

Cylinder Ø32-125 mm

with blocking device

Series DZB....

Blocking reverse
stroke

Series DZBA....

Blocking forward
stroke

Mountings to
ISO 1552 (ISO
6431)

Special versions:

- according to CETOP RP 53 P (Piston rod thread M24x2)
- versions for special applications on request

Delivery includes:

- 1 Cylinder
- 1 Hexagon nut for piston rod thread



Characteristics

Characteristics	Symbol	Unit	Description
General Features			
Type			Piston rod cylinder with blocking device
Series			DZB - reverse stroke blocked DZBA - forward stroke blocked
System			Double acting with cushioning at one end
Mounting			See drawing
Tube connection			Thread
Ambient temperature range	T_{min} T_{max}	°C	-20 +80
Medium temperature range	T_{max}	°C	+80
Weight (mass)		kg	See table
Installation			In any position
Medium			Filtered and lubricated or filtered and unlubricated air
Lubrication			Oil mist lubrication compatible with Buna
Material			
Cylinder tube			Aluminium, anodised
Front/Rear end caps			Aluminium, anodised
Piston rod			Inductively hardened steel hard-chrome plated
Pneumatic Characteristics			
Nominal pressure	p_n	bar	6
Operating pressure range	p_{min} p_{max}	bar bar	2 8
Releasing pressure		bar	≥ 4
Piston diameter		mm	32 40 50 63 80 100 125
Port size			G1/8 G1/4 G1/4 G3/8 G3/8 G1/2 G1/2
Port size control signal			M5 G1/8 G1/8 G1/4 G1/4 G1/4 G1/4
Piston rod diameter		mm	12 16 20 20 25 25 32
Piston rod thread		mm	M10 M12 M16 M16 M20 M20 M27 x1.25 x1.25 x1.5 x1.5 x1.5 x1.5 x2 ^{*)}
Stroke length		mm	For standard stroke lengths see order instructions max. 1000mm, longer strokes on request
Piston force and			See page 9
Static holding force ^{**)}			Corresponds to the respective cylinder force - see page 9
Cushioning			
Adjustable at one end			
Cushioned stroke length	∅		32 40 50 63 80 100 125
	mm		20 25 25 25 28 30 42

*) Standard piston rod thread M 27x2 - on request also piston rod thread M24x2 to CETOP RP 53 P can be delivered.

**) see page 119



*****) Note – Static holding force:**

The holding force quoted relates to a static load. If this load is exceeded, slippage can occur. Any dynamic forces occurring in operation must not exceed the static holding force.

In clamped operating mode, if the load is fluctuating, the clamping unit is not free from

play. The cylinder is not suitable for positioning tasks.

Actuation:

The clamping unit must only be released when both cylinder chambers are pressurised, otherwise there is danger of an accident from the jerky movement of the piston rod.

Shutting off the compressed air supply at both ends with a 5/3 way valve provides adequate safety only for a short time.

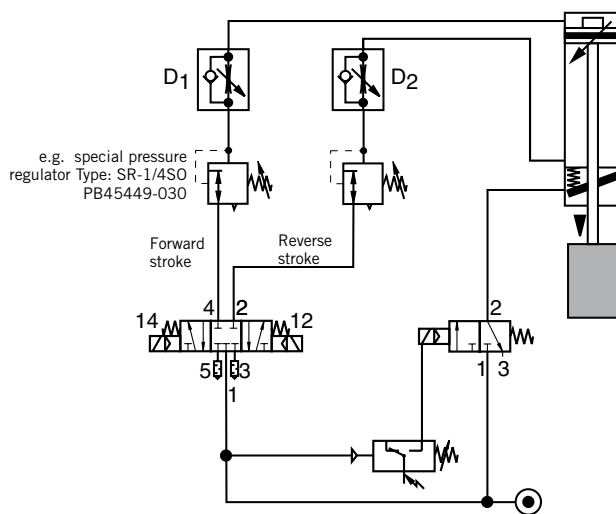
Weight (mass) kg

Cylinder version	Cylinder diameter													
	Ø32		Ø40		Ø50		Ø63		Ø80		Ø100		Ø125	
	*1	*2	1	2	1	2	1	2	1	2	1	2	1	2
Basic Cylinder	1.06	0.26	1.45	0.56	2.45	0.67	3.70	0.75	6.00	1.15	9.50	1.40	11.90	1.30

