cm <sup>3</sup>	0.7 kg
R412000365	17.92 cm <sup>3</sup>	0.91 kg
R412000366	35.84 cm <sup>3</sup>	0.91 kg
R412000367	38.75 cm <sup>3</sup>	1.73 kg
R412000368	77.5 cm <sup>3</sup>	1.73 kg

## Technical data

Frame size	RCM-06	RCM-08	RCM-12
Max. permissible axial bearing load	170 N	280 N	330 N
Max. permissible radial bearing load	170 N	300 N	360 N
Max. permissible mass moment of inertia	0.08 kg cm <sup>2</sup>	0.25 kg cm <sup>2</sup>	0.7 kg cm <sup>2</sup>
Repetitive precision	0.2 °	0.2 °	0.2 °
Theoretical torque	0.17 Nm	0.33 Nm	0.95 Nm

Frame size	RCM-16	RCM-20	RCM-25
Max. permissible axial bearing load	490 N	620 N	1160 N
Max. permissible radial bearing load	580 N	780 N	1480 N
Max. permissible mass moment of inertia	1.6 kg cm <sup>2</sup>	3.2 kg cm <sup>2</sup>	6.3 kg cm <sup>2</sup>
Repetitive precision	0.2 °	0.2 °	0.2 °
Theoretical torque	1.7 Nm	3 Nm	6.5 Nm

## Technical information

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 compressed air must remain constant during the life cycle.

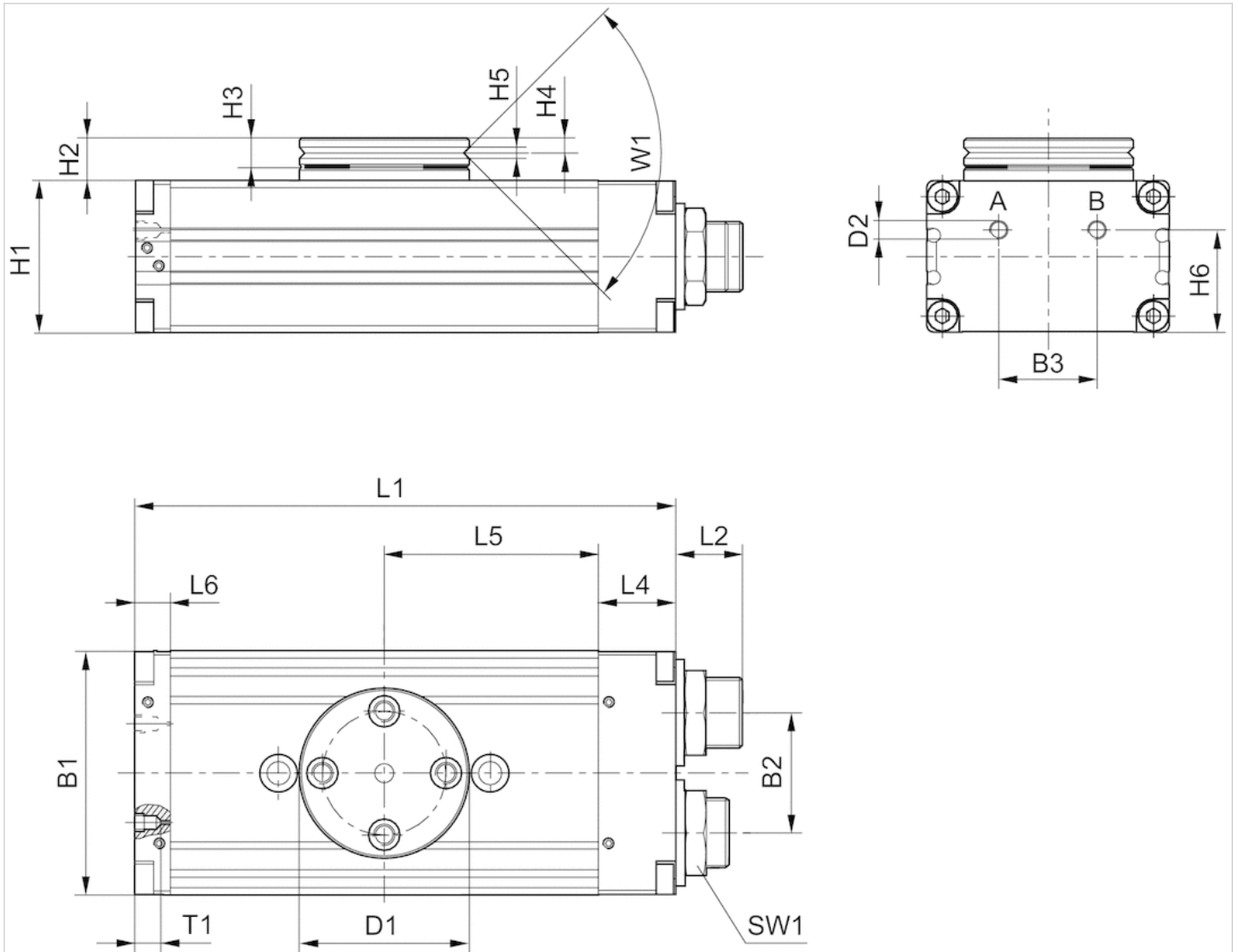
Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

## Technical information

Material	
Housing	Aluminum, anodized
Cap	Aluminum, black anodized
Base	Aluminum, black anodized
Seal	Acrylonitrile butadiene rubber
Axis	Steel, hardened
Rotary flange	Steel, hardened

## Dimensions

RCM-6/.../-25



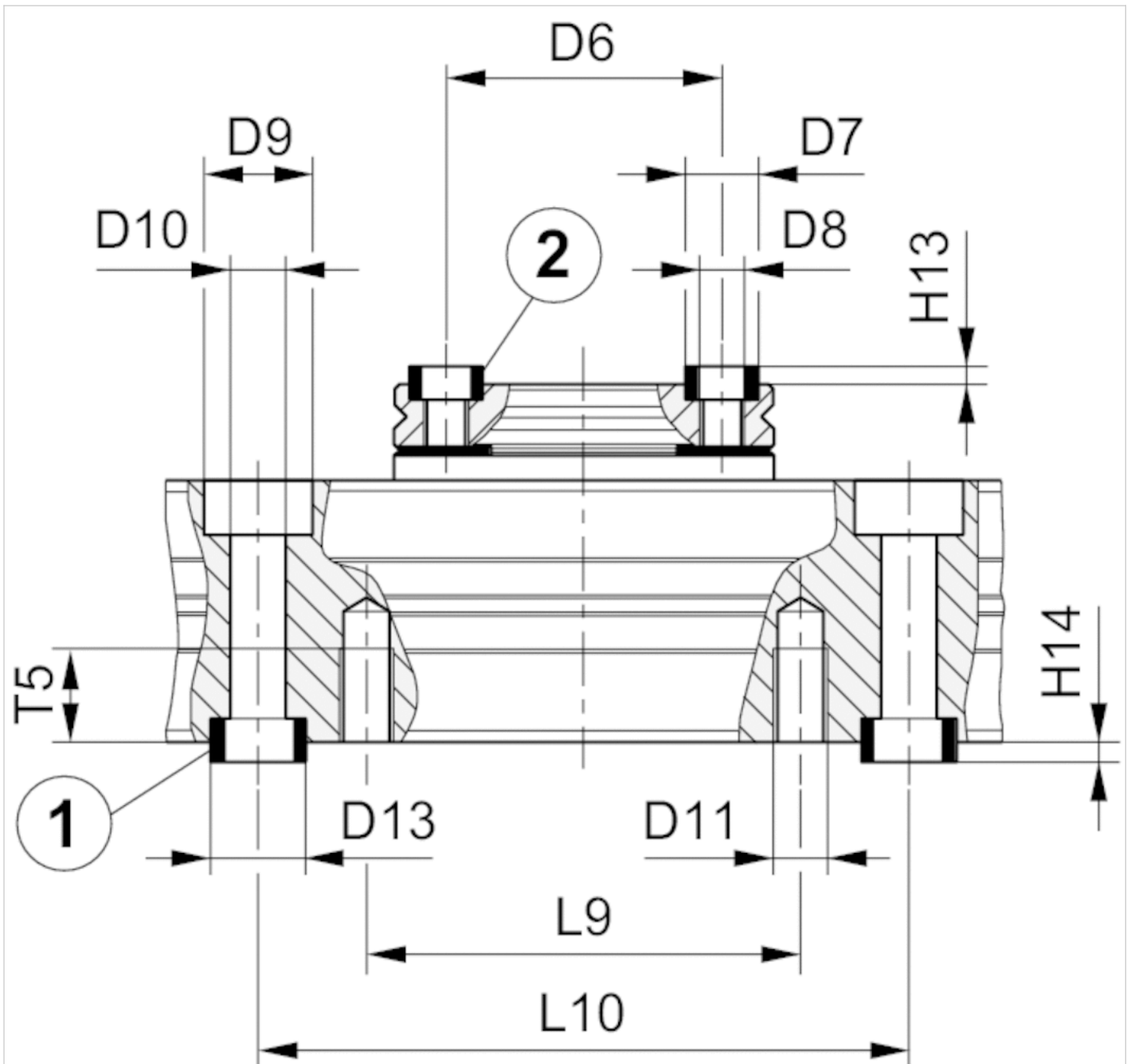
T1 = depth of thread

## Dimensions

Frame size	B1	B2	B3	Ø D1	Ø D2	H1	H2	H3	H4	H5	H6	L1	L2	L4	L5	L6	SW1	T1	W1
RCM-06	31	13.6	11.6	26	M3	17	7.5	5	2.4	2	12.9	71	9	7	28.5	7	8	3	90°
RCM-08	35	15	13	28	M3	18	8	5	2.4	2	14	77	9.5	7	31.5	7	10	3	90°
RCM-12	43	18	18	35	M5	24	10.5	6	2.9	2.5	18	103	12.5	14	40	9	15	4	90°
RCM-16	52	24	20	40	M5	32	10	7	3.3	2.5	21	108	15	18	40	10	19	4	90°
RCM-20	58	30	20	42	M5	37	11	7	3.3	3	26	114	15	19	43	9	19	4	90°
RCM-25	69	34	28	48	M5	43	12	8	4	3	29	153	19	22	60.5	10	23	4	90°

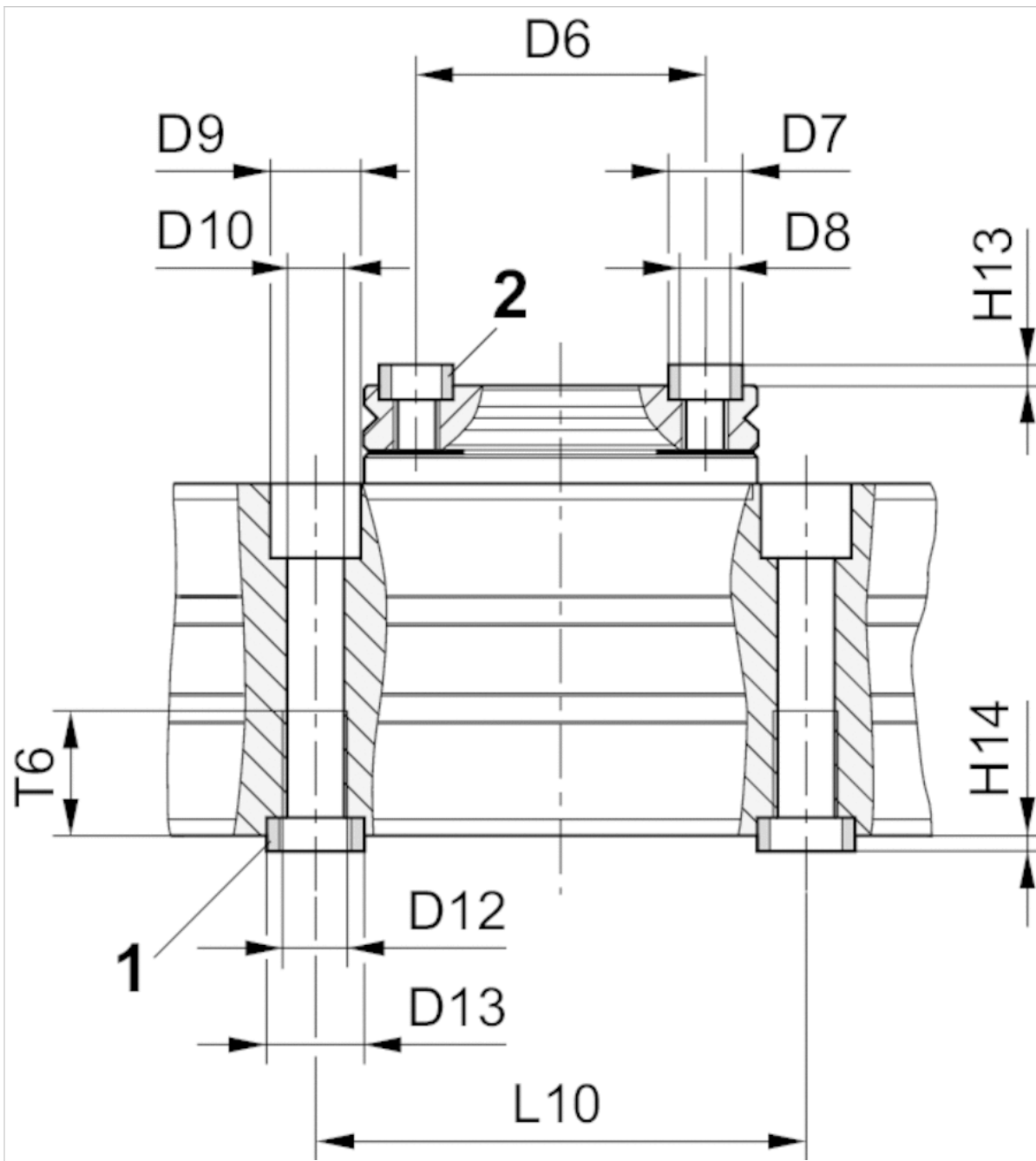
## Dimensions

### Mounting and assembly, RCM-12



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

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



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

Dimensions

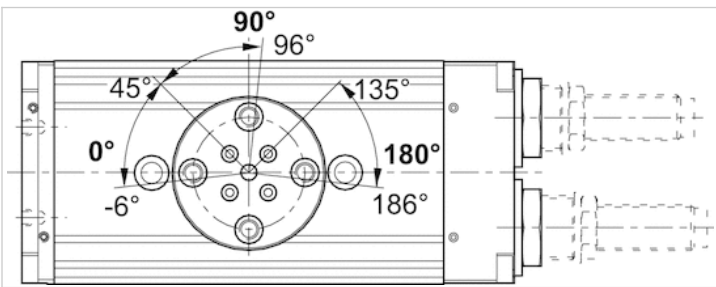
Frame size	Ø D6 ±0,02	Ø D7 k6	Ø D8	Ø D9	Ø D10	Ø D11	Ø D12	Ø D13 k6	H13 +0,2
RCM-06	18	5	M3	6	3.3	M4	-	5	1.6
RCM-08	20	5	M3	7.5	4.2	-	M5	7	1.6
RCM-12	25	7	M4	10	5.1	M5	-	9	1.6
RCM-16	30	7	M5	10	5	-	M6	9	1.6
RCM-20	30	7	M5	11	6.8	-	M8	12	1.6
RCM-25	35	9	M6	11	6.8	-	M8	12	2.1

Frame size	H14 +0,2	L9	L10 ± 0,02	T5	T6
RCM-06	1.6	20	40	7	-

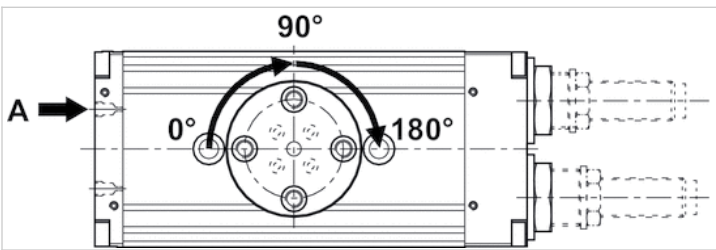
Frame size	H14 +0,2	L9	L10 ± 0,02	T5	T6
RCM-08	1.6	–	40	–	9.1
RCM-12	2.1	40	60	8.5	–
RCM-16	2.1	–	60	–	11.1
RCM-20	2.1	–	60	–	15.1
RCM-25	2.1	–	60	–	15.1

## Diagrams

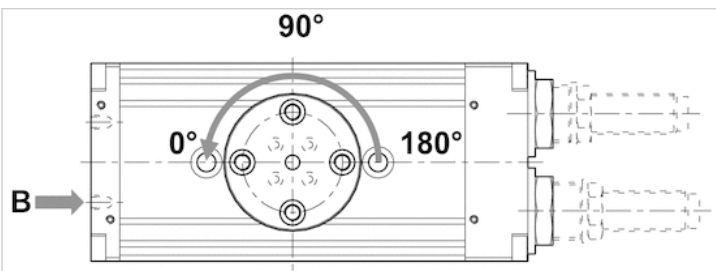
### Setting range for end positions 0° / 90° / 180°



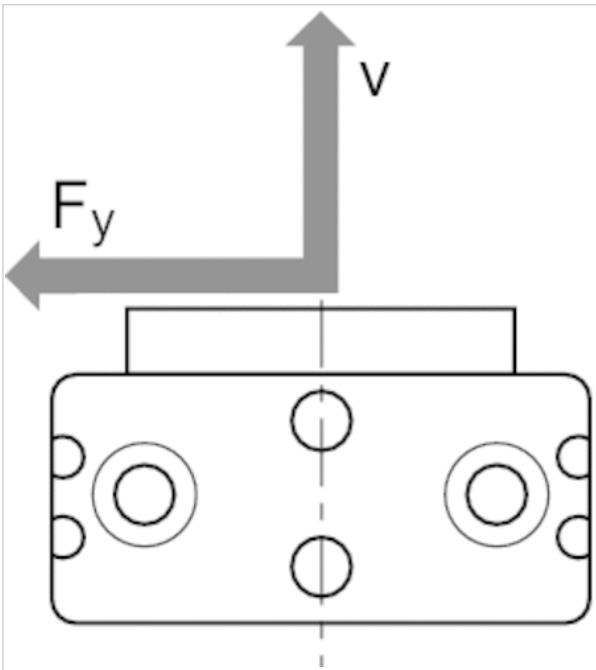
### Movement into end position 90°/180°



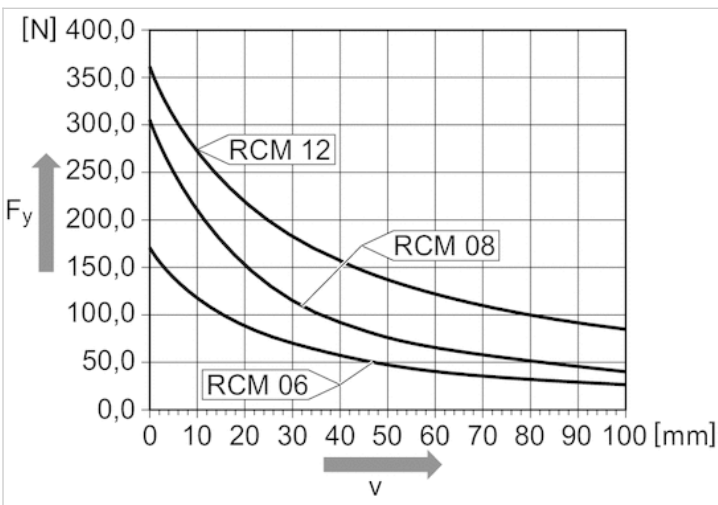
### Movement into end position 0°



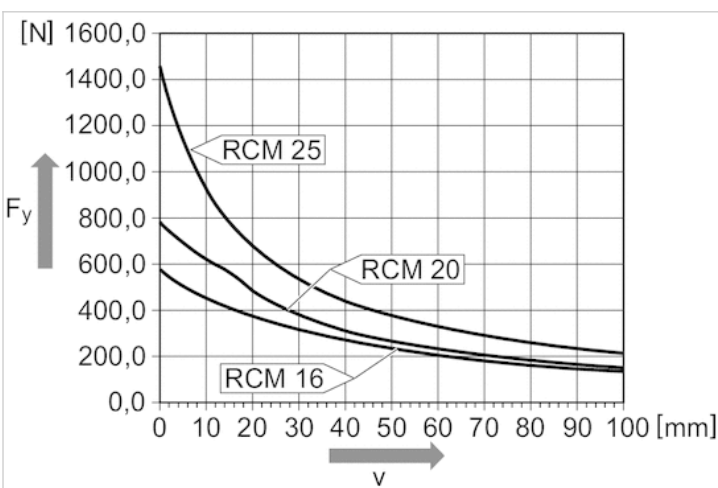
Maximum permissible radial force  $F_y$  [N] as a function of  $v$  [mm]



Maximum permissible radial force  $F_y$  [N] as a function of  $v$  [mm], RCM 6 - 12

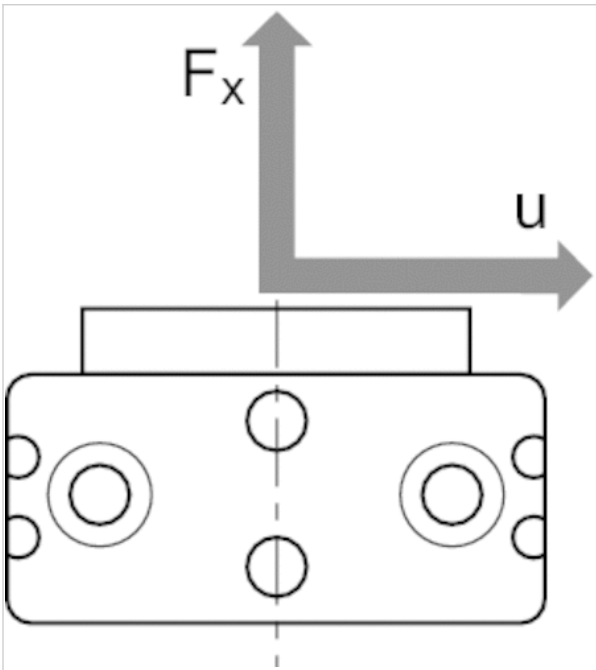


Maximum permissible radial force  $F_y$  [N] as a function of  $v$  [mm], RCM 16 - 25

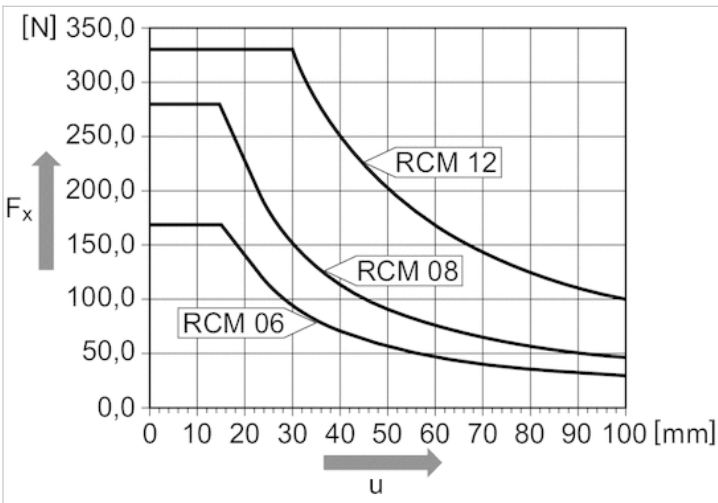




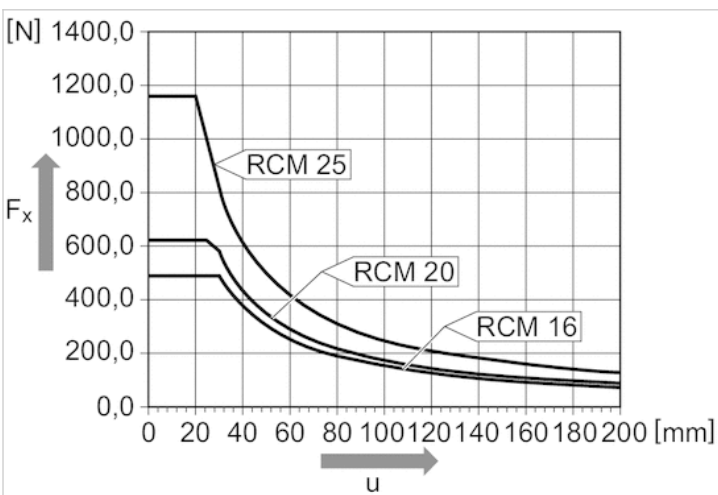
Maximum permissible axial force  $F_x$  [N] as a function of  $u$  [mm]



Maximum permissible axial force  $F_x$  [N] as a function of  $u$  [mm], RCM 6 - 12



Maximum permissible axial force  $F_x$  [N] as a function of  $u$  [mm], RCM 16 - 25

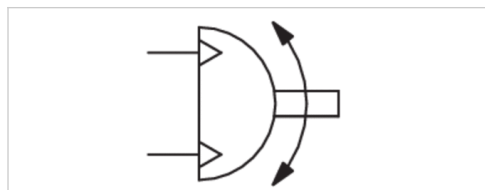


# Rotary Compact Module, Series RCM-SH

- angle of rotation max. 90 180 °
- Ø 12-25 mm
- with magnetic piston
- double piston with rack
- Easy2Combine capable
- Cushioning hydraulic non-adjustable



Working pressure min./max.	2 ... 8 bar
Ambient temperature min./max.	5 ... 60 °C
Medium temperature min./max.	5 ... 60 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 ... 1 mg/m <sup>3</sup>
Cushioning	hydraulic non-adjustable
Theoretical torque at	6 bar
Weight	See table below



## Technical data

Part No.	Frame size	Compressed air connection	angle of rotation	Min. swivel times
		G		
R412000369	RCM-12	M5	0-90 °	0.3 s
R412000370	RCM-12	M5	0-180 °	0.3 s
R412000371	RCM-16	M5	0-90 °	0.32 s
R412000372	RCM-16	M5	0-180 °	0.32 s
R412000373	RCM-20	M5	0-90 °	0.48 s
R412000374	RCM-20	M5	0-180 °	0.48 s
R412000375	RCM-25	M5	0-90 °	0.6 s
R412000376	RCM-25	M5	0-180 °	0.6 s

Part No.	Air consumption per rotation	Weight
R412000369	5.86 cm <sup>3</sup>	0.46 kg
R412000370	11.72 cm <sup>3</sup>	0.46 kg
R412000371	10.36 cm <sup>3</sup>	0.77 kg
R412000372	20.71 cm <sup>3</sup>	0.77 kg
R412000373	17.92 cm <sup>3</sup>	0.96 kg
R412000374	35.84 cm <sup>3</sup>	0.96 kg
R412000375	38.75 cm <sup>3</sup>	1.85 kg

Part No.	Air consumption per rotation	Weight
R412000376	77.5 cm <sup>3</sup>	1.85 kg

## Technical data

Frame size	RCM-12	RCM-16	RCM-20
Max. permissible axial bearing load	330 N	490 N	620 N
Max. permissible radial bearing load	360 N	580 N	780 N
Max. permissible mass moment of inertia	10 kg cm <sup>2</sup>	80 kg cm <sup>2</sup>	180 kg cm <sup>2</sup>
Repetitive precision	0.05 °	0.05 °	0.05 °
Theoretical torque	0.95 Nm	1.7 Nm	3 Nm

Frame size	RCM-25
Max. permissible axial bearing load	1160 N
Max. permissible radial bearing load	1480 N
Max. permissible mass moment of inertia	450 kg cm <sup>2</sup>
Repetitive precision	0.05 °
Theoretical torque	6.5 Nm

## Technical information

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 compressed air must remain constant during the life cycle.

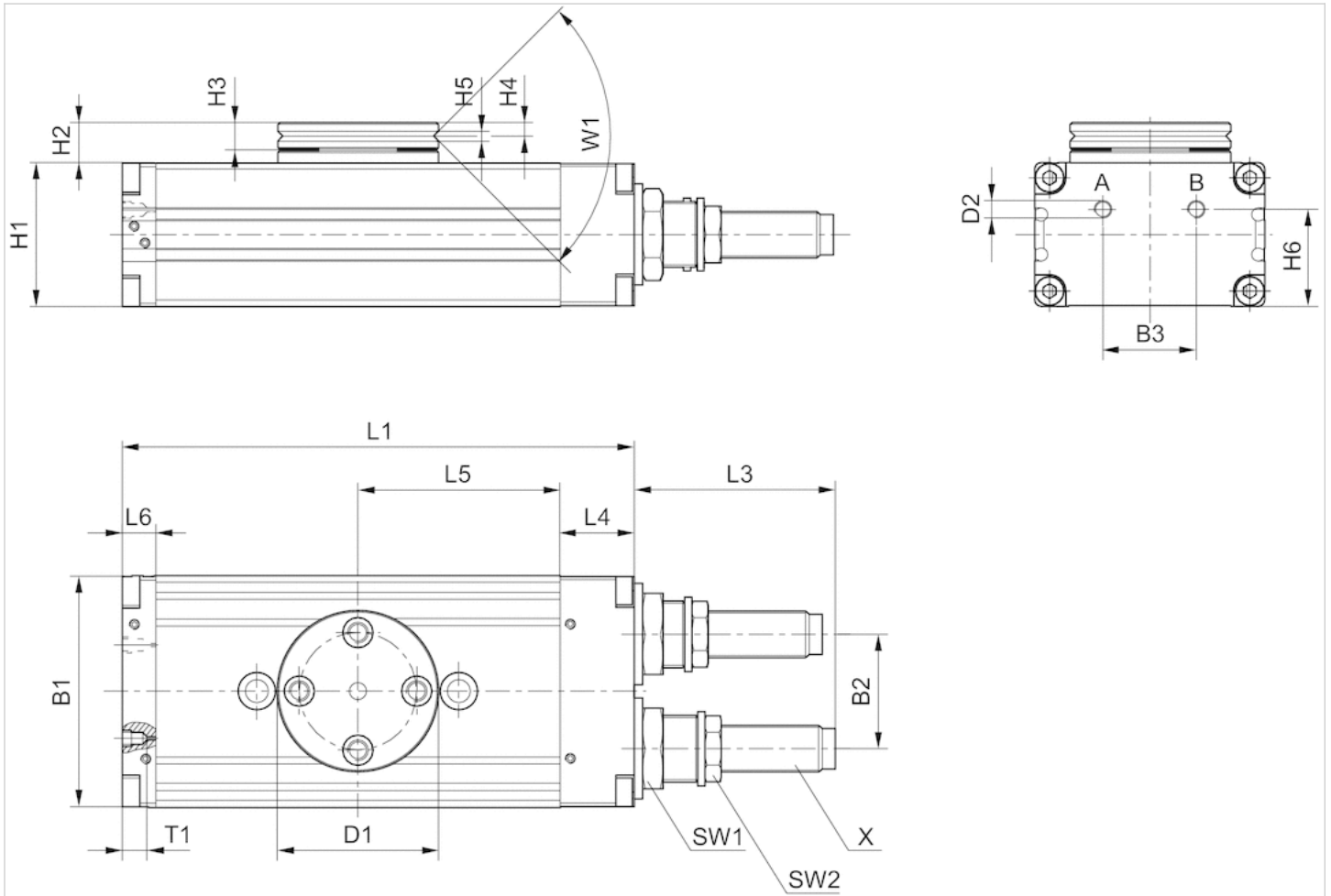
Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

## Technical information

Material	
Housing	Aluminum, anodized
Cap	Aluminum, black anodized
Base	Aluminum, black anodized
Seal	Acrylonitrile butadiene rubber
Axis	Steel, hardened
Rotary flange	Steel, hardened

## Dimensions

RCM-12/.../-25



T1 = depth of thread

## Dimensions

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

X

M8x1

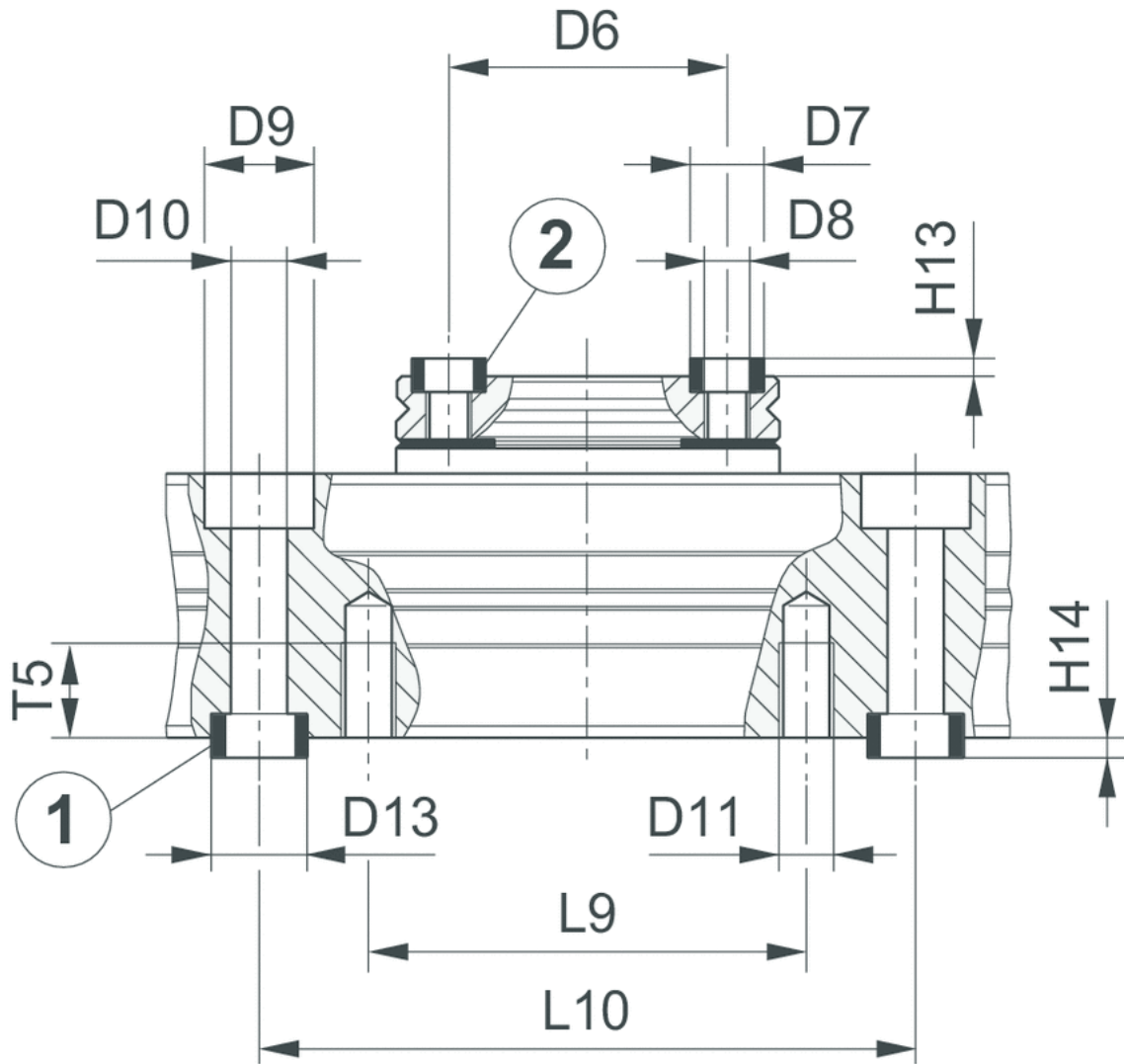
M10x1

M12x1

M14x1,5

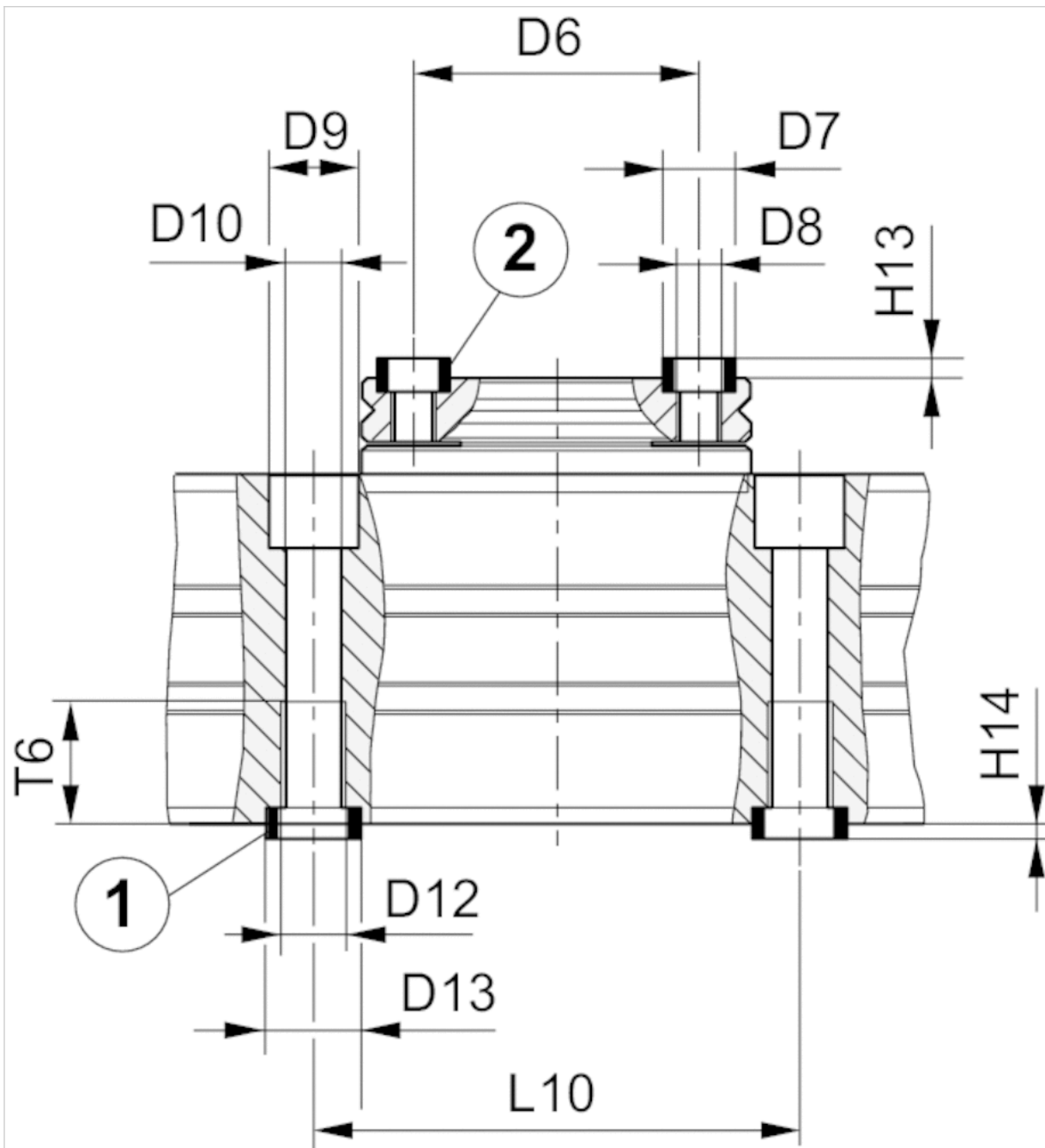
Dimensions

Mounting and assembly, RCM-12



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

Mounting and assembly, RCM 16 - 25



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

Dimensions

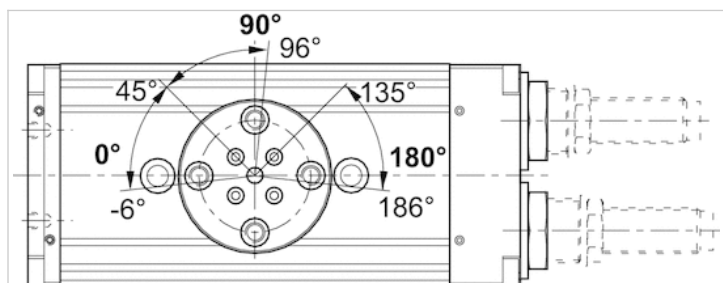
Frame size	$\varnothing D6 \pm 0,02$	$\varnothing D7 k6$	$\varnothing D8$	$\varnothing D9$	$\varnothing D10$	$\varnothing D11$	$\varnothing D12$	$\varnothing D13 k6$	$H13 +0,2$
RCM-12	25	7	M4	10	5.1	M5	-	9	1.6
RCM-16	30	7	M5	10	5	-	M6	9	1.6
RCM-20	30	7	M5	11	6.8	-	M8	12	1.6
RCM-25	35	9	M6	11	6.8	-	M8	12	2.1

