

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.



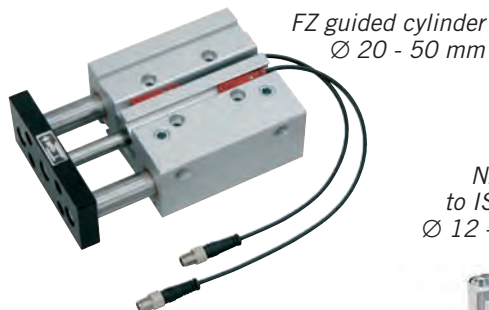
Consistent design of accessories for all cylinder series, e.g. swivel mountings, pivots, piston rod eyes, magnetic switches, etc.

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**

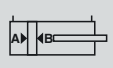


Formula	$F = p \cdot A \cdot R$
Symbol	Description
A p R	Piston area Pressure in bar Friction ca. 10%

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) 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

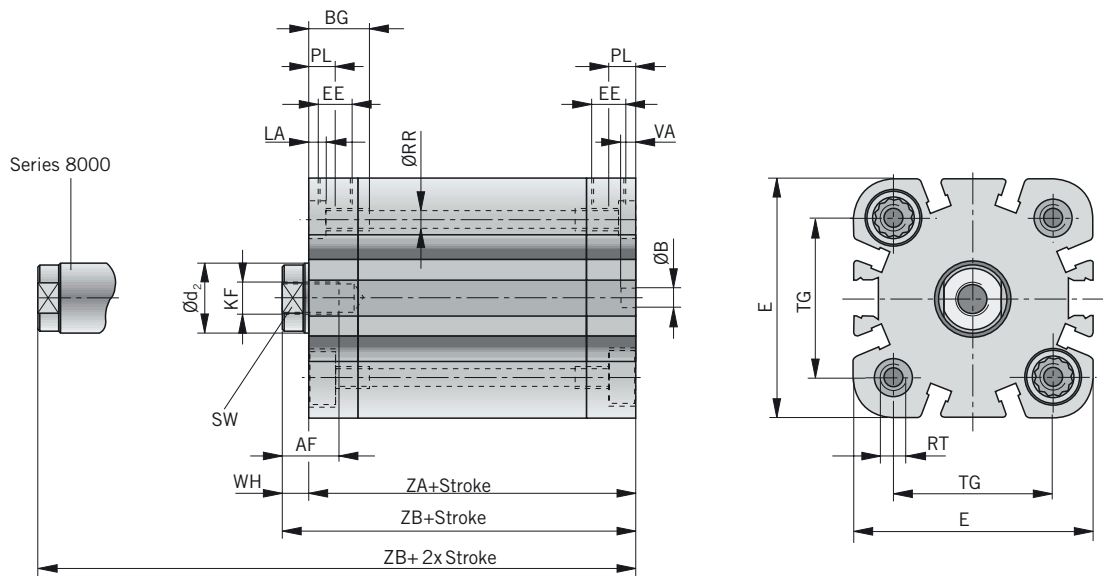


NZ - Compact Cylinders

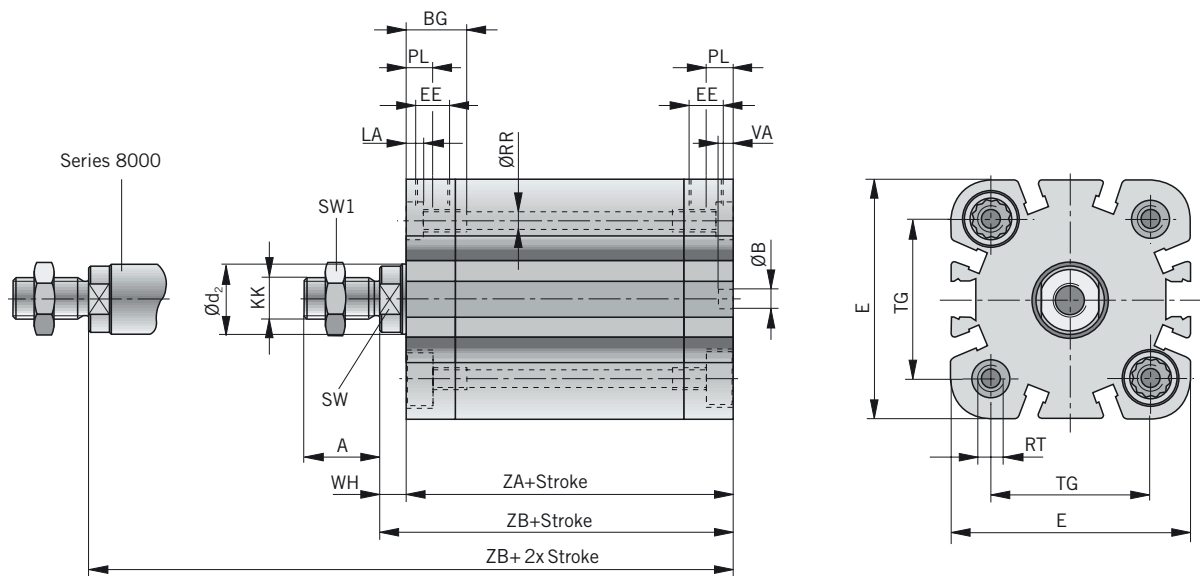
Ø 32-100 mm

to ISO 21287

Dimensions – Basic Cylinder, Ø 32 – 100 mm
Version: Piston rod with Internal Thread (Series NZ.../...)



Dimensions – Basic Cylinder, Ø 32 – 100 mm
Version: Piston rod with External Thread (Series NZ.../...-AG)

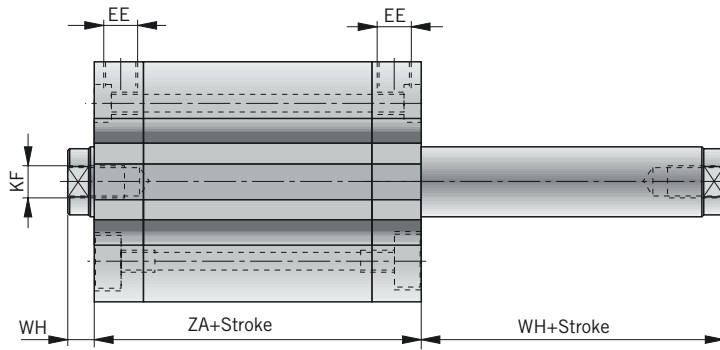


Dimension Table (mm) – Series NZ..., NZD...

Cyl. Ø	A	ØB ^{H9}	Ød ₂ ^{H9}	E	AF	BG	EE	KF	KK