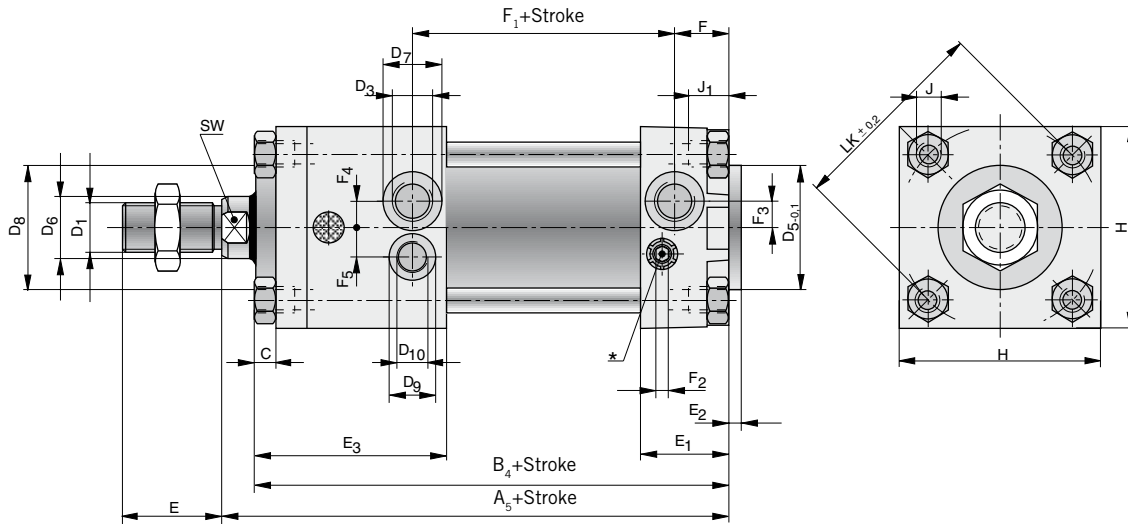
Mounting	Cylinder diameter						
	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100	Ø125
B	0.070	0.090	0.170	0.220	0.490	0.790	1.400
BA	0.100	0.130	0.210	0.300	0.570	0.910	1.600
BAS	0.100	0.150	0.220	0.320	0.560	0.860	1.600
D	0.100	0.120	0.230	0.280	0.620	0.780	1.400
EN	0.110	0.180	0.230	0.390	0.530	0.720	3.300

* 1 = Weight for cylinder with 100 mm stroke
2 = Weight for every additional 100 mm stroke length

Control Example for Blocking Cylinder



Dimensions – Basic Cylinder, Series DZB5..., Ø 32 – 125 mm



* throttle screw (for cushioning)

Dimensions Table (mm) – for Basic Cylinder, Series DZB5...