Frame size	$H14 +0,2$	L9	$L10 \pm 0,02$	T5	T6
RCM-12	2.1	40	60	8.5	-
RCM-16	2.1	-	60	-	11.1
RCM-20	2.1	-	60	-	15.1

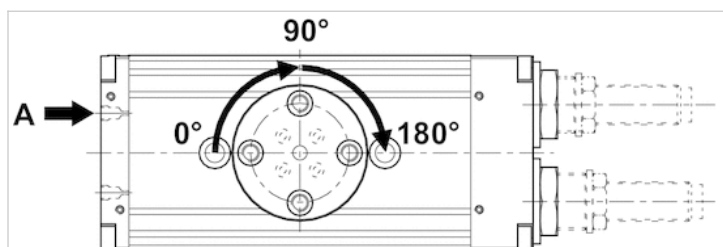
Frame size	H14 +0,2	L9	L10 ±0,02	T5	T6
RCM-25	2.1	-	60	-	15.1

## Diagrams

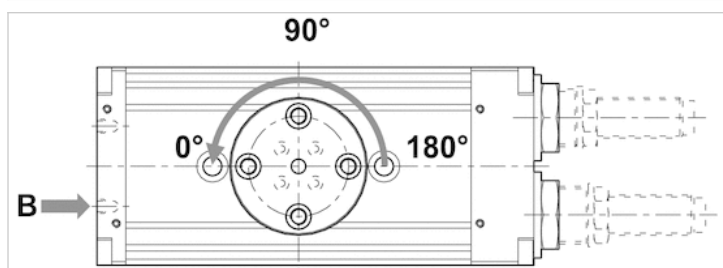
Setting range for end positions 0° / 90° / 180°



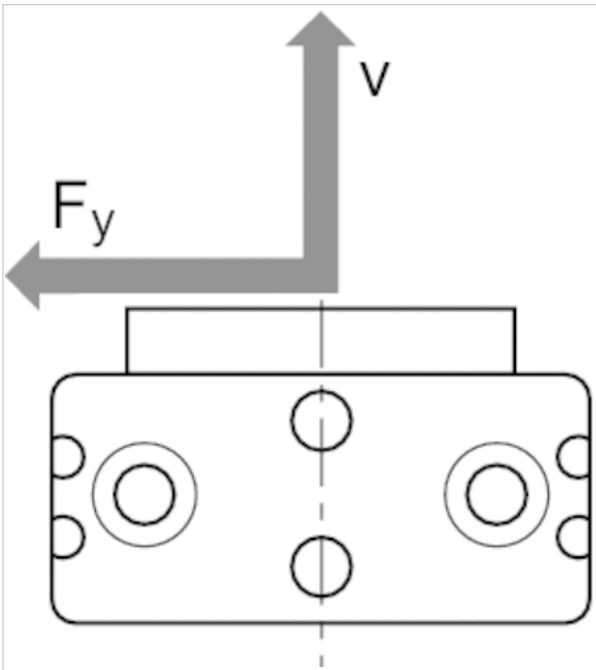
Movement into end position 90°/180°



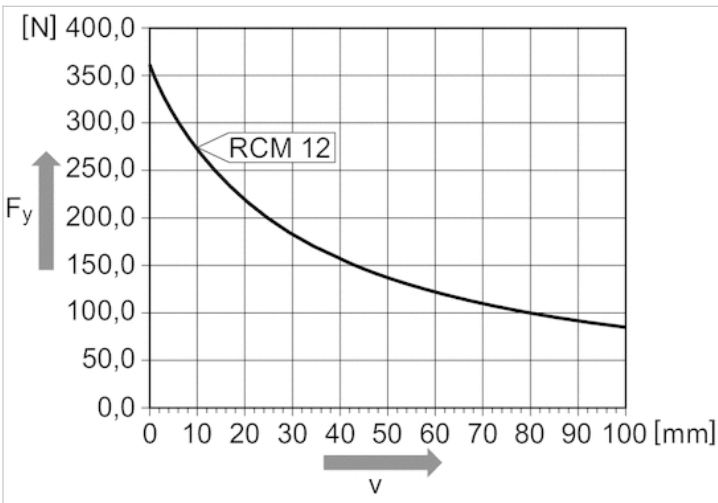
Movement into end position 0°



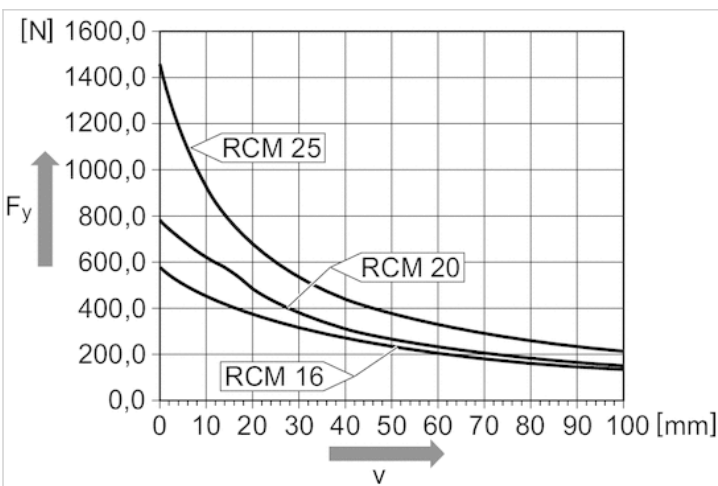
Maximum permissible radial force  $F_y$  [N] as a function of  $v$  [mm]



Maximum permissible radial force  $F_y$  [N] as a function of  $v$  [mm], RCM 12

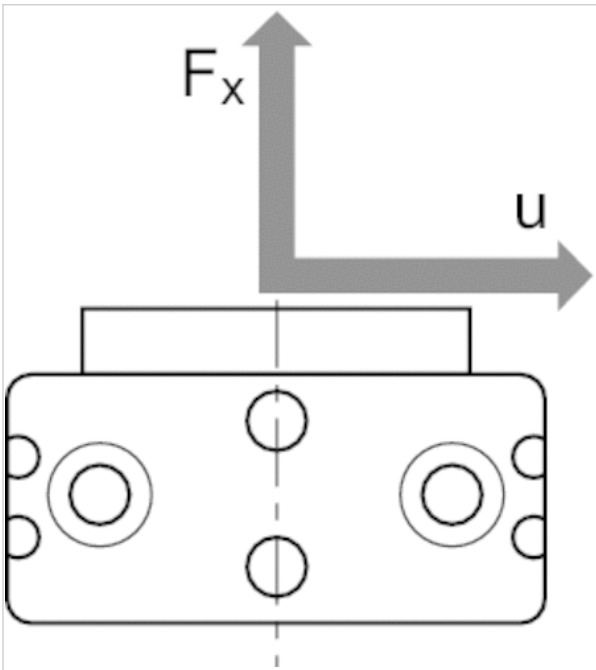


Maximum permissible radial force  $F_y$  [N] as a function of  $v$  [mm], RCM 16 - 25

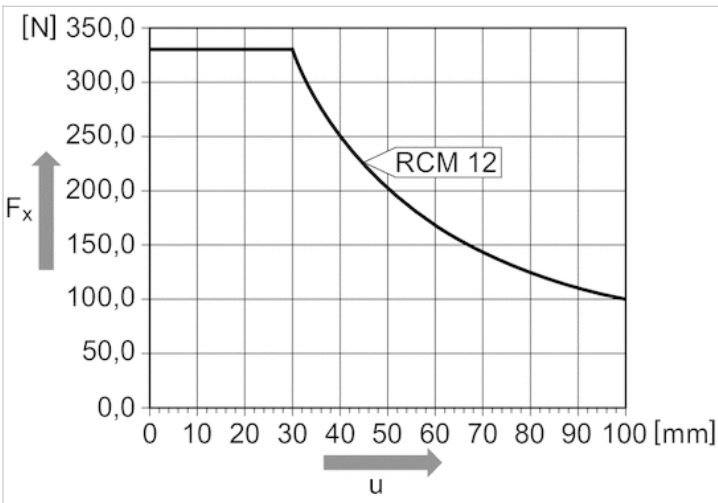




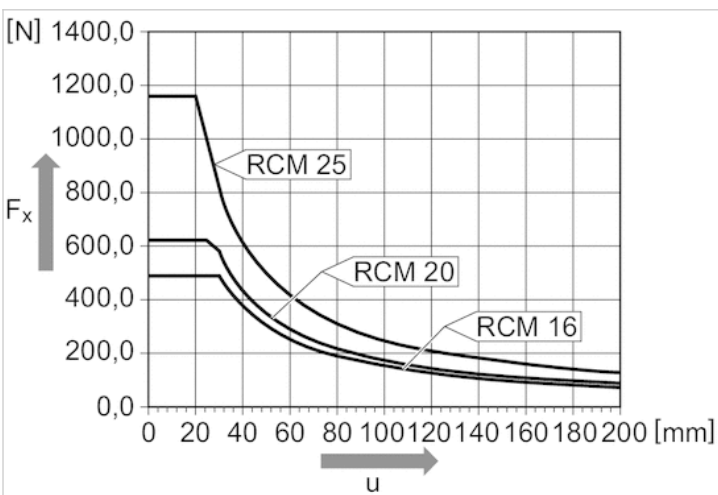
Maximum permissible axial force  $F_x$  [N] as a function of  $u$  [mm]



Maximum permissible axial force  $F_x$  [N] as a function of  $u$  [mm], RCM 12



Maximum permissible axial force  $F_x$  [N] as a function of  $u$  [mm], RCM 16 - 25

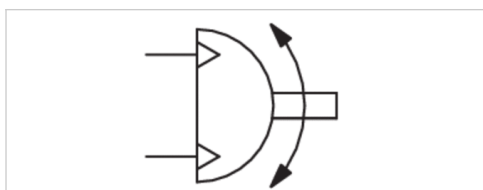


# Rotary Compact Module, Series RCM-SE

- angle of rotation max. 90 180 °
- Ø 8-25 mm
- with magnetic piston
- double piston with rack
- Easy2Combine capable
- Cushioning elastic
- with air duct



Working pressure min./max.	See table below
Ambient temperature min./max.	5 ... 60 °C
Medium temperature min./max.	5 ... 60 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 ... 1 mg/m <sup>3</sup>
air duct	with air duct
Cushioning	elastic
Theoretical torque at	6 bar
Weight	See table below



## Technical data

Part No.	Frame size	Compressed air connection	angle of rotation	Min. swivel times
		G		
R412000377	RCM-08	M3	0-90 °	0.2 s
R412000378	RCM-08	M3	0-180 °	0.28 s
R412000379	RCM-12	M5	0-90 °	0.2 s
R412000380	RCM-12	M5	0-180 °	0.28 s
R412000381	RCM-16	M5	0-90 °	0.2 s
R412000382	RCM-16	M5	0-180 °	0.25 s
R412000383	RCM-20	M5	0-90 °	0.22 s
R412000384	RCM-20	M5	0-180 °	0.3 s
R412000385	RCM-25	M5	0-90 °	0.22 s
R412000386	RCM-25	M5	0-180 °	0.3 s

Part No.	Working pressure min./max.	Air consumption per rotation	Weight
R412000377	3.5 ... 8 bar	2.14 cm <sup>3</sup>	0.19 kg
R412000378	3.5 ... 8 bar	4.27 cm <sup>3</sup>	0.19 kg
R412000379	2.5 ... 8 bar	5.86 cm <sup>3</sup>	0.46 kg
R412000380	2.5 ... 8 bar	11.72 cm <sup>3</sup>	0.46 kg

Part No.	Working pressure min./max.	Air consumption per rotation	Weight
R412000381	2 ... 8 bar	10.36 cm <sup>3</sup>	0.76 kg
R412000382	2 ... 8 bar	20.71 cm <sup>3</sup>	0.76 kg
R412000383	2 ... 8 bar	17.92 cm <sup>3</sup>	0.99 kg
R412000384	2 ... 8 bar	35.84 cm <sup>3</sup>	0.99 kg
R412000385	2 ... 8 bar	38.75 cm <sup>3</sup>	1.83 kg
R412000386	2 ... 8 bar	77.5 cm <sup>3</sup>	1.83 kg

## Technical data

Frame size	RCM-08	RCM-12	RCM-16
Number of air ducts	2	2	4
Max. permissible axial bearing load	280 N	330 N	490 N
Max. permissible radial bearing load	210 N	290 N	400 N
Max. permissible mass moment of inertia	0.25 kg cm <sup>2</sup>	0.7 kg cm <sup>2</sup>	1.6 kg cm <sup>2</sup>
Repetitive precision	0.2 °	0.2 °	0.2 °
Theoretical torque	0.33 Nm	0.95 Nm	1.7 Nm

Frame size	RCM-20	RCM-25
Number of air ducts	4	4
Max. permissible axial bearing load	620 N	1160 N
Max. permissible radial bearing load	560 N	700 N
Max. permissible mass moment of inertia	3.2 kg cm <sup>2</sup>	6.3 kg cm <sup>2</sup>
Repetitive precision	0.2 °	0.2 °
Theoretical torque	3 Nm	6.5 Nm

## Technical information

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 compressed air must remain constant during the life cycle.

Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

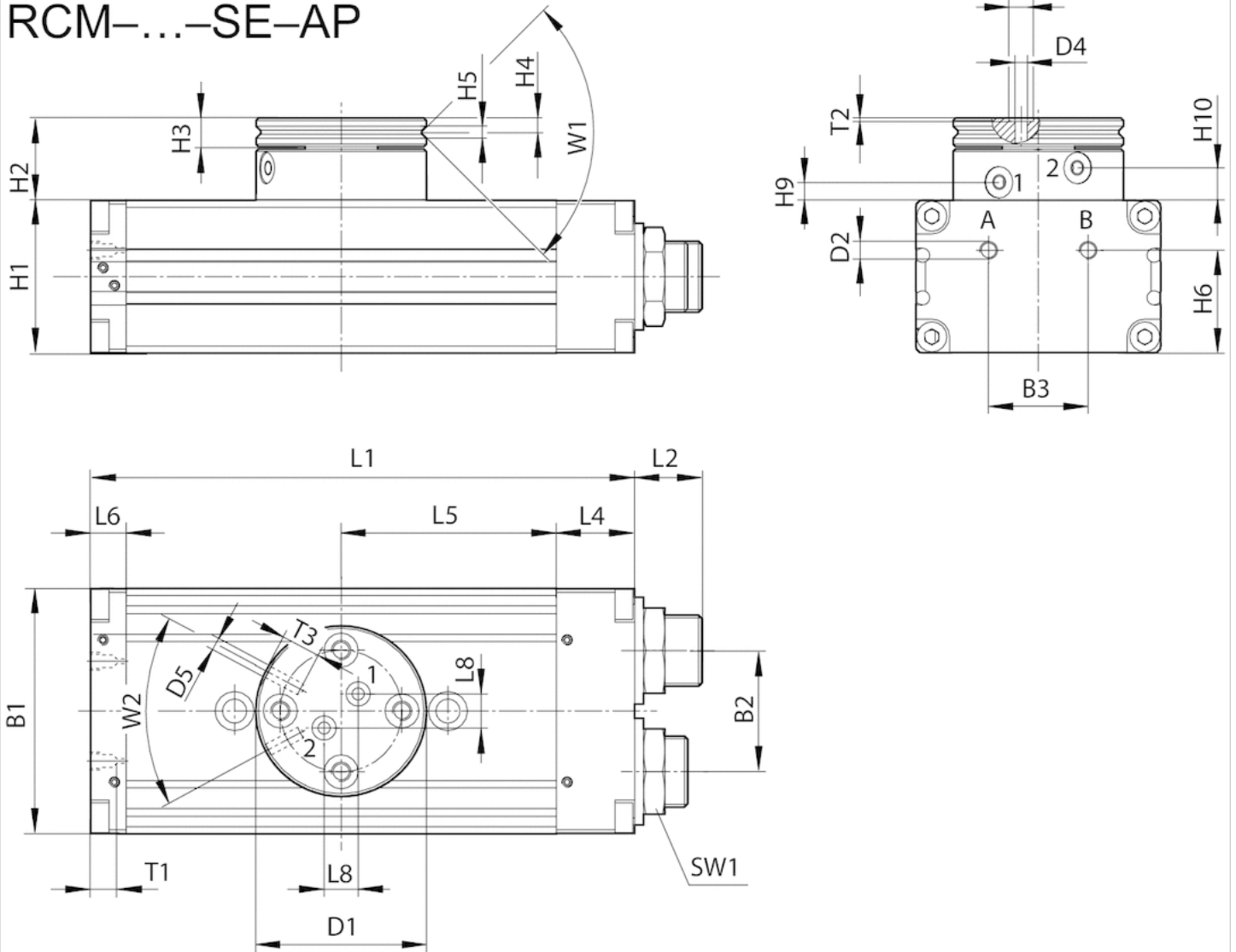
## Technical information

Material	
Housing	Aluminum, anodized
Cap	Aluminum, black anodized
Base	Aluminum, black anodized
Seal	Acrylonitrile butadiene rubber
Axis	Steel, hardened
Rotary flange	Steel, hardened

## Dimensions

RCM-8/-12

RCM-...-SE-AP



T1 = depth of thread

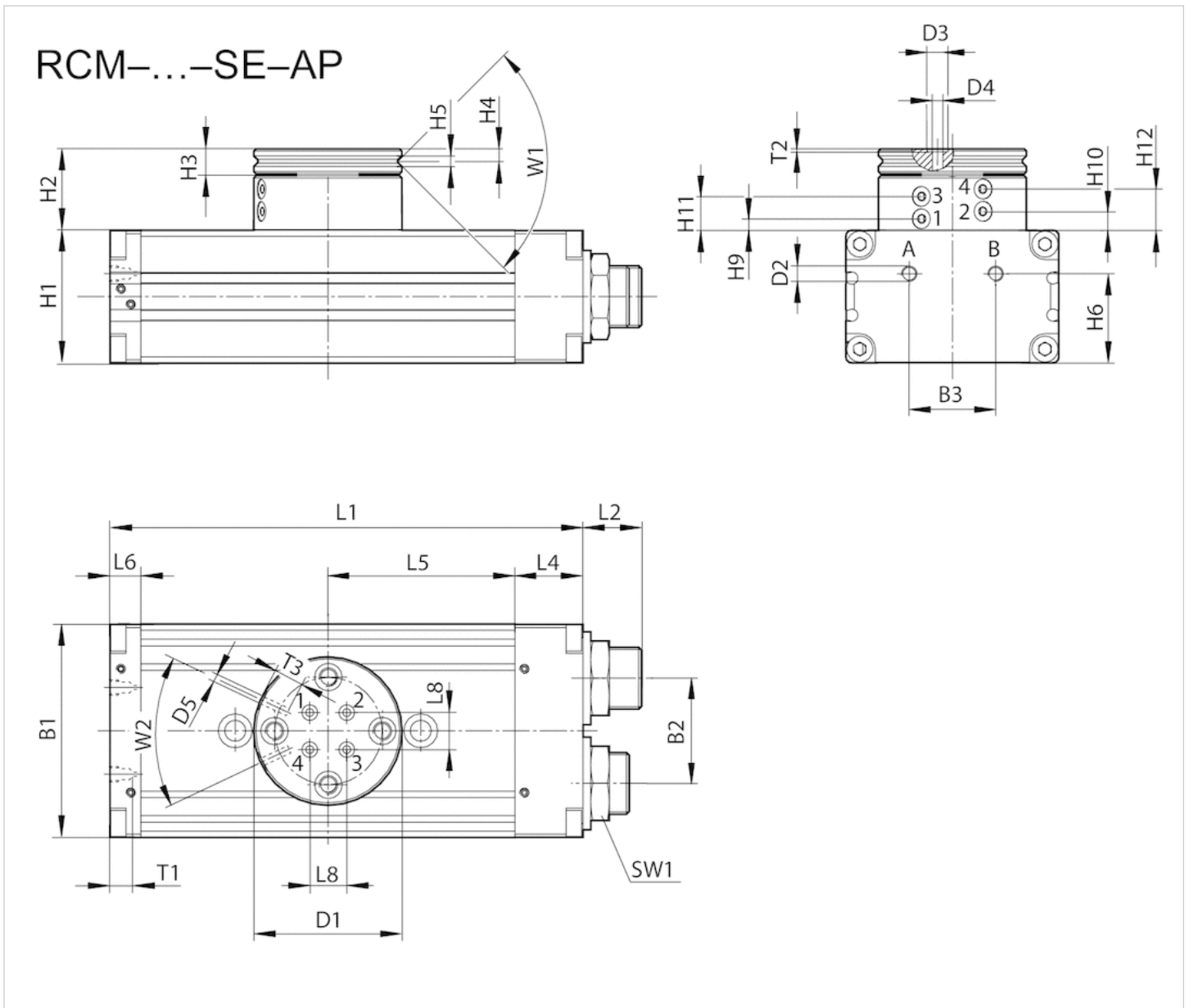
## Dimensions

Frame size	B1	B2	B3	Ø D1	Ø D2	Ø D3	Ø D4	Ø D5	H1	H2	H3	H4	H5	H6	H9 ±0,2	H10 ±0,2
RCM-08	35	15	13	28	M3	3	1.5	M3	18	16.5	5	2.4	2	14	4.3	7.2
RCM-12	43	18	18	35	M5	5	2.5	M3	24	17	6	2.9	2.5	18	3.8	6.7

Frame size	L1	L2	L4	L5	L6	L8	SW1	T1	T2	T3	W1	W2
RCM-08	77	9.5	7	31.5	7	4	10	3	0.35	4	90°	60°
RCM-12	103	12.5	14	40	9	7	15	4	0.7	4	90°	56°

## Dimensions

RCM-16/.../-25



T1 = depth of thread

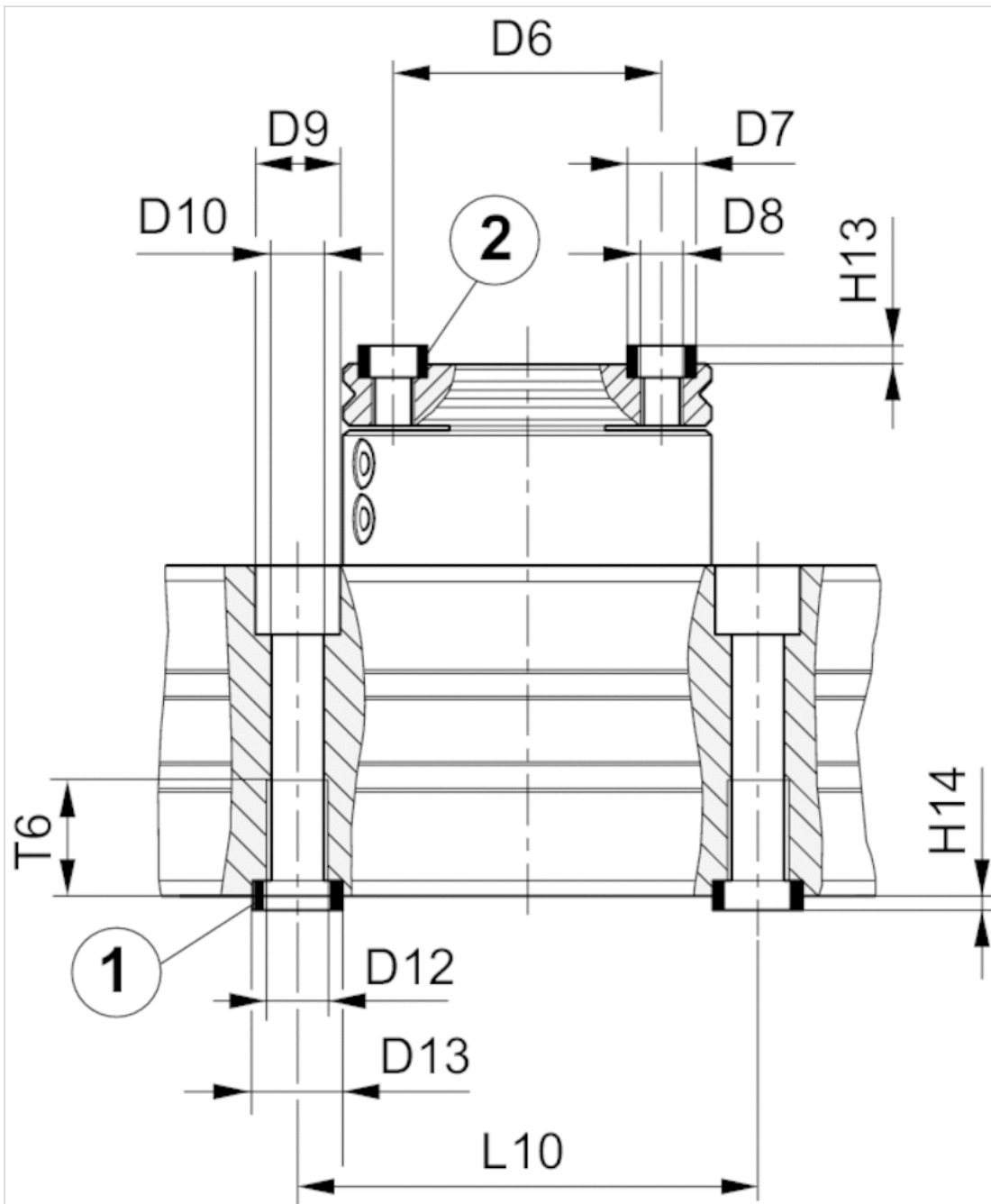
## Dimensions

Frame size	B1	B2	B3	Ø D1	Ø D2	Ø D3	Ø D4	Ø D5	H1	H2	H3	H4	H5	H6	H9 ±0,2	H10 ±0,2
RCM-16	52	24	20	40	M5	5	2.5	M3	32	25.5	7	3.3	2.5	21	3.9	6.5
RCM-20	58	30	20	42	M5	5	2.5	M3	37	26	7	3.3	3	26	4.4	7
RCM-25	69	34	28	48	M5	5	2.5	M3	43	26.5	8	4	3	29	3.9	6.5

Frame size	H11 ±0,2	H12 ±0,2	L1	L2	L4	L5	L6	L8	SW1	T1	T2	T3	W1	W2
RCM-16	11.1	13.7	108	15	18	40	10	6	19	4	0.7	4	90°	50°
RCM-20	11.6	14.2	114	15	19	43	9	10	19	4	0.7	4	90°	50°
RCM-25	11.1	13.7	153	19	22	60.5	10	12	23	4	0.7	4	90°	50°

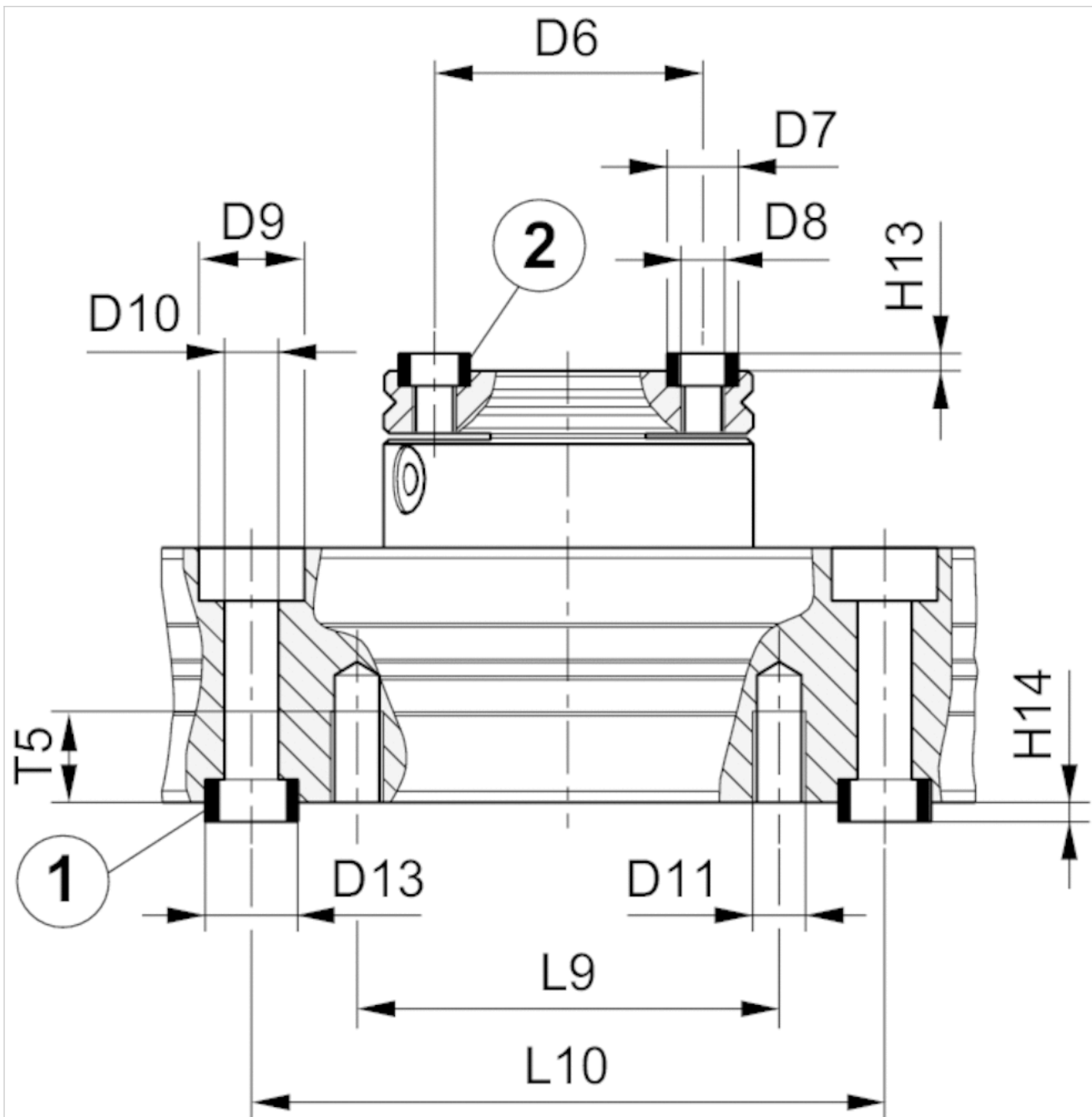
## Dimensions

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



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

Mounting and assembly, RCM 12



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

Dimensions

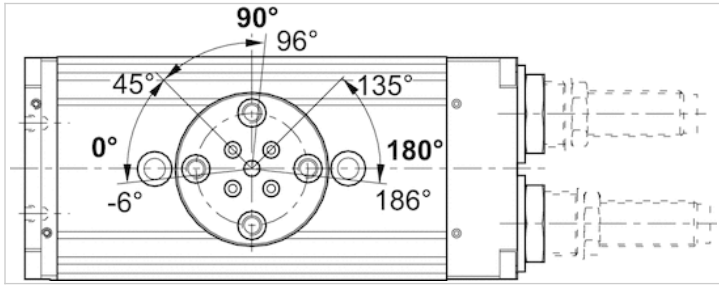
Frame size	Ø D6 ±0,02	Ø D7 k6	Ø D8	Ø D9	Ø D10	Ø D11	Ø D12	Ø D13 k6	H13 +0,2
RCM-08	20	5	M3	7.5	4.2	-	M5	7	1.6
RCM-12	25	7	M4	10	5.1	M5	-	9	1.6
RCM-16	30	7	M5	10	5	-	M6	9	1.6
RCM-20	30	7	M5	11	6.8	-	M8	12	1.6
RCM-25	35	9	M6	11	6.8	-	M8	12	2.1

Frame size	H14 +0,2	L9	L10 ± 0,02	T5	T6
RCM-08	1.6	-	40	-	9.1

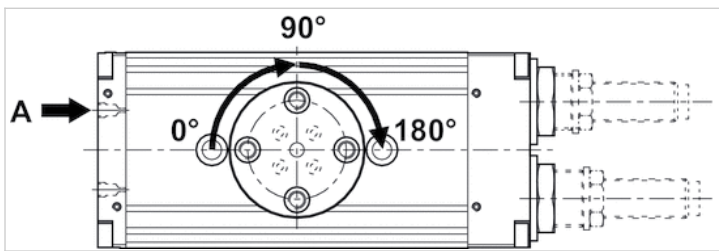
Frame size	H14 +0,2	L9	L10 ± 0,02	T5	T6
RCM-12	2.1	40	60	8.5	–
RCM-16	2.1	–	60	–	11.1
RCM-20	2.1	–	60	–	15.1
RCM-25	2.1	–	60	–	15.1

## Diagrams

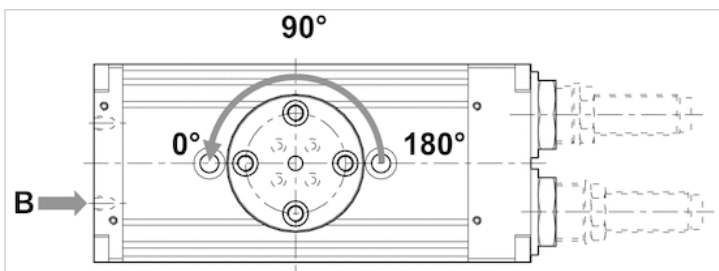
Setting range for end positions 0° / 90° / 180°



Movement into end position 90°/180°

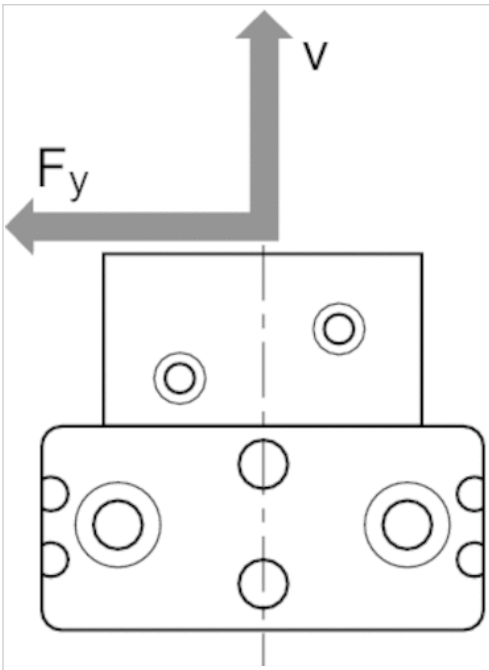


Movement into end position 0°

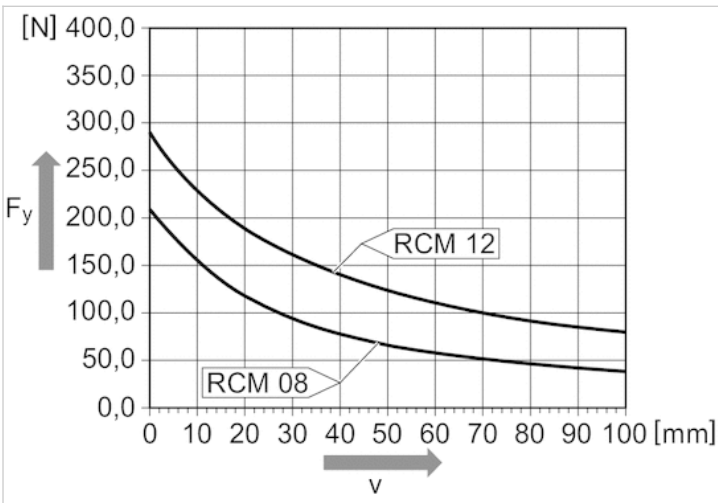




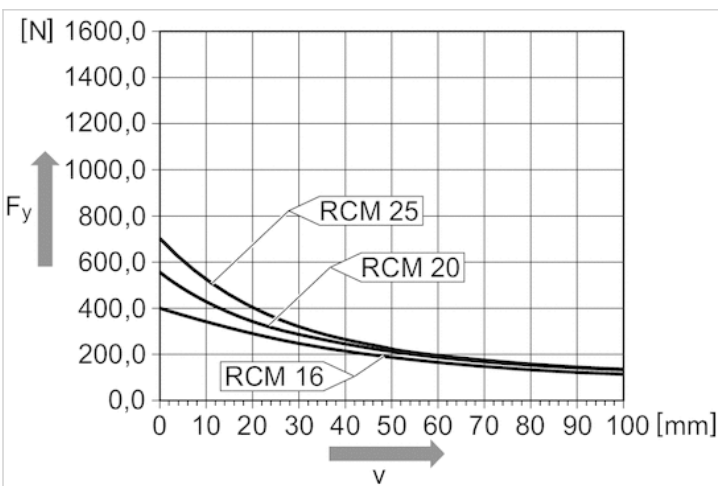
Maximum permissible radial force  $F_y$  [N] as a function of  $v$  [mm]



