

Short Stroke Cylinders

Bores from 12 to 200 mm

Double acting



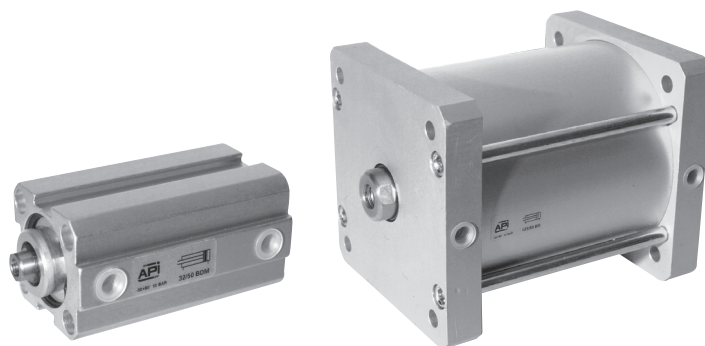
Standard executions		
Version	Symbol	Type
Non magnetic		BD
Magnetic		BDM
Anti-rotating magnetic from bore 20 to 100 mm		BDMN



On request, they can be supplied according Directive 94/9/EC - ATEX
CE II 2 GDc T5

Options	Suffix
Through rod from bore 16 to 100 mm	P
Seals FKM max 150 °C from bore 12 to 100 mm	V
Special versions on request	/ S

The options can be combined (when this is possible).



Series of short stroke cylinders with extruded aluminium profile barrel (up to the bore 100 mm) and fixing holes directly in the profile. In the magnetic type, up to the bore 100 mm, the sensor can be fixed in the groove for sensor mounting by the bracket not included in the kit.

The sensor is to be fixed on the external tie rods with the bores 125, 160 and 200 mm.

Standard elastic dampers (except the non magnetic type up to the bore 100 mm).

For the magnetic reed switches type ASV see from page 1.110.1.

For the bracket type AS108 see page 1.120.1

For mounting accessories see from page 1.20.20.

For the rod with male thread see nipple page 1.20.20.

For rod accessories see from page 1.85.1.