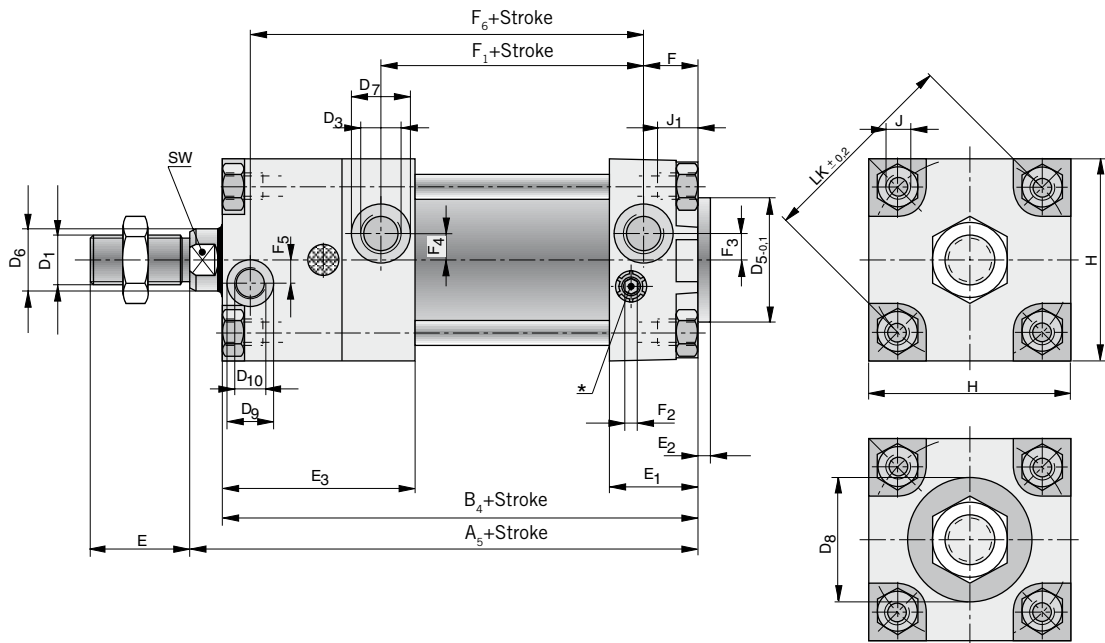
Cylinder-Ø	Norm	A ₅ +Stroke	B ₄ +Stroke	C	D ₁	D ₃	Ø D ₅	Ø D ₆	Ø D ₇	Ø D ₈	Ø D ₉	D ₁₀	E
32	ISO	120	112	5	M10x1.25	G1/8	30	12	15	30	8	M 5	20
40	ISO	135	126	6	M12x1.25	G1/4	35	16	19	35	15	G1/8	24
50	ISO	143	132	6.5	M16x1.5	G1/4	40	20	19	40	15	G1/8	32
63	*)	170	159	6.5	M16x1.5	G3/8	45	20	23	57	19	G1/4	32
80	*)	188	174	8.5	M20x1.5	G3/8	45	25	23	78	19	G1/4	40
100	*)	203	189	8.5	M20x1.5	G1/2	55	25	28	100	19	G1/4	40
125	ISO	225	209	15	M27x2	G1/2	60	32	28	121	19	G1/4	54
125	CETOP	225	209	15	M24x2	G1/2	60	32	28	121	19	G1/4	54

*) Dimensions not to ISO norm.

Cylinder-Ø	Norm	E ₁	E ₂	E ₃	F	F ₁ +Stroke	F ₂	F ₃	F ₄	F ₅	J	J _{1 max}	H	LK Ø	SW
32	ISO	29	4	46	14	60	SW4	5.5	6	7	M6	16	47	46	10
40	ISO	27	4	56.5	16	63.5	SW4	7	8	9.5	M6	16	53	54	14
50	ISO	29	4	61	17.5	64.5	SW4	8.5	8	9.5	M8	16	65	66	17
63	*)	30	4	81	17	73	SW4	8	12	11	M8	16	75	80	17
80	*)	34	4	84	20.5	82.5	SW4	9	12.5	15	M10	16	95	102	22
100	*)	35	4	92.5	19	93	SW4	13	15	15	M10	16	115	126	22
125	ISO	40	4	104	19	100	-	11	15	15	M12	18	140	156	27
125	CETOP	40	4	104	19	100	-	11	15	15	M12	18	140	156	27

*) Dimensions not to ISO norm.

Dimensions – Basic Cylinder, Series DZBA5...., Ø 32 – 125 mm



* throttle screw (for cushioning)

view by cylinder Ø 125 mm

Dimension Table (mm) – for Basic Cylinder, Series DZBA5...