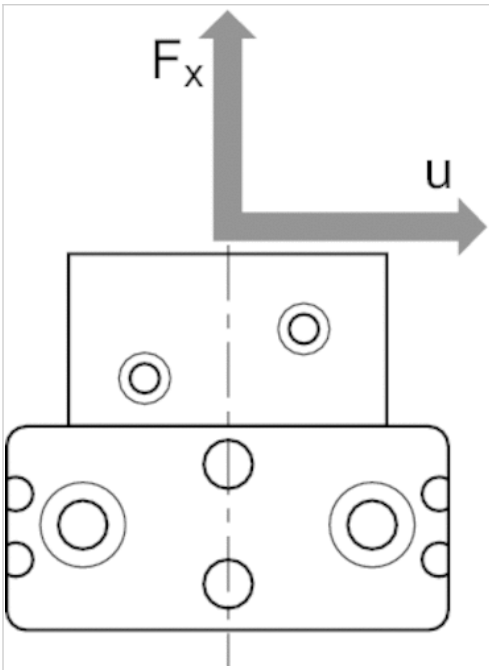
Maximum permissible radial force  $F_y$  [N] as a function of  $v$  [mm], RCM 8 - 12



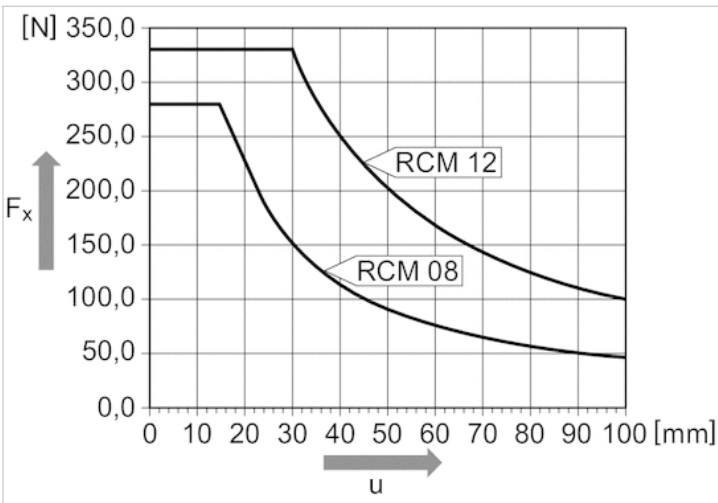
Maximum permissible radial force  $F_y$  [N] as a function of  $v$  [mm], RCM 16 - 25



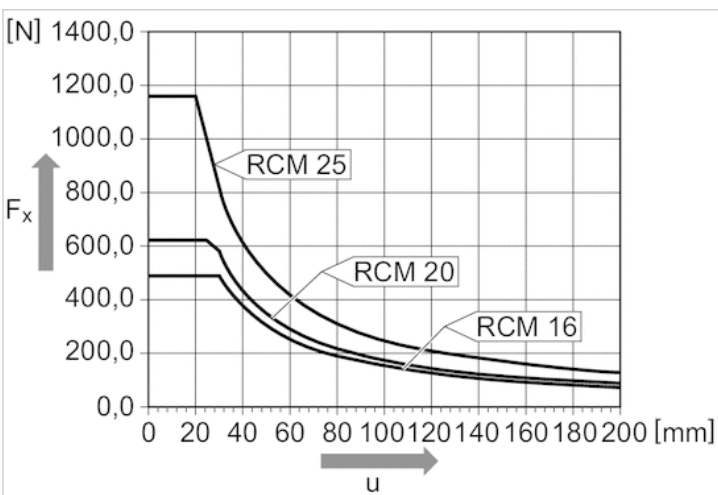
Maximum permissible radial force  $F_y$  [N] as a function of  $v$  [mm]



Maximum permissible radial force  $F_y$  [N] as a function of  $v$  [mm], RCM 8 - 12



Maximum permissible axial force  $F_x$  [N] as a function of  $u$  [mm], RCM 16 - 25

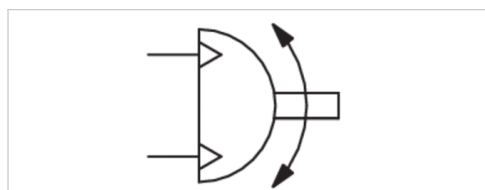


# Rotary Compact Module, Series RCM-SH

- angle of rotation max. 90 180 °
- Ø 12-25 mm
- with magnetic piston
- double piston with rack
- Easy2Combine capable
- Cushioning hydraulic non-adjustable
- with air duct



Working pressure min./max.	See table below
Ambient temperature min./max.	5 ... 60 °C
Medium temperature min./max.	5 ... 60 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 ... 1 mg/m <sup>3</sup>
air duct	with air duct
Cushioning	hydraulic non-adjustable
Theoretical torque at	6 bar
Weight	See table below



## Technical data

Part No.	Frame size	Compressed air connection	angle of rotation	Min. swivel times
		G		
R412000387	RCM-12	M5	0-90 °	0.3 s
R412000388	RCM-12	M5	0-180 °	0.3 s
R412000389	RCM-16	M5	0-90 °	0.32 s
R412000390	RCM-16	M5	0-180 °	0.32 s
R412000391	RCM-20	M5	0-90 °	0.48 s
R412000392	RCM-20	M5	0-180 °	0.48 s
R412000393	RCM-25	M5	0-90 °	0.6 s
R412000394	RCM-25	M5	0-180 °	0.6 s

Part No.	Working pressure min./max.	Air consumption per rotation	Weight
R412000387	2.5 ... 8 bar	5.86 cm <sup>3</sup>	0.5 kg
R412000388	2.5 ... 8 bar	11.72 cm <sup>3</sup>	0.5 kg
R412000389	2 ... 8 bar	10.36 cm <sup>3</sup>	0.84 kg
R412000390	2 ... 8 bar	20.71 cm <sup>3</sup>	0.84 kg
R412000391	2 ... 8 bar	17.92 cm <sup>3</sup>	1.04 kg
R412000392	2 ... 8 bar	35.84 cm <sup>3</sup>	1.04 kg

Part No.	Working pressure min./max.	Air consumption per rotation	Weight
R412000393	2 ... 8 bar	38.75 cm <sup>3</sup>	1.95 kg
R412000394	2 ... 8 bar	77.5 cm <sup>3</sup>	1.95 kg

## Technical data

Frame size	RCM-12	RCM-16	RCM-20
Number of air ducts	2	4	4
Max. permissible axial bearing load	330 N	490 N	620 N
Max. permissible radial bearing load	290 N	400 N	560 N
Max. permissible mass moment of inertia	10 kg cm <sup>2</sup>	80 kg cm <sup>2</sup>	180 kg cm <sup>2</sup>
Repetitive precision	0.05 °	0.05 °	0.05 °
Theoretical torque	0.95 Nm	1.7 Nm	3 Nm

Frame size	RCM-25
Number of air ducts	4
Max. permissible axial bearing load	1160 N
Max. permissible radial bearing load	700 N
Max. permissible mass moment of inertia	450 kg cm <sup>2</sup>
Repetitive precision	0.05 °
Theoretical torque	6.5 Nm

## Technical information

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 compressed air must remain constant during the life cycle.

Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

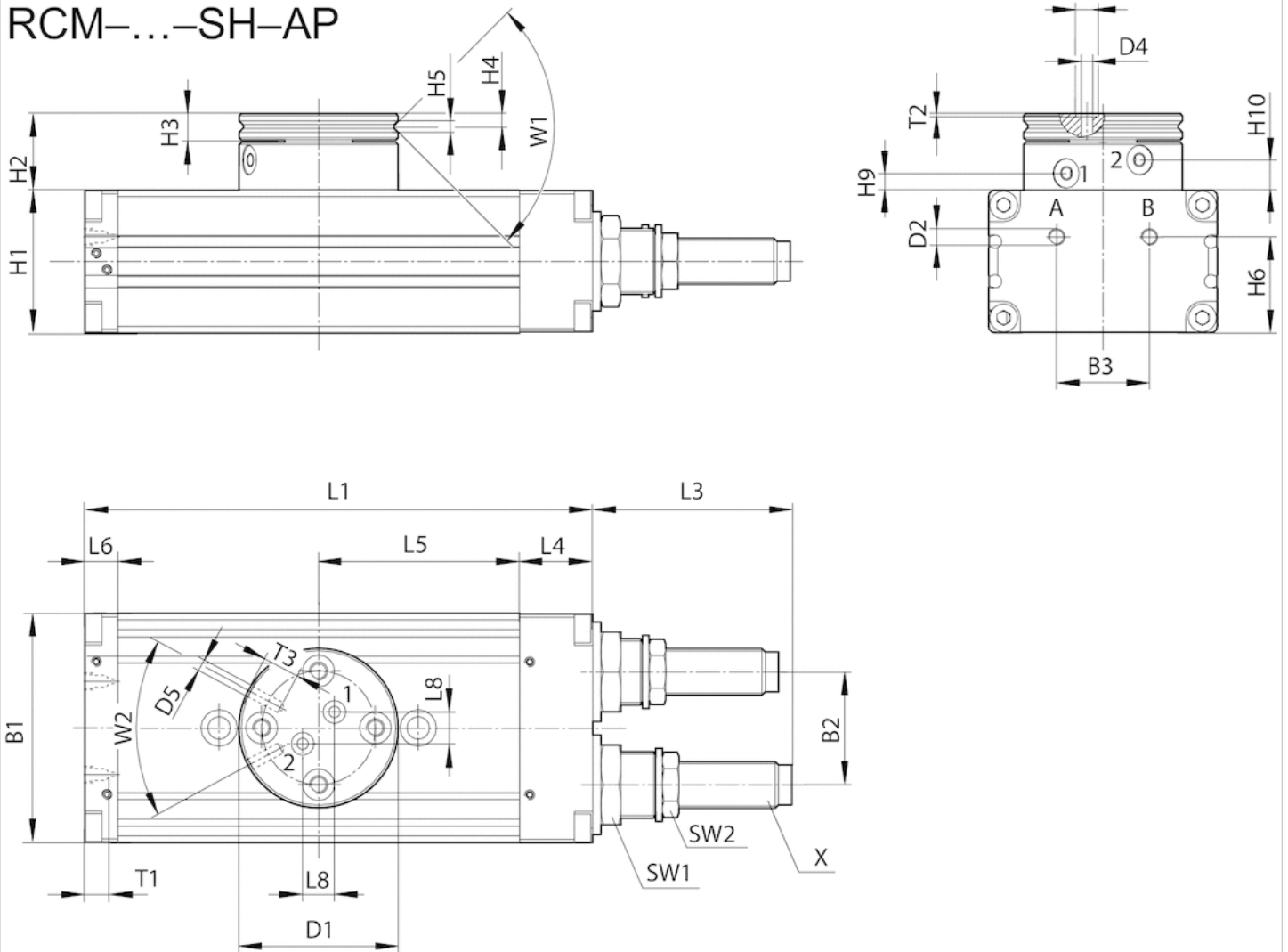
## Technical information

Material	
Housing	Aluminum, anodized
Cap	Aluminum, black anodized
Base	Aluminum, black anodized
Seal	Acrylonitrile butadiene rubber
Axis	Steel, hardened
Rotary flange	Steel, hardened

## Dimensions

RCM-12

RCM-...-SH-AP



T1 = depth of thread

## Dimensions

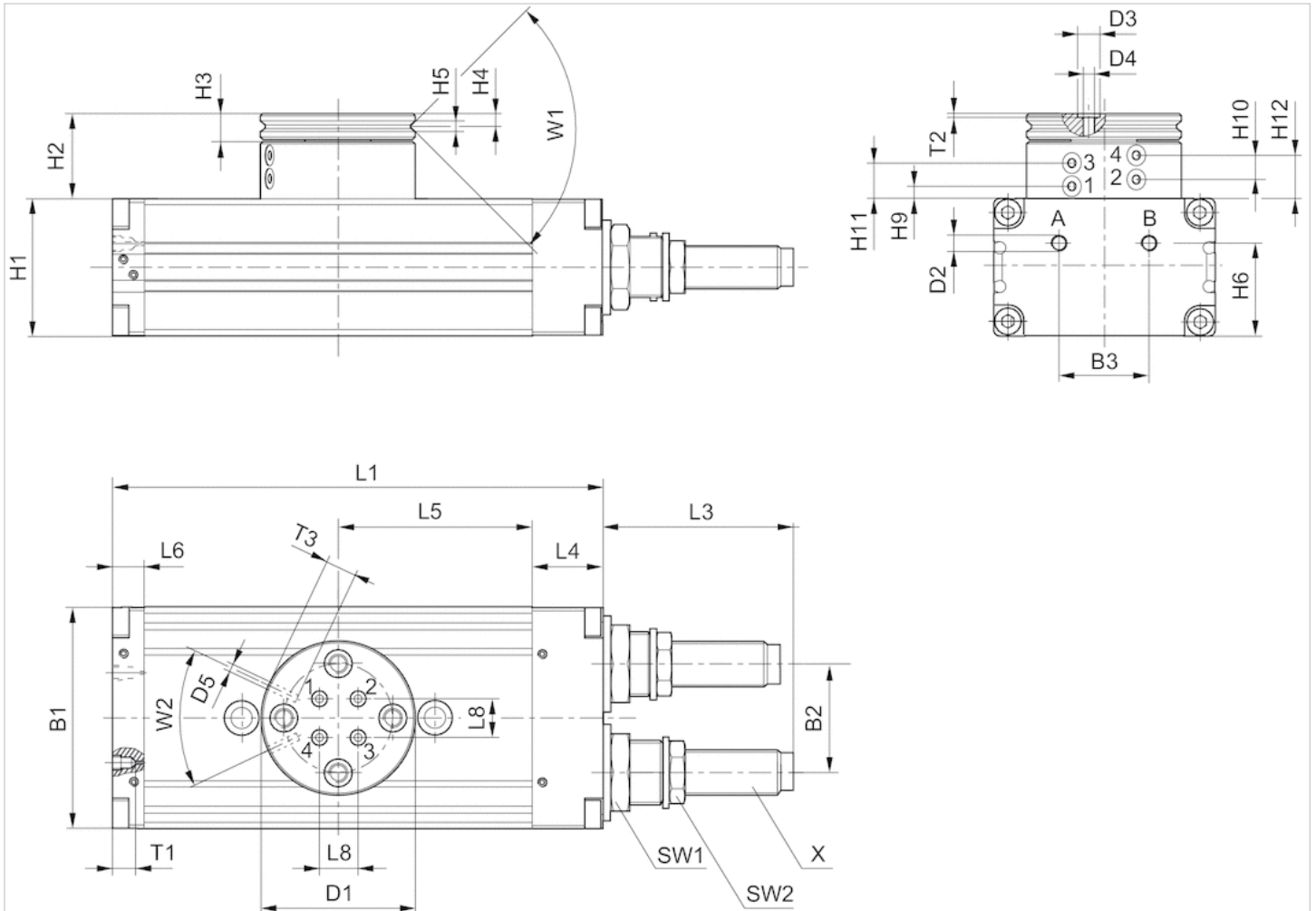
Frame size	B1	B2	B3	Ø D1	Ø D2	Ø D3	Ø D4	Ø D5	H1	H2	H3	H4	H5	H6	H9 ±0,2	H10 ±0,2
RCM-12	43	18	18	35	M5	5	2.5	M3	24	17	6	2.9	2.5	18	3.8	6.7

Frame size	L1	L3	L4	L5	L6	L8	SW1	SW2	T1	T2	T3	W1	W2	X
RCM-12	103	33.5	14	40	9	7	15	11	4	0.7	4	90°	56°	M8x1

## Dimensions

### RCM-16/.../-25



T1 = depth of thread

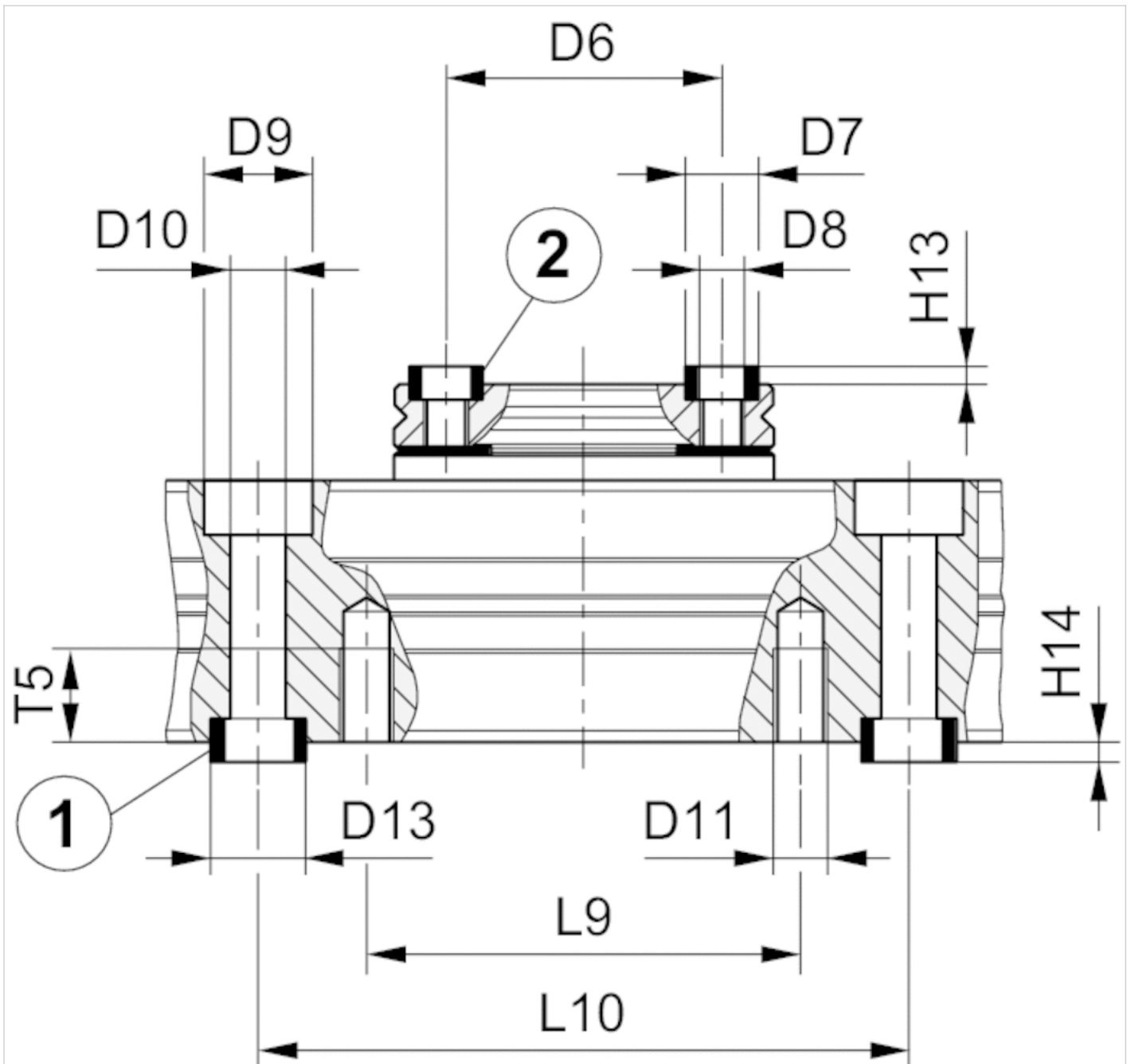
## Dimensions

Frame size	B1	B2	B3	Ø D1	Ø D2	Ø D3	Ø D4	Ø D5	H1	H2	H3	H4	H5	H6	H9 ±0,2	H10 ±0,2
RCM-16	52	24	20	40	M5	5	2.5	M3	32	25.5	7	3.3	2.5	21	3.9	6.5
RCM-20	58	30	20	42	M5	5	2.5	M3	37	26	7	3.3	3	26	4.4	7
RCM-25	69	34	28	48	M5	5	2.5	M3	43	26.5	8	4	3	29	3.9	6.5

Frame size	H11 ±0,2	H12 ±0,2	L1	L3	L4	L5	L6	L8	SW1	SW2	T1	T2	T3	W1	W2	X
RCM-16	11.1	13.7	108	34	18	40	10	6	19	13	4	0.7	4	90°	50°	M10x1
RCM-20	11.6	14.2	114	48.5	19	43	9	10	19	15	4	0.7	4	90°	50°	M12x1
RCM-25	11.1	13.7	153	60	22	60.5	10	12	23	17	4	0.7	4	90°	50°	M14x1,5

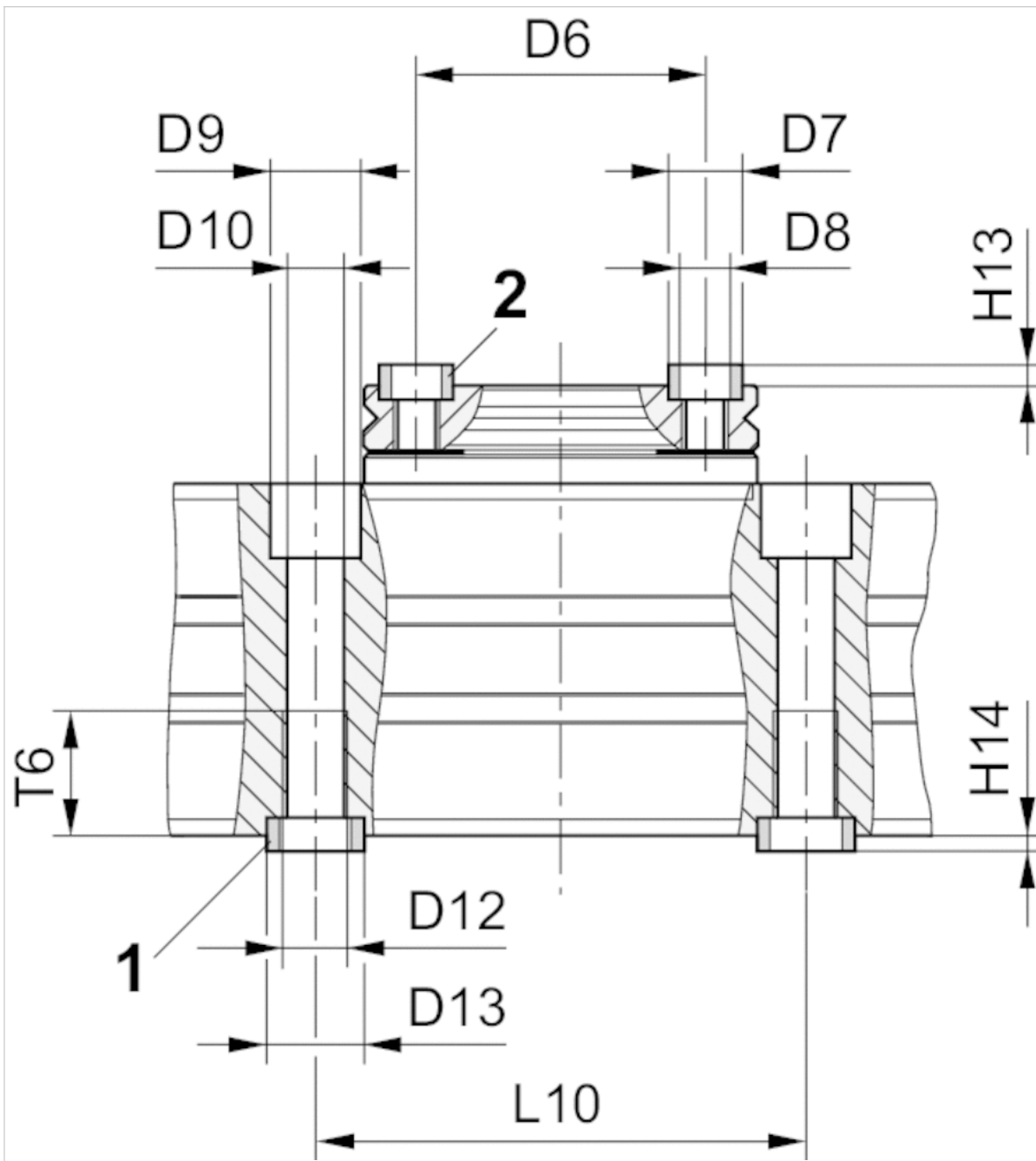
## Dimensions

### Mounting and assembly, RCM-12



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

## Mounting and assembly, RCM-16/.../-25



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

## Dimensions

Frame size	$\varnothing D6 \pm 0,02$	$\varnothing D7 k6$	$\varnothing D8$	$\varnothing D9$	$\varnothing D10$	$\varnothing D11$	$\varnothing D12$	$\varnothing D13 k6$	$H13 +0,2$
RCM-12	25	7	M4	10	5.1	M5	-	9	1.6
RCM-16	30	7	M5	10	5	-	M6	9	1.6
RCM-20	30	7	M5	11	6.8	-	M8	12	1.6
RCM-25	35	9	M6	11	6.8	-	M8	12	2.1

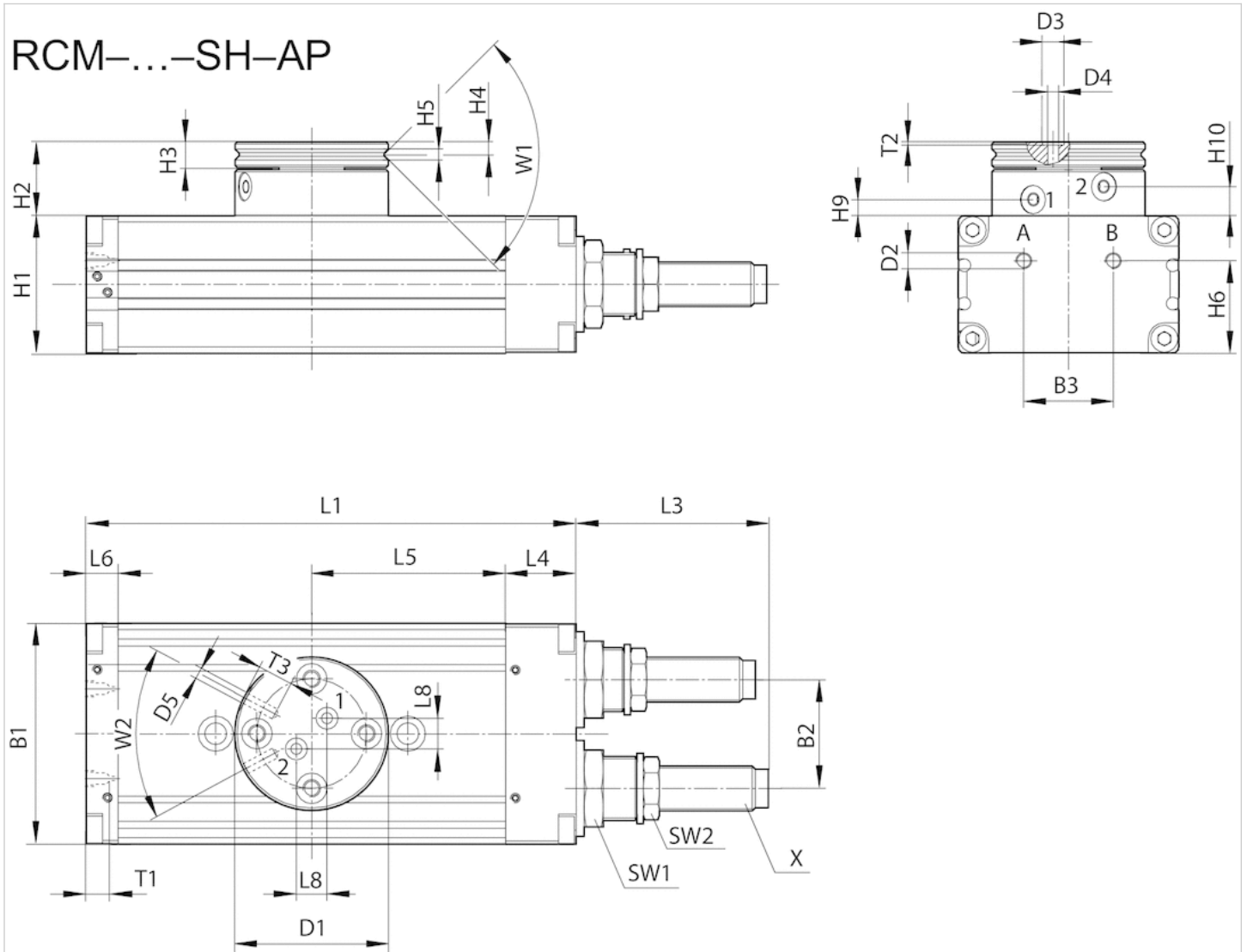
Frame size	$H14 +0,2$	L9	$L10 \pm 0,02$	T5	T6
RCM-12	2.1	40	60	8.5	-
RCM-16	2.1	-	60	-	11.1
RCM-20	2.1	-	60	-	15.1



Frame size	H14 +0,2	L9	L10 ±0,02	T5	T6
RCM-25	2.1	-	60	-	15.1

## Dimensions

### RCM-12



T1 = depth of thread

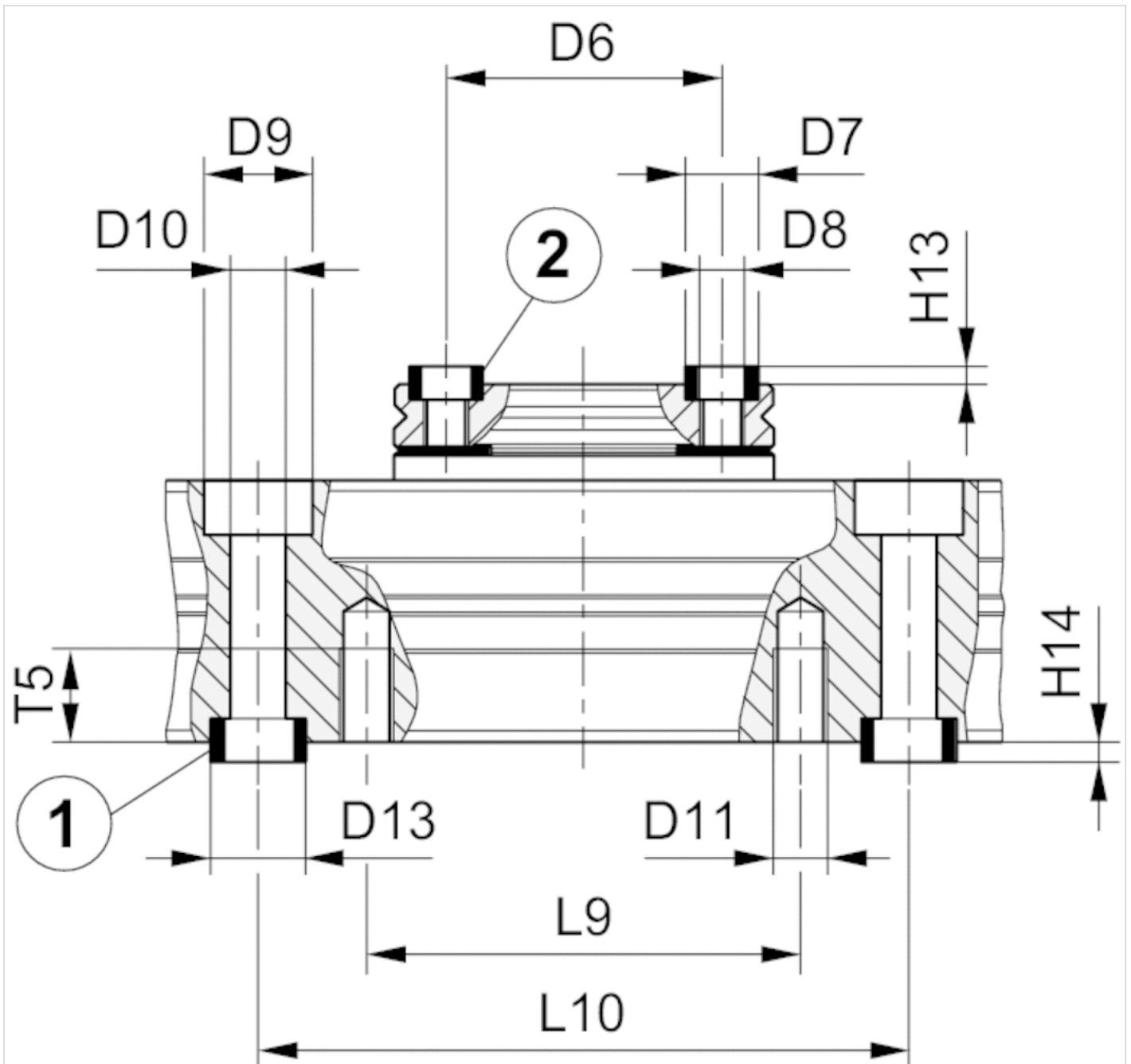
## Dimensions

Frame size	B1	B2	B3	Ø D1	Ø D2	Ø D3	Ø D4	Ø D5	H1	H2	H3	H4	H5	H6	H9 ±0,2	H10 ±0,2
RCM-12	43	18	18	35	M5	5	2.5	M3	24	17	6	2.9	2.5	18	3.8	6.7

Frame size	L1	L3	L4	L5	L6	L8	SW1	SW2	T1	T2	T3	W1	W2	X
RCM-12	103	33.5	14	40	9	7	15	11	4	0.7	4	90°	56°	M8x1

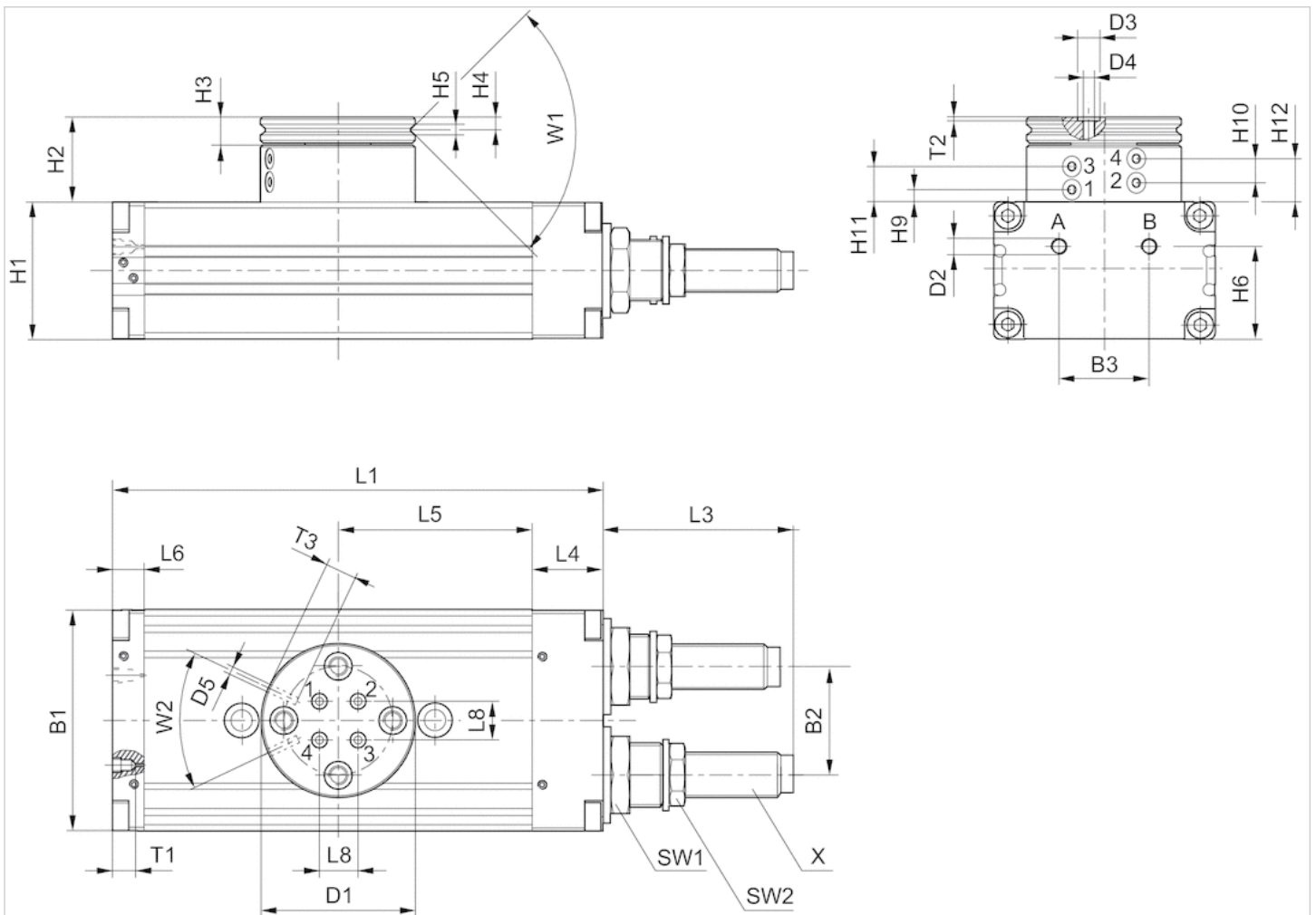
Dimensions

Mounting and assembly, RCM-12



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

RCM-16/.../-25



T1 = depth of thread

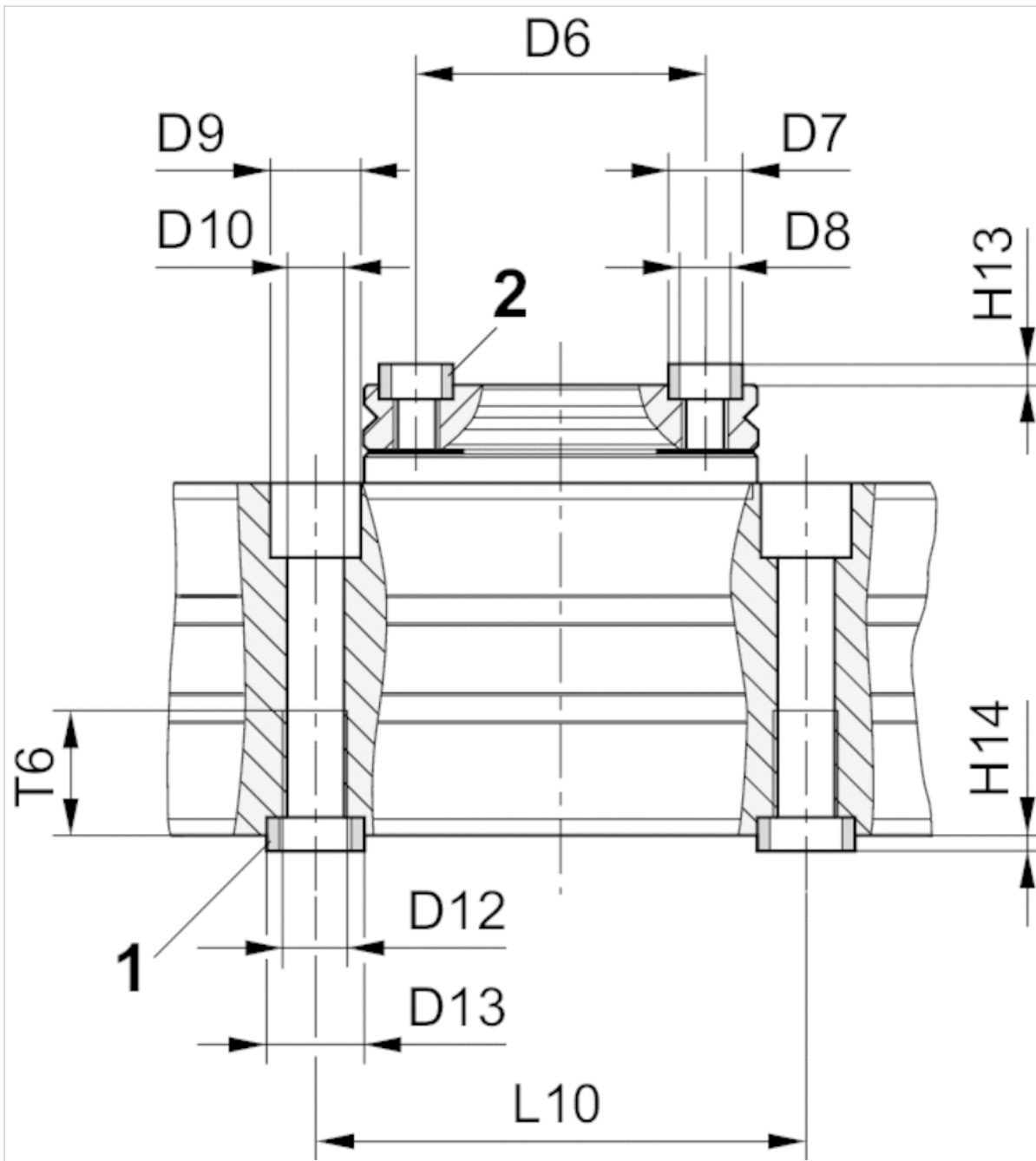
Dimensions

Frame size	B1	B2	B3	Ø D1	Ø D2	Ø D3	Ø D4	Ø D5	H1	H2	H3	H4	H5	H6	H9 ±0,2	H10 ±0,2
RCM-16	52	24	20	40	M5	5	2.5	M3	32	25.5	7	3.3	2.5	21	3.9	6.5
RCM-20	58	30	20	42	M5	5	2.5	M3	37	26	7	3.3	3	26	4.4	7
RCM-25	69	34	28	48	M5	5	2.5	M3	43	26.5	8	4	3	29	3.9	6.5

