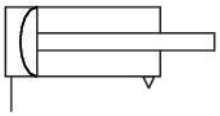
Diaphragm and piston actuators, Series RDC

5218565110

AVENTICS Series RDC Diaphragm and piston actuators

The AVENTICS Series RDC is flexible diaphragm cylinders with low friction, and can be actuated at low pressure. These cylinders permit precise balancing of forces, particularly in finely-tuned systems.





Technical data

Industry	Industrial
Piston Ø	85 mm
Stroke	70 mm
Ports	G 1/4
Functional principle	Single-acting, retracted without pressure
Piston rod thread - type	External thread
Piston rod thread	M16x1,5
Pressure for determining piston forces	6,3 bar
Extracting piston force	3575 N
Min. ambient temperature	-25 °C
Max. ambient temperature	80 °C
Min. working pressure	0.035 bar
Max. working pressure	8 bar
Weight	3.6 kg
Weight 0 mm stroke	3.6 kg
Stroke max.	70 mm
Medium	Compressed air
Min. medium temperature	-25 °C
Max. medium temperature	80 °C

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Max. particle size	5 µm
Min. oil content of compressed air	0 mg/m³
Max. oil content of compressed air	1 mg/m³

Material

Piston rod	Stainless Steel
Piston material	Aluminum
Seal material	Acrylonitrile butadiene rubber
Material, front cover	Aluminum
Cylinder tube	Steel, chrome-plated
End cover	Aluminum
Nut for piston rod	Steel, chrome-plated
Part No.	5218565110

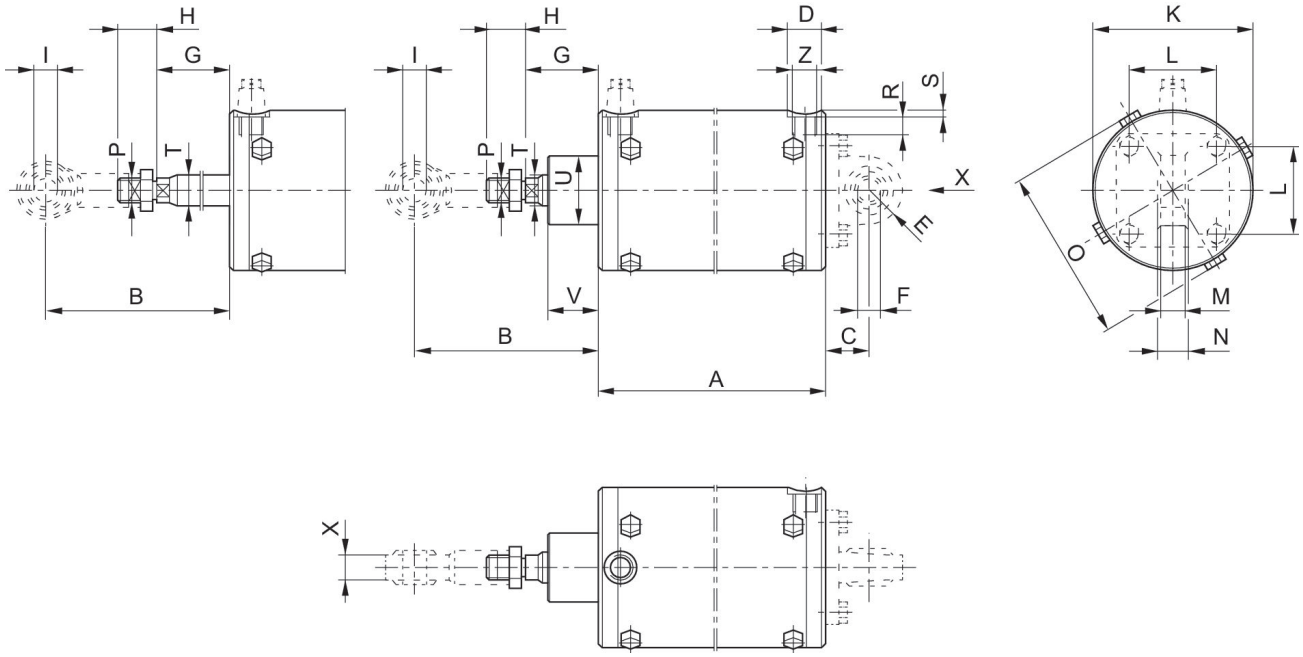
Technical information

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.

Use only the approved oils from AVENTICS. Further information can be found in the “Technical information” document (available in https://www.emerson.com/en-us/support).