Cylinder-Ø	Norm	$A_5+Stroke$	$B_4+Stroke$	D_1	D_3	$\text{Ø } D_5$	$\text{Ø } D_6$	$\text{Ø } D_7$	$\text{Ø } D_8$	$\text{Ø } D_9$	D_{10}	E	E_1	E_2
32	ISO	120	112	M10x1.25	G1/8	30	12	15	–	8	M 5	20	29	5
40	ISO	135	126	M12x1.25	G1/4	35	16	19	–	15	G1/8	24	27	5
50	ISO	143	132	M16x1.5	G1/4	40	20	19	–	15	G1/8	32	29	6.5
63	*)	170	159	M16x1.5	G3/8	45	20	23	–	19	G1/4	32	30	6
80	*)	188	174	M20x1.5	G3/8	45	25	23	–	19	G1/4	40	34	8
100	*)	203	189	M20x1.5	G1/2	55	25	28	–	19	G1/4	40	35	8
125	ISO	225	209	M27x2	G1/2	60	32	28	100	19	G1/4	54	40	10
125	CETOP	225	209	M24x2	G1/2	60	32	28	100	19	G1/4	54	40	10

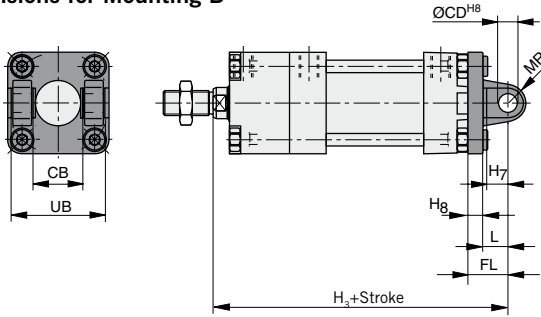
*) Dimensions not to ISO norm.

Cylinder-Ø	Norm	E_3	F	$F_1+Stroke$	F_2	F_3	F_4	F_5	$F_6+Stroke$	J	J_{1max}	H	LK Ø	SW
32	ISO	46	14	60	SW4	5.5	6	7	94	M6	11	47	46	10
40	ISO	56,5	16	63.5	SW4	7	8	7.5	103.5	M6	11	53	54	14
50	ISO	61	17.5	64.5	SW4	8.5	8	7.5	107	M8	12	65	66	17
63	*)	81	17	73	SW4	8	12	8.5	118	M8	12	75	80	17
80	*)	84	20.5	82.5	SW4	9	12.5	9	129.5	M10	16	95	102	22
100	ISO	92,5	19	93	SW4	13	15	16.5	145.5	M10	16	115	126	22
125	ISO	104	19	100	-	11	15	28	179	M12	18	140	156	27
125	CETOP	104	19	100	-	11	15	28	179	M12	18	140	156	27

*) Dimensions not to ISO norm.

Mountings – Series DZB..., DZBA..., Ø 32 – 125 mm

Dimensions for Mounting B



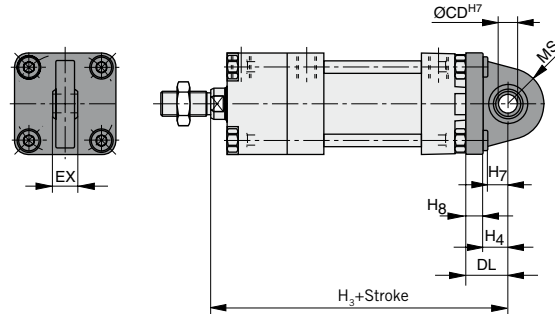
Material: cast aluminium

Dimension Table (mm) – for Mounting B

Cyl. Ø	H ₃ +Stroke	H ₇	H ₈	FL	L	CB	ØCD ^{H8}	MR	UB
32	142	10	10	22	12	26	10	9	45
40	160	13	10	25	15	28	12	11	52
50	170	12	11	27	16	32	12	12	60
63	202	17	11	32	21	40	16	15	70
80	224	16	15	36	22	50	16	16	90
100	244	20.5	16	41	25	60	20	20	110
125	275	27.5	20	50	30	70	25 ^{H9}	25	130

