

Rack-and-pinion gears, Series TRR

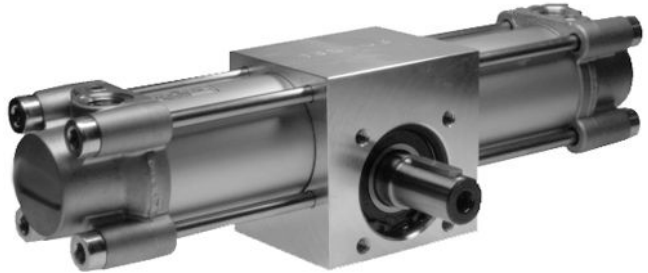
0822931204

AVENTICS
Series TRR
Rotary
actuators

2024-04-05

AVENTICS Series TRR Rotary actuators

The AVENTICS Series TRR is a rotary cylinder based on two ISO cylinders and a rack and pinion gearbox to generate high torques with adjustable angle.



Technical data

Industry	Industrial
Diameter	40 mm
Compressed air connection	G 1/4
Magnetic piston	with magnetic piston
Rotary compact module version	Double piston with rack
Frame size	TRR-40
Axis diameter	17 mm
Theoretical torque at	6,3 bar
Rotation angle tolerance	0° / +3°
Direction of rotation	counterclockwise
Max. play (radial)	1.6 °
Theoretical torque	7 Nm
Cushioning	Pneumatically
Cushioning	Non-adjustable
Cushioning angle	69 °
Stroke/10° angle of rotation	2.2 mm
Min. angle of rotation	0 °
Max. angle of rotation	90 °
Tolerance in 0° position not under pressure min.	-3 °

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Max. tolerance in 0° position not under pressure	3 °
Min. working pressure	2 bar
Max. working pressure	10 bar
Min. ambient temperature	-20 °C
Max. ambient temperature	80 °C
Min. medium temperature	-20 °C
Max. medium temperature	80 °C
Medium	Compressed air
Min. oil content of compressed air	0 mg/m ³
Max. oil content of compressed air	1 mg/m ³
Max. particle size	5 µm
Weight	2.5 kg

Material

Housing material	Aluminum
Material front cover	Die-cast aluminum
Seal material	Polyurethane
Material axis	Steel, chrome-plated
Part No.	0822931204

Technical information

The pressure dew point must be at least 15 °C less than ambient and medium temperature and may not exceed 3 °C.

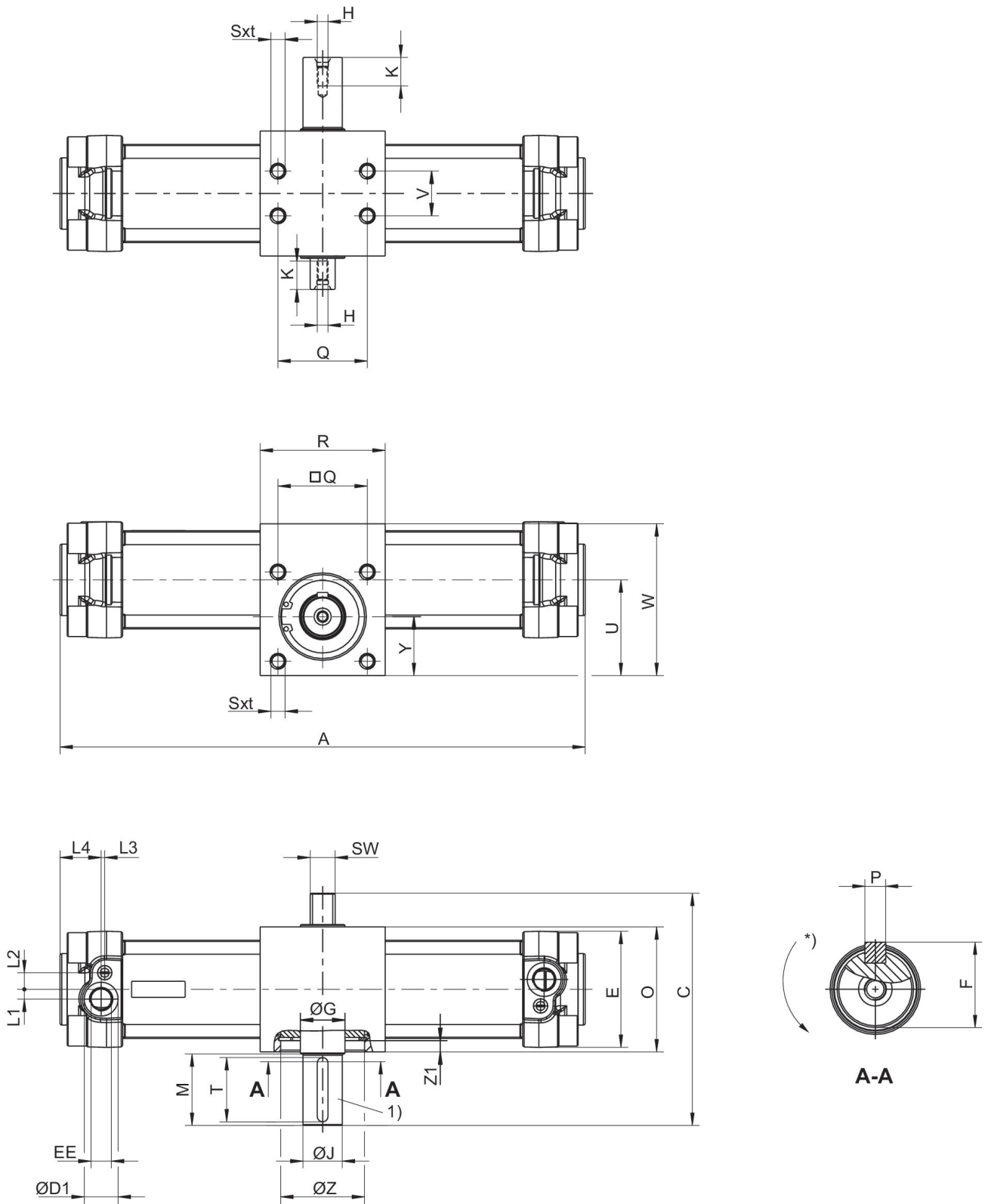
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Dimensions