Frame size	H11 ±0,2	H12 ±0,2	L1	L3	L4	L5	L6	L8	SW1	SW2	T1	T2	T3	W1	W2	X
RCM-16	11.1	13.7	108	34	18	40	10	6	19	13	4	0.7	4	90°	50°	M10x1
RCM-20	11.6	14.2	114	48.5	19	43	9	10	19	15	4	0.7	4	90°	50°	M12x1
RCM-25	11.1	13.7	153	60	22	60.5	10	12	23	17	4	0.7	4	90°	50°	M14x1,5

## Dimensions

### Mounting and assembly, RCM-16/.../-25



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

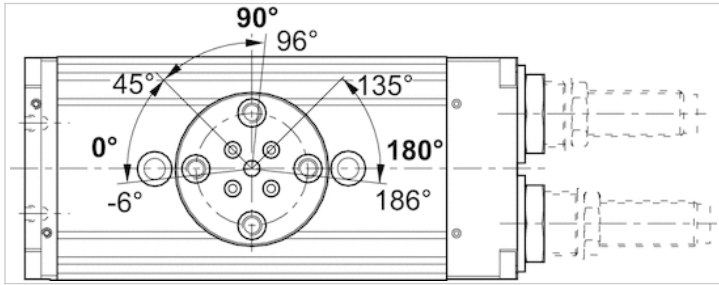
## Dimensions

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
RCM-12	25	7	M4	10	5.1	M5	-	9	1.6
RCM-16	30	7	M5	10	5	-	M6	9	1.6
RCM-20	30	7	M5	11	6.8	-	M8	12	1.6
RCM-25	35	9	M6	11	6.8	-	M8	12	2.1

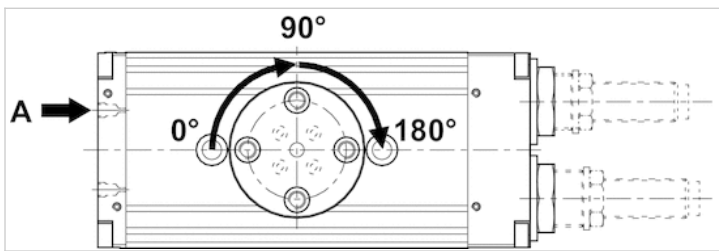
Frame size	H14 +0,2	L9	L10 ±0,02	T5	T6
RCM-12	2.1	40	60	8.5	-
RCM-16	2.1	-	60	-	11.1
RCM-20	2.1	-	60	-	15.1
RCM-25	2.1	-	60	-	15.1

## Diagrams

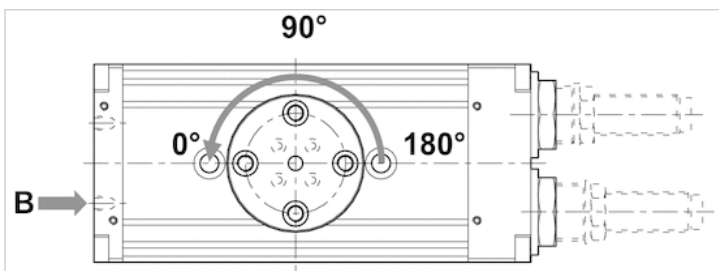
Setting range for end positions 0° / 90° / 180°



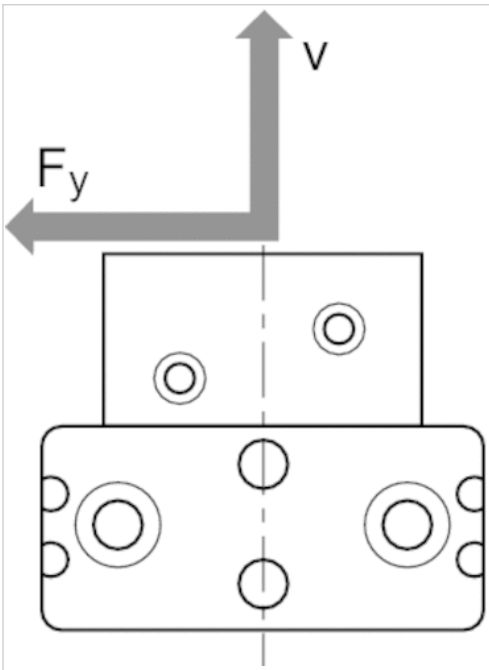
Movement into end position 90°/180°



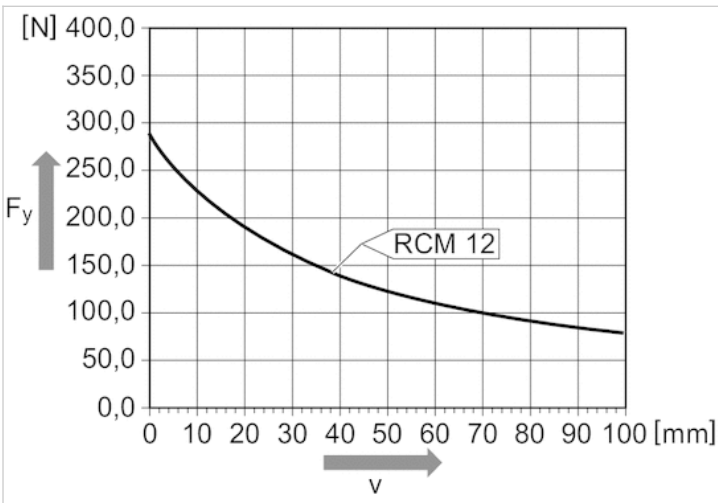
Movement into end position 0°



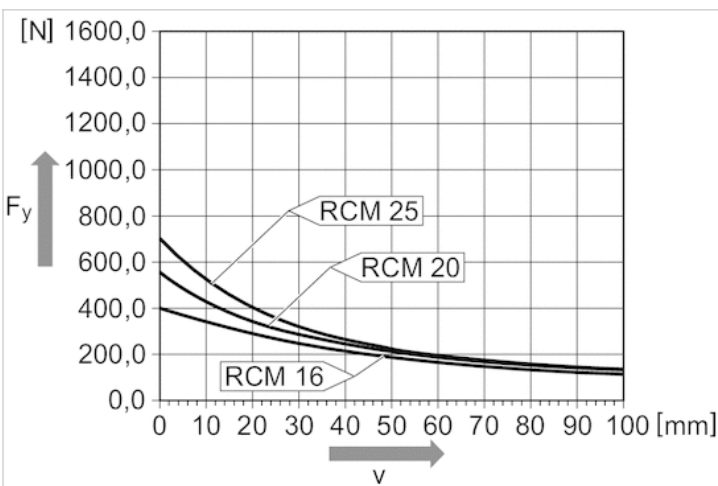
Maximum permissible radial force  $F_y$  [N] as a function of  $v$  [mm]



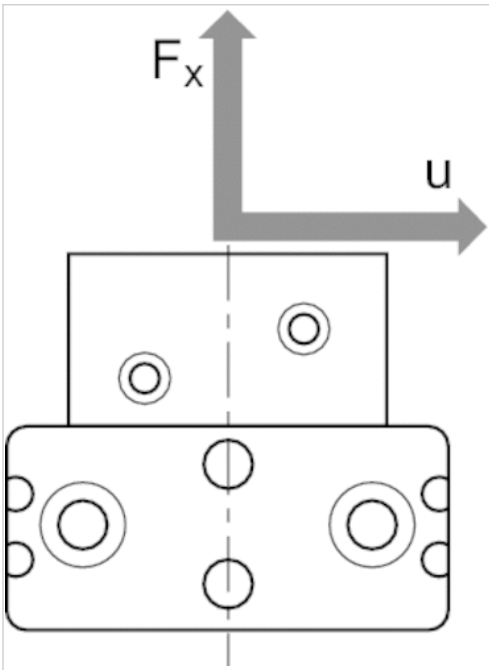
Maximum permissible radial force  $F_y$  [N] as a function of  $v$  [mm], RCM-12



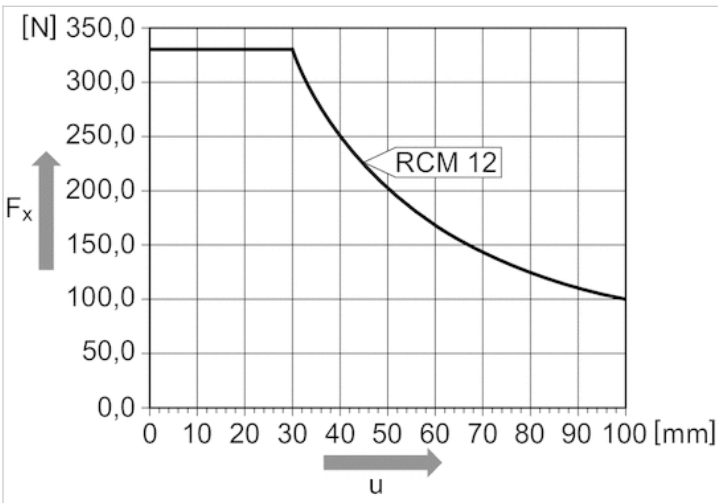
Maximum permissible radial force  $F_y$  [N] as a function of  $v$  [mm], RCM 16 - 25



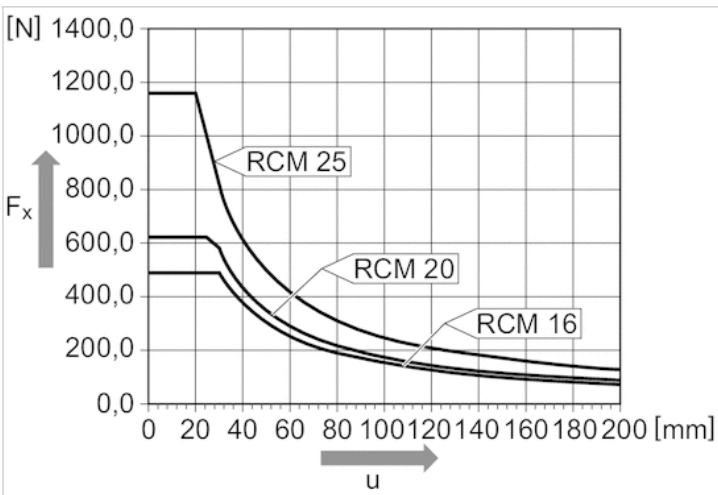
Maximum permissible axial force  $F_x$  [N] as a function of  $u$  [mm]



Maximum permissible axial force  $F_x$  [N] as a function of  $u$  [mm], RCM 12



Maximum permissible axial force  $F_x$  [N] as a function of  $u$  [mm], RCM 16 - 25

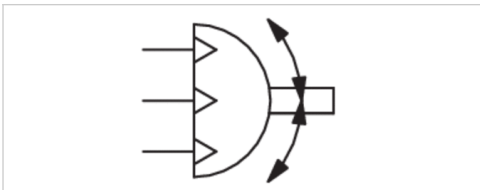


# Rotary Compact Module, Series RCM-SE

- angle of rotation max. 180 °
- Ø 12-25 mm
- with magnetic piston
- double piston with rack
- Easy2Combine capable
- Cushioning elastic
- with integrated intermediate position



Working pressure min./max.	4 ... 8 bar
Ambient temperature min./max.	5 ... 60 °C
Medium temperature min./max.	5 ... 60 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 ... 1 mg/m <sup>3</sup>
Cushioning	elastic
Theoretical torque at	6 bar
Weight	See table below



## Technical data

Part No.	Frame size	Compressed air connection	angle of rotation	Min. swivel times
		G		
R412000395	RCM-12	M5	0-180 °	0.28 s
R412000396	RCM-16	M5	0-180 °	0.25 s
R412000397	RCM-20	M5	0-180 °	0.3 s
R412000398	RCM-25	M5	0-180 °	0.3 s

Part No.	Air consumption per rotation	Weight
R412000395	13.29 cm <sup>3</sup>	0.48 kg
R412000396	22.14 cm <sup>3</sup>	0.79 kg
R412000397	37.83 cm <sup>3</sup>	1.12 kg
R412000398	80.72 cm <sup>3</sup>	2.1 kg



## Technical data

Frame size	RCM-12	RCM-16	RCM-20
Max. permissible axial bearing load	330 N	490 N	620 N
Max. permissible radial bearing load	360 N	580 N	780 N
Max. permissible mass moment of inertia	0.7 kg cm <sup>2</sup>	1.6 kg cm <sup>2</sup>	3.2 kg cm <sup>2</sup>
Repetitive precision	0.2 °	0.2 °	0.2 °
Theoretical torque	0.95 Nm	1.7 Nm	3 Nm

Frame size	RCM-25
Max. permissible axial bearing load	1160 N
Max. permissible radial bearing load	1480 N
Max. permissible mass moment of inertia	6.3 kg cm <sup>2</sup>
Repetitive precision	0.2 °
Theoretical torque	6.5 Nm

## Technical information

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 compressed air must remain constant during the life cycle.

Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

### 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!

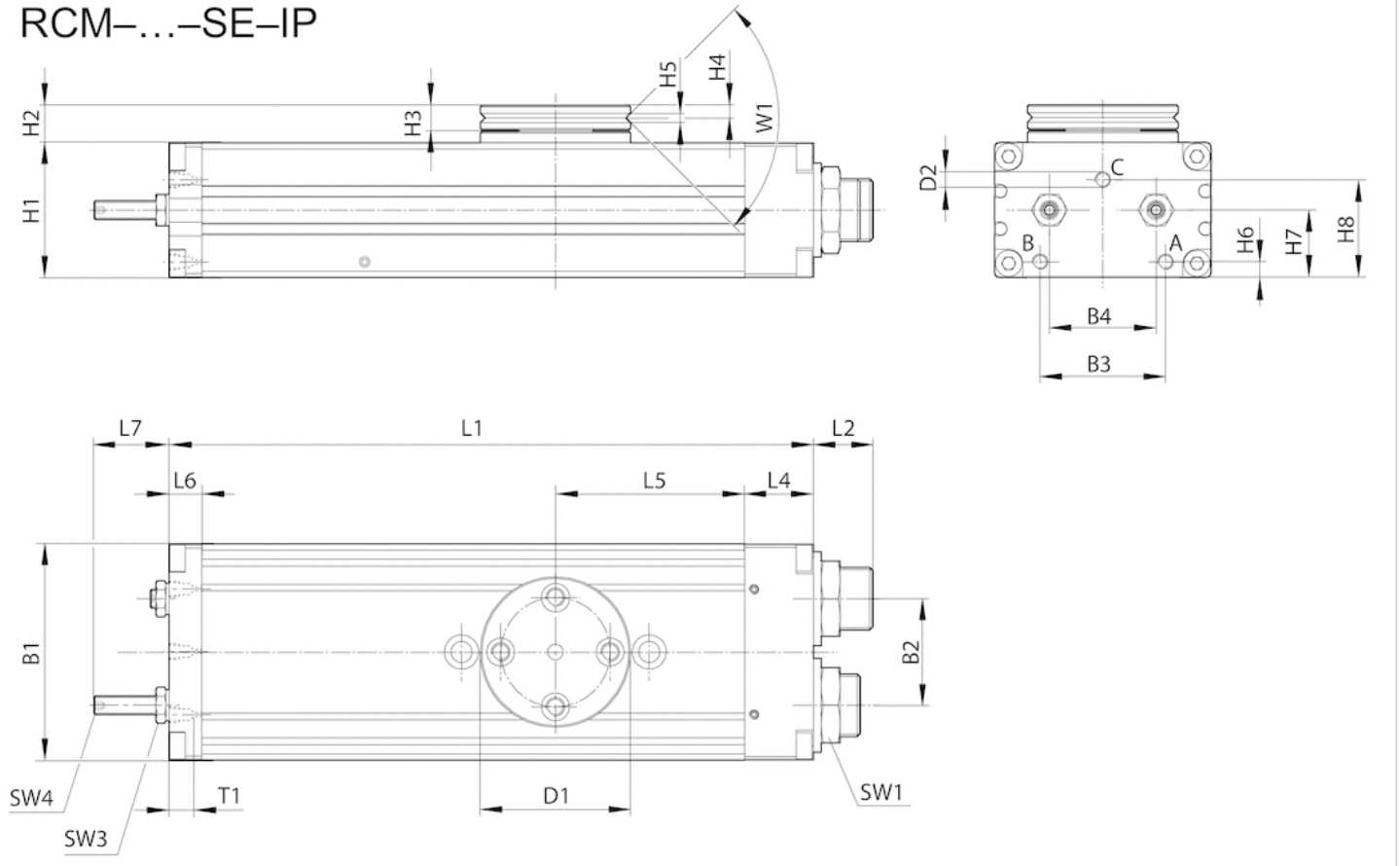
## Technical information

Material	
Housing	Aluminum, anodized
Cap	Aluminum, black anodized
Base	Aluminum, black anodized
Seal	Acrylonitrile butadiene rubber
Axis	Steel, hardened
Rotary flange	Steel, hardened

## Dimensions

RCM-12/.../-25

### RCM-...-SE-IP



T1 = depth of thread

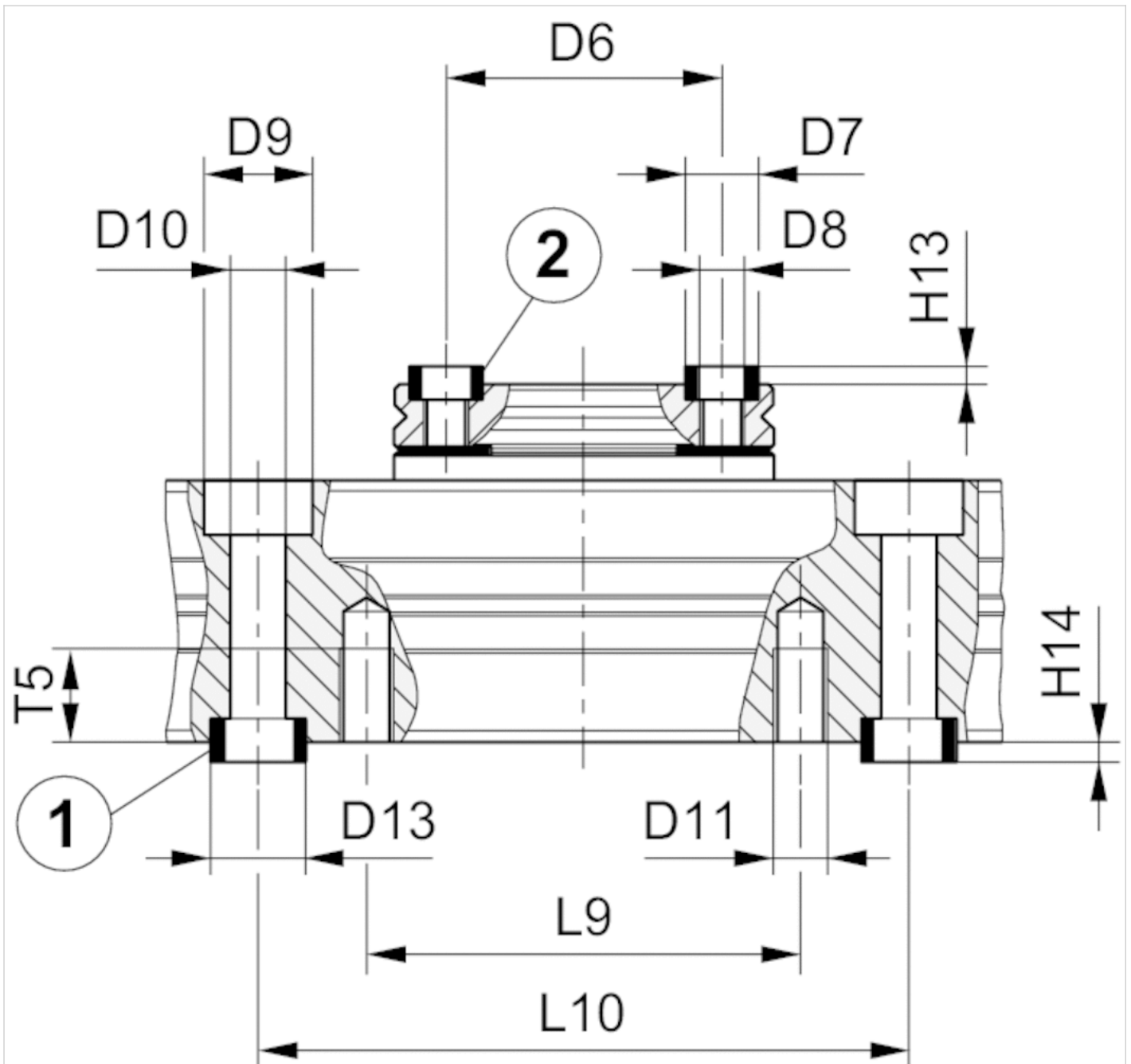
## Dimensions

Frame size	B1	B2	B3	B4	Ø D1	Ø D2	H1	H2	H3	H4	H5	H6	H7	H8	L1	L2	L4	L5	L6	L7
RCM-12	43	18	24	18	35	M5	24	10.5	6	2.9	2.5	3.7	12.5	18.1	136	12.5	14	40	8.5	17
RCM-16	52	24	29	24	40	M5	32	10	7	3.3	2.5	5	16	21.1	140	15.5	18	40	8.5	17
RCM-20	58	30	30	30	42	M5	37	11	7	3.3	3	5.5	19	27.1	156	15	19	43	8.5	22
RCM-25	69	34	40	34	48	M5	43	12	8	4	3	5	21.5	31.1	206	19	22	60.5	10.5	24

SW1	SW3	SW4	T1	W1
15	7	2	4	90°
19	7	2	4	90°
19	8	2.5	4	90°
23	10	3	4	90°

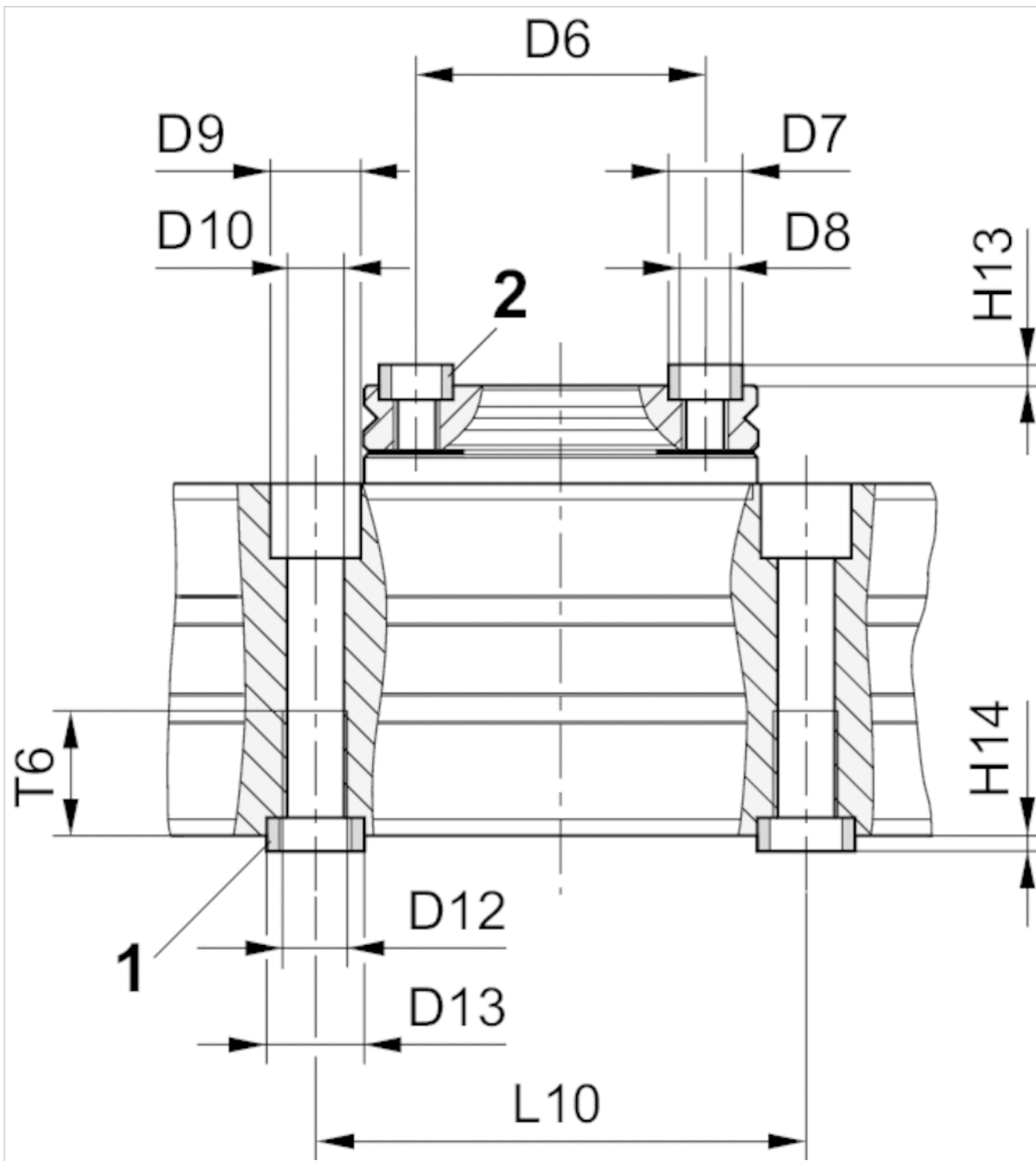
Dimensions

Mounting and assembly, RCM-12



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

## Mounting and assembly, RCM-16/.../-25



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

## Dimensions

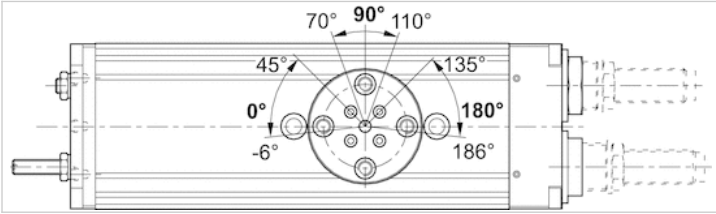
Frame size	$\varnothing D6 \pm 0,02$	$\varnothing D7 k6$	$\varnothing D8$	$\varnothing D9$	$\varnothing D10$	$\varnothing D11$	$\varnothing D12$	$\varnothing D13 k6$	$H13 +0,2$
RCM-12	25	7	M4	10	5.1	M5	-	9	1.6
RCM-16	30	7	M5	10	5	-	M6	9	1.6
RCM-20	30	7	M5	11	6.8	-	M8	12	1.6
RCM-25	35	9	M6	11	6.8	-	M8	12	2.1

Frame size	$H14 +0,2$	L9	$L10 \pm 0,02$	T5	T6
RCM-12	2.1	40	60	8.5	-
RCM-16	2.1	-	60	-	11.1
RCM-20	2.1	-	60	-	15.1

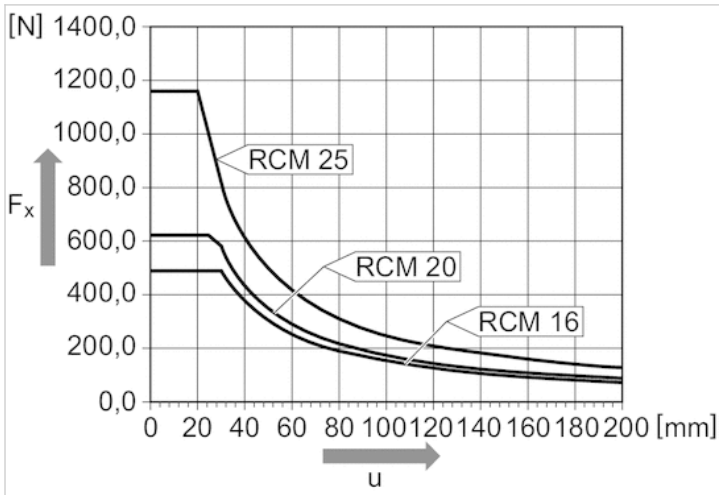
Frame size	H14 +0,2	L9	L10 ± 0,02	T5	T6
RCM-25	2.1	-	60	-	15.1

## Diagrams

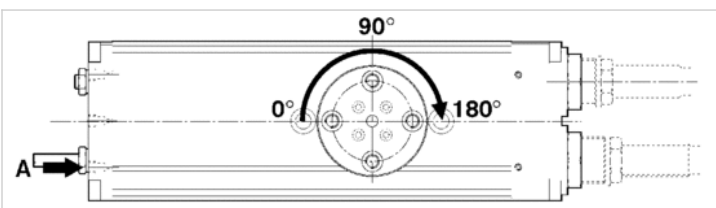
Setting range for end positions 0°/180° and intermediate position 90°



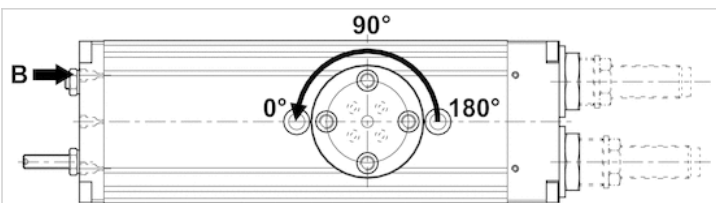
Maximum permissible axial force  $F_x$  [N] as a function of  $u$  [mm], RCM 16 - 25



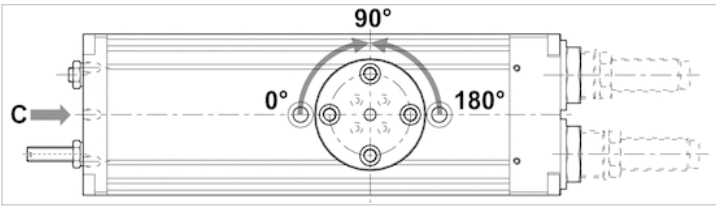
Movement into end position 180°



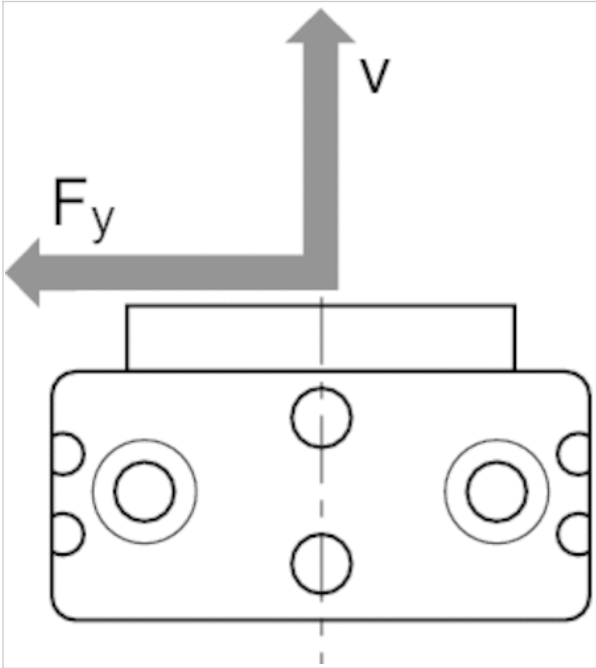
Movement into end position 0°



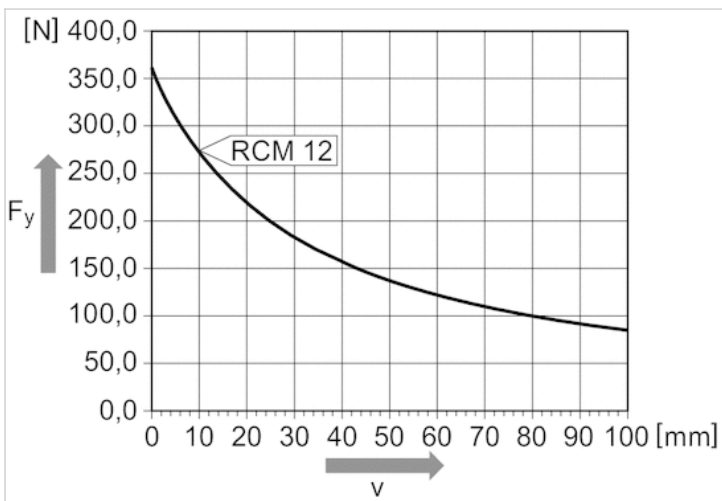
Movement into intermediate position 90°



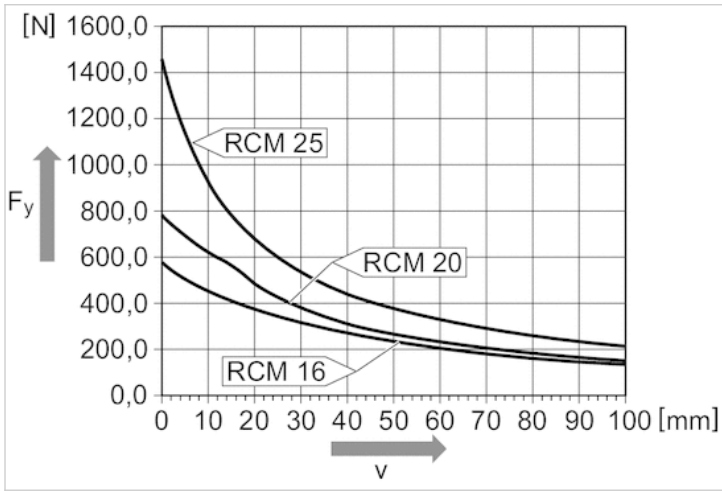
Maximum permissible radial force  $F_y$  [N] as a function of  $v$  [mm]



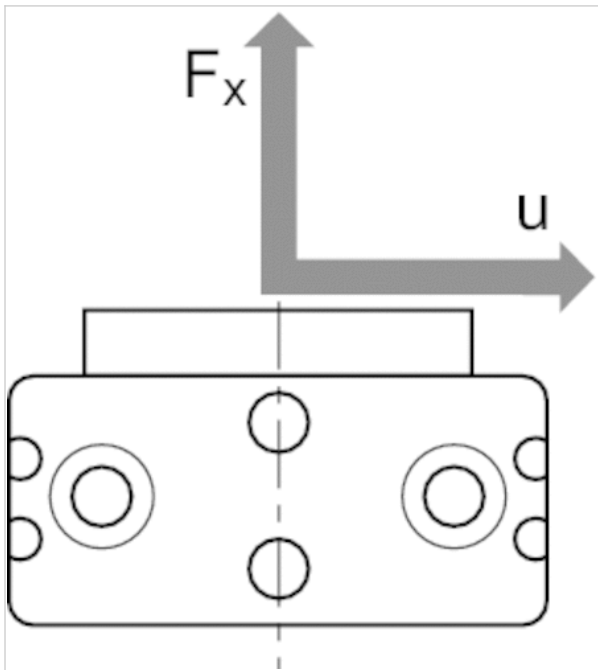
Maximum permissible radial force  $F_y$  [N] as a function of  $v$  [mm], RCM 12



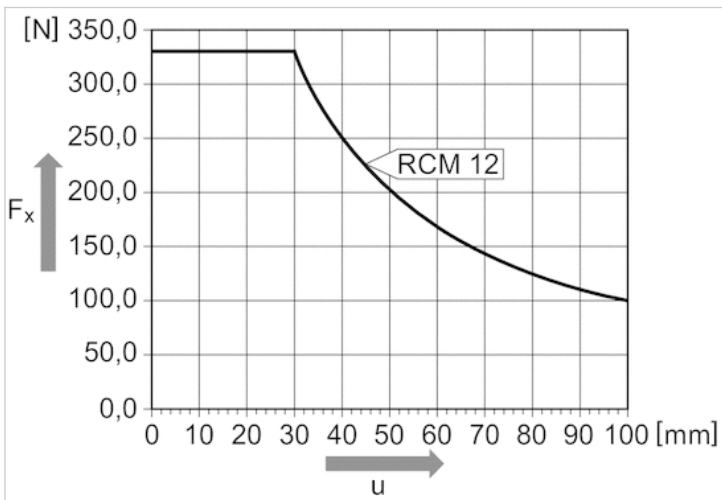
Maximum permissible radial force  $F_y$  [N] as a function of  $v$  [mm], RCM 16 - 25



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



Maximum permissible axial force  $F_x$  [N] as a function of  $u$  [mm], RCM 12

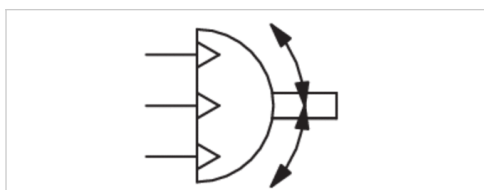


# Rotary Compact Module, Series RCM-SH

- angle of rotation max. 180 °
- Ø 12-25 mm
- with magnetic piston
- double piston with rack
- Easy2Combine capable
- Cushioning hydraulic non-adjustable
- with integrated intermediate position



Working pressure min./max.	4 ... 8 bar
Ambient temperature min./max.	5 ... 60 °C
Medium temperature min./max.	5 ... 60 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 ... 1 mg/m <sup>3</sup>
Cushioning	hydraulic non-adjustable
Theoretical torque at	6 bar
Weight	See table below



## Technical data

Part No.	Frame size	Compressed air connection	angle of rotation	Min. swivel times
		G		
R412000399	RCM-12	M5	0-180 °	0.3 s
R412000400	RCM-16	M5	0-180 °	0.32 s
R412000401	RCM-20	M5	0-180 °	0.48 s
R412000402	RCM-25	M5	0-180 °	0.6 s

Part No.	Air consumption per rotation	Weight
R412000399	13.29 cm <sup>3</sup>	0.5 kg
R412000400	22.14 cm <sup>3</sup>	0.82 kg
R412000401	37.83 cm <sup>3</sup>	1.18 kg
R412000402	80.72 cm <sup>3</sup>	2.23 kg



## Technical data

Frame size	RCM-12	RCM-16	RCM-20
Max. permissible axial bearing load	330 N	490 N	620 N
Max. permissible radial bearing load	360 N	580 N	780 N
Max. permissible mass moment of inertia	10 kg cm <sup>2</sup>	80 kg cm <sup>2</sup>	180 kg cm <sup>2</sup>
Repetitive precision	0.05 °	0.05 °	0.05 °
Theoretical torque	0.95 Nm	1.7 Nm	3 Nm

Frame size	RCM-25
Max. permissible axial bearing load	1160 N
Max. permissible radial bearing load	1480 N
Max. permissible mass moment of inertia	450 kg cm <sup>2</sup>
Repetitive precision	0.05 °
Theoretical torque	6.5 Nm

## Technical information

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 compressed air must remain constant during the life cycle.

Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

### NOTICE:

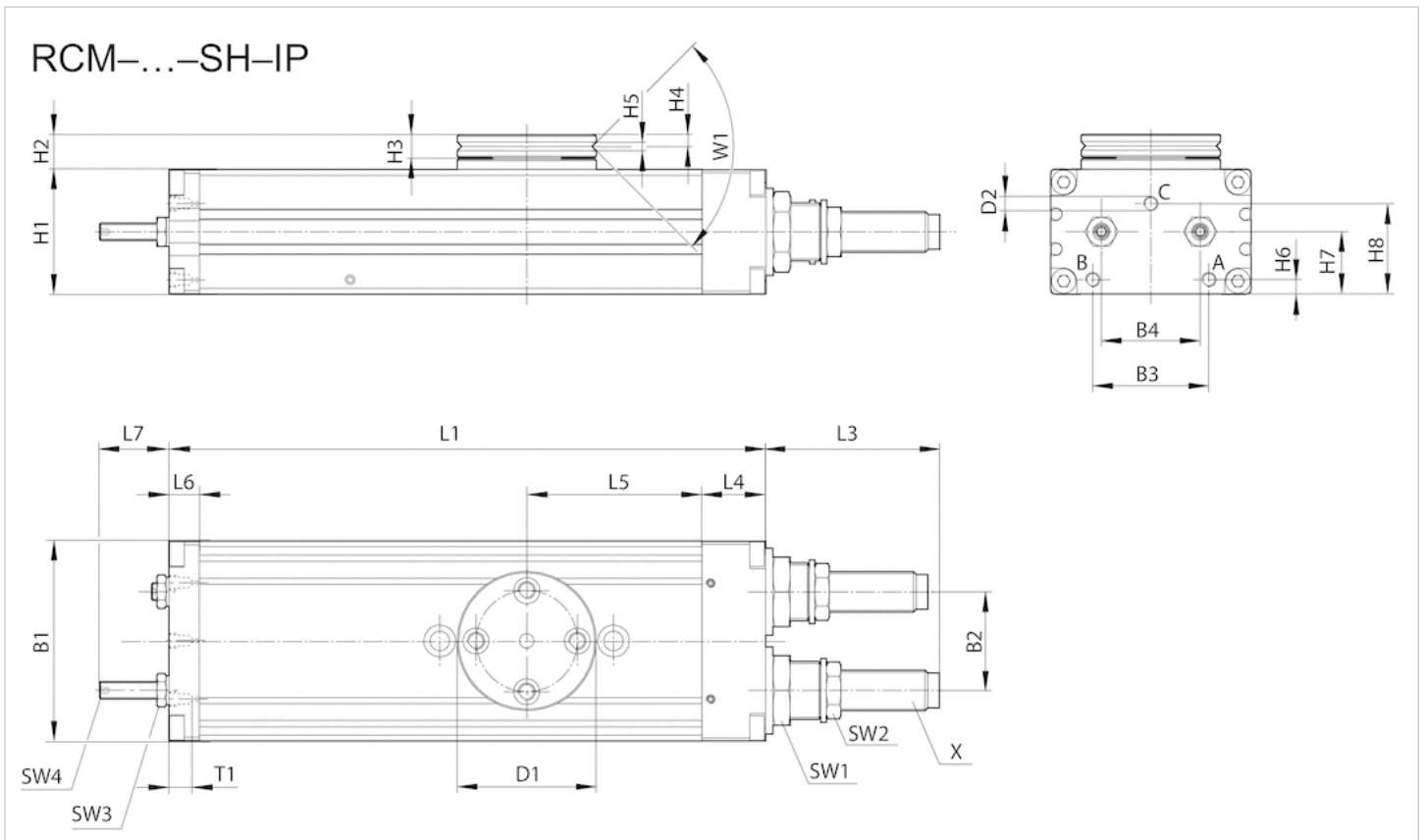
For positioning without overswing in the intermediate position, it is recommended to limit the mass moment of inertia to 40% of the maximum permissible value!

## Technical information

Material	
Housing	Aluminum, anodized
Cap	Aluminum, black anodized
Base	Aluminum, black anodized
Seal	Acrylonitrile butadiene rubber
Axis	Steel, hardened
Rotary flange	Steel, hardened

## Dimensions

RCM-12/.../-25



T1 = depth of thread

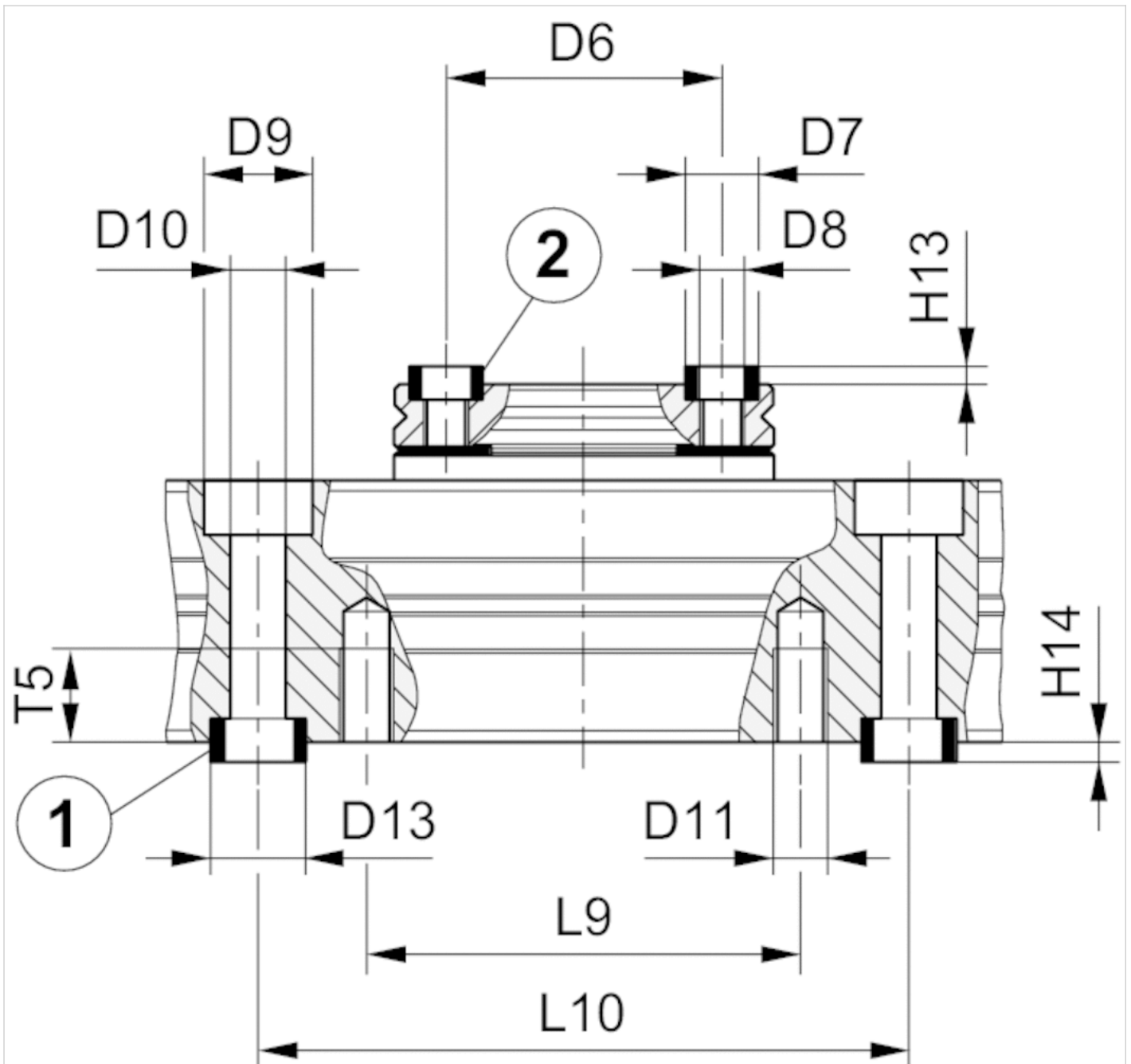
## Dimensions

Frame size	B1	B2	B3	B4	Ø D1	Ø D2	H1	H2	H3	H4	H5	H6	H7	H8	L1	L3	L4	L5	L6	L7
RCM-12	43	18	24	18	35	M5	24	10.5	6	2.9	2.5	3.7	12.5	18.1	136	33.5	14	40	8.5	17
RCM-16	52	24	29	24	40	M5	32	10	7	3.3	2.5	5	16	21.1	140	34	18	40	8.5	17
RCM-20	58	30	30	30	42	M5	37	11	7	3.3	3	5.5	19	27.1	156	48.5	19	43	8.5	22
RCM-25	69	34	40	34	48	M5	43	12	8	4	3	5	21.5	31.1	206	60	22	60.5	10.5	24

Frame size	SW1	SW2	SW3	SW4	T1	W1	X
RCM-12	15	11	7	2	4	90°	M8x1
RCM-16	19	13	7	2	4	90°	M10x1
RCM-20	19	15	8	2.5	4	90°	M12x1
RCM-25	23	17	10	3	4	90°	M14x1,5

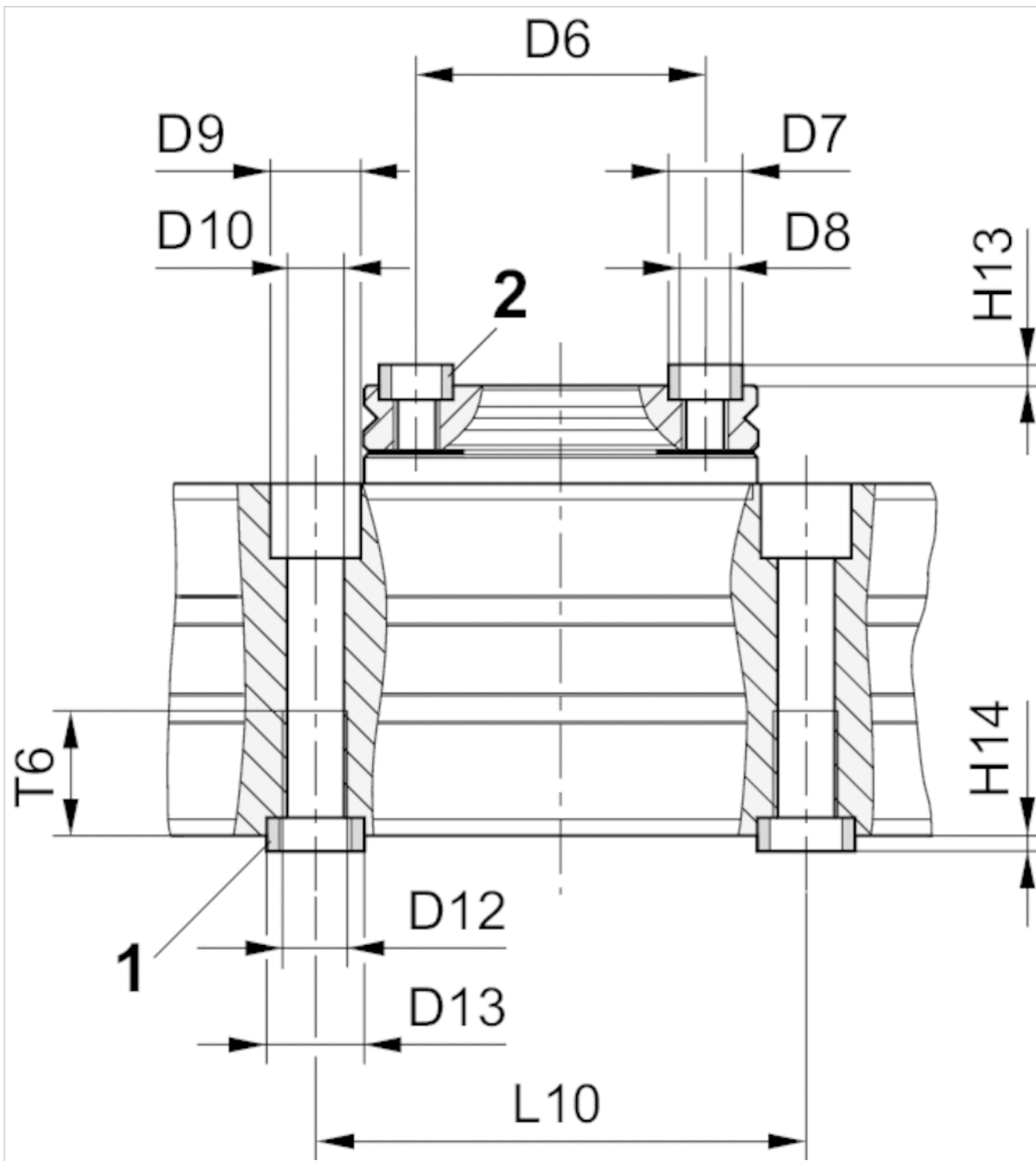
Dimensions

Mounting and assembly, RCM-12



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

## Mounting and assembly, RCM-16/.../-25



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

## Dimensions

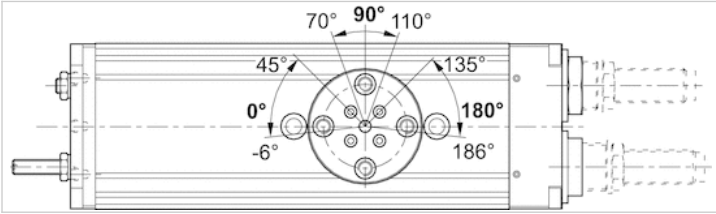
Frame size	$\varnothing D6 \pm 0,02$	$\varnothing D7 k6$	$\varnothing D8$	$\varnothing D9$	$\varnothing D10$	$\varnothing D11$	$\varnothing D12$	$\varnothing D13 k6$	$H13 +0,2$
RCM-12	25	7	M4	10	5.1	M5	-	9	1.6
RCM-16	30	7	M5	10	5	-	M6	9	1.6
RCM-20	30	7	M5	11	6.8	-	M8	12	1.6
RCM-25	35	9	M6	11	6.8	-	M8	12	2.1

Frame size	$H14 +0,2$	L9	$L10 \pm 0,02$	T5	T6
RCM-12	2.1	40	60	8.5	-
RCM-16	2.1	-	60	-	11.1
RCM-20	2.1	-	60	-	15.1

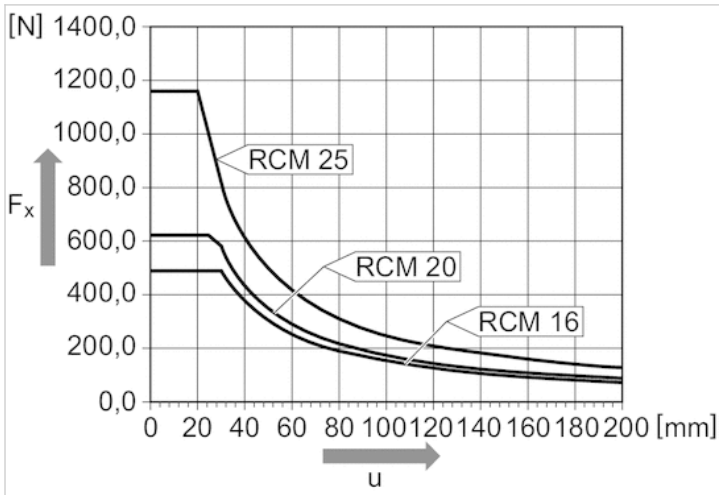
Frame size	H14 +0,2	L9	L10 ± 0,02	T5	T6
RCM-25	2.1	-	60	-	15.1

## Diagrams

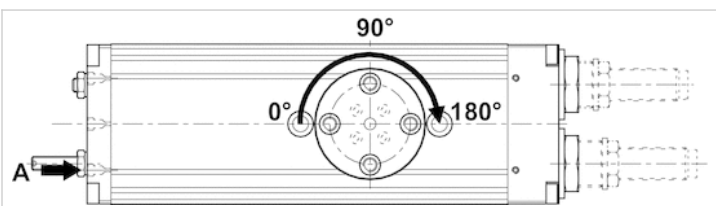
Setting range for end positions 0°/180° and intermediate position 90°



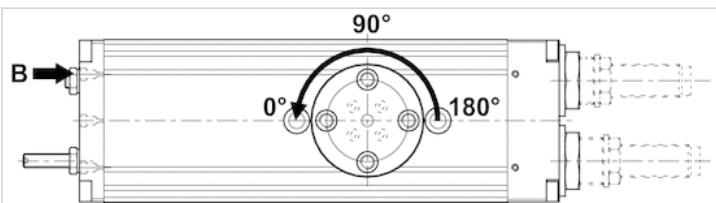
Maximum permissible axial force  $F_x$  [N] as a function of  $u$  [mm], RCM 16 - 25



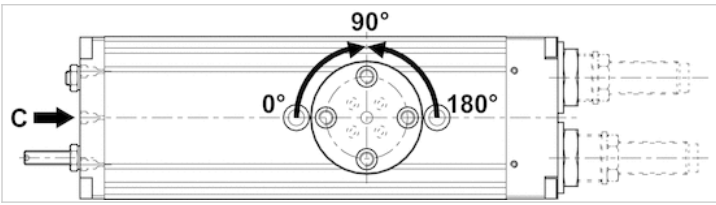
Movement into end position 180°



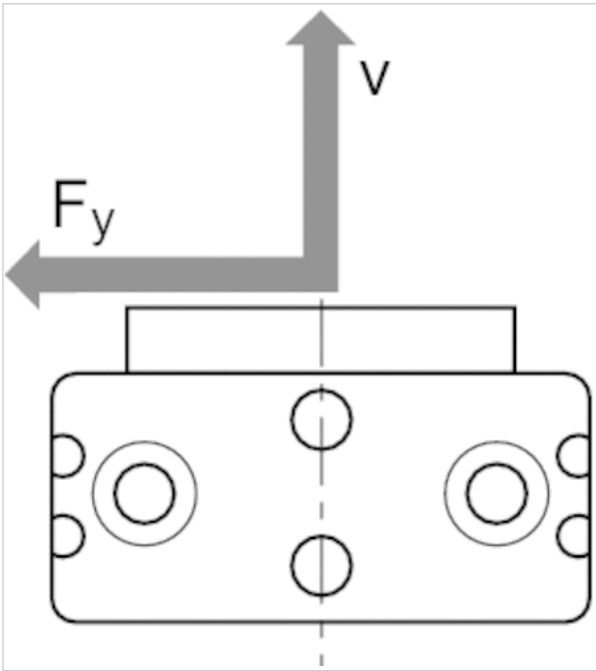
Movement into end position 0°



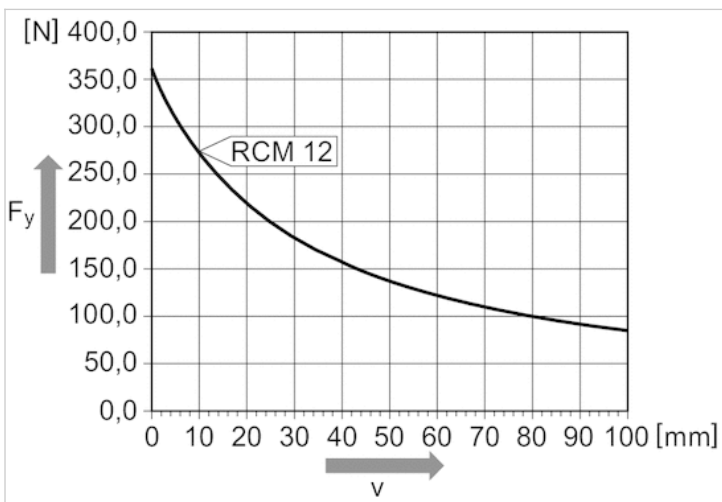
Movement into intermediate position 90°



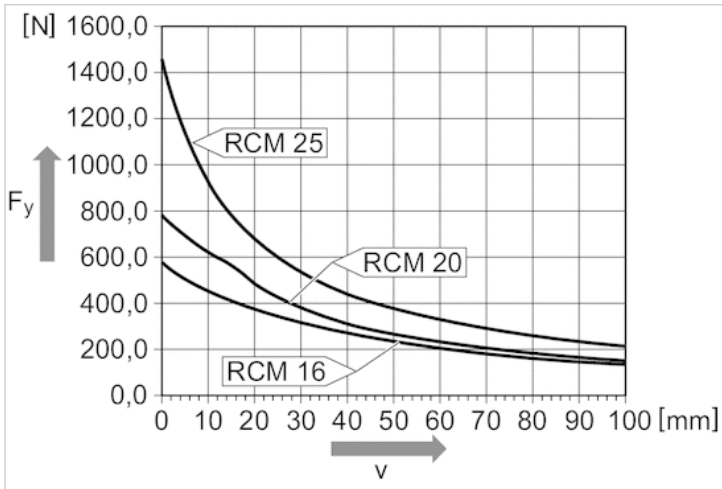
Maximum permissible radial force  $F_y$  [N] as a function of  $v$  [mm]



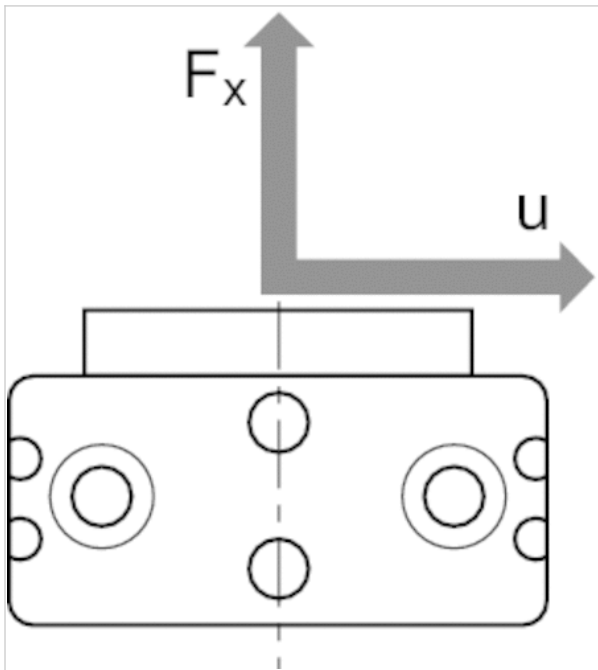
Maximum permissible radial force  $F_y$  [N] as a function of  $v$  [mm], RCM 12



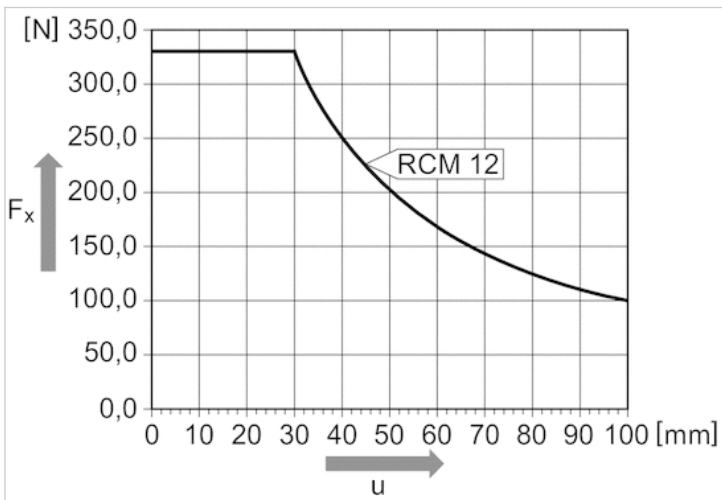
Maximum permissible radial force  $F_y$  [N] as a function of  $v$  [mm], RCM 16 - 25



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



Maximum permissible axial force  $F_x$  [N] as a function of  $u$  [mm], RCM 12

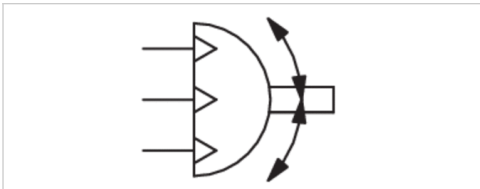


# Rotary Compact Module, Series RCM-SE

- angle of rotation max. 180 °
- Ø 12-25 mm
- with magnetic piston
- double piston with rack
- Easy2Combine capable
- Cushioning elastic
- with integrated intermediate position
- with air duct



Working pressure min./max.	4 ... 8 bar
Ambient temperature min./max.	5 ... 60 °C
Medium temperature min./max.	5 ... 60 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 ... 1 mg/m <sup>3</sup>
air duct	with air duct
Cushioning	elastic
Theoretical torque at	6 bar
Weight	See table below



## Technical data

Part No.	Frame size	Compressed air connection	angle of rotation	Min. swivel times
		G		
R412000403	RCM-12	M5	0-180 °	0.32 s
R412000404	RCM-16	M5	0-180 °	0.3 s
R412000405	RCM-20	M5	0-180 °	0.35 s
R412000406	RCM-25	M5	0-180 °	0.35 s

Part No.	Air consumption per rotation	Weight
R412000403	13.29 cm <sup>3</sup>	0.52 kg
R412000404	22.14 cm <sup>3</sup>	0.85 kg
R412000405	37.83 cm <sup>3</sup>	1.2 kg
R412000406	80.72 cm <sup>3</sup>	2.2 kg



## Technical data

Frame size	RCM-12	RCM-16	RCM-20
Number of air ducts	2	4	4
Max. permissible axial bearing load	330 N	490 N	620 N
Max. permissible radial bearing load	290 N	400 N	560 N
Max. permissible mass moment of inertia	0.7 kg cm <sup>2</sup>	1.6 kg cm <sup>2</sup>	3.2 kg cm <sup>2</sup>
Repetitive precision	0.2 °	0.2 °	0.2 °
Theoretical torque	0.95 Nm	1.7 Nm	3 Nm

Frame size	RCM-25
Number of air ducts	4
Max. permissible axial bearing load	1160 N
Max. permissible radial bearing load	700 N
Max. permissible mass moment of inertia	6.3 kg cm <sup>2</sup>
Repetitive precision	0.2 °
Theoretical torque	6.5 Nm

## Technical information

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 compressed air must remain constant during the life cycle.

Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

### NOTICE:

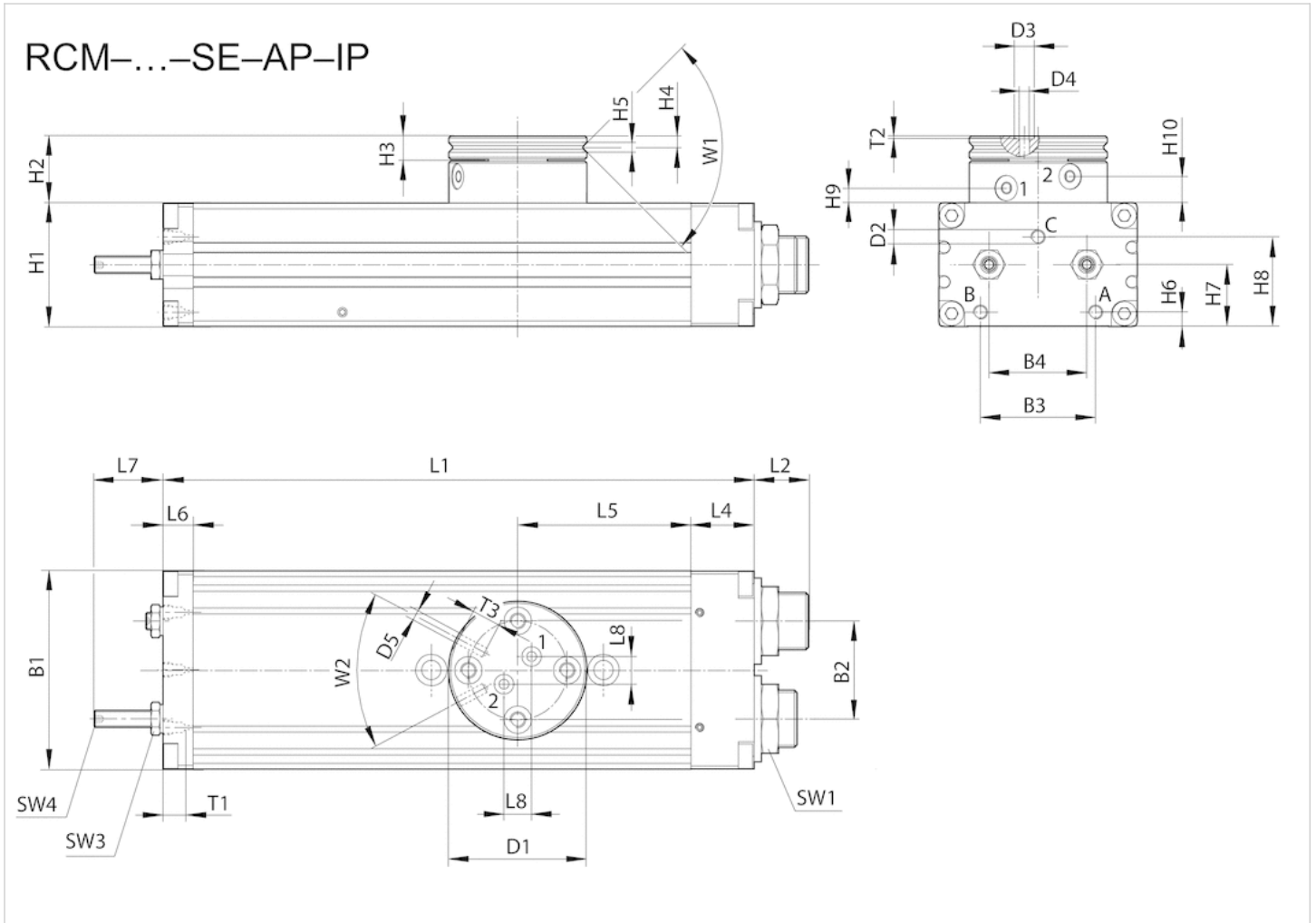
For positioning without overswing in the intermediate position, it is recommended to limit the mass moment of inertia to 40% of the maximum permissible value!