Included in delivery: 1 rear trunnion mounting, 4 screws

Dimensions for Mounting BAS



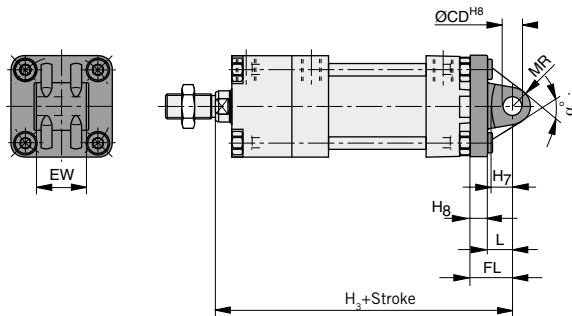
Material: cast aluminium

Dimension Table (mm) – for Mounting BAS

Cyl. Ø	H ₃ +Stroke	H ₄	H ₇	H ₈	ØCX ^{H7}	DL	MS	EX
32	142	12	10	10	10 ^{H8}	22	18	14
40	160	15	13	10	12 ^{H8}	25	21	16
50	170	16	12	11	12 ^{H8}	27	23	16
63	202	21	17	11	16	32	27	21
80	224	21	16	15	16	36	29	21
100	244	25	20.5	16	20	41	34	25
125	275	30	27.5	20	25	50	40	31

Included in delivery: 1 rear trunnion mounting with spherical bearing, 4 screws

Dimensions for Mounting BA



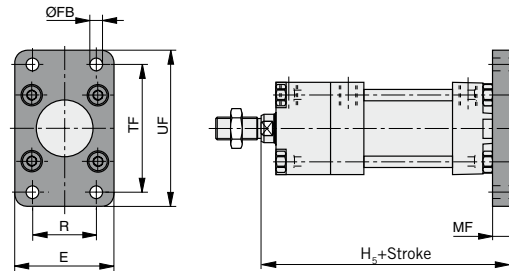
Material: cast aluminium

Dimension Table (mm) – for Mounting BA

Cyl. Ø	H ₃ +Stroke	H ₇	H ₈	L	ØCD ^{H8}	FL	MR	EW	α°
32	142	10	10	12	10	22	10.5	26	60
40	160	13	10	15	12	25	13	28	60
50	170	12	11	16	12	27	13	32	70
63	202	17	11	21	16	32	17	40	60
80	224	16	15	21	16	36	17	50	70
100	244	20.5	16	25	20	41	21	50	70
125	275	27.5	20	30	25 ^{H9}	50	25	70	60

Included in delivery: 1 rear trunnion mounting, 4 screws

Dimensions for Mounting D



Material: cast aluminium

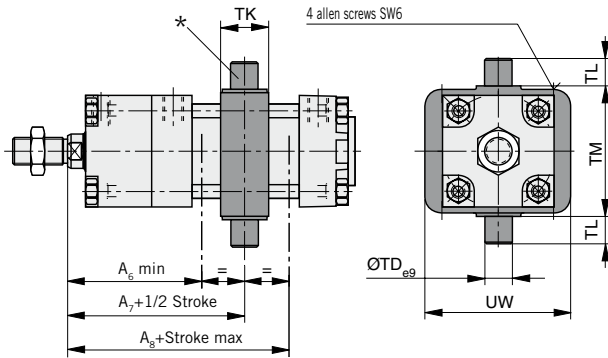
Dimension Table (mm) – for Mounting D

Cyl. Ø	E	H ₃ +Stroke	R	ØFB	MF	TF	UF
32	50	130	32	7	10	64	79
40	56	145	36	9	10	72	90
50	70	155	45	9	12	90	110
63	77	182	50	9	12	100	120
80	100	204	63	12	16	126	153
100	120	219	75	14	16	150	178
125	145	245	90	16	20	180	220

Included in delivery: 1 flange, 4 screws

Dimensions – Series DZB..., DZBA..., Ø 32 – 125 mm

Dimensions for Mounting EN



Material: nodular graphite cast iron, passivated

* Position centre trunnion mounting

Standard position: Type EN1 – The taps of the EN attachment are horizontally aligned to the air supply

Option: Type EN2 – The taps of the EN attachment are vertically aligned to the air supply

Dimension Table (mm) – for Mounting EN

Cyl. Ø	A ₆ min	A ₇ +1/Stroke	A ₈ max +Stroke	ØTD _{e9}	TK	TL	TM	UW
32	61.5	72.5	83.5	12	15	12	50	40
40	75.5	86.8	98	16	20	16	63	59
50	82	93	104	16	20	16	75	69
63	104.5	116	127.5	20	25	20	90	84
80	113	126	139	20	30	20	110	102
100	122.5	137.3	152	25	32	25	132	125
125	140	182.5	165	25	32	25	160	155

Included in delivery: 1 rear trunnion mounting

Cyl.-Ø 32-100 mm:

The trunnion mounting can be moved to any position between A₆ and A₈ after loosening the clamping screws.