How to order: 40 / 50 BDP

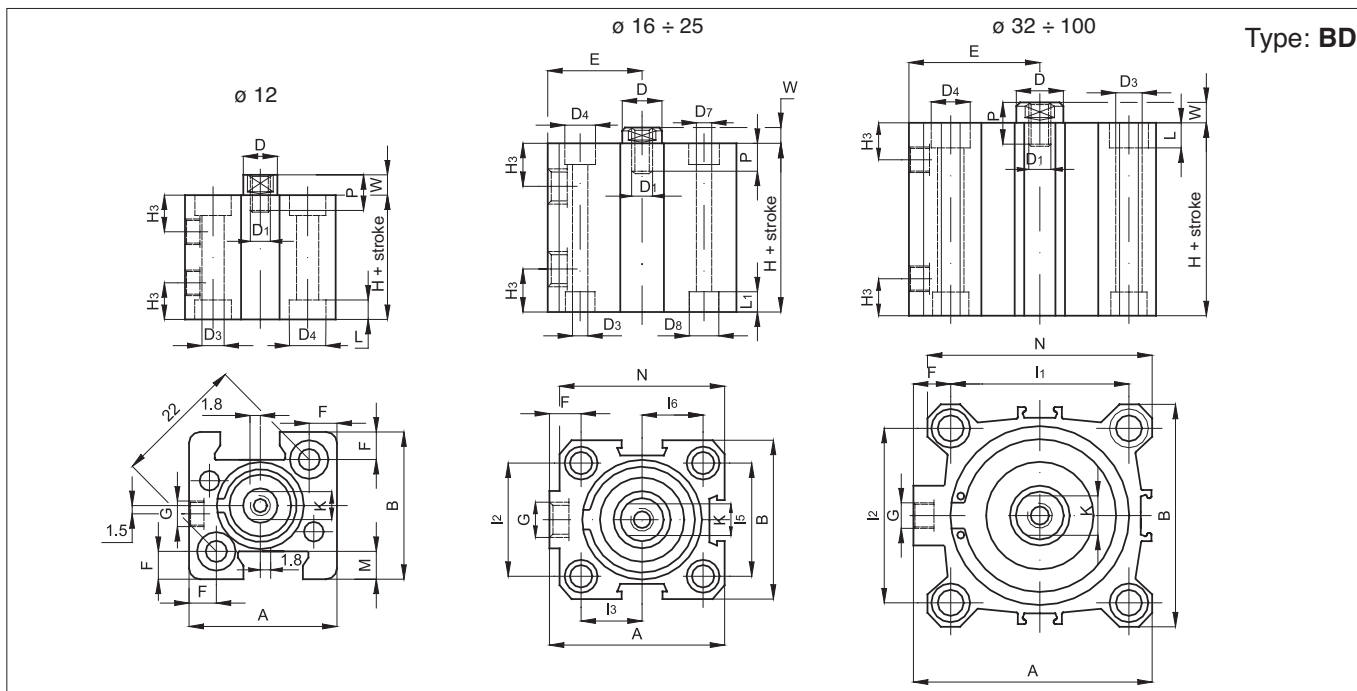
40	/	50	BD	P
Bore	/	Stroke	Type	Option

Technical data	
Fluid	Compressed filtered air with or without lubrication
Pressure range	2 ÷ 10 bar
Temperature range	-20 °C ÷ + 80°C
Materials	Heads: from 12 to 25 mm: Brass from 32 to 200 mm: Aluminium Barrel: Anodised aluminium (the bores 125, 160 and 200 mm are provided with a round profile) Rod: Stainless steel AISI 303 Seals: NBR Piston: Non magnetic: from 12 to 32 mm: Delrin from 40 to 200 mm: Aluminium Magnetic: from 12 to 63 mm: Delrin from 80 to 200 mm: Aluminium

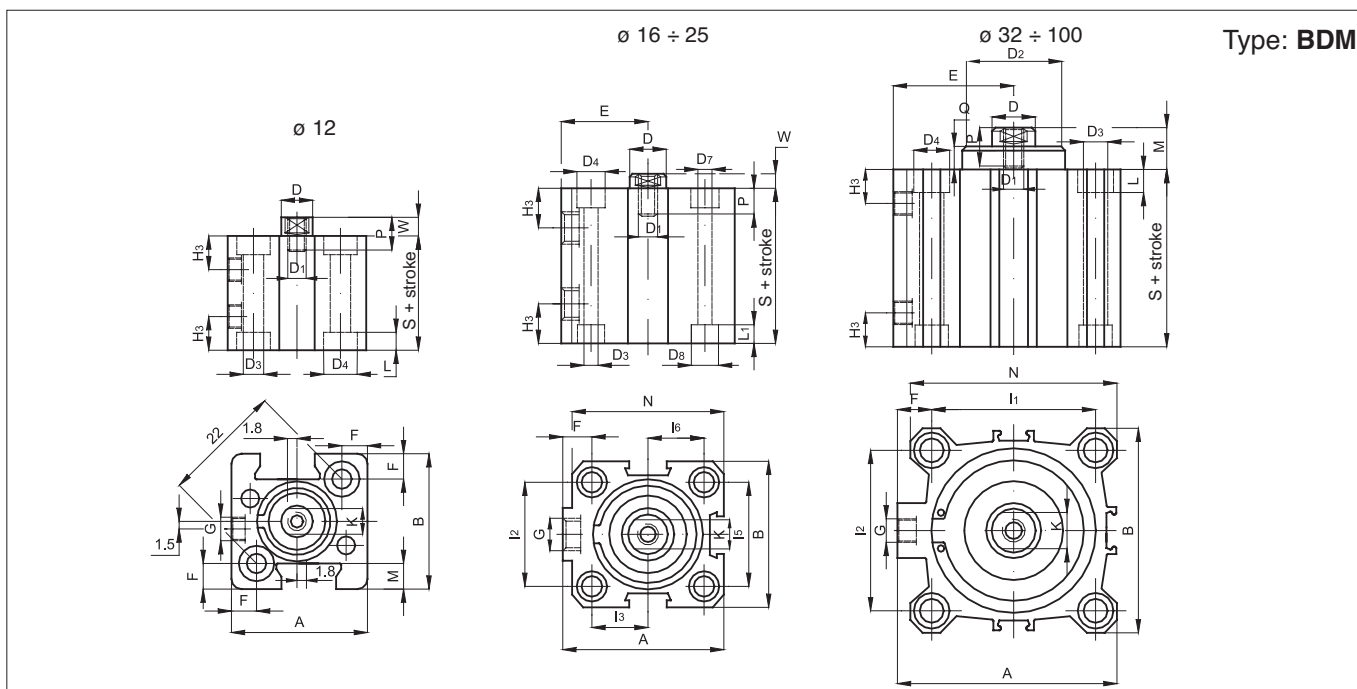
Bore (mm)	Standard strokes BD (mm)	Standard strokes BDM (mm)	Standard strokes BDMN (mm)	Max strokes (mm)		
				BD	BDM	BDMN
12	5, 10, 15, 20, 25, 30, 40	5, 10, 15, 20, 25, 30		40	30	
16		5, 10, 15, 20, 25, 30, 40, 50, 60, 80, 100,			100	
20	5, 10, 15, 20, 25, 30, 40, 50	5, 10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 125		50	125	
25			5, 10, 15, 20, 25, 30, 40, 50, 60, 80, 100			100
32	5, 10, 15, 20, 25, 30, 40, 50, 60, 80, 100,	5, 10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 125, 160			160	
40			10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 125	100	200	125
50	10, 15, 20, 25, 30, 40, 50, 60, 80, 100,	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 125, 160, 200			250	160
63			10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 125, 160			
80						
100						
125	25, 50, 75, 100, 125, 160, 200, 250	25, 50, 75, 100, 125, 160, 200, 250		250	250	
160						
200						