## Technical information

Material	
Housing	Aluminum, anodized
Cap	Aluminum, black anodized
Base	Aluminum, black anodized
Seal	Acrylonitrile butadiene rubber
Axis	Steel, hardened
Rotary flange	Steel, hardened

## Dimensions

### RCM-12



T1 = depth of thread

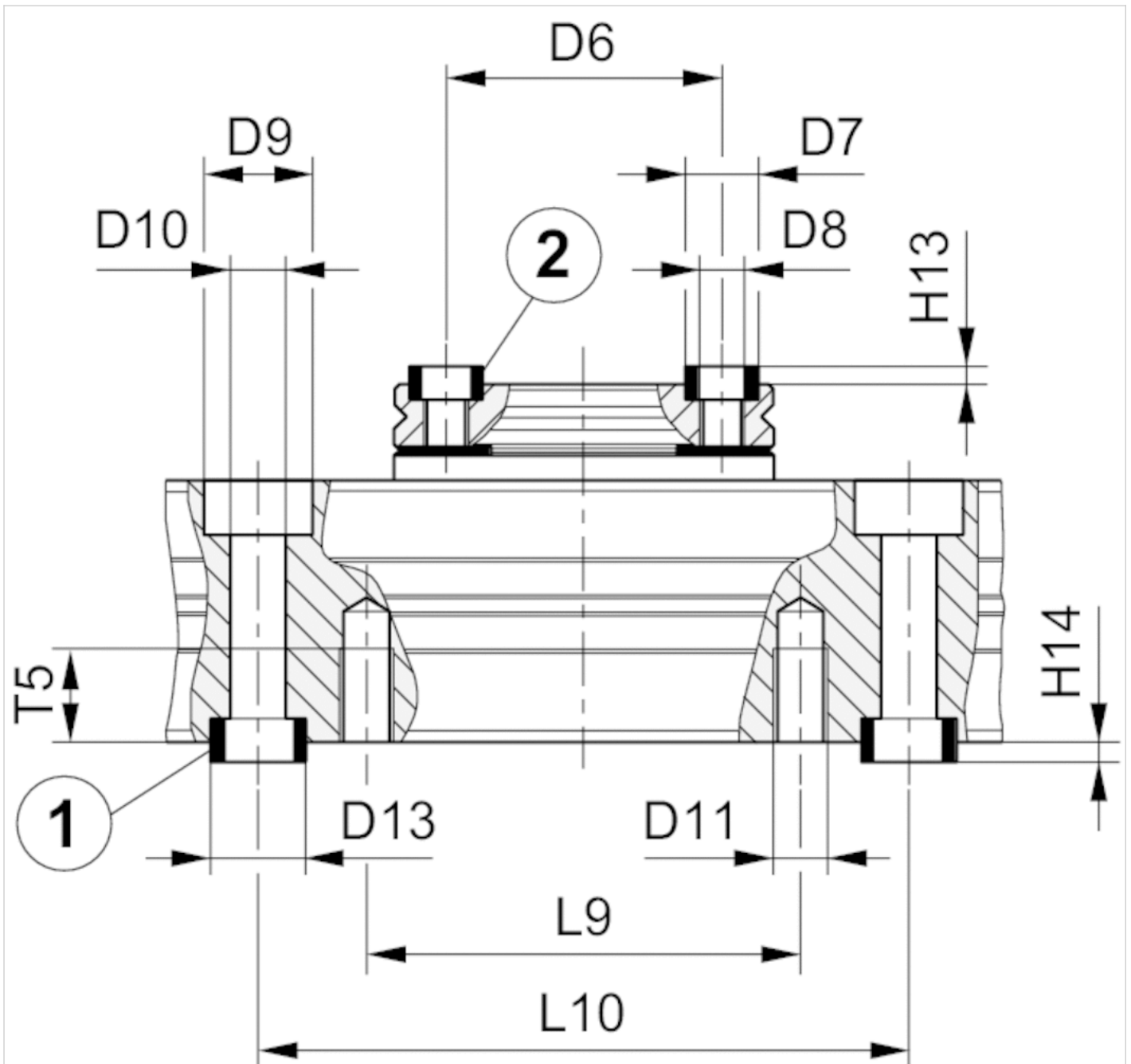
## Dimensions

Frame size	B1	B2	B3	B4	Ø D1	Ø D2	Ø D3	Ø D4	Ø D5	H1	H2	H3	H4	H5	H6	H7	H8	H9 ±0,2
RCM-12	43	18	24	18	35	M5	5	2.5	M3	24	17	6	2.9	2.5	3.7	12.5	18.1	3.8

Frame size	H10 ±0,2	L1	L2	L4	L5	L6	L7	L8	SW1	SW3	SW4	T1	T2	T3	W1	W2
RCM-12	6.7	136	12.5	14	40	8.5	17	7	15	7	2	4	0.7	4	90°	56°

Dimensions

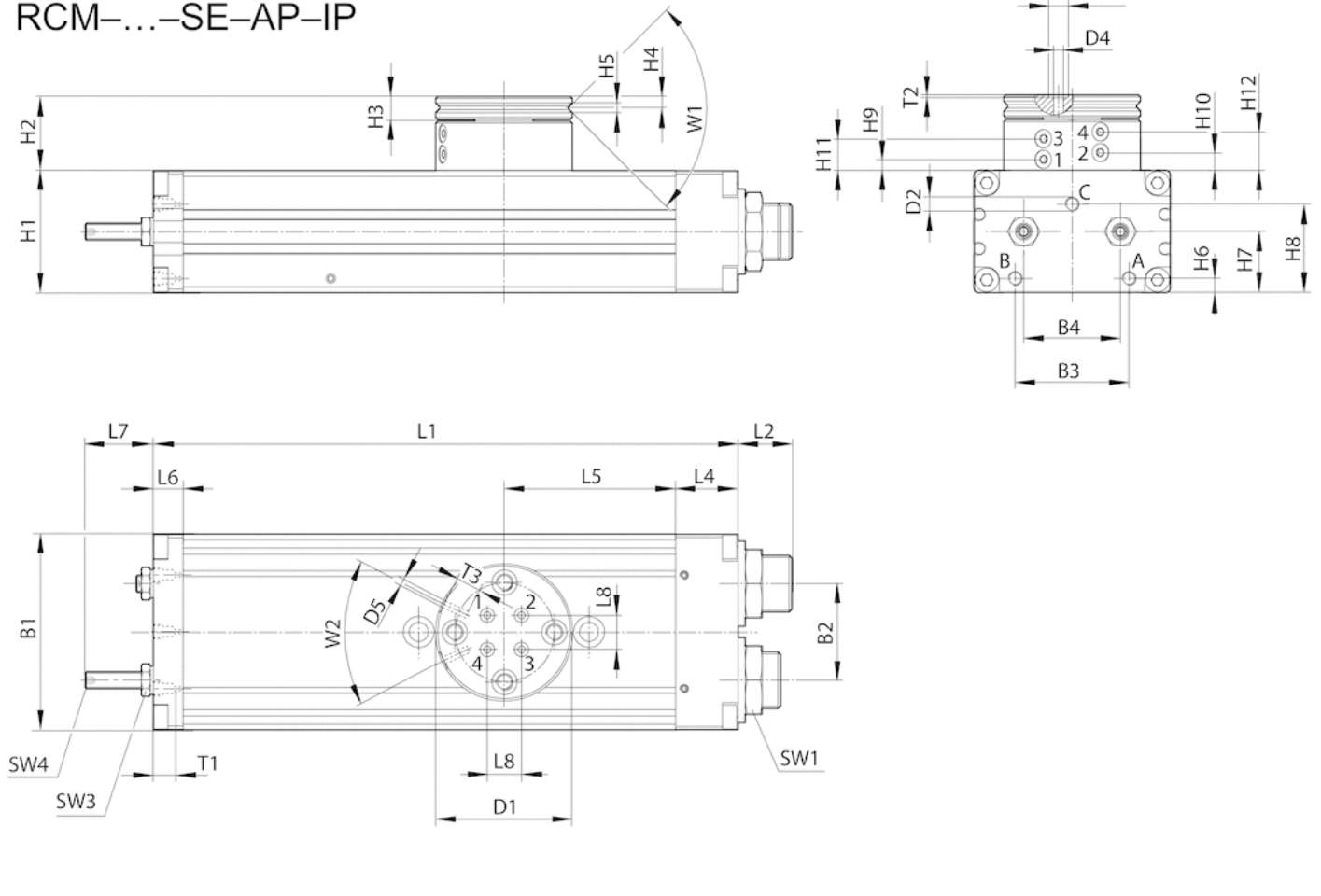
Mounting and assembly, RCM-12



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

RCM-16/.../-25

RCM-...-SE-AP-IP



T1 = depth of thread

Dimensions

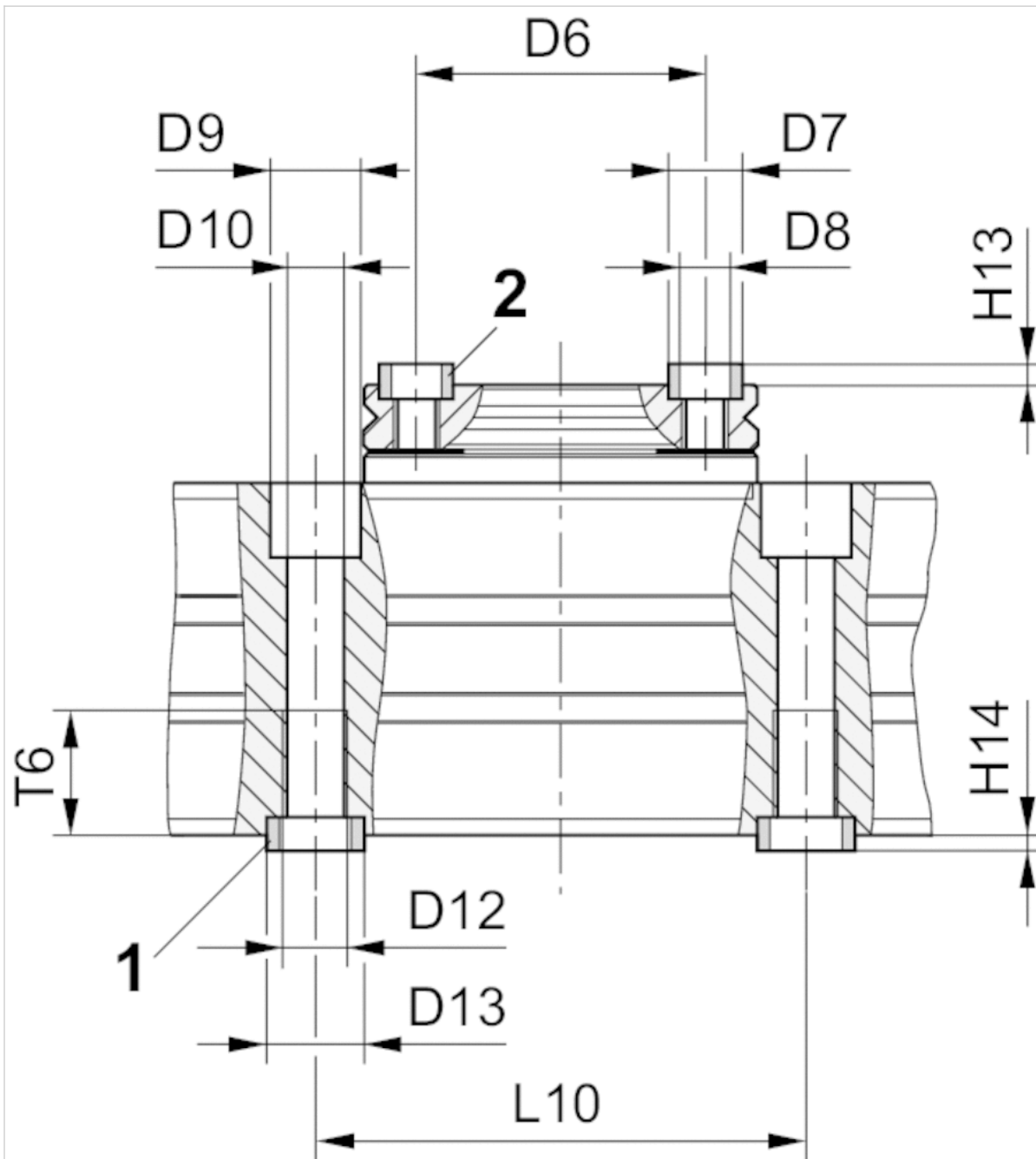
Frame size	B1	B2	B3	B4	Ø D1	Ø D2	Ø D3	Ø D4	Ø D5	H1	H2	H3	H4	H5	H6	H7	H8
RCM-16	52	24	29	24	40	M5	5	2.5	M3	32	25.5	7	3.3	2.5	5	16	21.1
RCM-20	58	30	30	30	42	M5	5	2.5	M3	37	26	7	3.3	3	5.5	19	27.1
RCM-25	69	34	40	34	48	M5	5	2.5	M3	43	26.5	8	4	3	5	21.5	31.1

Frame size	H9 ±0,2	H10 ±0,2	H11 ±0,2	H12 ±0,2	L1	L2	L4	L5	L6	L7	L8	SW1	SW3	SW4	T1
RCM-16	3.9	6.5	11.1	13.7	140	15.5	18	40	8.5	17	6	19	7	2	4
RCM-20	4.4	7	11.6	14.2	156	15	19	43	8.5	22	10	19	8	2.5	4
RCM-25	3.9	6.5	11.1	13.7	206	19	22	60.5	10.5	24	12	23	10	3	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°

## Dimensions

### Mounting and assembly, RCM-16/.../-25



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

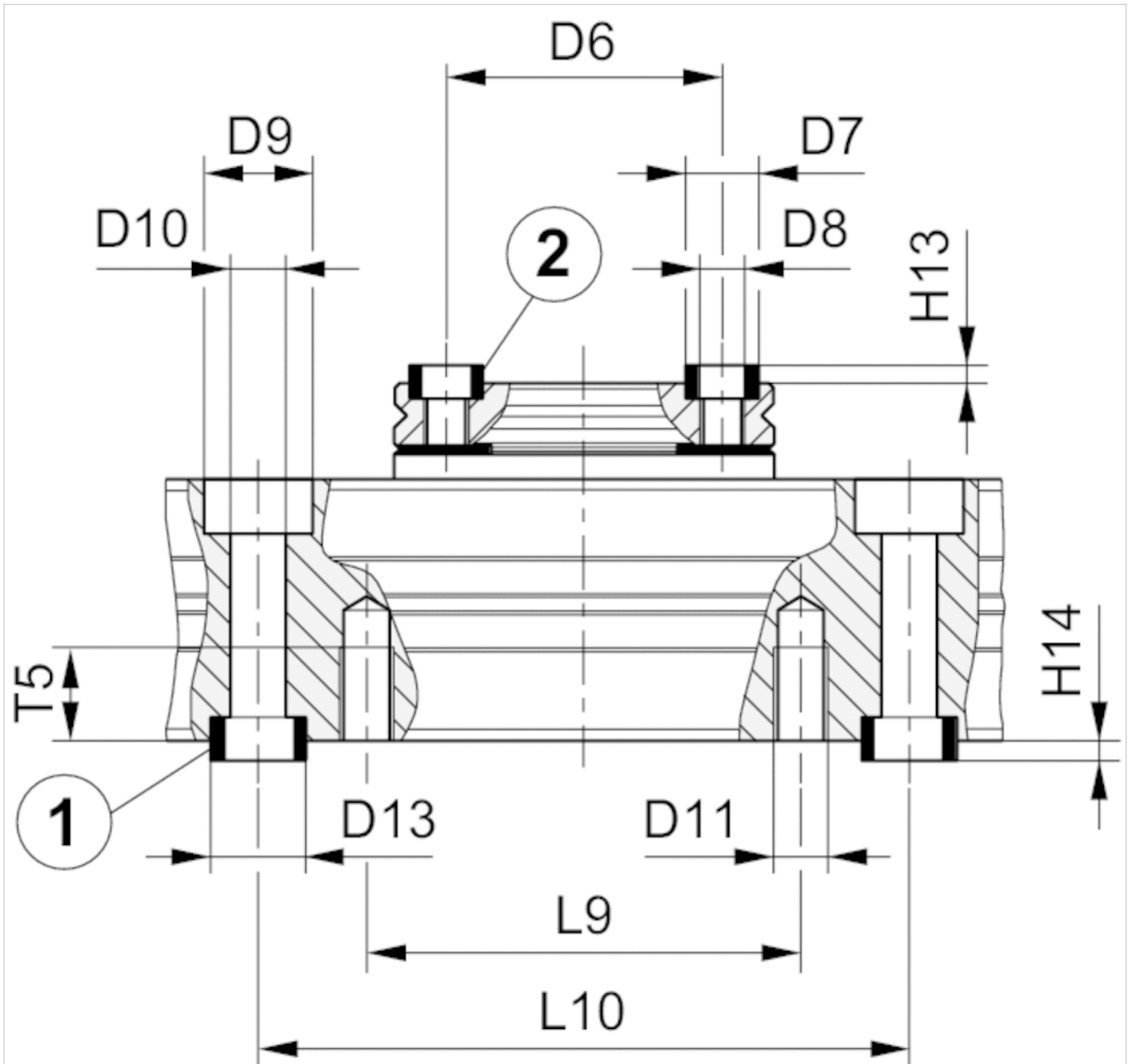
## Dimensions

Frame size	$\varnothing D6 \pm 0,02$	$\varnothing D7 k6$	$\varnothing D8$	$\varnothing D9$	$\varnothing D10$	$\varnothing D11$	$\varnothing D12$	$\varnothing D13 k6$	H13 +0,2
RCM-12	25	7	M4	10	5.1	M5	-	9	1.6
RCM-16	30	7	M5	10	5	-	M6	9	1.6
RCM-20	30	7	M5	11	6.8	-	M8	12	1.6
RCM-25	35	9	M6	11	6.8	-	M8	12	2.1

Frame size	H14 +0,2	L9	L10 ±0,02	T5	T6
RCM-12	2.1	40	60	8.5	-
RCM-16	2.1	-	60	-	11.1
RCM-20	2.1	-	60	-	15.1
RCM-25	2.1	-	60	-	15.1

## Dimensions

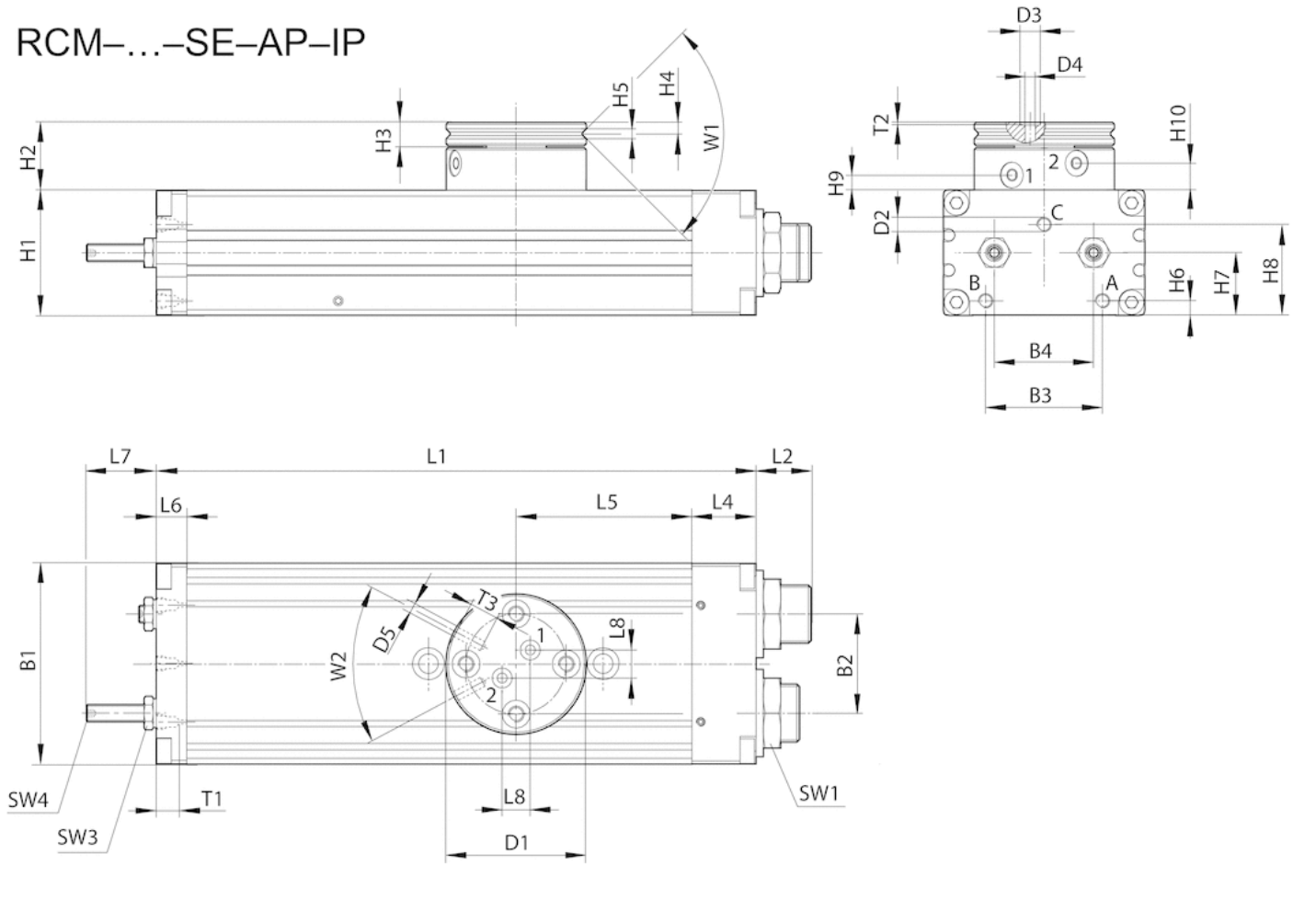
### Mounting and assembly, RCM-12



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

RCM-12

RCM-...-SE-AP-IP



T1 = depth of thread

Dimensions

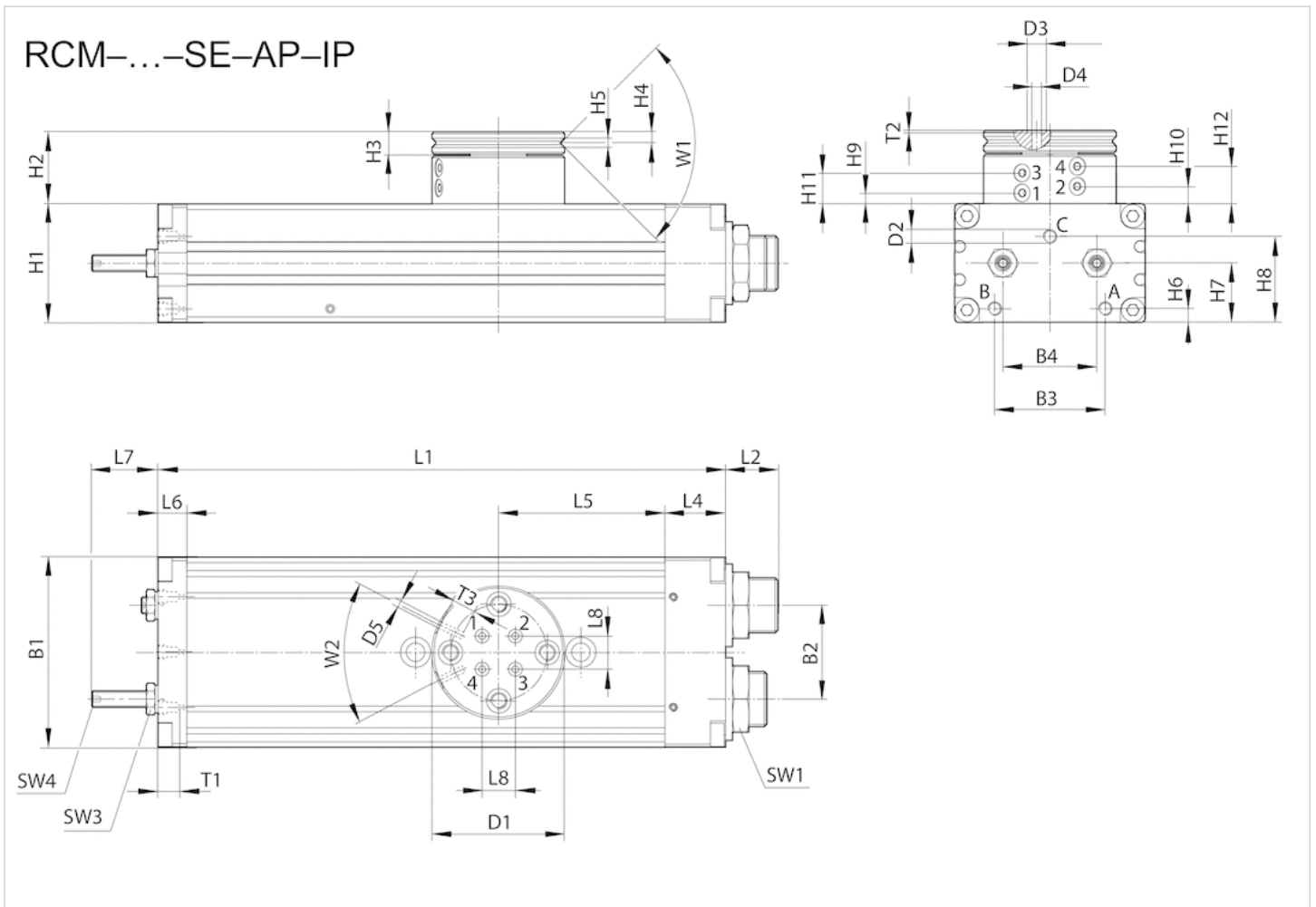
Frame size	B1	B2	B3	B4	Ø D1	Ø D2	Ø D3	Ø D4	Ø D5	H1	H2	H3	H4	H5	H6	H7	H8	H9 ±0,2
RCM-12	43	18	24	18	35	M5	5	2.5	M3	24	17	6	2.9	2.5	3.7	12.5	18.1	3.8

Frame size	H10 ±0,2	L1	L2	L4	L5	L6	L7	L8	SW1	SW3	SW4	T1	T2	T3	W1	W2
RCM-12	6.7	136	12.5	14	40	8.5	17	7	15	7	2	4	0.7	4	90°	56°

## Dimensions

RCM-16/.../-25



T1 = depth of thread

## Dimensions

Frame size	B1	B2	B3	B4	Ø D1	Ø D2	Ø D3	Ø D4	Ø D5	H1	H2	H3	H4	H5	H6	H7	H8
RCM-16	52	24	29	24	40	M5	5	2.5	M3	32	25.5	7	3.3	2.5	5	16	21.1
RCM-20	58	30	30	30	42	M5	5	2.5	M3	37	26	7	3.3	3	5.5	19	27.1
RCM-25	69	34	40	34	48	M5	5	2.5	M3	43	26.5	8	4	3	5	21.5	31.1

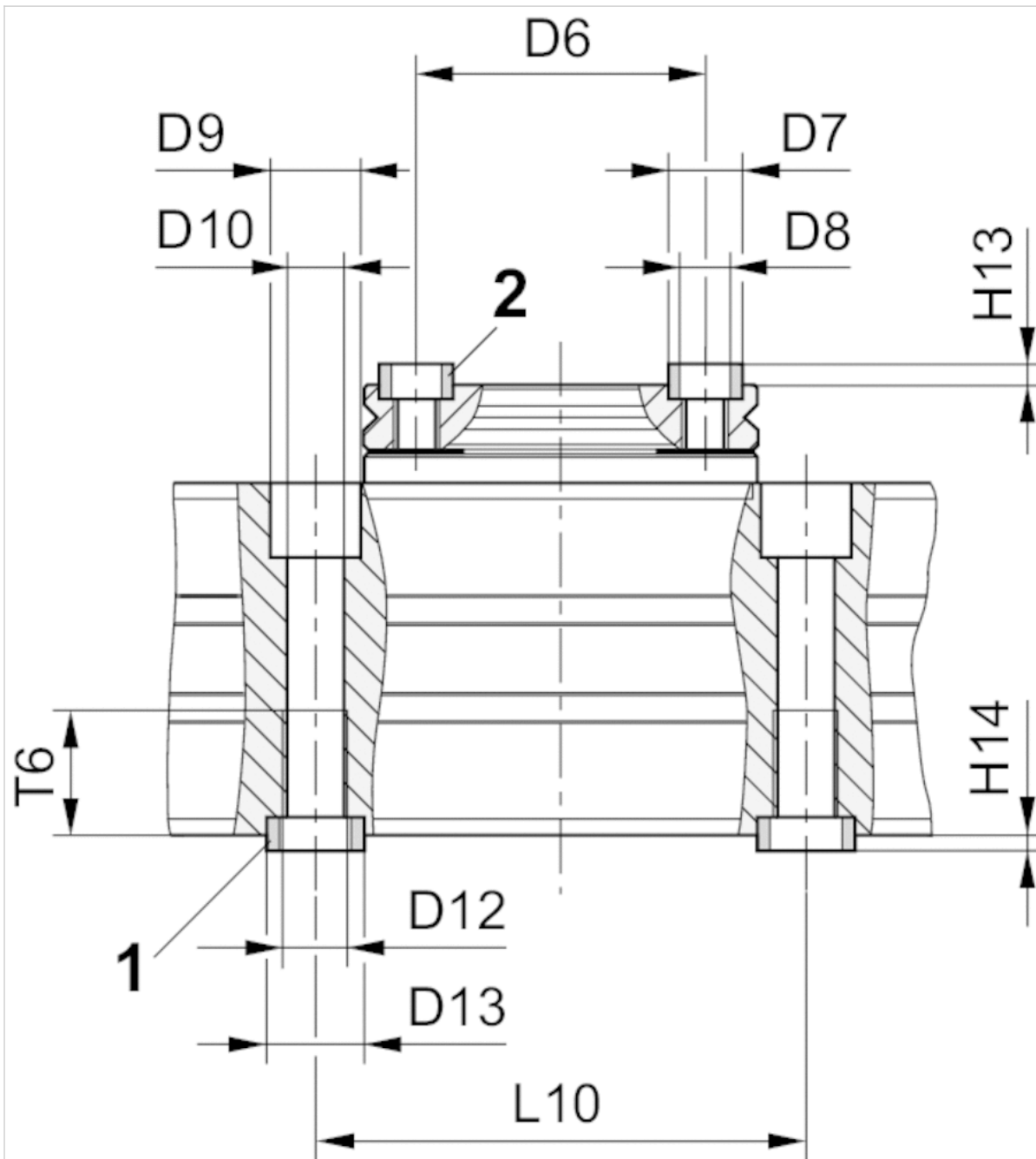
Frame size	H9 ±0,2	H10 ±0,2	H11 ±0,2	H12 ±0,2	L1	L2	L4	L5	L6	L7	L8	SW1	SW3	SW4	T1
RCM-16	3.9	6.5	11.1	13.7	140	15.5	18	40	8.5	17	6	19	7	2	4
RCM-20	4.4	7	11.6	14.2	156	15	19	43	8.5	22	10	19	8	2.5	4
RCM-25	3.9	6.5	11.1	13.7	206	19	22	60.5	10.5	24	12	23	10	3	4

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°



## Dimensions

### Mounting and assembly, RCM-16/.../-25



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

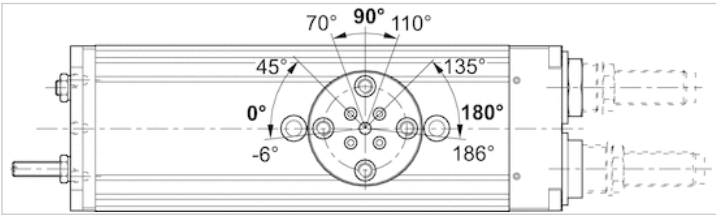
## Dimensions

Frame size	$\varnothing D6 \pm 0,02$	$\varnothing D7 k6$	$\varnothing D8$	$\varnothing D9$	$\varnothing D10$	$\varnothing D11$	$\varnothing D12$	$\varnothing D13 k6$	H13 +0,2
RCM-12	25	7	M4	10	5.1	M5	-	9	1.6
RCM-16	30	7	M5	10	5	-	M6	9	1.6
RCM-20	30	7	M5	11	6.8	-	M8	12	1.6
RCM-25	35	9	M6	11	6.8	-	M8	12	2.1

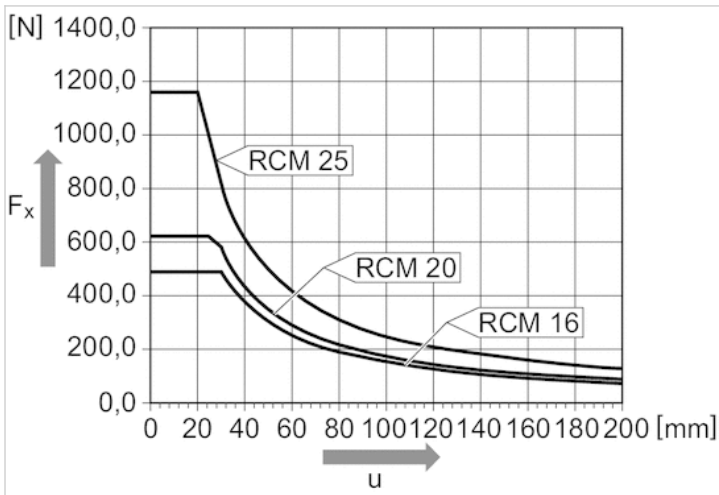
Frame size	H14 +0,2	L9	L10 ±0,02	T5	T6
RCM-12	2.1	40	60	8.5	–
RCM-16	2.1	–	60	–	11.1
RCM-20	2.1	–	60	–	15.1
RCM-25	2.1	–	60	–	15.1

## Diagrams

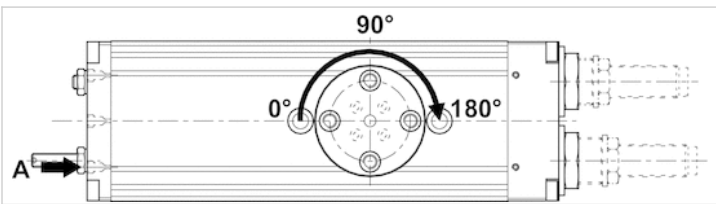
Setting range for end positions 0°/180° and intermediate position 90°



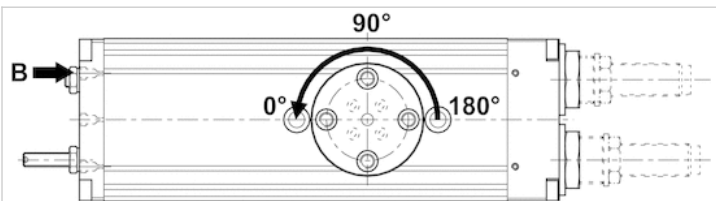
Maximum permissible axial force  $F_x$  [N] as a function of  $u$  [mm], RCM 16 – 25



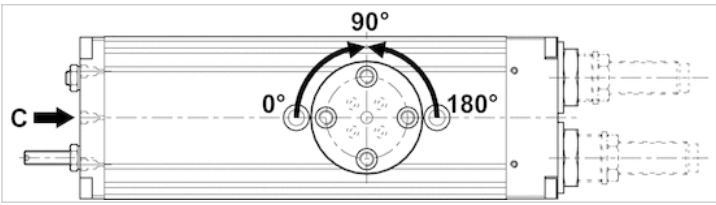
Movement into end position 180°



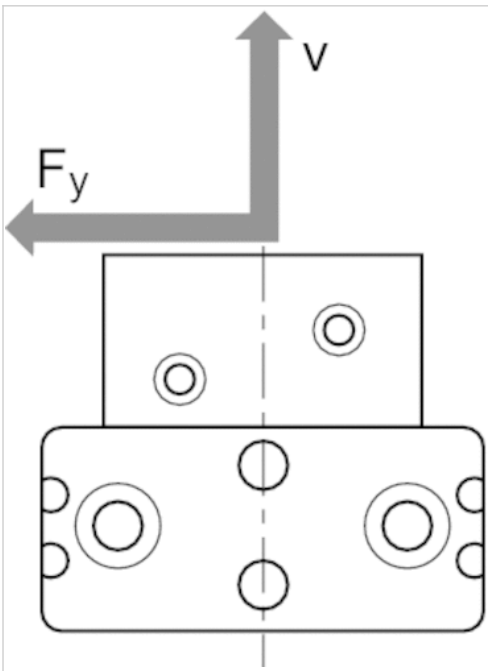
Movement into end position 0°



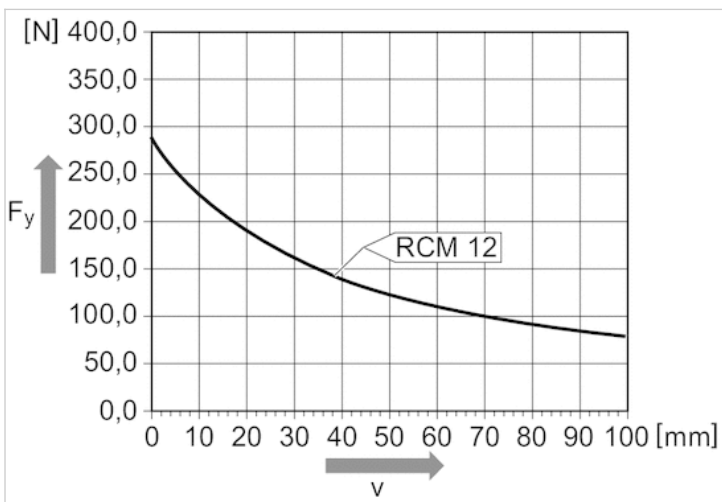
Movement into intermediate position 90°



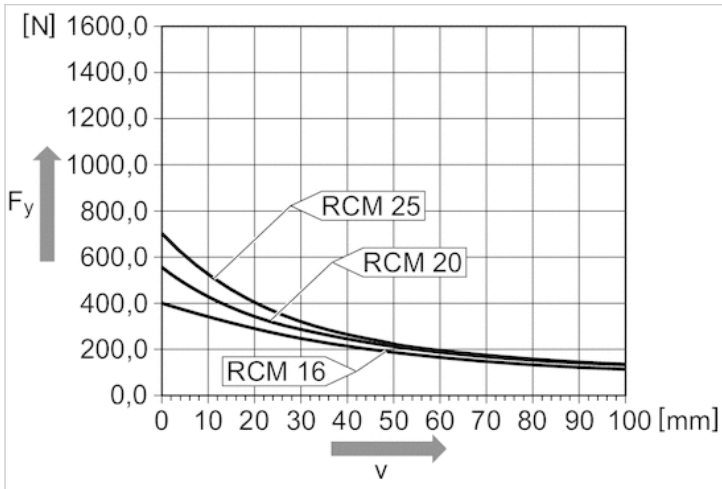
Maximum permissible radial force  $F_y$  [N] as a function of  $v$  [mm]



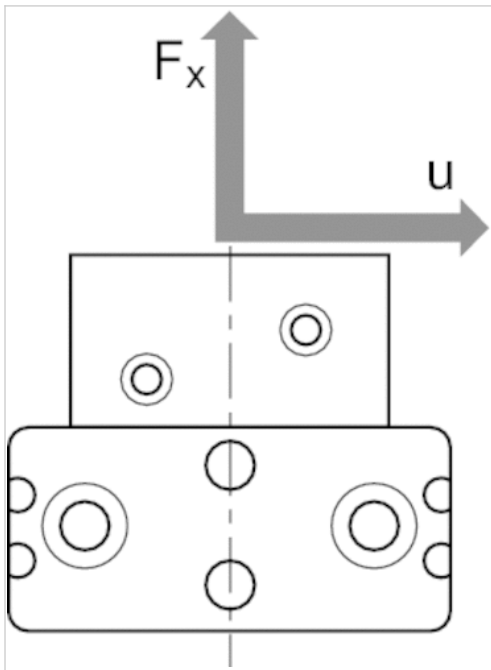
Maximum permissible radial force  $F_y$  [N] as a function of  $v$  [mm], RCM 12



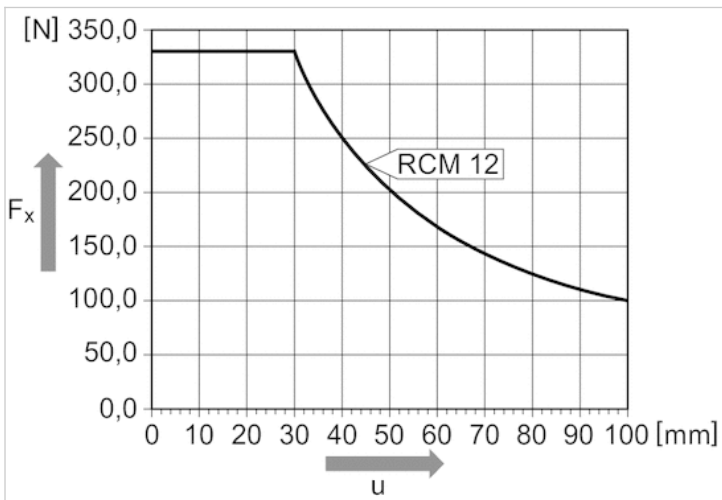
Maximum permissible radial force  $F_y$  [N] as a function of  $v$  [mm], RCM 16 - 25



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



Maximum permissible axial force  $F_x$  [N] as a function of  $u$  [mm], RCM 12

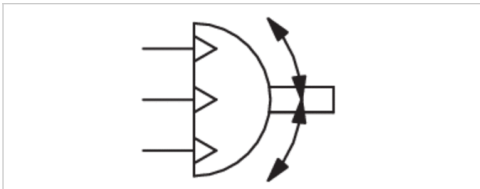


# Rotary Compact Module, Series RCM-SH

- angle of rotation max. 180 °
- Ø 12-25 mm
- with magnetic piston
- double piston with rack
- Easy2Combine capable
- Cushioning hydraulic non-adjustable
- with integrated intermediate position
- with air duct



Working pressure min./max.	4 ... 8 bar
Ambient temperature min./max.	5 ... 60 °C
Medium temperature min./max.	5 ... 60 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 ... 1 mg/m <sup>3</sup>
air duct	with air duct
Cushioning	hydraulic non-adjustable
Theoretical torque at	6 bar
Weight	See table below



## Technical data

Part No.	Frame size	Compressed air connection	angle of rotation	Min. swivel times
		G		
R412000407	RCM-12	M5	0-180 °	0.3 s
R412000408	RCM-16	M5	0-180 °	0.32 s
R412000409	RCM-20	M5	0-180 °	0.48 s
R412000410	RCM-25	M5	0-180 °	0.65 s

Part No.	Air consumption per rotation	Weight
R412000407	13.29 cm <sup>3</sup>	0.56 kg
R412000408	22.14 cm <sup>3</sup>	0.93 kg
R412000409	37.83 cm <sup>3</sup>	1.25 kg
R412000410	80.72 cm <sup>3</sup>	2.33 kg

## Technical data

Frame size	RCM-12	RCM-16	RCM-20
Number of air ducts	2	4	4
Max. permissible axial bearing load	330 N	490 N	620 N
Max. permissible radial bearing load	290 N	400 N	560 N
Max. permissible mass moment of inertia	10 kg cm <sup>2</sup>	80 kg cm <sup>2</sup>	180 kg cm <sup>2</sup>
Repetitive precision	0.05 °	0.05 °	0.05 °
Theoretical torque	0.95 Nm	1.7 Nm	3 Nm

Frame size	RCM-25
Number of air ducts	4
Max. permissible axial bearing load	1160 N
Max. permissible radial bearing load	700 N
Max. permissible mass moment of inertia	450 kg cm <sup>2</sup>
Repetitive precision	0.05 °
Theoretical torque	6.5 Nm

## Technical information

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 compressed air must remain constant during the life cycle.

Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

### NOTICE:

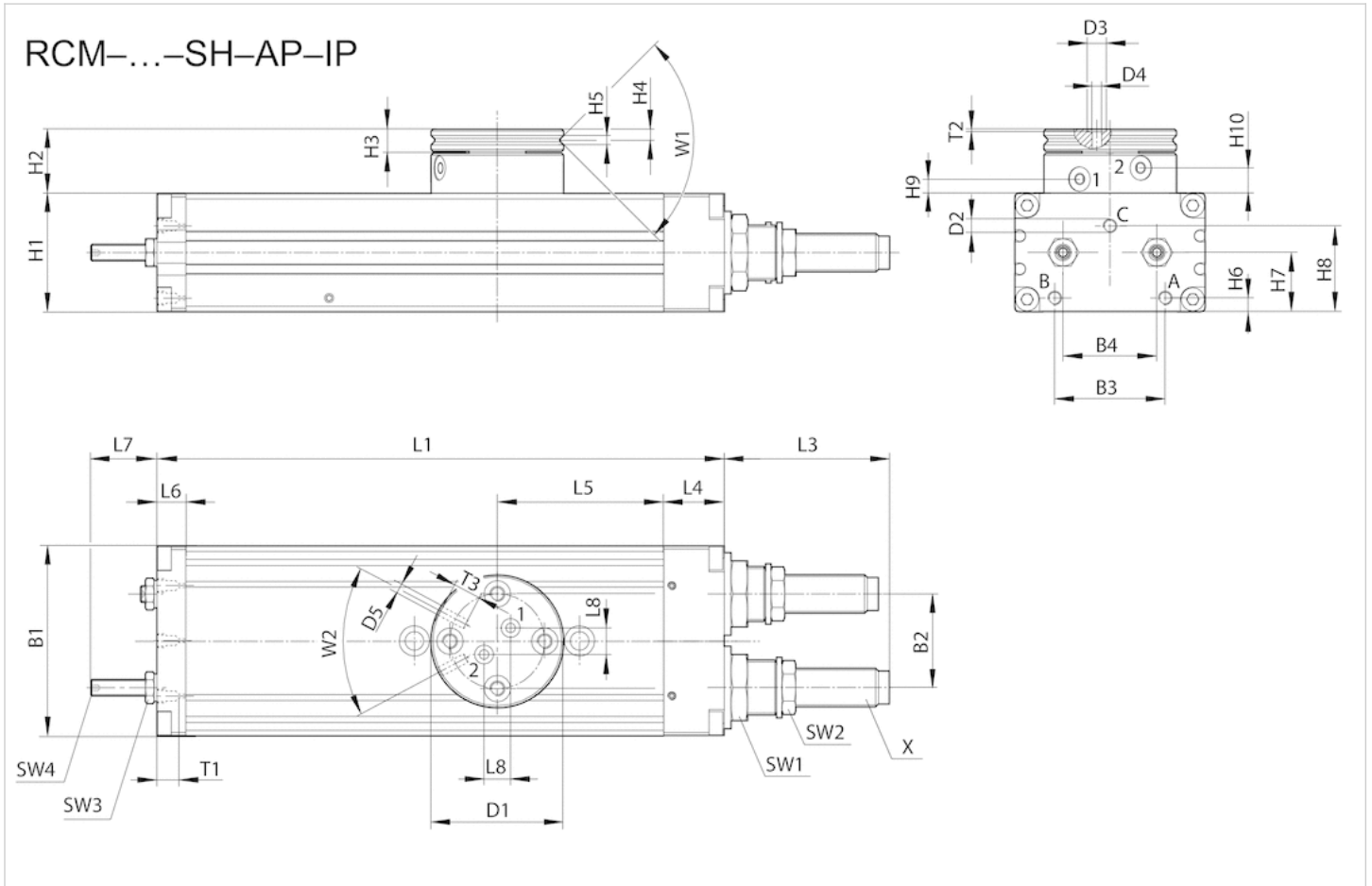
For positioning without overswing in the intermediate position, it is recommended to limit the mass moment of inertia to 40% of the maximum permissible value!

## Technical information

Material	
Housing	Aluminum, anodized
Cap	Aluminum, black anodized
Base	Aluminum, black anodized
Seal	Acrylonitrile butadiene rubber
Axis	Steel, hardened
Rotary flange	Steel, hardened

## Dimensions

### RCM-12



T1 = depth of thread

## Dimensions

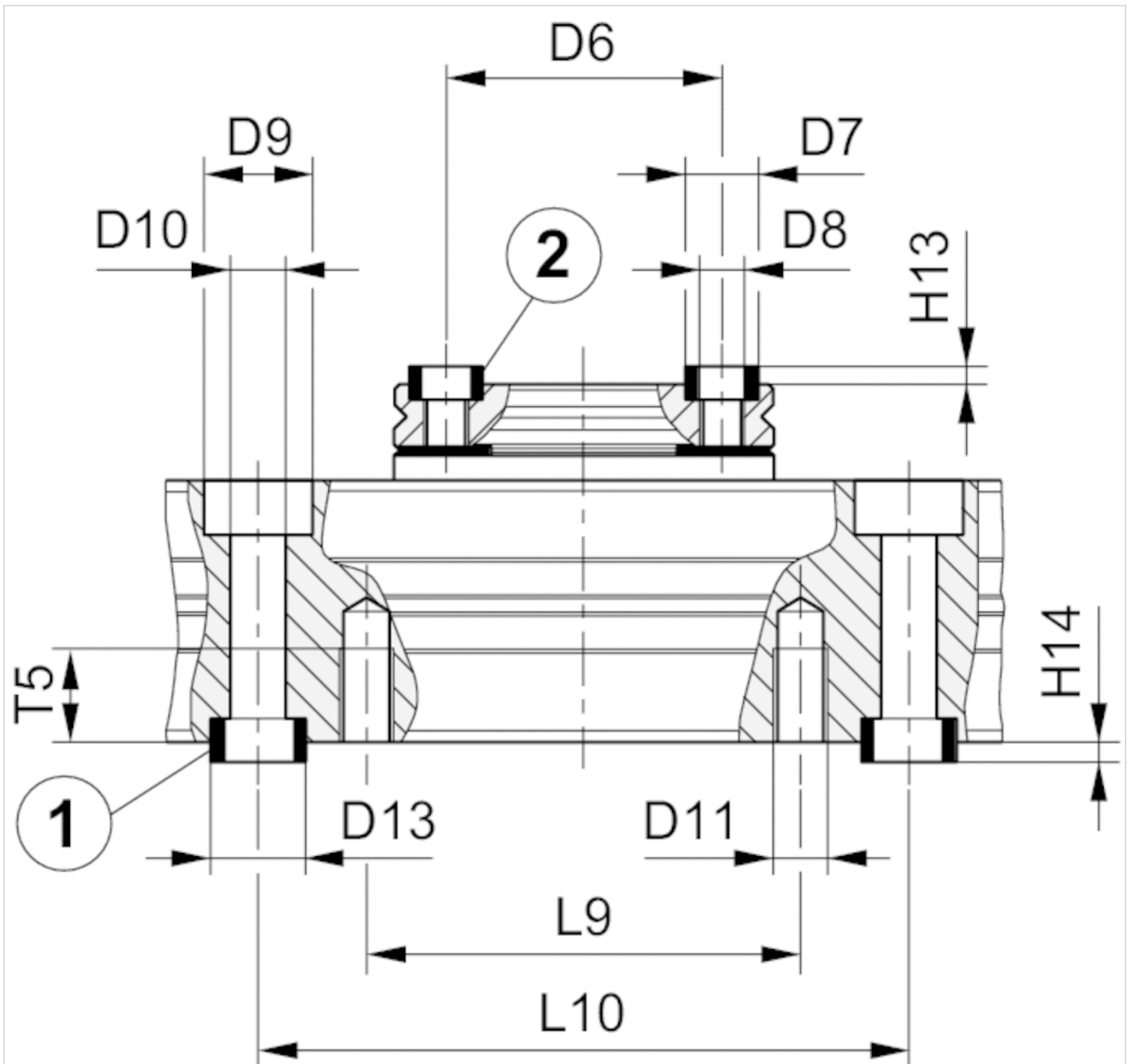
Frame size	B1	B2	B3	B4	Ø D1	Ø D2	Ø D3	Ø D4	Ø D5	H1	H2	H3	H4	H5	H6	H7	H8	H9 ±0,2
RCM-12	43	18	24	18	35	M5	5	2.5	M3	24	17	6	2.9	2.5	3.7	12.5	18.1	3.8

Frame size	H10 ±0,2	L1	L3	L4	L5	L6	L7	L8	SW1	SW2	SW3	SW4	T1	T2	T3	W1	W2	X
RCM-12	6.7	136	33.5	14	40	8.5	17	7	15	11	7	2	4	0.7	4	90°	56°	M8x1

Dimensions

Mounting and assembly, RCM-12

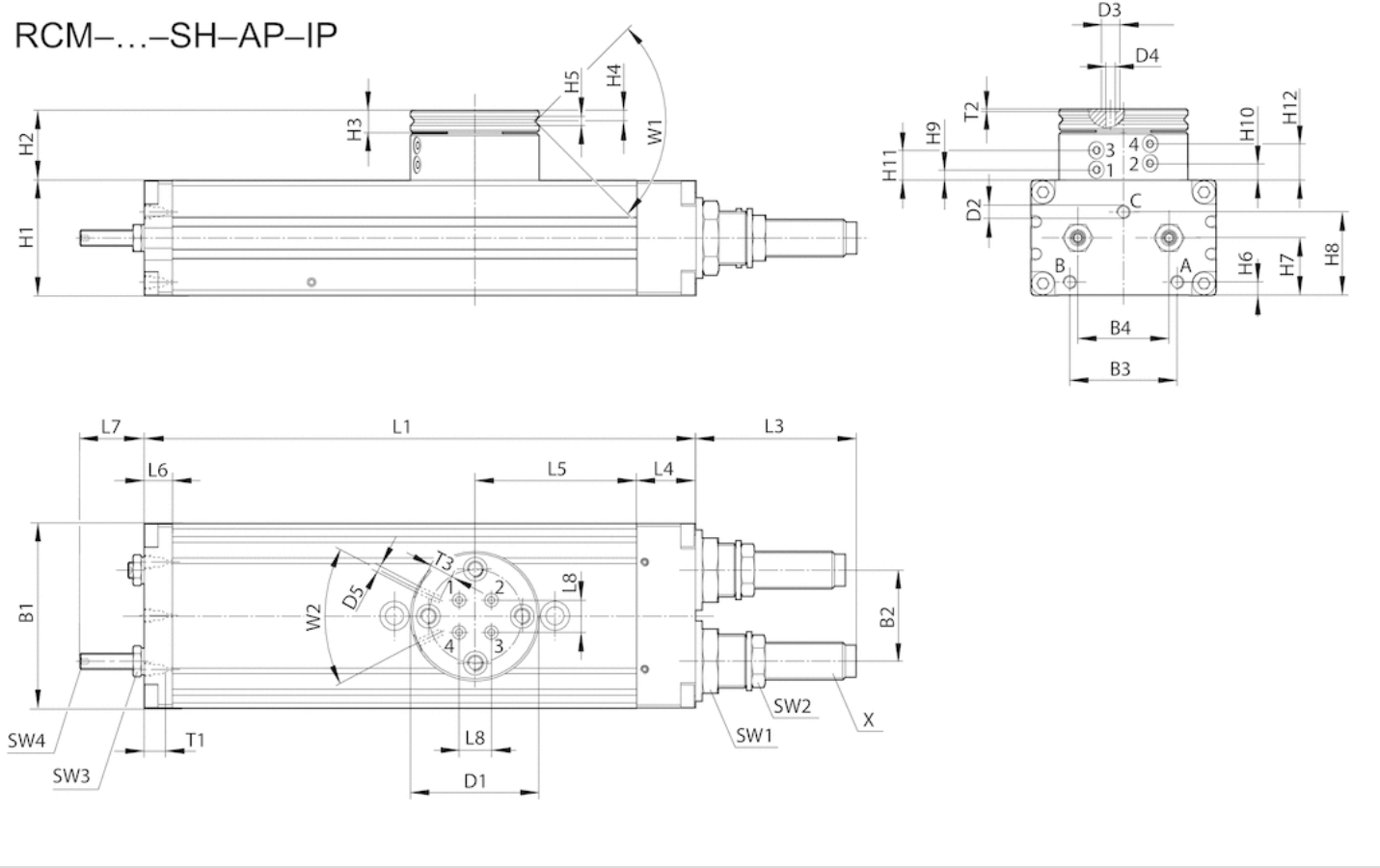


1) centering sleeve, included in the scope of delivery 2) centering sleeve



RCM-16/.../-25

RCM-...-SH-AP-IP



T1 = depth of thread

Dimensions

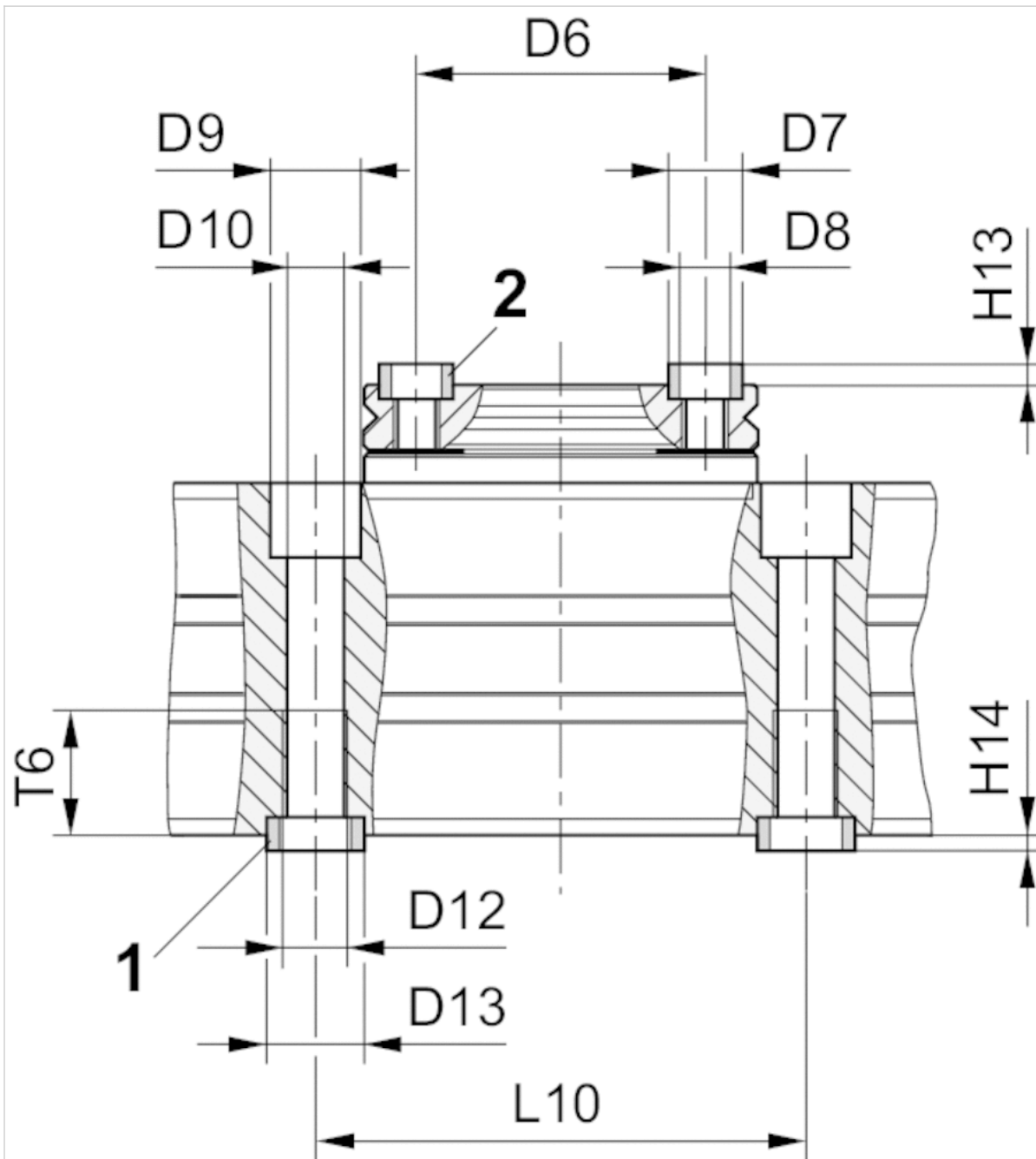
Frame size	B1	B2	B3	B4	Ø D1	Ø D2	Ø D3	Ø D4	Ø D5	H1	H2	H3	H4	H5	H6	H7	H8
RCM-16	52	24	29	24	40	M5	5	2.5	M3	32	25.5	7	3.3	2.5	5	16	21.1
RCM-20	58	30	30	30	42	M5	5	2.5	M3	37	26	7	3.3	3	5.5	19	27.1
RCM-25	69	34	40	34	48	M5	5	2.5	M3	43	26.5	8	4	3	5	21.5	31.1

Frame size	H9 ±0,2	H10 ±0,2	H11 ±0,2	H12 ±0,2	L1	L3	L4	L5	L6	L7	L8	SW1	SW2	SW3
RCM-16	3.9	6.5	11.1	13.7	140	34	18	40	8.5	17	6	19	13	7
RCM-20	4.4	7	11.6	14.2	156	48.5	19	43	8.5	22	10	19	15	8
RCM-25	3.9	6.5	11.1	13.7	206	60	22	60.5	10.5	24	12	23	17	10

Frame size	SW4	T1	T2	T3	W1	W2	X
RCM-16	2	4	0.7	4	90°	50°	M10x1
RCM-20	2.5	4	0.7	4	90°	50°	M12x1
RCM-25	3	4	0.7	4	90°	50°	M14x1,5

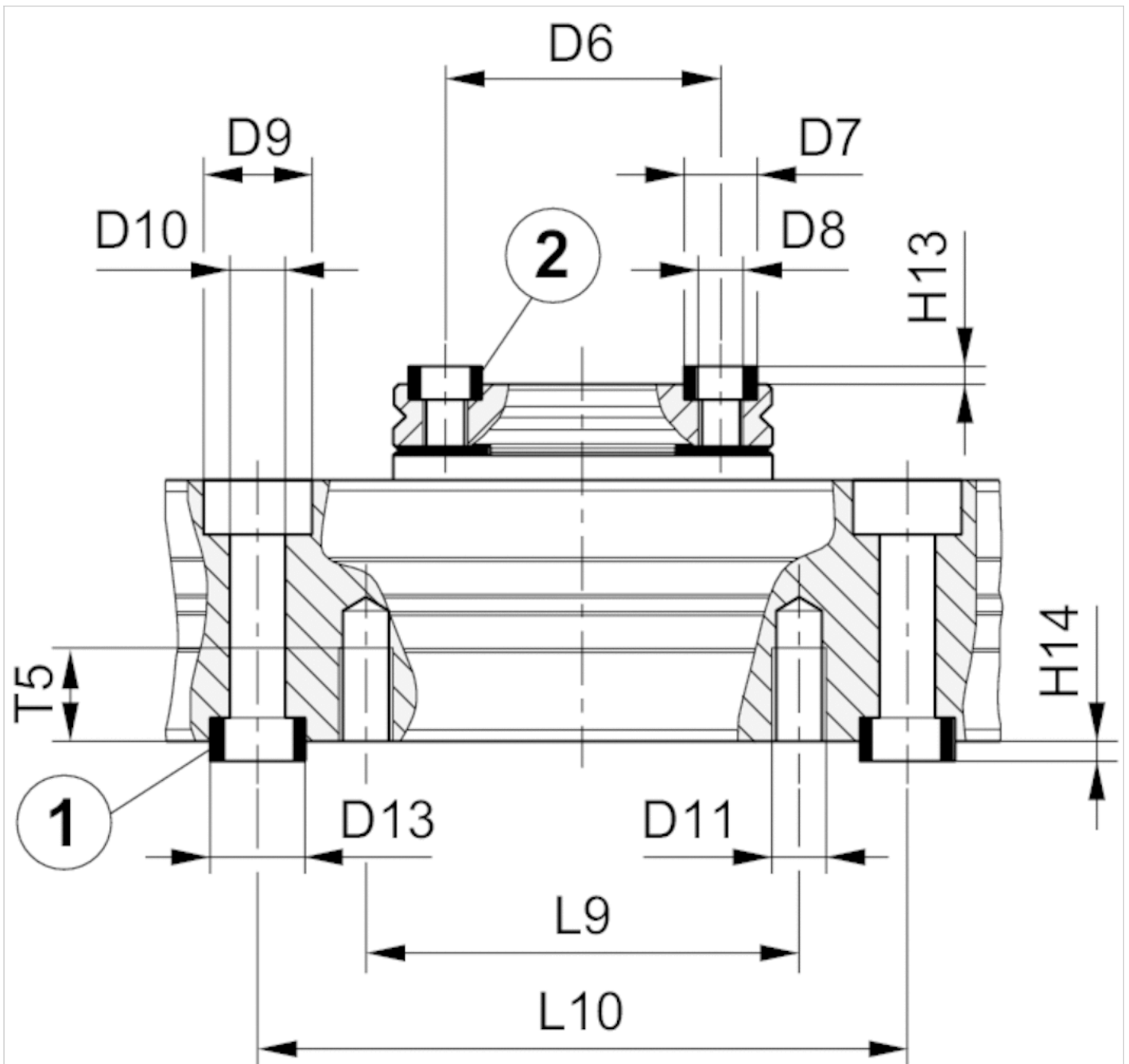
## Dimensions

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



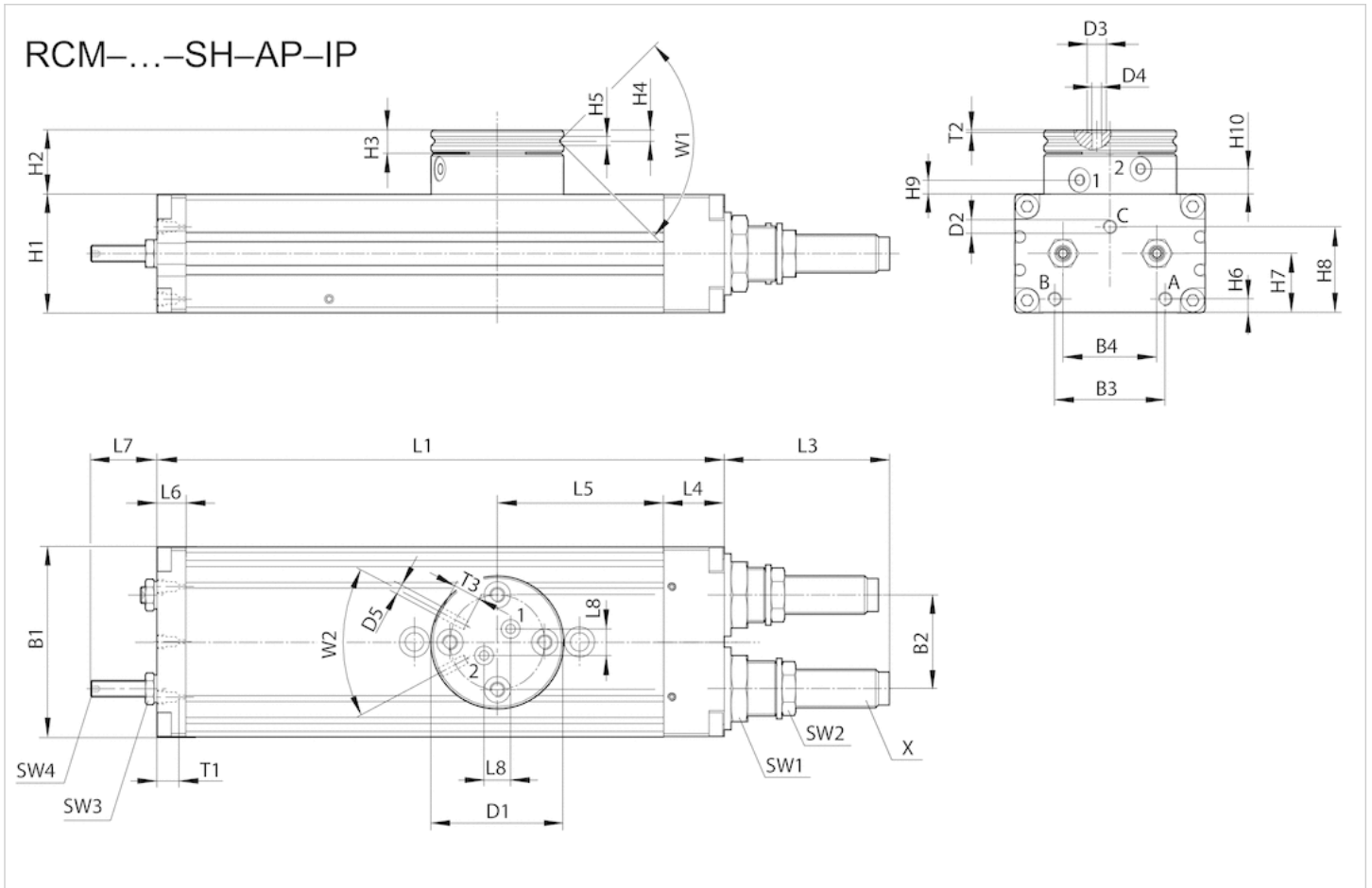
1) centering sleeve, included in the scope of delivery 2) centering sleeve

Mounting and assembly, RCM-12



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

RCM-12



T1 = depth of thread

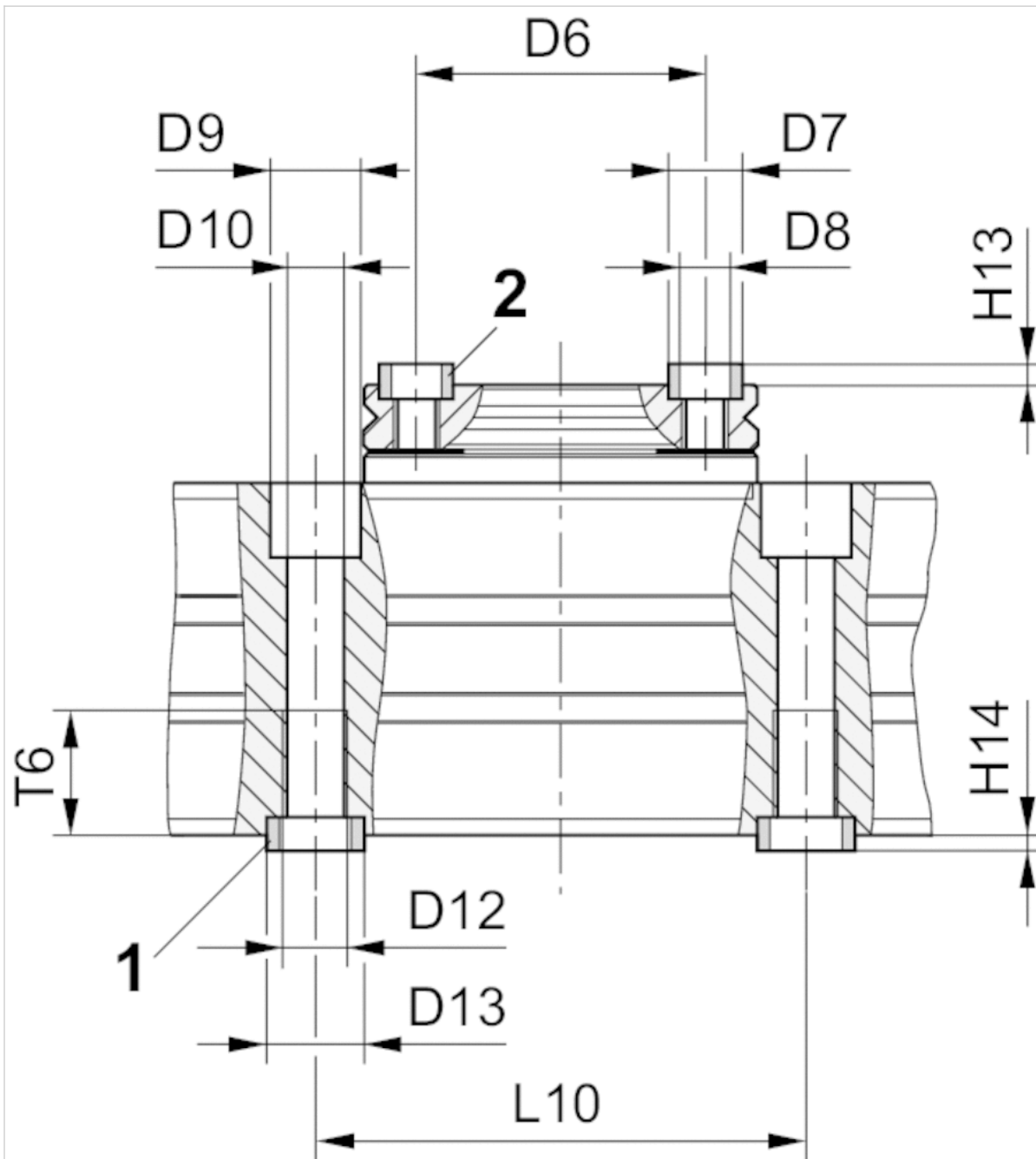
Dimensions

Frame size	B1	B2	B3	B4	Ø D1	Ø D2	Ø D3	Ø D4	Ø D5	H1	H2	H3	H4	H5	H6	H7	H8	H9 ±0,2
RCM-12	43	18	24	18	35	M5	5	2.5	M3	24	17	6	2.9	2.5	3.7	12.5	18.1	3.8

Frame size	H10 ±0,2	L1	L3	L4	L5	L6	L7	L8	SW1	SW2	SW3	SW4	T1	T2	T3	W1	W2	X
RCM-12	6.7	136	33.5	14	40	8.5	17	7	15	11	7	2	4	0.7	4	90°	56°	M8x1

Dimensions

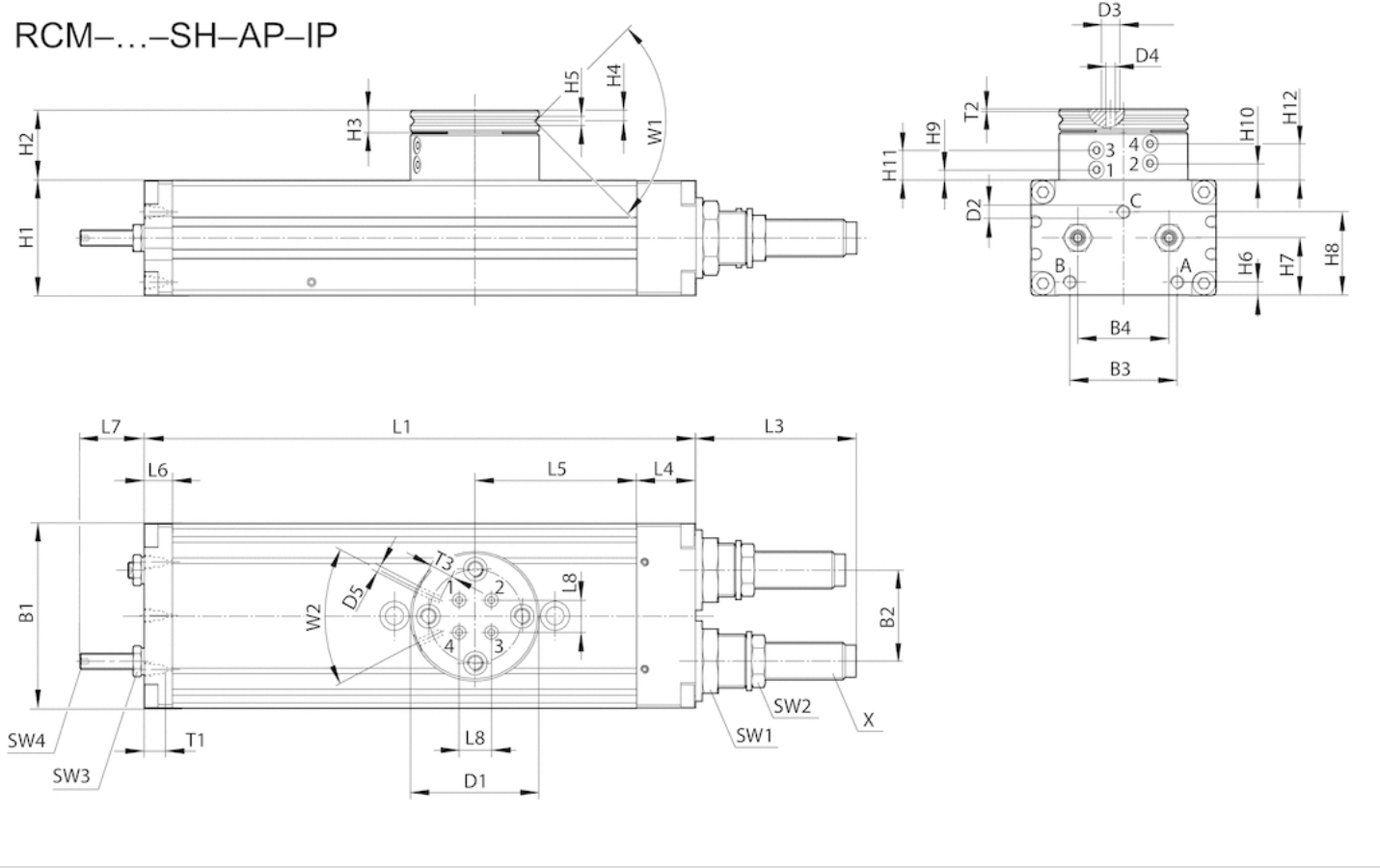
Mounting and assembly, RCM-16/.../-25



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

RCM-16/.../-25

RCM-...-SH-AP-IP



T1 = depth of thread

Dimensions

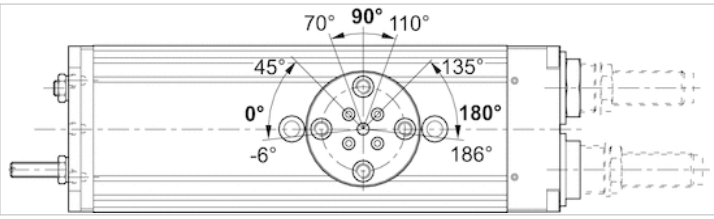
Frame size	B1	B2	B3	B4	Ø D1	Ø D2	Ø D3	Ø D4	Ø D5	H1	H2	H3	H4	H5	H6	H7	H8
RCM-16	52	24	29	24	40	M5	5	2.5	M3	32	25.5	7	3.3	2.5	5	16	21.1
RCM-20	58	30	30	30	42	M5	5	2.5	M3	37	26	7	3.3	3	5.5	19	27.1
RCM-25	69	34	40	34	48	M5	5	2.5	M3	43	26.5	8	4	3	5	21.5	31.1

Frame size	H9 ±0,2	H10 ±0,2	H11 ±0,2	H12 ±0,2	L1	L3	L4	L5	L6	L7	L8	SW1	SW2	SW3
RCM-16	3.9	6.5	11.1	13.7	140	34	18	40	8.5	17	6	19	13	7
RCM-20	4.4	7	11.6	14.2	156	48.5	19	43	8.5	22	10	19	15	8
RCM-25	3.9	6.5	11.1	13.7	206	60	22	60.5	10.5	24	12	23	17	10

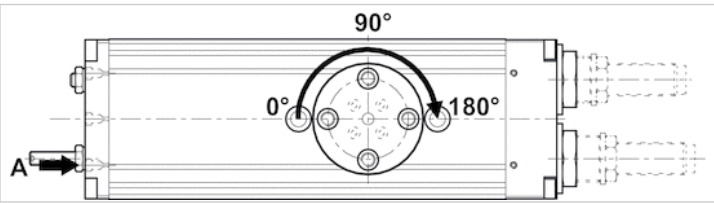
Frame size	SW4	T1	T2	T3	W1	W2	X
RCM-16	2	4	0.7	4	90°	50°	M10x1
RCM-20	2.5	4	0.7	4	90°	50°	M12x1
RCM-25	3	4	0.7	4	90°	50°	M14x1,5

## Diagrams

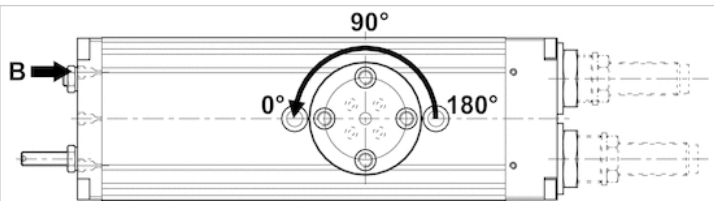
Setting range for end positions 0°/180° and intermediate position 90°



