

DESCRIPTION

Cylinders series "HB" are manufactured to be fixed on machine edges without the use of mountings. The end cap acts as a mounting device in the versions: hinge-mounted, screw-mounted, feet-mounted, front flange-mounted, rear flange-mounted. The double acting hinge-mounted versions and rear flange-mounted are available with reduced end caps. Cylinders series "HB" cannot be supplied with magnetic sensors.

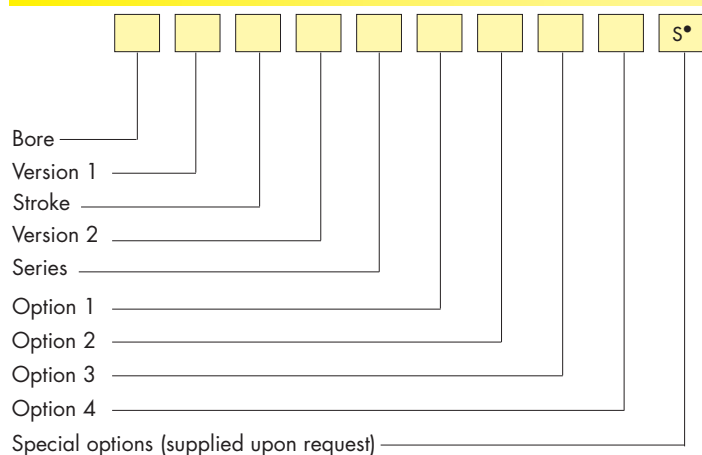
TECHNICAL DATA

Operating pressure	1,5 ÷ 10 bar
Working temperature	0 ÷ +80 °C [-20 °C with dry air] 0 ÷ +150 °C with seals for high temperatures [-20 °C with dry air]
Medium	Filtered, unlubricated or continuous lubricated compressed air
Life	5000 Km (in optimal use conditions)
Versions	Double acting; Single acting front spring; Single acting rear spring; Through rod
Bore	Ø 20, 27, 35, 40, 50, 58, 70, 85, 100
Port size	Ø 20 ÷ 50 = G 1/8; Ø 58 ÷ 100 = G 1/4
Standard strokes (mm)	10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100, 150, 200, 250
Max. strokes double acting (mm)	Ø 20 - 27 = 1000; Ø 35 ÷ 50 = 1500; Ø 58 ÷ 100 = 2000
Maximum strokes single acting	mm 20 27 35 40 50 58 70 85 100 mm 20 25 35 60 70 60 70 90 100
Maximum strokes single acting with spacers	mm 20 27 35 40 50 58 70 85 100 mm 60 75 105 180 210 180 210 270 300

MATERIALS

End caps	Aluminium alloy
Cylinder barrel	Ø 20 - 27 : Extruded tube, brass Ø 35 ÷ 100: Extruded tube, anodized aluminium alloy Extruded tube, brass (supplied upon request)
Piston rod	C45 chromium-plated steel Aisi 303 rolled stainless steel
Piston rod bearing	Bronze-iron 20%, sintered, self-lubricating
Piston guide shoe	Acetal resin
Piston	Aluminium alloy
Seals	NBR rubber Viton®
Springs	Springs steel

ORDER KEY



• See technical data on page 0.12

ORDER EXAMPLES

Basic cylinder Ø27, 25 mm stroke, single acting front spring, feet-mounted 27/25 SPB