See page 1.1.3 to calculate the cylinder force.

Should you require intermediate strokes, the overall dimensions of the cylinder body will be those of the cylinder of the following standard stroke (in fact the intermediate stroke is obtained applying a distancer).



ø mm	A	B	D	D ₁	D ₂	D ₃	D ₄	D ₇	D ₈	E	F	Q	G	H ₃	I ₁	I ₂	I ₃	I ₅	I ₆	K	L	L ₁	M	N	P	W	H	S
12	25	25	6	M3	-	3,7	5,6	-	-	-	4,7	-	M5	5,5	-	-	-	-	-	5	3,5	-	3,5	-	6	3,5	17	27
16	34	30	8	M4	-	4,7	7,5	3,7	5,6	19	7	-	M5	8	-	18	12	20	10	6	4,6	3,5	4,5	32	8	4,5	27	32
20	40	36	10	M5	-	5,8	9	5,8	9	22	7	-	M5	8	-	20	15	25,5	12,7	8	5,7	5,7	4,5	38,5	10	5	27	32
25	44,5	40	10	M5	-	5,8	9	5,8	9	24,5	9	-	1/8"	10,5	-	26	15,5	28	14	8	5,7	5,7	5,5	42	10	5,5	28,5	38,5
32	51	46	12	M6	24,5	5,8	9	-	-	27	9	5	1/8"	11,5	36	32	-	-	-	10	5,7	-	11	48	12	6	29,5	39,5
40	58	55	12	M6	28	5,8	9	-	-	30,5	9,5	6	1/8"	11	42	42	-	-	-	10	5,7	-	12,5	55	12	6	29,5	39,5
50	70	65	16	M8	34	6,8	11	-	-	37,5	12,5	6	1/8"	11,5	50	50	-	-	-	13	6,8	-	13,5	65	12	7,5	34,5	39,5
63	86	80	16	M8	38,5	9	14	-	-	46	15	8	1/8"	11	62	62	-	-	-	13	8,8	-	15	80	14	7	37	42
80	105	100	20	M10	44	9	14	-	-	55	14	10	1/4"	14	82	82	-	-	-	17	9	-	18	100	15	8	46	46
100	131	124	25	M12	56	11	17,2	-	-	69	17,5	10,5	1/4"	16	103	103	-	-	-	22	11	-	20,5	124	20	10	56	56



