

Piston Rod Cylinders Bellows Cylinders

Advanced cylinder concepts with outstanding performance define the ORIGA piston rod cylinder programme.

The resulting advantages are the basis for trouble-free operation – whether as individual components or in a combined system, meeting the demands of modern automation for high reliability and high economic efficiency. Special solutions can be developed for optimum efficiency in specific applications.



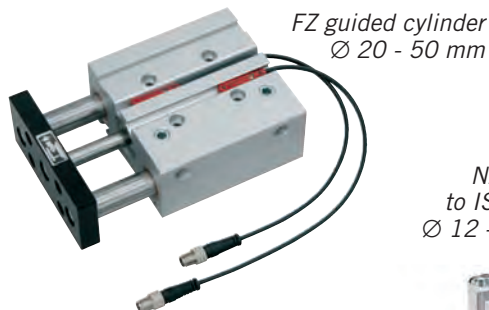
Consistent design of accessories for all cylinder series, e.g. swivel mountings, pivots, piston rod eyes, magnetic switches, etc.

DZ tie rod cylinder
to ISO 15552 (ISO 6431)
Ø 125 - 320 mm

DZB blocking cylinder
mountings to ISO 15552
(ISO 6431)
Ø 32 - 125 mm



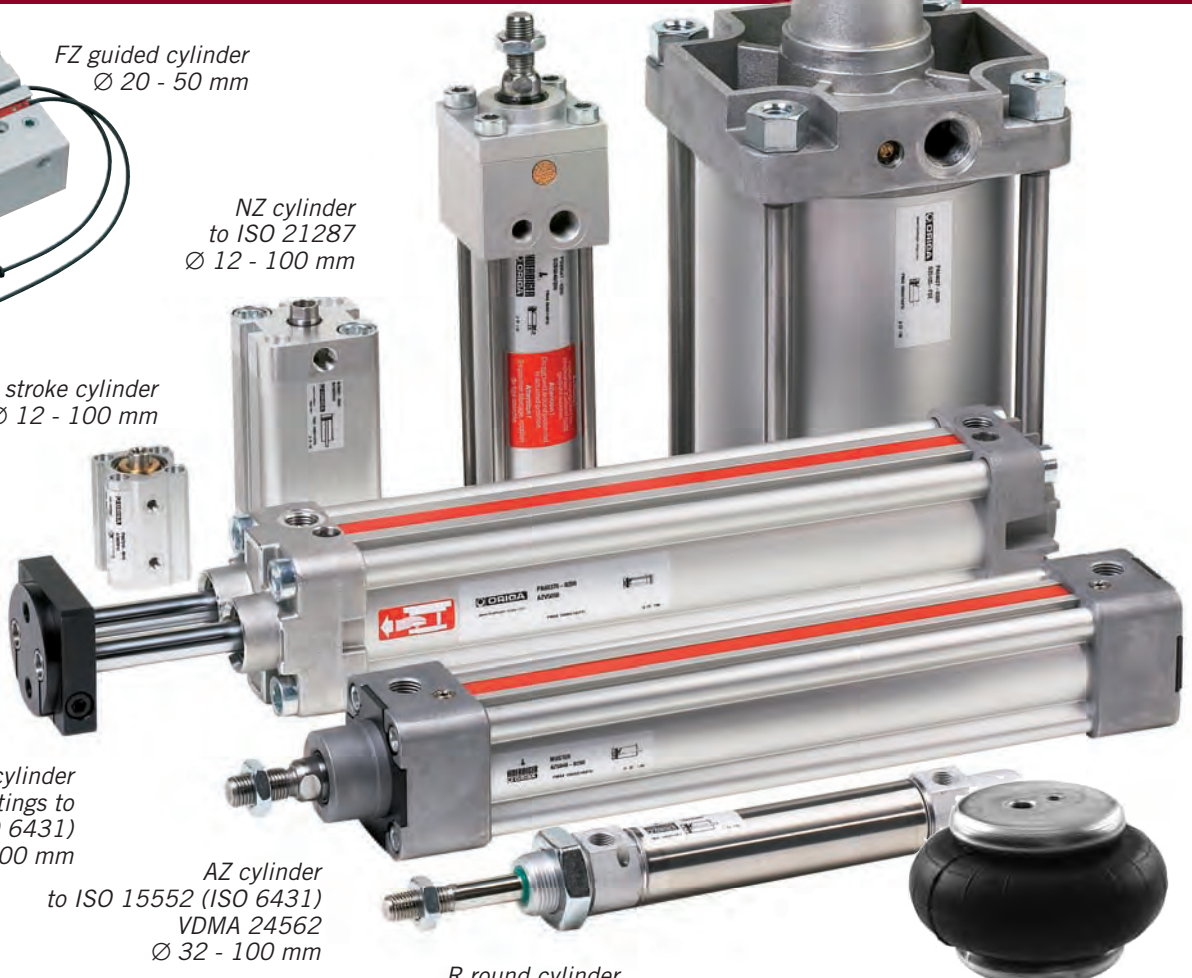
ST stop cylinder



FZ guided cylinder
Ø 20 - 50 mm

NZ cylinder
to ISO 21287
Ø 12 - 100 mm

SZ short stroke cylinder
Ø 12 - 100 mm



AZV non-rotating cylinder
mountings to
ISO 15552 (ISO 6431)
Ø 32 - 100 mm


AZ cylinder
to ISO 15552 (ISO 6431)
VDMA 24562
Ø 32 - 100 mm

R round cylinder
to ISO 6432 Ø 10 - 25 mm
R round cylinder Ø 32 - 63 mm

SP bellows cylinder
single, double, triple convolution

HOERBIGER-ORIGA-Products for -Atmospheres

Equipment Group II Category 2GD

Piston Rod Cylinders:  II 2GD c T4 T135°C

Note on ordering:

When ordering the ATEX version of a cylinder, please add "ATEX" to the type designation and order no.

Example:

DZ 5125-0100 ATEX

PA 53540-0100 ATEX

**Cylinders
for EX-Areas
ATEX versions**




Formula	$F = p \cdot A \cdot R$
Symbol	Description
A p R	Piston area Pressure in bar Friction ca. 10%

1) Air consumption when charging in dm³/100 mm stroke. The tube volume must also be taken into consideration. The given figures relate to piston area A.

The figures for piston area B change proportionally with the piston areas A to B.

