

AVENTICS Series ITS Tie rod cylinders (ISO 15552)

The AVENTICS Series ITS (ISO 15552) cylinders are often chosen when extremely large loads need to be moved efficiently and under control with the familiar ease of operation. The Series ITS (ISO 15552) cylinders are easily configurable to your application needs.

- Up to five tons can be moved by a single Series ITS (ISO 15552) cylinder across a large stroke range from only a few centimetres to 2700 mm
- Allows the simple and cost-effective automation of extremely powerful applications
- Available in piston diameters from 160 mm to 320 mm
- The modular sealing system enables tailor-made solutions for specific applications that function efficiently and minimize maintenance efforts
- Material-optimized design
- Optimized cushioning concept - opportunity to use the elastic cushioning element or pneumatic cushioning
- Analog distance measuring sensors available



Technical data

Industry	Industrial
Standards	ISO 15552
Piston Ø	160 mm
Stroke	160 mm
Ports	G 3/4
Functional principle	Double-acting
Cushioning	Pneumatic adjustable cushioning
Magnetic piston	Piston with magnet
Environmental requirements	Industry standard ATEX optional
Piston rod thread - type	External thread
Piston rod thread	M36x2
Piston rod	through
Scraper	Standard Industry Scraper
Pressure for determining piston forces	6,3 bar
Retracting piston force	11875 N
Extracting piston force	11875 N
Min. ambient temperature	-20 °C

Max. ambient temperature	80 °C
Min. working pressure	2 bar
Max. working pressure	10 bar
Cushioning length	46 mm
Cushioning energy	160 J
Weight 0 mm stroke	14.44 kg
Weight +10 mm stroke	0.42 kg
Stroke max.	1000 mm
Medium	Compressed air
Min. medium temperature	-20 °C
Max. medium temperature	80 °C
Max. particle size	50 µm
Min. oil content of compressed air	0 mg/m ³
Max. oil content of compressed air	5 mg/m ³
Clamping piece for magnetic field sensor necessary	Clamping piece for magnetic field sensor necessary

Material

Piston rod	Stainless Steel
Scraper material	Acrylonitrile butadiene rubber
Material tie-rod	Stainless Steel
Seal material	Acrylonitrile butadiene rubber
Material, front cover	Die-cast aluminum
Cylinder tube	Aluminum
End cover	Die-cast aluminum
Nut for piston rod	Steel, chrome-plated
Part No.	R480635054

Technical information

ATEX-certified cylinders with identification II 2G Ex h IIC T4 Gb / II 2D Ex h IIIC T135°C Db_X can be generated in the Internet configurator.

The operating temperature range for ATEX-certified cylinders is -20°C ... 60°C.

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

The oil content of compressed air must remain constant during the life cycle.

Overview drawing



NOTE: This overview drawing is only for orientation to indicate where the various accessory parts can be fastened to the cylinder. The illustration has been simplified for this purpose. It is thus not possible to derive the dimensions from this overview.

Tie rod cylinder ISO 15552, Series ITS

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Series ITS

2026-07-23

Dimensions



S = stroke

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Piston Ø	A	B	ØB	BG	DA	E	EE	G	KK	KV
160	72	65	65	24	167	180	G 3/4	56	M36x2	55
200	72	75	75	24	210	220	G 3/4	54	M36x2	55
250	84	90	90	25	262	280	G 1	59.5	M42x2	65
320	96	110	110	28	336	350	G 1	61.5	M48x2	75

Piston Ø	KW	L2	L8	L12	MM	P	PA	PM	RT	SW1
160	18	53	180	16	40	24	45	35	M16	36
200	18	56	180	16	40	22.5	42	30	M16	36
250	21	67	200	20	50	29	46	32.8	M20	46
320	24	76	220	23.25	63	30	48	37	M24	55

Piston Ø	SW2	SW3	TG	VD	WH	ZJ	ZM
160	27	60	140	6	80	260	340
200	27	60	175	6	95	275	370
250	41	80	220	31	105	305.3	411
320	50	95	270	34	120	340.5	462

Cushioning diagram



v_t = Piston velocity [m/s] m = Cushionable mass [kg]