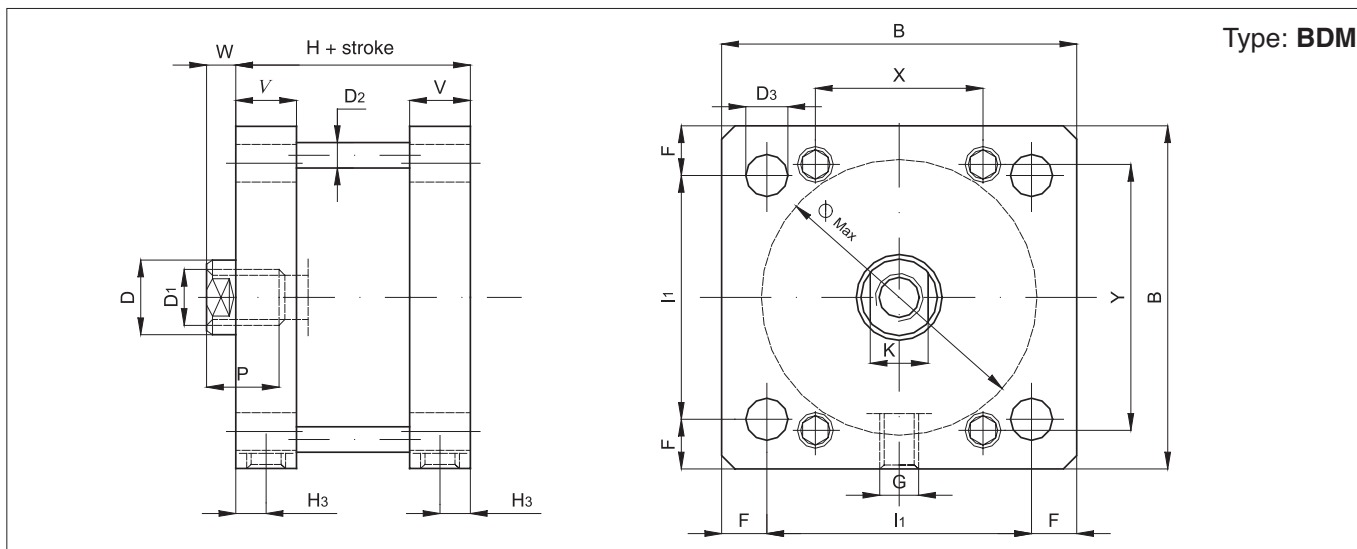
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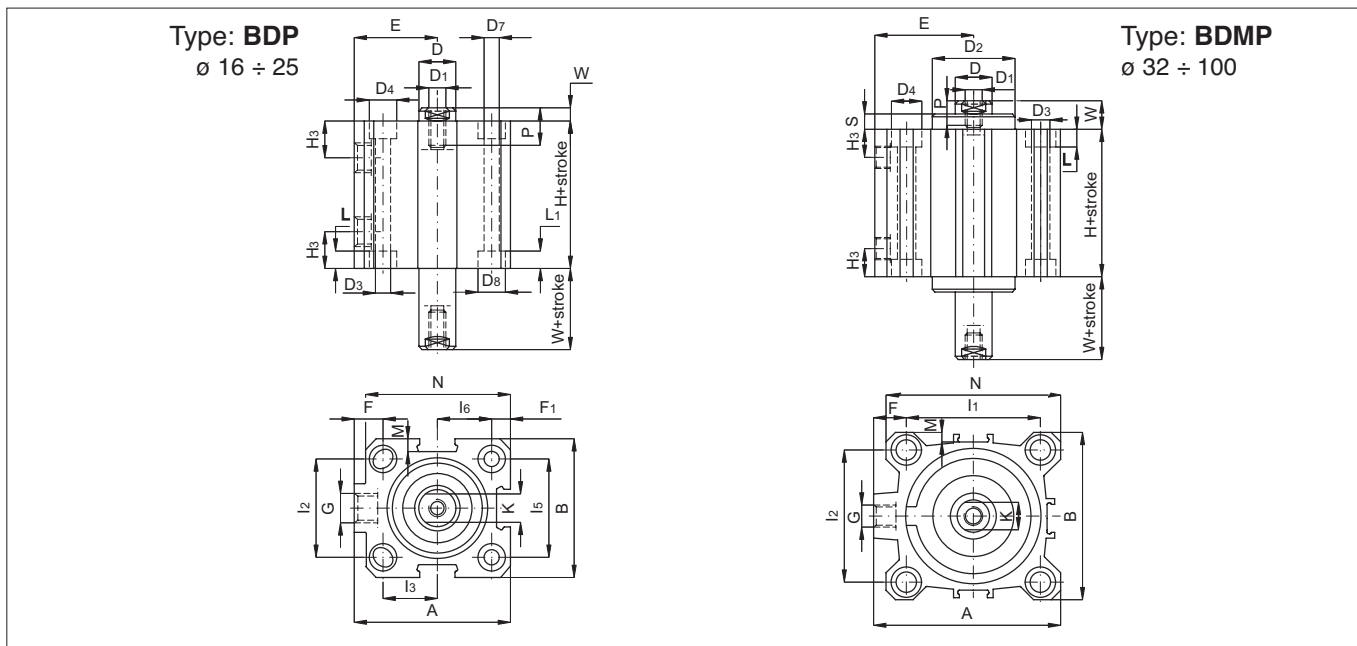
Double acting