A = Piston area - piston side
B = Piston area - piston rod side



**Piston Force
and Air
Consumption**
for
Standard Cylinders

		Piston diameter (mm)																
		8	10	12	16	20	25	32	40	50	63	80	100	125	160	200	250	320
Piston area* (cm ²)	A	0.5	0.8	1.1	2.0	3.1	4.9	8.0	12.6	19.6	31.2	50.0	78.0	122.7	201.0	314.1	490.8	804
	B	0.38	0.65	0.85	1.7	2.6	4.1	6.9	10.6	16.5	28.0	45.4	73.6	114.7	188.5	301.5	471.2	773
Approx. piston force (kN) at ... bar	1	0.0045	0.007	0.010	0.018	0.028	0.044	0.072	0.113	0.176	0.281	0.452	0.706	1.104	1.809	2.827	4.417	7.236
	2	0.0090	0.014	0.020	0.036	0.056	0.088	0.144	0.226	0.353	0.561	0.905	1.413	2.209	3.619	5.654	8.835	14.476
	3	0.0135	0.021	0.030	0.054	0.084	0.132	0.217	0.339	0.530	0.842	1.357	2.120	3.313	5.428	8.482	13.253	21.715
	4	0.0180	0.028	0.040	0.072	0.113	0.176	0.289	0.452	0.707	1.122	1.809	2.827	4.417	7.238	11.309	17.671	28.953
	5	0.0225	0.035	0.050	0.090	0.141	0.220	0.362	0.565	0.884	1.402	2.262	3.534	5.522	9.407	14.137	22.089	36.191
	6	0.0270	0.042	0.060	0.108	0.169	0.265	0.434	0.678	1.060	1.683	2.714	4.241	6.626	10.857	16.964	26.507	43.429
	7	0.0315	0.049	0.070	0.126	0.197	0.309	0.506	0.792	1.237	1.963	3.167	4.948	7.731	12.666	19.792	30.952	50.652
	8	0.0360	0.056	0.080	0.144	0.226	0.353	0.579	0.905	1.414	2.244	3.619	5.654	8.835	14.476	22.619	35.342	57.788
	9	0.0405	0.063	0.090	0.162	0.254	0.397	0.651	1.018	1.590	2.524	4.071	6.361	9.940	16.286	25.447	39.760	65.124
	10	0.0450	0.070	0.100	0.180	0.282	0.441	0.723	1.131	1.767	2.805	4.523	7.068	11.044	18.095	28.274	44.178	72.360
Approx. air consumption (dm ³ /100 mm stroke at ... bar ¹) Figures are valid for piston area A (see symbol)	1	0.010	0.016	0.02	0.04	0.06	0.09	0.18	0.30	0.46	0.71	1.20	1.90	2.65	4.60	6.90	10.80	16.50
	2	0.015	0.024	0.03	0.06	0.09	0.14	0.27	0.43	0.69	1.00	1.85	2.85	4.10	6.90	10.40	16.30	24.50
	3	0.020	0.032	0.04	0.08	0.12	0.19	0.36	0.58	0.92	1.40	2.45	3.80	5.50	9.20	13.90	21.80	32.50
	4	0.025	0.040	0.05	0.10	0.15	0.24	0.45	0.72	1.15	1.75	3.00	4.75	6.95	11.50	17.40	27.20	40.50
	5	0.030	0.048	0.06	0.12	0.18	0.29	0.55	0.86	1.40	2.10	3.65	5.70	8.40	13.80	20.90	32.70	48.00
	6	0.035	0.056	0.07	0.14	0.21	0.34	0.65	1.00	1.60	2.50	4.25	6.60	9.70	16.00	24.40	38.20	56.50
	7	0.040	0.064	0.08	0.16	0.25	0.39	0.73	1.15	1.80	2.85	4.85	7.60	11.15	18.30	27.90	43.70	64.50
	8	0.045	0.072	0.09	0.18	0.28	0.41	0.82	1.30	2.00	3.20	5.45	8.50	12.55	20.60	31.50	49.20	72.50
	9	0.050	0.080	0.10	0.20	0.31	0.49	0.90	1.45	2.30	3.55	6.10	9.50	14.00	22.90	35.00	54.60	80.50
	10	0.055	0.088	0.11	0.22	0.34	0.53	1.00	1.60	2.50	3.90	6.40	10.40	15.40	25.20	38.50	60.10	89.00