Cyl.-Ø 125 mm:

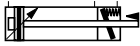
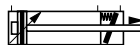
When ordering please give exact dimension A₇.
Mounting is assembled when delivered.

Accessories

 Piston Rod Eye Page 138	 Piston Rod Clevis Page 139	 Compensating Coupling Page 140	 Coupling Page 141	 Magnetic Switch Page 152	 Adapter plate for Mounting Page 145	 Pivot for Mounting B Page 142, 143	 Pivot for Mounting EN Page 144	
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Piston force and air consumption see page 9, order instructions see page 136, 137

Order Instructions – Basic Cylinder, Series DZB..., DZBA..., Ø 32 – 125 mm

System	Symbol	Piston-Ø	Order Instructions	
			Type	Order-No.
For contactless position sensing Double acting with adjustable end cushioning in one direction Reverse stroke blocked		32	DZB5032/....	PD29546-....
		40	DZB5040/....	PD29547-....
		50	DZB5050/....	PD29548-....
		63	DZB5063/....	PD27063-....
		80	DZB5080/....	PD27064-....
		100	DZB5100/....	PD22605-....
		125*	DZB5125/....	PD26273-....
		125**	DZB5125/....	PD27066-....
For contactless position sensing Double acting with adjustable end cushioning in one direction Forward stroke blocked		32	DZBA5032/....	PD29549-....
		40	DZBA5040/....	PD29550-....
		50	DZBA5050/....	PD29551-....
		63	DZBA5063/....	PD27059-....
		80	DZBA5080/....	PD27060-....
		100	DZBA5100/....	PD27061-....
		125*	DZBA5125/....	PD26243-....
		125**	DZBA5125/....	PD26209-....

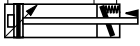
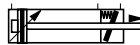
Complete type designation and order no. with stroke length (in mm)

(4-digit)

Standard stroke lengths

0025, 0050, 0080, 0100, 0125, 0160, 0200, 0320, 0400, 0500 delivered preferably

Order Instructions – Cylinder with Mounting EN, Ø 125 mm

System	Symbol	Piston-Ø	Order Instructions	
			Type	Order-No.
Double acting with adjustable end cushioning in one direction Reverse stroke blocked		125*	DZB5125EN-..../...	PD29578-..../...
		125**	DZB5125EN-..../...	PD29579-..../...
Double acting with adjustable end cushioning in one direction Forward stroke blocked		125*	DZBA5125EN-..../...	PD29580-..../...
		125**	DZBA5125EN-..../...	PD29581-..../...

Complete type designation and order no. with stroke length (in mm)

(4-digit)

Add exact A₇ dimension in mm (3 digits)

* Piston rod thread = M27x2 = ISO

** Piston rod thread = M24x2 = CETOP

Order Instructions – Cylinder Mountings Series DZB..., DZBA..., Ø 32 – 125 mm

Description	Order-No.						
	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100	Ø125
Swivel mounting B-	PD 22704	PD 22705	PD 22706	PD 22707	PD 22708	PD 22709	PD 22034
Rear trunnion mounting BA-..	PD 23412	PD 23413	PD 23414	PD 23415	PD 23416	PD 23417	PD 23418
Rear trunnion mounting BAS-..	PD 23843	PD 23844	PD 23845	PD 23846	PD 23847	PD 23848	PD 23849
Rear flange mounting D-..	PD 23403	PD 23404	PD 23405	PD 23406	PD 23407	PD 23408	PD 23409
Centre trunnion mounting EN-..*	KL9234	KL9235	KL9236	KL9237	KL9238	KL9239	KL9240

* Position centre trunnion mounting

Standard position: Type EN1 – The taps of the EN attachment are horizontally aligned to the air supply

Option: Type EN2 – The taps of the EN attachment are vertically aligned to the air supply

Ordering Example:

Basic Cylinder: DZB5063-0500 PD27063-0500

Mounting: BAS-63 PD23846

Accessories

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