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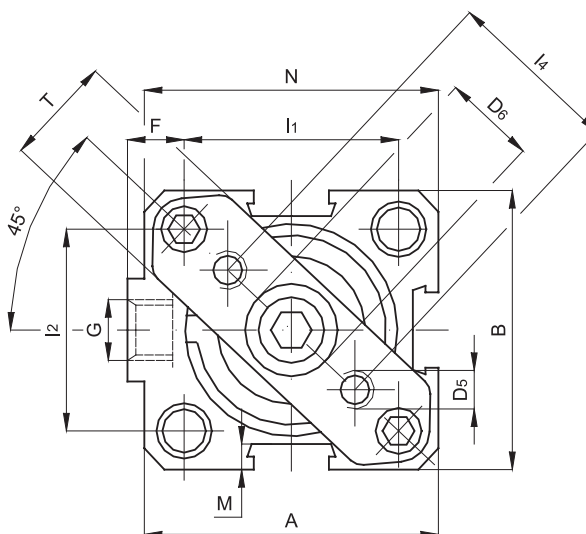
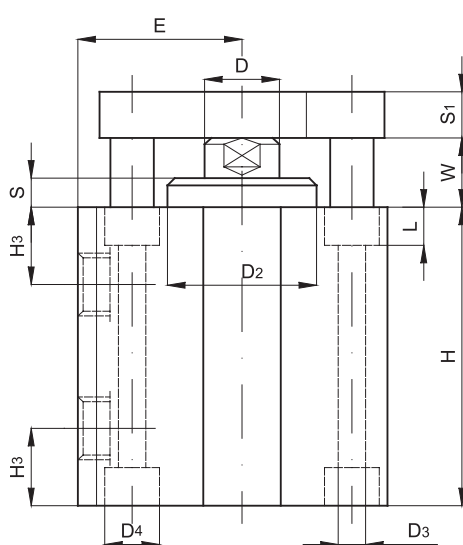


ø mm	B	D ø	D ₁ ø	D ₂ ø	D ₃ ø	F	G	H ₃	I ₁	K	P	V	W	X	Y	ø est. max.	H
125	140	30	M14	10	10,2	15	1/4"	10	110	28	25	22	10	77	123	132	78
160	180	40	M20	12	14,2	20	3/8"	12	140	36	30	26	12	94	157	168	87
200	220	40	M20	14	14,2	22,5	3/8"	12	175	36	30	26	12	126	193	210	87