32	19	6	12	50	13	14.5	G1/8	M8	M10x1.25
40	19	6	16	58	13	14.5	G1/8	M8	M10x1.25
50	22	6	20	70	16	14	G1/8	M10	M12x1.25
63	22	8	20	80	16	14.5	G1/8	M10	M12x1.25
80	28	8	25	96	20	15.5	G1/8	M12	M16x1.5
100	28	8	25	116	20	20	G1/8	M12	M16x1.5



Dimensions – Basic Cylinder with Through Piston Rod, Ø 32 – 100 mm
Version: Piston rod with Internal Thread (Series NZ..../...)



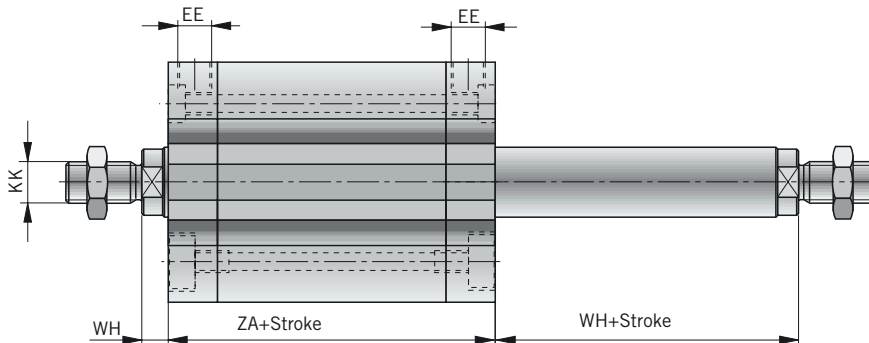
Ø32 mm, Ø40 mm



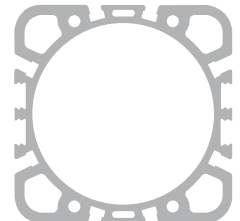
Ø50 mm, Ø63 mm



Dimensions – Basic Cylinder with Through Piston Rod, Ø 32 – 100 mm
Version: Piston rod with External Thread (Series NZ..../...-AG)



Ø80 mm, Ø100 mm



Cyl. Ø	LA	PL	TG	ØRR	RT	SW	SW1	VA	WH	WH+Stroke	ZA+Stroke	ZB+Stroke (*)
32	5	7.5	32.5	8.5	M6	10	17	4	7	7	44	51
40	5	7.5	38	8.5	M6	13	17	4	7	7	45	52
50	6	7.5	46.5	10.5	M8	17	19	4	8	8	45	53
63	6	7.5	56.5	10.5	M8	17	19	4	8	8	49	57
80	2	7.5	72	13.8	M10	19	24	4	10	10	54	64
100	2	10	89	13.8	M10	22	24	4	10	10	67	77

(* for Series NZ8000: ZB+2xStroke)

Special multi-position cylinder