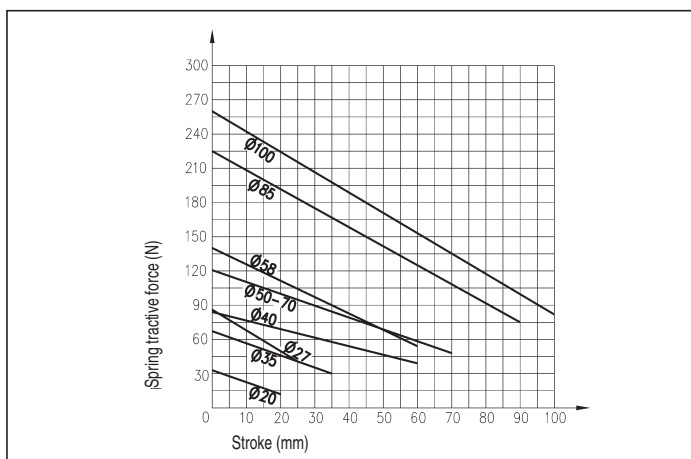
Cylinder Ø20, through rod, 100 mm stroke, double acting, feet-mounted 20R100 DPB

Basic cylinder Ø58, 50 mm stroke, double acting, hinge-mounted, stainless steel piston rod, brass cylinder barrel 58/50 DVB 1 4

Basic cylinder Ø35, 70 mm stroke, double acting, hinge-mounted, reduced end cap 35/70 DCBC



SPRING THEORETICAL TRACTIVE FORCE



VERSION 1

/ Basic cylinder R Through rod

VERSION 2

D Double acting Y Single acting rear spring
 S Single acting front spring Different dimensions from the versions "D" and "S".
 Contact our technical office for more details.

SERIES

CB Hinge-mounted FAB Front flange-mounted
 VB Screw-mounted FPB Rear flange-mounted
 PB Feet-mounted

OPTION 1

C Reduced end cap*

OPTION 2

1 Stainless steel piston rod 3 Stainless steel piston rod and seals
for high temperatures
 2 Seals for high temperatures

OPTION 3

4 Brass cylinder barrel**

OPTION 4

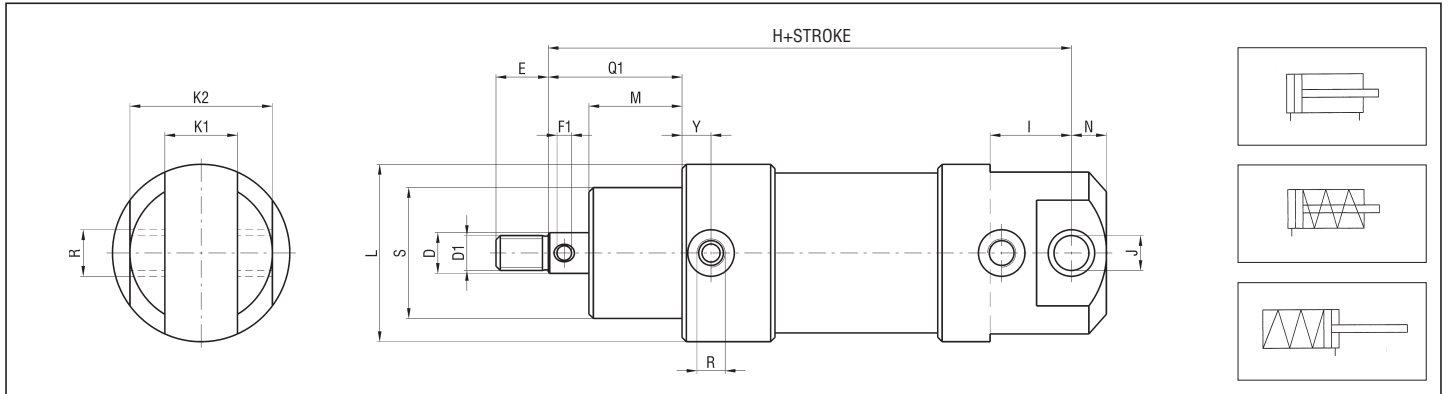
5 Rod wipers

* Supplied only with "CB", "FAB" and "FPB" series ** Supplied as standard for Ø 20 and Ø 27