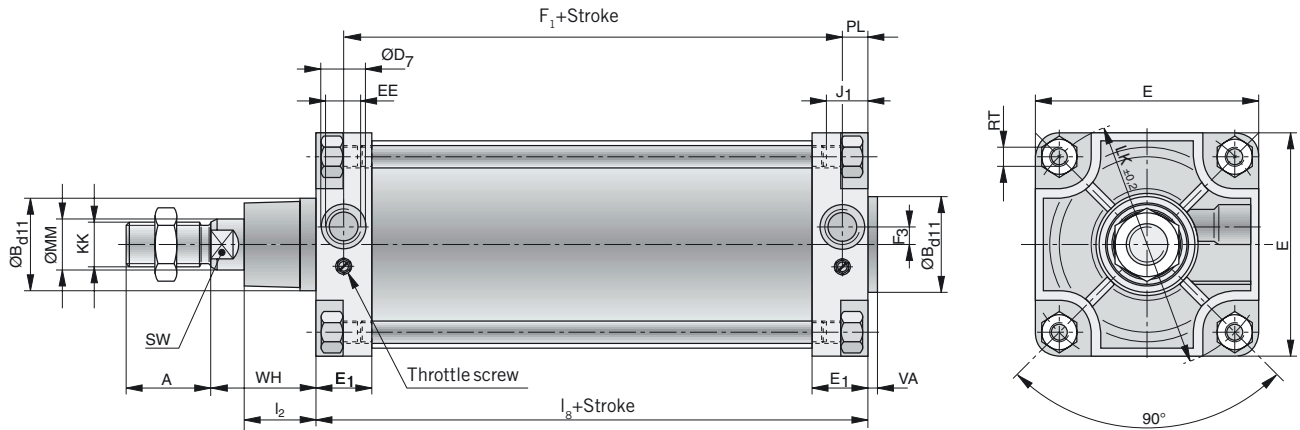
DZL - Standard Cylinders

Ø 125-320 mm

to ISO 15552 (ISO 6431) and CETOP RP53P



Dimensions – Basic Cylinder

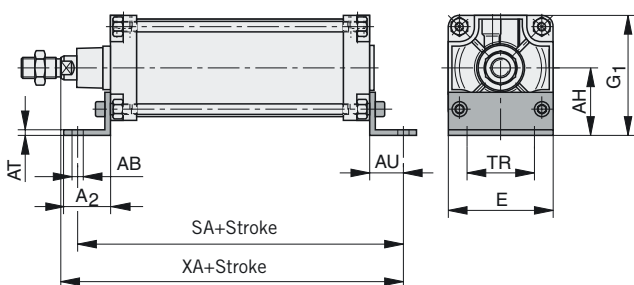


Dimension Table (mm) – for Basic Cylinder

Cyl. Ø	A	ØB _{d11}	ØD ₇	E	E ₁	F ₁ + Stroke	F ₃	J ₁ max.	l ₂	l ₈ + Stroke	EE	KK	ØLK	ØMM	PL	RT	SW	VA	WH
125	54	60	28	140	35	122	11	18	45	160	G1/2	M27x2*	156	32	19	M12	27	6	65
160	72	65	33	180	45	130	11	23	50	180	G3/4	M36x2	198	40	25	M16	36	6	80
200	72	75	33	220	45	130	11	23	60	180	G3/4	M36x2	248	40	25	M16	36	6	95
250	84	90	40	280	53	136	21	27	70	200	G 1	M42x2	311	50	32	M20	46	10	105
320	96	110	40	340	55	158	-	28	90	220	G1	M48x2	382	63	31	M24	55	10	140

* Standard piston rod thread M27x2 - on request M24x2 to CETOP RP53P can also be delivered

Dimensions for Mounting A

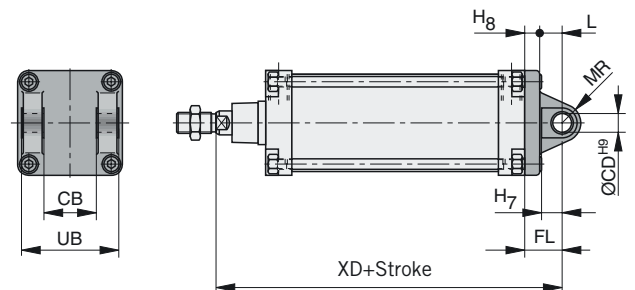


Material: steel, passivated

Dimensions Table (mm) – for Mounting A

Cyl. Ø	A ₂	E	G ₁	ØAB	AH	AT	AU	SA + Stroke	TR	XA + Stroke
125	60	140	160	16	90	8	45	250	90	270
160	80	180	205	18	115	8	60	300	115	320
200	100	220	245	22	135	9	70	320	135	345
250	110	280	305	26	165	12	75	350	165	380
320	130	353	370	35	200	23	85	390	200	425

Dimensions for Mounting B



Material: cast aluminium

Dimensions Table (mm) – for Mounting B

Cyl. Ø	H ₇	H ₈	L	ØCD ^{H9}	CB	FL	MR	UB	XD + Stroke
125	27,5	20	30	25	70	50	25	130	275
160	28,5	20	35	30	90	55	30	170	315
200	28,5	25	35	30	90	60	31	170	335
250	25	25	45	40	110	70	41	200	375
320	26	30	50	45	120	80	46	220	420