Dimensions



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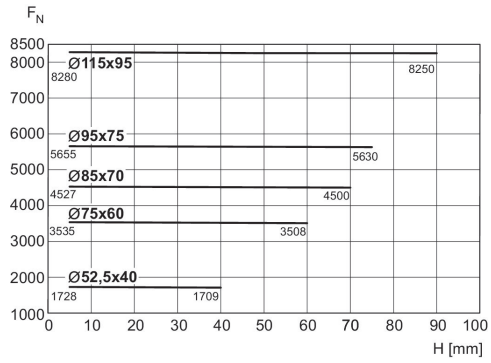
Piston Ø	A	B	C	D	E	F H7	G	H	I H7
52.5	140	67	29	17	15	10	19	26	10
75	166	84	26	23	18	12	32	31	10
85	202	118	30	22	22	16	43	26	16
95	208	124	30	23	22	16	49	26	16
115	247	120	38	23	25	16	45	26	16

Piston Ø	K	L	M	N	O	P	R	S	U
52.5	60	33	7-9	14	68	M10x1,25	8	3.1	–
75	86	49	9-11	16	92	M10x1,25	12	3.5	–
85	97	59	14,5-17,5	21	108	M16x1,5	12	4.5	–
95	106	59	14,5-17,5	21	117	M16x1,5	12	3.5	45
115	127	75	14-17,5	21	138	M16x1,5	12	3.6	45

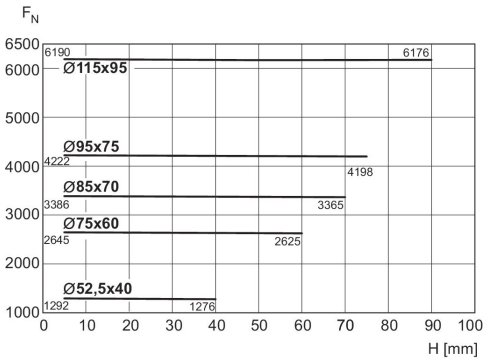
Piston Ø	V	T h7	X	Z
52.5	–	12	14	G 1/8
75	–	16	14	G 3/8
85	–	20	21	G 1/4
95	34	20	21	G 3/8
115	33	20	21	G 3/8

Force-stroke characteristic curve 8 bar



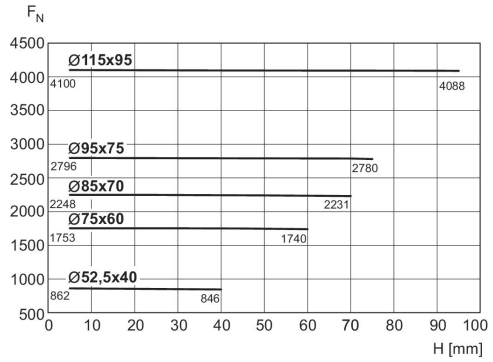
F_N = extending piston force
H = stroke

Force-stroke characteristic curve 6 bar



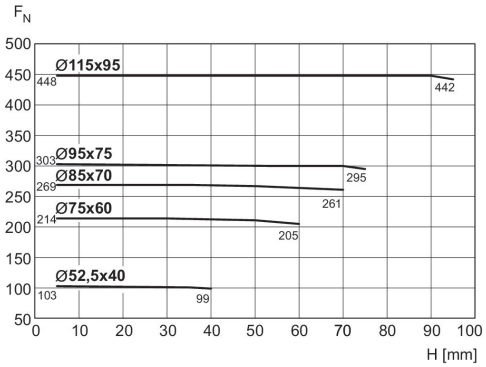
F_N = extending piston force
H = stroke

Force-stroke characteristic curve 4 bar



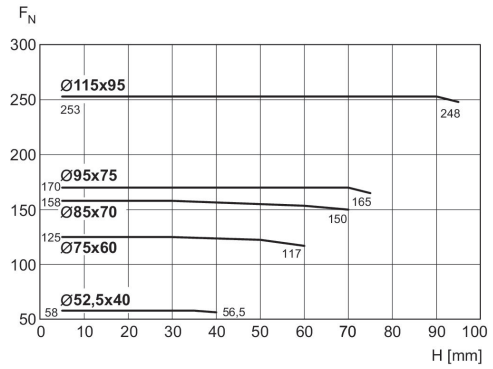
F_N = extending piston force
H = stroke

Force-stroke characteristic curve 0,5 bar



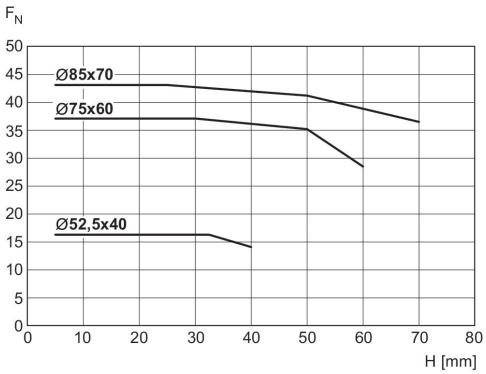
F_N = extending piston force
H = stroke

Force-stroke characteristic curve 0,3 bar



F_N = extending piston force
H = stroke

Force-stroke characteristic curve 0,1 bar



F_N = extending piston force
H = stroke