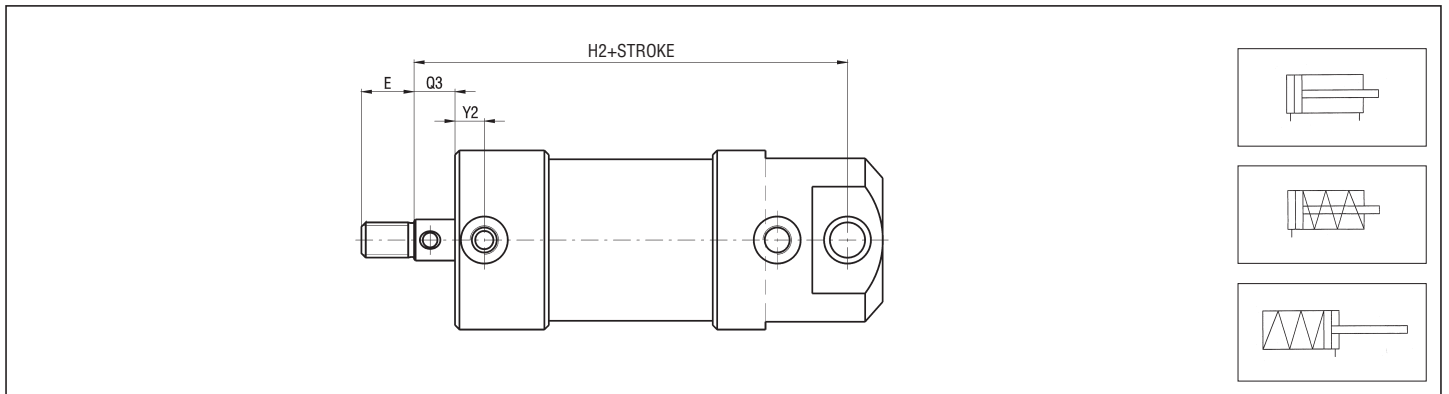
SPARE PARTS

SEALS KIT			
NBR	Ø/SG/HB	For high temperatures	Ø/SG/HB2
Through rod, NBR	Ø/SG/R/HB	Through rod, for high temperatures	Ø/SG/R/HB2