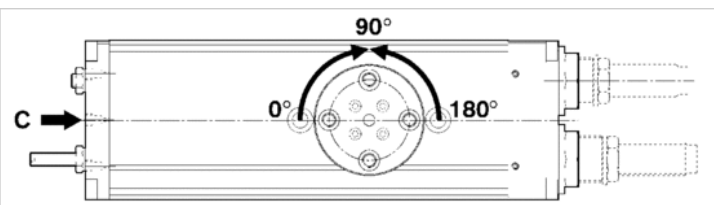
Movement into end position 180°



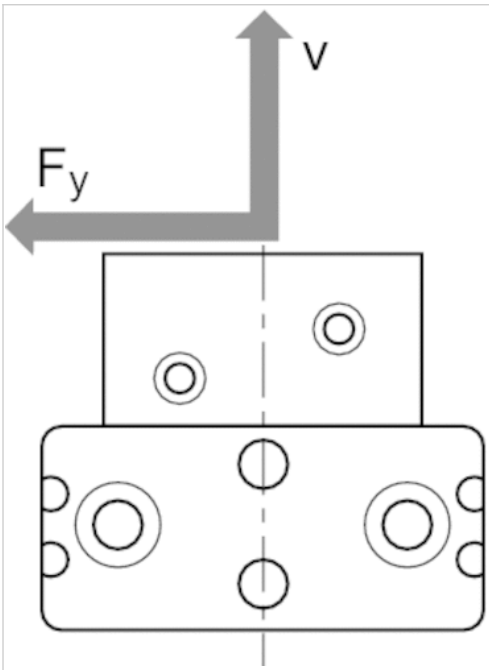
Movement into end position 0°



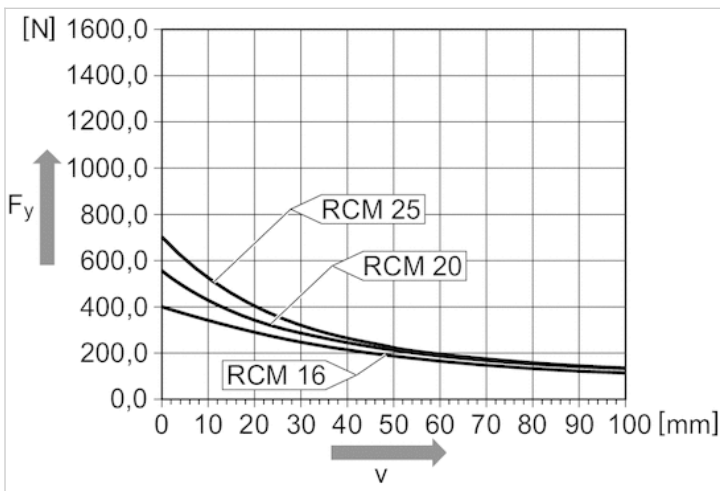
Movement into intermediate position 90°



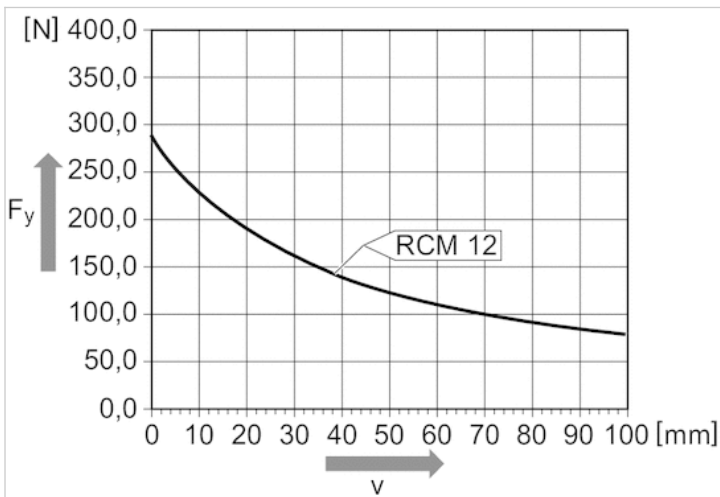
Maximum permissible radial force  $F_y$  [N] as a function of  $v$  [mm]



Maximum permissible radial force  $F_y$  [N] as a function of  $v$  [mm], RCM 16 - 25

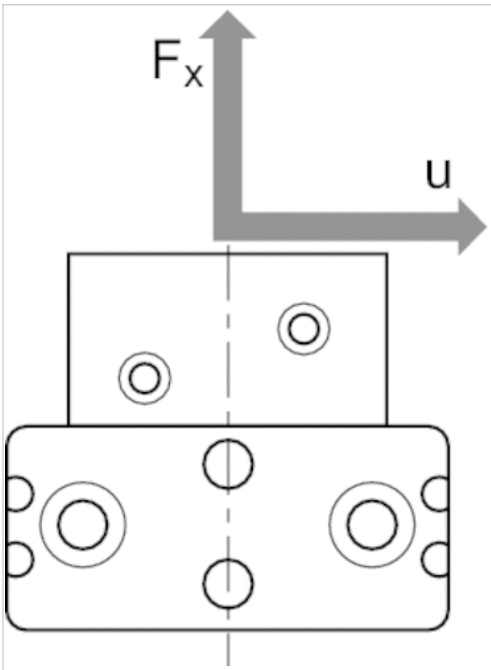


Maximum permissible radial force  $F_y$  [N] as a function of  $v$  [mm], RCM 12

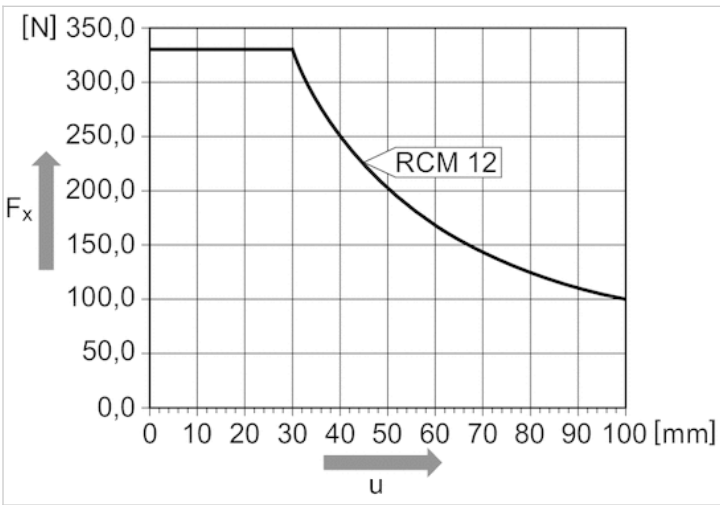




Maximum permissible axial force  $F_x$  [N] as a function of  $u$  [mm]



Maximum permissible axial force  $F_x$  [N] as a function of  $u$  [mm], RCM 12



## Centering rings



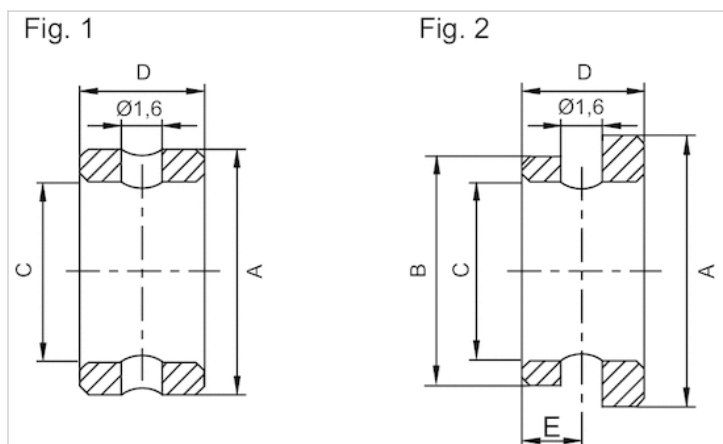
### Technical data

Part No.	External Ø	Scope of delivery	Fig.
R412000669	5-5 mm	6 piece	Fig. 1
R412000668	7 mm	6 piece	Fig. 1
R412000670	9 mm	6 piece	Fig. 1
R412000671	12 mm	6 piece	Fig. 1
R402003731	16 mm	6 piece	Fig. 1
R412004030	7-5 mm	6 piece	Fig. 2
R412004032	9-5 mm	6 piece	Fig. 2
R412004033	9-7 mm	6 piece	Fig. 2
R412004034	12-9 mm	6 piece	Fig. 2
R402003736	16-12 mm	6 piece	Fig. 2

### Technical information

Material	
Housing	Stainless steel

## Dimensions



## Dimensions

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

# Sensor, Series ST4

- 4 mm T-slot
- with cable
- Plug, M8, 3-pin
- UL certification
- electronic PNP electronic NPN
- Direct mounting for series PRA, SSI, GSU, RTC, CKP, GSP, MSC, MSN, RCM, CVI
- Indirect mounting for series MNI, CSL-RD, ICM



Certificates	UL (Underwriters Laboratories) cULus RoHS
Ambient temperature min./max.	-30 ... 80 °C
Protection class	IP65, IP67
Switching point precision	±0,1 mT
Min./max. DC operating voltage	10 ... 30 V DC
Switching logic	NO (make contact)
Display	LED
LED status display	Yellow
Vibration resistance	10 - 55 Hz, 1 mm
Shock resistance	30 g / 11 ms
Cable length L	0.3 m
Mounting screw	Combination: slotted and hexagon socket

## Technical data

Part No.		for
R412019683		PRA, SSI, GSU, RTC, CKP, GSP, MSC, MSN, RCM, CVI
R412019694		PRA, SSI, GSU, RTC, CKP, GSP, MSC, MSN, RCM, CVI

Part No.	Type of contact	Cable length L	Voltage drop U at I <sub>max</sub>
R412019683	electronic PNP	0.3 m	≤ 2,5 V
R412019694	electronic NPN	0.3 m	≤ 2,5 V

Part No.	DC switching current, max.
R412019683	0.1 A
R412019694	0.1 A

Part No.	Version
R412019683	short circuit resistant Protected against polarity reversal
R412019694	short circuit resistant Protected against polarity reversal

## Technical information

The max. switching capacity must not be exceeded.

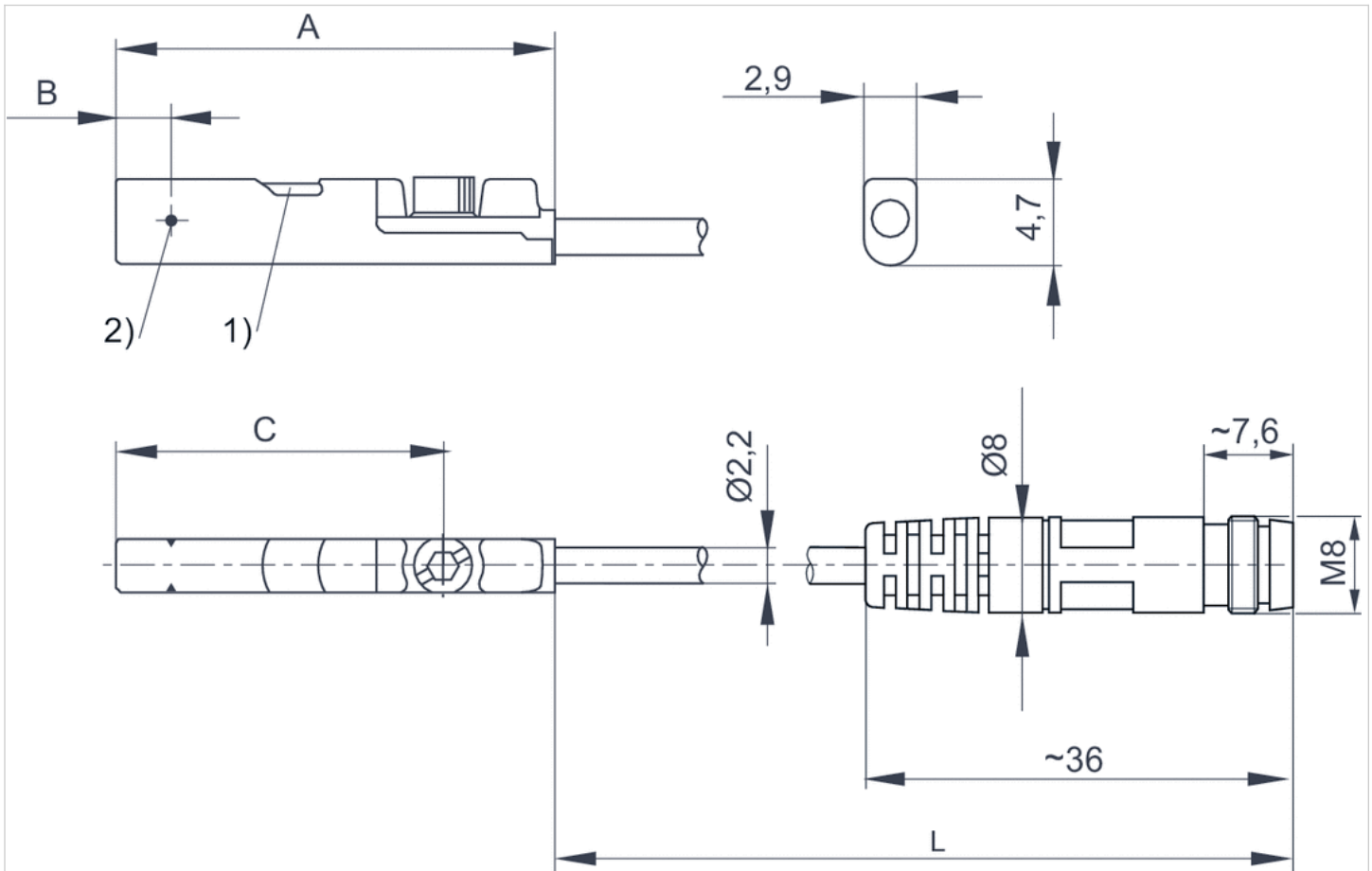
## Technical information

### Material

Housing	Polyamide fiber-glass reinforced
Cable sheath	Polyurethane

## Dimensions

### Dimensions



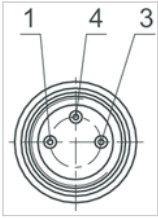
1) LED 2) Switching point  
L = cable length

## Dimensions

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

## Pin assignments

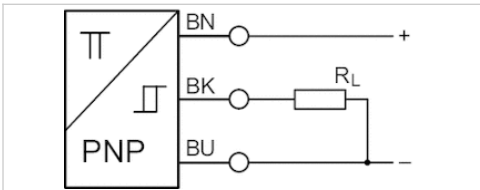
### Pin assignments



Pin	1	3	4
Allocation	(+)	(-)	(OUT)

# Sensor, Series ST4

- 4 mm T-slot
- with cable
- Plug, M8, 3-pin, with knurled screw
- UL certification
- electronic PNP
- Direct mounting for series PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI
- Indirect mounting for series MNI, CSL-RD, ICM



Certificates	UL (Underwriters Laboratories) cULus RoHS
Ambient temperature min./max.	-30 ... 80 °C
Protection class	IP65, IP67
Switching point precision	±0,1 mT
Min./max. DC operating voltage	10 ... 30 V DC
Switching logic	NO (make contact)
Display	LED
LED status display	Yellow
Vibration resistance	10 - 55 Hz, 1 mm
Shock resistance	30 g / 11 ms
Cable length L	0.3 0.5 m
Mounting screw	Combination: slotted and hexagon socket

## Technical data

Part No.	for	Type of contact
R412019493	PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI	electronic PNP
R412019687	PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI	electronic PNP

Part No.	Cable length L	Voltage drop U at I <sub>max</sub>	DC switching current, max.
R412019493	0.3 m	≤ 2,5 V	0.1 A
R412019687	0.5 m	≤ 2,5 V	0.1 A

Part No.	Version
R412019493	short circuit resistant Protected against polarity reversal
R412019687	short circuit resistant Protected against polarity reversal

## Technical information

The max. switching capacity must not be exceeded.

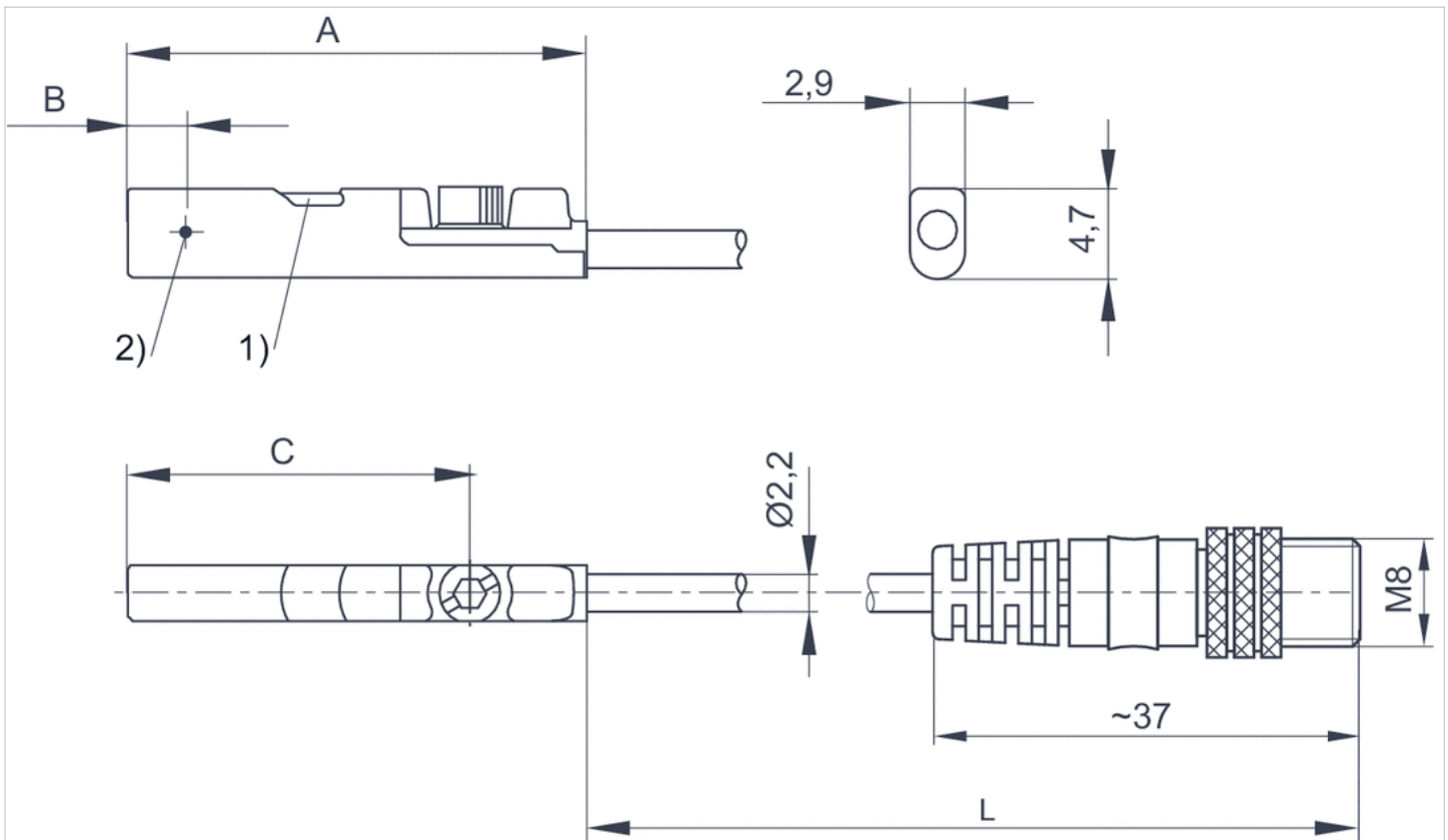
## Technical information

### Material

Housing	Polyamide fiber-glass reinforced
Cable sheath	Polyurethane

## Dimensions

### Dimensions



1) LED 2) Switching point  
L = cable length

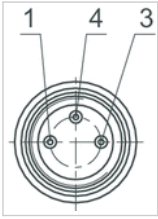
## Dimensions

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



## Pin assignments

### Pin assignments



Pin	1	3	4
Allocation	(+)	(-)	(OUT)

# Sensor, Series ST4

- 4 mm T-slot
- with cable
- open cable ends, 3-pin
- UL certification
- electronic PNP electronic NPN
- Direct mounting for series PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI
- Indirect mounting for series MNI, CSL-RD, ICM



Certificates	UL (Underwriters Laboratories) cULus RoHS
Ambient temperature min./max.	-30 ... 80 °C
Protection class	IP65, IP67
Switching point precision	±0,1 mT
Min./max. DC operating voltage	10 ... 30 V DC
Switching logic	NO (make contact)
Display	LED
LED status display	Yellow
Vibration resistance	10 - 55 Hz, 1 mm
Shock resistance	30 g / 11 ms
Cable length L	3 5 m
Mounting screw	Combination: slotted and hexagon socket

## Technical data

Part No.		for
R412019680		PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI
R412019681		PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI
R412019684		PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI
R412019685		PRA, SSI, GSU, RTC, CKP, GPC, MSC, MSN, RCM, CVI

Part No.	Type of contact	Cable length L	Voltage drop U at I <sub>max</sub>
R412019680	electronic PNP	3 m	≤ 2,5 V
R412019681	electronic PNP	5 m	≤ 2,5 V
R412019684	electronic NPN	3 m	≤ 2,5 V
R412019685	electronic NPN	5 m	≤ 2,5 V

Part No.	DC switching current, max.
R412019680	0.1 A
R412019681	0.1 A
R412019684	0.1 A
R412019685	0.1 A

Part No.	Version
R412019680	short circuit resistant Protected against polarity reversal

Part No.	Version
R412019681	short circuit resistant Protected against polarity reversal
R412019684	short circuit resistant Protected against polarity reversal
R412019685	short circuit resistant Protected against polarity reversal

## Technical information

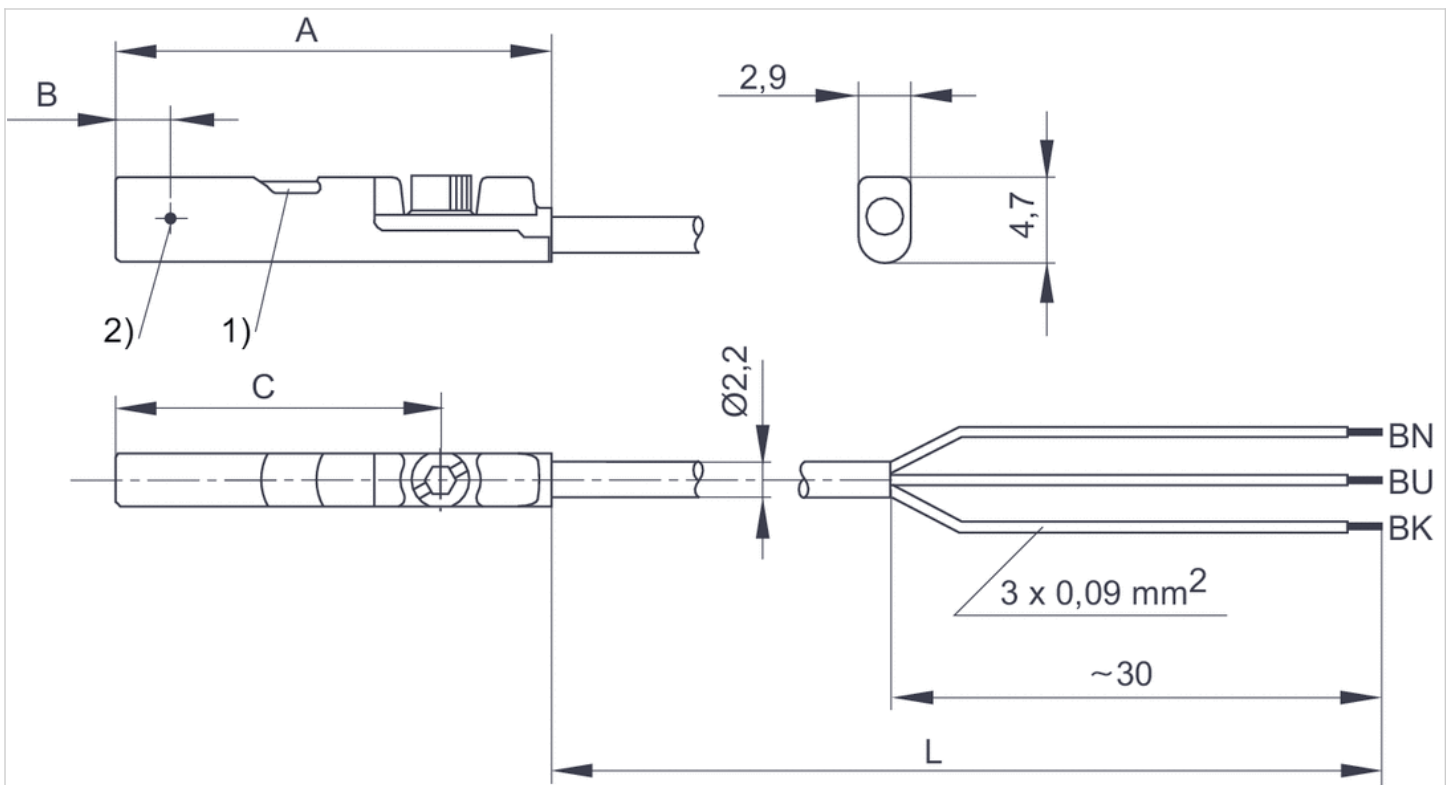
The max. switching capacity must not be exceeded.

## Technical information

Material	
Housing	Polyamide fiber-glass reinforced
Cable sheath	Polyurethane

## Dimensions

### Dimensions



1) LED 2) Switching point

L = cable length

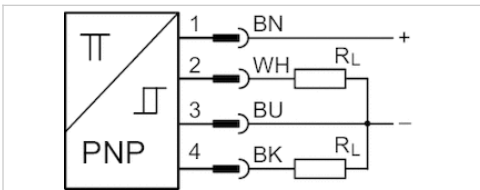
BN = brown, BK = black, BU = blue

## Dimensions

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

# Sensors, Series ST4-2P

- 4 mm T-slot
- number of switching points 2
- with cable
- without wire end ferrule, tin-plated, 4-pin
- electronic PNP
- 2 switching points
- electronic PNP
- Direct mounting for series PRA, SSI, RTC, GPC, MSC, MSN, RCM, CVI
- Indirect mounting for series MNI, CSL-RD, ICM



Certificates	RoHS
Ambient temperature min./max.	-20 ... 75 °C
Protection class	IP65, IP67
number of switching points	2
Power consumption	15 mA
Min./max. DC operating voltage	12 ... 30 V DC
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
Cable length L	2 m
Mounting screw	with hexagon socket

## Technical data

Part No.	for	Type of contact	Cable length L
R412010139	PRA, SSI, RTC, GPC, MSC, MSN, RCM, CVI	electronic PNP	2 m

Part No.	Detection range max.	Voltage drop U at I <sub>max</sub>	DC switching current, max.
R412010139	50 mm	≤ 2,2 V	0.15 A

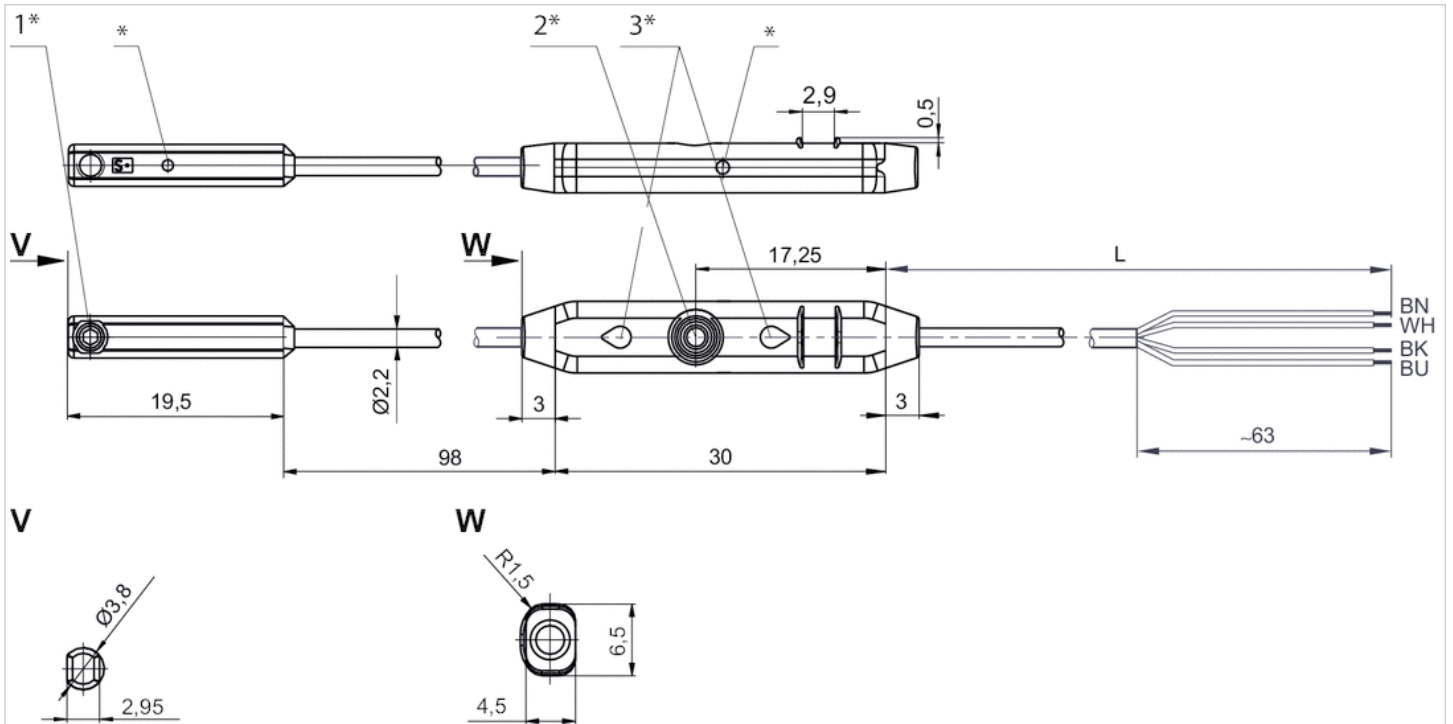
Part No.	Function	Version
R412010139	electronic PNP	short circuit resistant Protected against polarity reversal

## Technical information

Material	
Housing	Polyamide
Cable sheath	Polyurethane

# Dimensions

## Dimensions



1\* = mounting screw 2\* = teach button 3\* = LED

L = cable length

(1) BN=brown

(2) WH=white

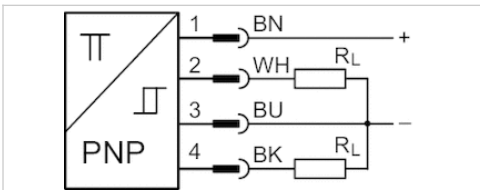
(3) BU=blue

(4) BK=black

\* Switching point

# Sensors, Series ST4-2P

- 4 mm T-slot
- number of switching points 2
- with cable
- Plug, M8x1, 4-pin, with knurled screw
- electronic PNP
- 2 switching points
- electronic PNP
- Direct mounting for series PRA, SSI, RTC, GPC, MSC, MSN, RCM, CVI
- Indirect mounting for series MNI, CSL-RD, ICM



Certificates	RoHS
Ambient temperature min./max.	-20 ... 75 °C
Protection class	IP65, IP67
number of switching points	2
Power consumption	15 mA
Min./max. DC operating voltage	12 ... 30 V DC
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
Cable length L	0.3 m
Mounting screw	with hexagon socket

## Technical data

Part No.	for	Type of contact	Cable length L
R412010140	PRA, SSI, RTC, GPC, MSC, MSN, RCM, CVI	electronic PNP	0.3 m

Part No.	Detection range max.	Voltage drop U at I <sub>max</sub>	Function
R412010140	50 mm	≤ 2,2 V	electronic PNP

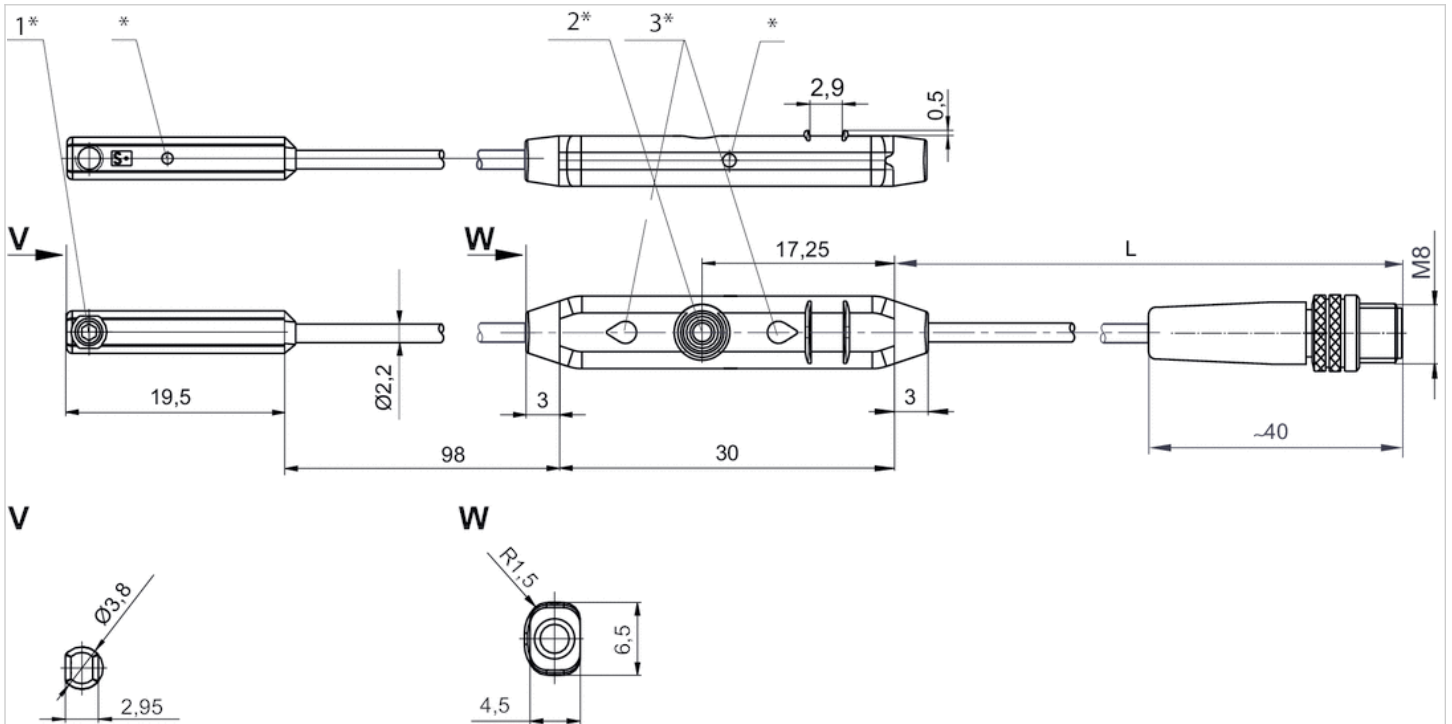
Part No.	Version
R412010140	short circuit resistant Protected against polarity reversal

## Technical information

Material	
Housing	Polyamide
Cable sheath	Polyurethane

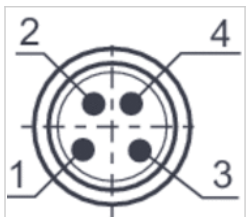
## Dimensions

### Dimensions



1\* = mounting screw 2\* = teach button 3\* = LED  
 L = cable length  
 \* Switching point

## Pin assignments



Pin	1	2	3	4
Allocation	(+)	(OUT)	(-)	(OUT)

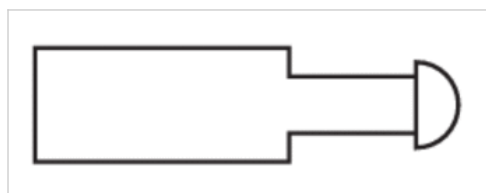


# Industrial shock absorber, Series SA2-RC

- for RCM-12 RCM-16 RCM-20 RCM-25
- Cushioning self-compensating
- Mounting Lock nut
- Mounting thread M8x1 M10x1 M12x1 M14x1,5
- SA2-RC



Ambient temperature min./max.	0 ... 60 °C
Medium	Oil
Mounting	Lock nut
Weight	See table below



## Technical data

Part No.	for series	Mounting thread	Stroke	Max. energy absorption/stroke	Max. energy absorption/hour
R412004751	RCM-12	M8x1	6 mm	4 Nm	14400 Nm
R412004752	RCM-16	M10x1	6 mm	9 Nm	21000 Nm
R412004753	RCM-20	M12x1	8.5 mm	16 Nm	30000 Nm
R412010089	RCM-25	M14x1,5	9.5 mm	20 Nm	40000 Nm

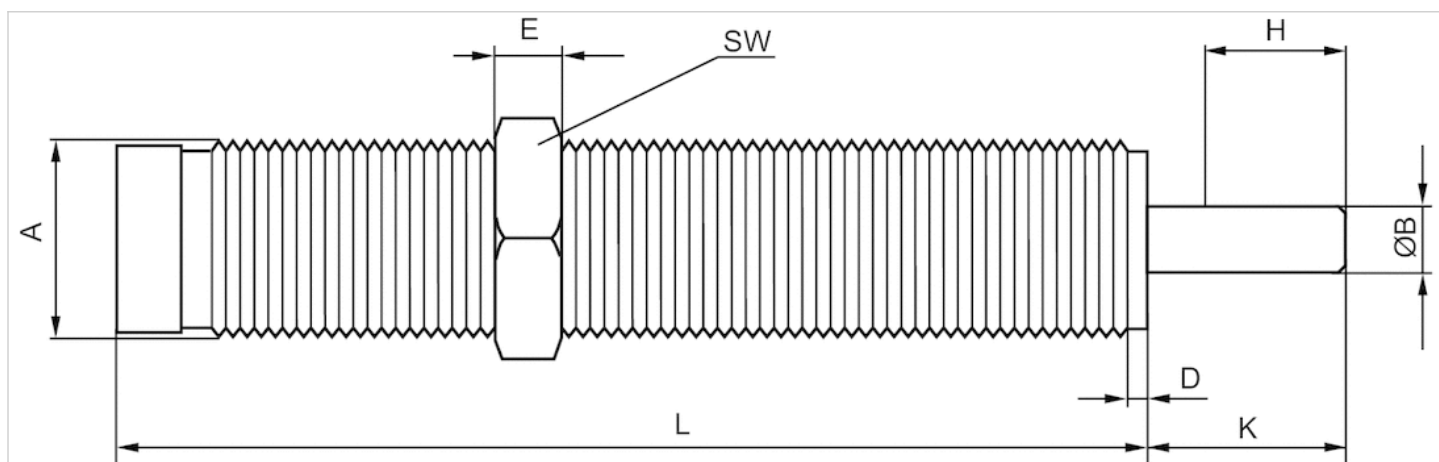
Part No.	Effective mass me	Return spring force	Weight
	min./max.	min./max.	
R412004751	2.8 ... 70 kg	2.5 ... 6 N	0.01 kg
R412004752	6 ... 280 kg	3.5 ... 8 N	0.02 kg
R412004753	17 ... 510 kg	3.5 ... 7 N	0.035 kg
R412010089	100 ... 420 kg	23 ... 35 N	0.06 kg

## Technical information

Material	
Cylinder tube	Steel, bronzed
Piston rod	Stainless steel, hardened
Lock nut	Steel, bronzed

## Dimensions

### Dimensions



H = stroke

A = mounting thread

## Dimensions

Part No.	For series	Mounting thread	ØB	D	E	H	K	L	SW
R412004751	RCM-12	M8x1	2.5	2.5	3	6	9	44	11
R412004752	RCM-16	M10x1	3	2.5	3	6	9	49.5	13
R412004753	RCM-20	M12x1	4	2.5	4	8,5	11	65	14
R412010089	RCM-25	M14x1,5	4	2.5	5	9,5	14	69	17

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