ø mm	A	B	D ø	D ₁ ø	D ₂ ø	D ₃ ø	D ₄ ø	D ₇ ø	D ₈	E	F	F ₁	G	H ₃	I ₁	I ₂	I ₃	I ₅	I ₆	K	L	L ₁	M	N	P	S	W	H
16	34	30	8	M4	-	4,7	7,5	3,7	5,6	19	7	5	M5	8	-	18	12	20	10	6	4,6	3,5	4	32	8	-	4,5	32
20	40	36	10	M5	-	5,8	9	5,8	9	22	7	2,5	M5	8	-	20	15	25,5	12,7	8	5,7	5,7	5,7	38,5	10	-	4,5	32
25	44,5	40	10	M5	-	5,8	9	5,8	9	24,5	9	6	1/8"	10,5	-	26	15,5	28	14	8	5,7	5,7	4,5	42	10	-	5,5	38,5
32	51	46	12	M6	24,5	5,8	9	-	-	27	9	-	1/8"	11,5	36	32	-	-	-	10	5,7	-	4	48	12	5	11	39,5
40	58	55	12	M6	28	5,8	9	-	-	30,5	9,5	-	1/8"	11	42	42	-	-	-	10	5,7	-	4	55	12	6	12,5	39,5
50	70	65	16	M8	34	6,8	11	-	-	37,5	12,5	-	1/8"	11,5	50	50	-	-	-	13	6,8	-	4	65	12	6	13,5	39,5
63	86	80	16	M8	38,5	9	14	-	-	46	15	-	1/8"	11	62	62	-	-	-	13	8,8	-	5	80	14	8	15	47
80	105	100	20	M10	44	9	14	-	-	55	14	-	1/4"	14	82	82	-	-	-	17	9	-	6	100	15	10	18	51
100	131	124	25	M12	56	11	17,2	-	-	69	17,5	-	1/4"	16	103	103	-	-	-	22	11	-	7,5	124	20	10,5	20,5	65

Type: **BDMN**



ø mm	A	B	α	D ø	D ₂ ø	D ₃ ø	D ₄ ø	D ₅ ø	D ₆ ø	E	F	G	H ₃	I ₁	I ₂	I ₄	L	M	N	S	S ₁	T	W	H
20	40	36	45°	10	-	5,8	9,2	M4	11	22	9,3	M5	8	25,5	25,5	20	5,7	5,7	38,5	-	8	15	4,5	32
25	44,5	40	45°	10	-	5,8	9,2	M4	11	24,5	10,5	1/8"	11	28	28	22	5,7	4,5	42	-	8	15	5,5	38,5
32	51	46	41,5°	12	24,5	5,8	9,2	M5	17	27	9	1/8"	11,5	36	32	28	5,7	4	48	5	10	20	11	39,5
40	58	55	45°	12	28	5,8	9,2	M5	17	30,5	9,5	1/8"	11,5	42	42	33	5,7	4	55	6	10	20	12,5	39,5
50	70	65	45°	16	34	6,8	11	M6	22	37,5	12,5	1/8"	11,5	50	50	42	6,8	4	65	6	12	30	13,5	39,5
63	86	80	45°	16	38,5	9	14	M6	22	46	15	1/8"	12	62	62	50	8,8	5	80	8	12	30	15	42
80	105	100	45°	20	44	9	14	M8	28	55	14	1/4"	14	82	82	65	9	6	100	10	14	50	18	46
100	131	124	45°	25	56	11	17,2	M10	30	69	17,5	1/4"	16	103	103	80	11	7,5	124	10,5	14	50	20,5	56

Seal kit

Here are the quantities and the components comprised in each kit.