1 BASIC CYLINDER HINGE-MOUNTED - CB



REDUCED END CAP

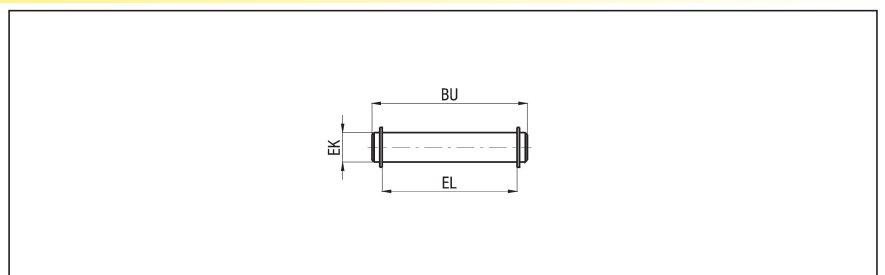


DIMENSIONS AND WEIGHTS BASIC CYLINDER CB

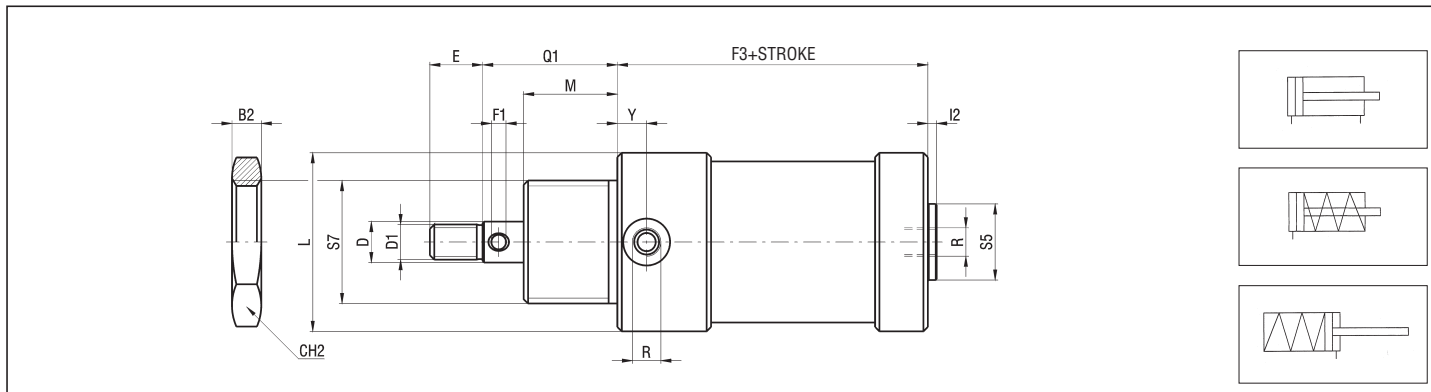
Ø	D	D1	E	F1	H	H2	I	J H8	K1 0/+0,2	K2 0/-0,2	L	M	N	Q1	Q3	R	S	Y	Y2	WEIGHT (g)	INCREM. (g) every 10 mm
20	8	M6	9	3	85	72	10	5	8	22	30	16	6	24	8	G 1/8	24	10	11,5	200	15
27	10	M8	12	4	96	76	21	6	9	25	35	20	7	30	10	G 1/8	28	9,5	11,5	289	20
35	12	M10	15	4	106	84	23	8	12	32	45	24	9	36	12	G 1/8	32	9,5	10	396	32
40	12	M10	15	4	121	90	26	10	18	40	50	32	10	44	12	G 1/8	36	10	10	503	35
50	14	M12	18	5	130	101	28	12	25	49	61	32	12	46	14	G 1/8	42	10	10	793	44
58	16	M14	21	5	140	110	33	14	26	54	70	32	14	48	16	G 1/4	45	12	14	1181	53
70	18	M16	24	5	151	122	35	16	35	67	82	35	16	53	18	G 1/4	50	14	16	1474	64
85	20	M18	27	6	168	128	36	18	40	76	98	44,5	18	64,5	20	G 1/4	60	12,5	14	2033	89
100	24	M20	30	6	191	142	45	20	40	80	114	50	20	74	24	G 1/4	70	14	19	3250	110

ACCESSORIES
PIVOT FOR FEMALE REAR HINGE - STEEL - HB/SEC Ø

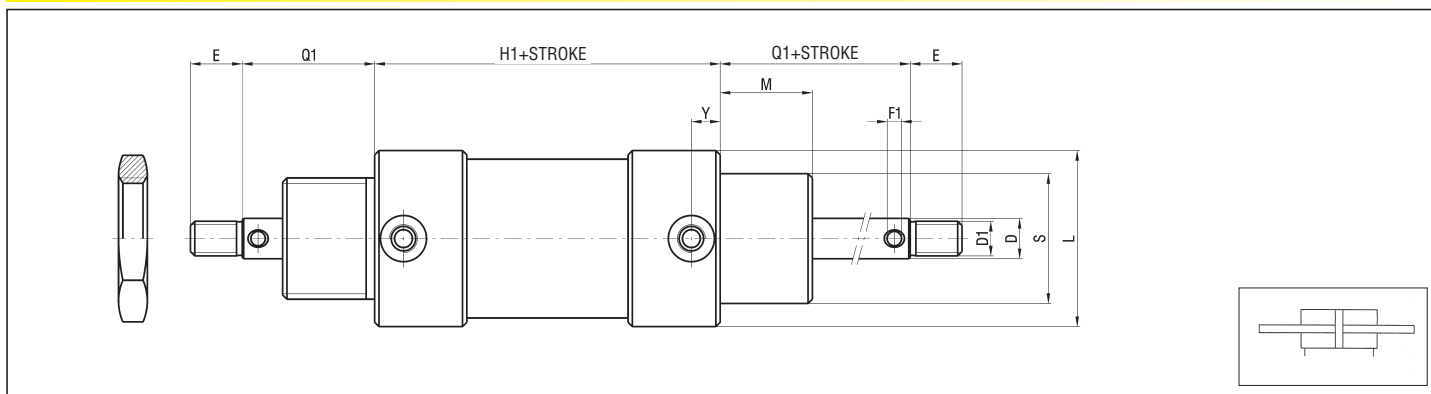
Ø	BU	EK f7	EL	WEIGHT (g)
20	28	5	23	4,5
27	31	6	26	7
35	38	8	33	15
40	47	10	41	29
50	56	12	50	50
58	62	14	55	76
70	75	16	68	118
85	84	18	77	168
100	88	20	81	217