1) Parallel key and slot dimensions according to DIN 6885

* Direction of rotation

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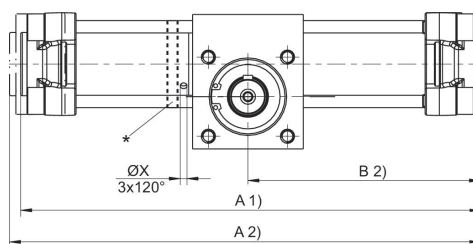
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Frame size	Ø	C	ØD1	E	EE	F	ØG	H	ØJ k6
TRR-32	32	103.5	15	47	G 1/8	16	17	M5x12,5	14
TRR-40	40	110	19	53	G 1/4	19	20	M5x12,5	17
TRR-50	50	130	19	65	G 1/4	24.5	25	M6x16	22
TRR-63	63	142.5	23	75	G 3/8	28	30	M8x19	25
TRR-80	80	175	23	95	G 3/8	33	35	M8x19	30
TRR-100	100	190	27	115	G 1/2	38	40	M10x22	35

Frame size	L1	L2	L3	L4	M	O	P	Q	R
TRR-32	5	7.5	4.2	20	30	55	5x25	33	63
TRR-40	5.5	9.5	5.2	24	30	60	5x25	40	70
TRR-50	5.5	9.3	2	23	40	70	6x36	50	70
TRR-63	9	11.7	2	28	40	80	8x36	60	80
TRR-80	8	15	2.5	28	50	100	8x45	80	106
TRR-100	12	14	4	29	50	114	10x45	80	125

Frame size	Sxt	SW	U	V	W	Y	ØZ H7	Z1
TRR-32	M6x9	11	40.7	18	63	25	35	4
TRR-40	M6x9	13	43.5	22	70	26.5	42	4.25
TRR-50	M8x12	14	53.5	25	85	33	47	6.25
TRR-63	M8x12	17	65	35	105	40	55	7
TRR-80	M10x15	22	84.5	50	135	53	62	9.5
TRR-100	M10x15	22	91.5	60	150	53	80	16.5

Rotation angle setting



* Rotation angle setting via rotation of the setting ring. The nuts of the tie rod must be loosened and tightened with the torque Ma. 0-position: parallel key on top (piston stop on the right).

Tightening torque TRR-50, TRR-63: 9-10 Nm Tightening torque TRR-80, TRR-100: 18-20 Nm
1) Min.
2) Max.

Adjustable angle of rotation

Frame size	Ø	A 1) 90°	A 1) 180°	A 1) 360°	A 2) 90°	A 2) 180°	A 2) 360°	B 2) 90°	B 2) 180°
TRR-50	50	292	339	434	299	345	440	150	173
TRR-63	63	337	400	525	344	407	533	173	204
TRR-80	80	388	458	600	399	470	611	200	235
TRR-100	100	440	533	722	451	544	733	226	273

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Frame size	B 2) 360°	ØX
TRR-50	220	4.2
TRR-63	267	4.2
TRR-80	306	4.2
TRR-100	366	4.2

1) Min.

2) Max.

Non-adjustable angle of rotation

Frame size	Ø	A 2) 90°	A 2) 180°	A 2) 360°	B 2) 90°	B 2) 180°	B 2) 360°	ØX
TRR-32	32	251	285	357	126	143	179	–
TRR-40	40	265	304	383	133	152	192	–
TRR-50	50	295	342	436	148	171	218	–
TRR-63	63	338	401	527	169	200	264	–
TRR-80	80	390	460	602	195	230	301	–
TRR-100	100	440	536	724	220	268	362	–

2) Max.