Description	N°	BD	BDM	BDMN
Rod seal	1	●	●	●
Tube o-ring	2	●	●	●
Lip seal	2	●	●	●

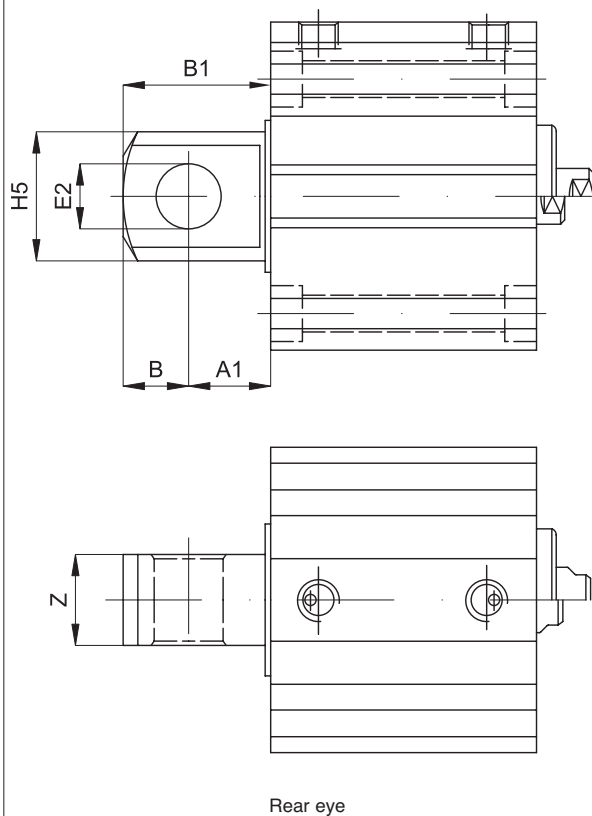
The magnetic ring to be ordered separately.

How to order: 50 / SG / BDP

50	/	SG	/	BD	P
Bore	/	Series of seals	/	Type	Option

The seal kit for the cylinders in non-standard executions is to be composed according to the option.

Type: **CM**

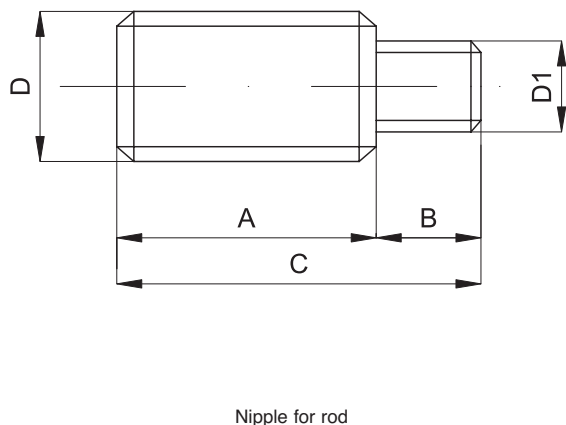


Code	Item	ø mm	A ₁	B	E ₂ ø (H8)	H ₅ ø	Z	B ₁
040070	CM16ALB	16	8	6	6	12	7	14
040071	CM20ALB	20	10	8	8	16	9	18
040072	CM25ALB	25	10	8	8	16	9	18
040073	CM32ALB	32	13	10	10	20	14	23
040074	CM40ALB	40	15	12	12	24	16	27
040075	CM50ALB	50	15	12	12	24	17	27
040076	CM63ALB	63	19	16	16	32	22	35
040077	CM80ALB	80	19	16	16	32	22	35
040078	CM100ALB	100	23	20	20	40	26	43

Material: Aluminium

Note: This accessory must be ordered together with the cylinder.