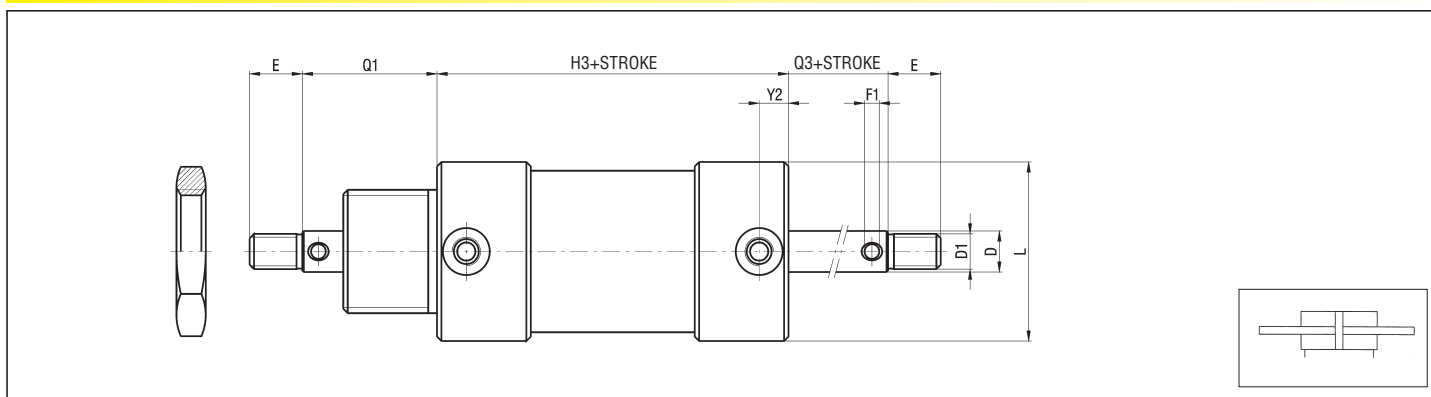
BASIC CYLINDER SCREW-MOUNTED - VB



THROUGH ROD



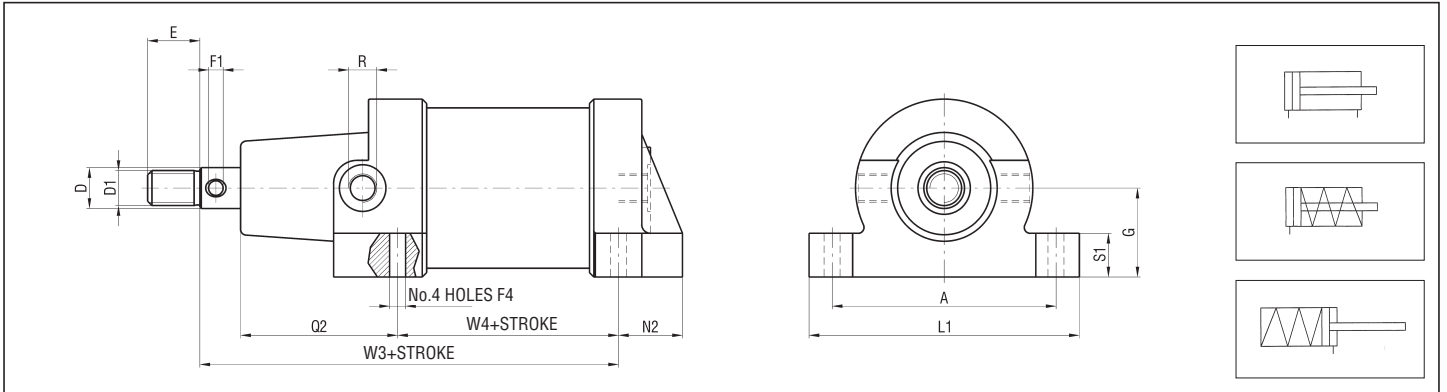
THROUGH ROD, REDUCED END CAP



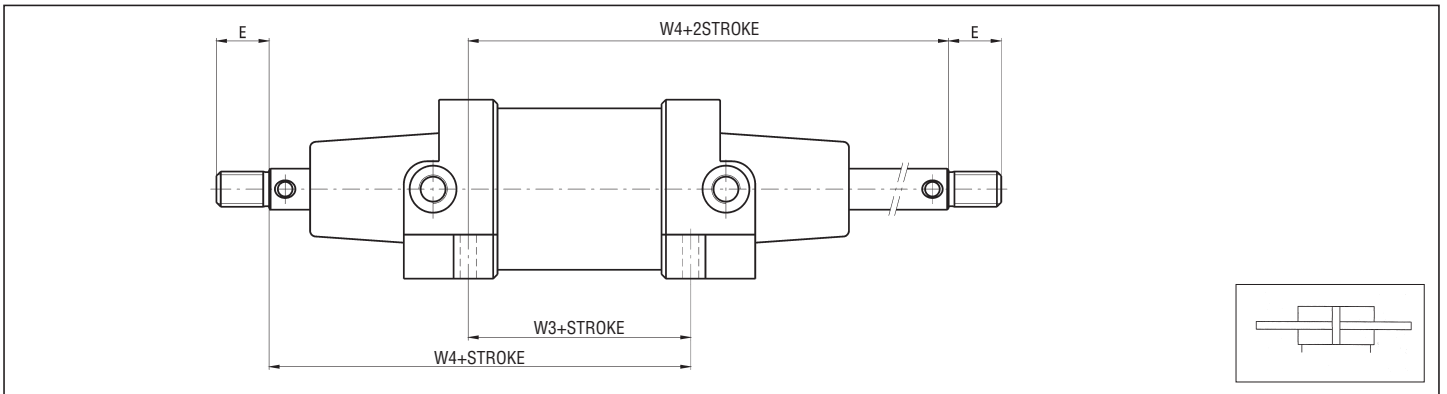
DIMENSIONS AND WEIGHTS BASIC CYLINDER VB

Ø	B2	CH2	D	D1	E	F1	F3	H1	H3	I2	L	M	Q1	Q3	R	S	S5	S7	Y	Y2	WEIGHT (g)	INCREM. (g) every 10 mm
20	5	32	8	M6	9	3	41	58	61	3,5	30	16	24	8	G 1/8	24	14	M24x2	10	11,5	129	15
27	6	35	10	M8	12	4	45,5	60,5	62,5	3,5	35	20	30	10	G 1/8	28	14	M28x2	9,5	11,5	160	20
35	7	40	12	M10	15	4	47,5	61,5	63,5	3,5	45	24	36	12	G 1/8	32	18	M32x2	9,5	10	299,5	32
40	8	45	12	M10	15	4	51	68	69	3	50	32	44	12	G 1/8	36	24	M36x3	10	10	416	35
50	10	50	14	M12	18	5	56	70	73	3	61	32	46	14	G 1/8	42	26	M42x3	10	10	691	44
58	10	55	16	M14	21	5	59	75	77	4	70	32	48	16	G 1/4	45	30	M45x3	12	14	1028	53
70	10	60	18	M16	24	5	63	80	86	4	82	35	53	18	G 1/4	50	30	M50x3	14	16	1388	64
85	12	70	20	M18	27	6	67,5	84	88,5	4	98	44,5	64,5	20	G 1/4	60	40	M60x4	12,5	14	2024	89
100	14	85	24	M20	30	6	72	89	90	4	114	50	74	24	G 1/4	70	40	M70x4	14	19	3060	110