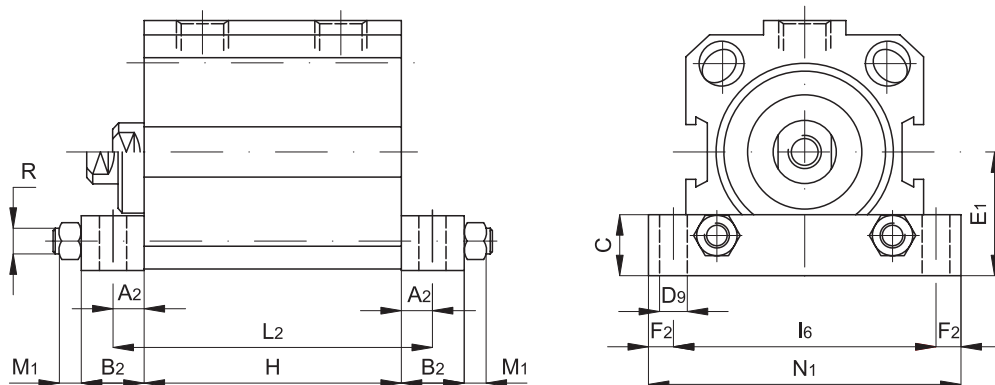
Type: **N**



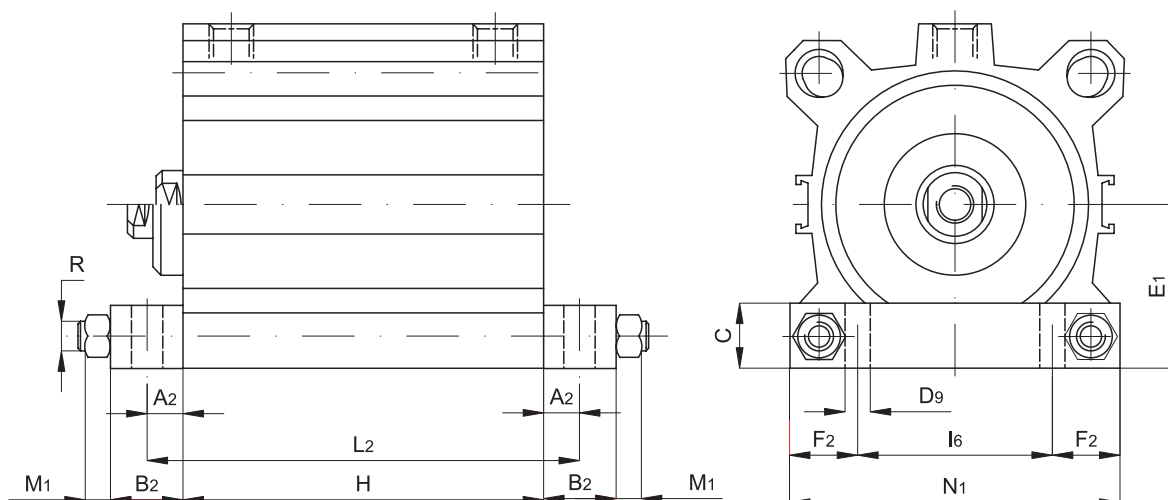
Code	Item	ø mm	D	D ₁	A	B	C
040079	N6-3AQB	12	6x1	M3	16	6,5	22,5
040080	N6-4AQC	16	6x1	M4	15	8	23
040081	N8-5AQB	20-25	8x1,25	M5	20	10	30
040082	N10-6AQB	32-40	10x1,25	M6	22	12	34
040083	N12-8AQB	50-63	12x1,25	M8	24	14	38
040084	N16-8AQB	50-63	16x1,5	M8	32	14	46
040085	N16-10AQB	80	16x1,5	M10	32	15	47
040086	N20-12AQB	100	20x1,5	M12	40	20	60

Material: Zinc plated steel

Type: P



High foot $\varnothing 16 \div 63$



High foot $\varnothing 80 \div 100$

The dimension H is according to the stroke and the bore of the cylinder.

The kit includes 2 high feet; the tie rods for the mounting of the feet are not included.
Material: Aluminium.

Code	Item	$\varnothing$ mm	A ₂	B ₂	C	D ₉ $\varnothing$	E ₁	F ₂	I ₆	L ₂	M ₁	N ₁	R $\varnothing$
040087	P16ALB	16	5	10	10	3,5	17	5	30	H*+10	2,4	40	M3
040088	P20ALB	20	5	10	10	5,5	18	5	40	H*+10	4	50	M5
040095	P25ALB	25	6	12	12	5,5	20	7,5	45	H*+12	4	60	M5
040089	P32ALB	32	6	12	12	5,5	24	5	50	H*+12	4	60	M5
040090	P40ALB	40	6	12	12	5,5	27,5	5	60	H*+12	4	70	M5
040091	P50ALB	50	7,5	15	15	6,5	32,5	5	70	H*+15	5	80	M6
040092	P63ALB	63	7,5	15	15	8,5	40	7,5	85	H*+15	6,5	100	M8
040093	P80ALB	80	10	20	20	8,5	50	20	60	H*+20	6,5	100	M8
040094	P100ALB	100	10	20	20	10,5	62	22	80	H*+20	8	124	M10