1 BASIC CYLINDER FEET-MOUNTED - PB



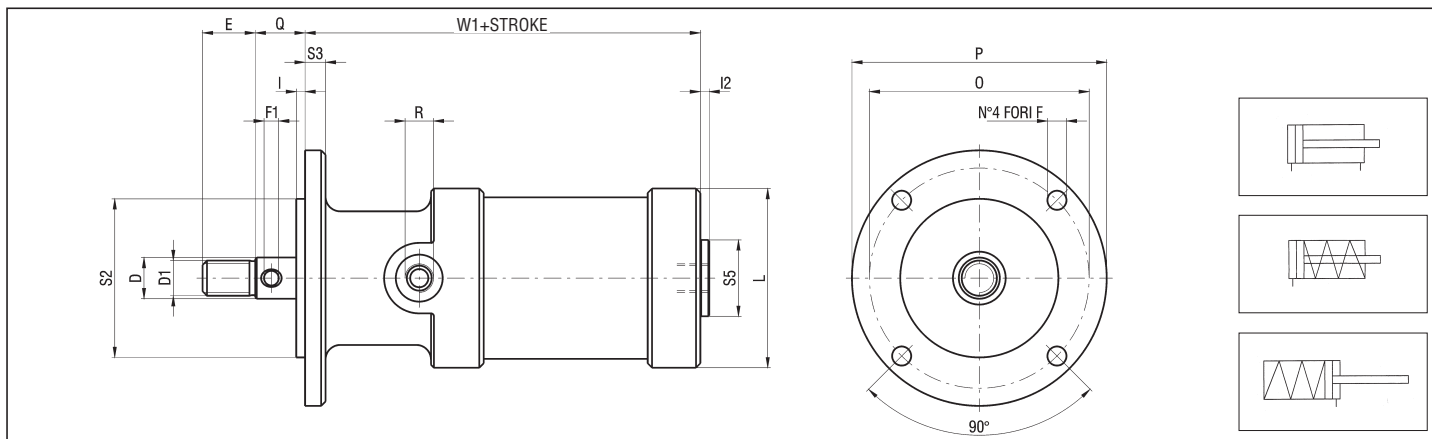
THROUGH ROD



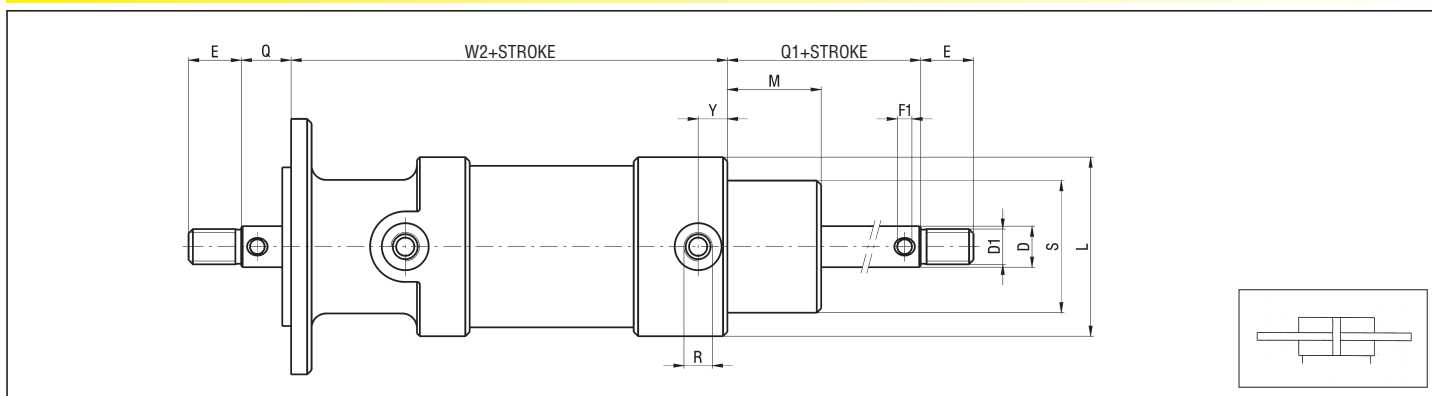
DIMENSIONS AND WEIGHTS BASIC CYLINDER PB

Ø	A	D	D1	E	F1	F4	G	L1	N2	Q2	R	S1	W3	W4	WEIGHT (g)	INCREMENT (g) every 10 mm
20	42	8	M6	9	3	4,25	17	52	13	36	G 1/8	8	18	62	181	15
27	45	10	M8	12	4	4,5	19,5	55	17	40	G 1/8	10	20	70	269	20
35	57	12	M10	15	4	5,5	22,5	69	17	44	G 1/8	12	21	77	359	32
40	64	12	M10	15	4	5,5	25	78	22	56	G 1/8	14	20	88	502	35
50	77	14	M12	18	5	5,5	30,5	93	22	54	G 1/8	16	26	94	743	44
58	86	16	M14	21	5	6,5	35	102	25	56	G 1/4	16	27	99	996	53
70	100	18	M16	24	5	6,5	41	118	26	61	G 1/4	18	28	107	1363	64
85	118	20	M18	27	6	8,5	49	138	27	72	G 1/4	20	30	122	2043	89
100	136	24	M20	30	6	8,5	57	158	28	76	G 1/4	22	33	133	3019	110

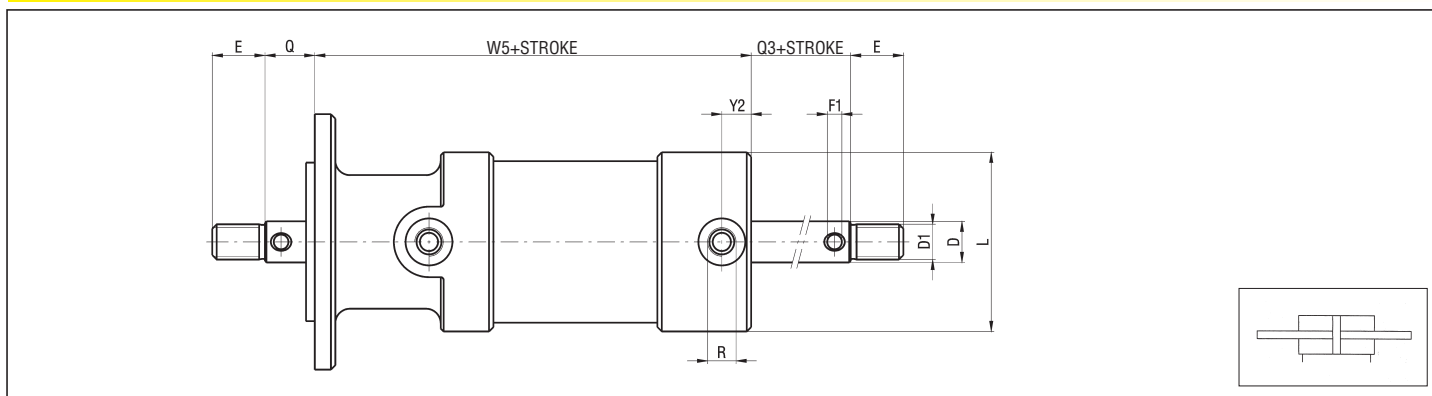
BASIC CYLINDER FRONT FLANGE-MOUNTED - FAB



THROUGH ROD



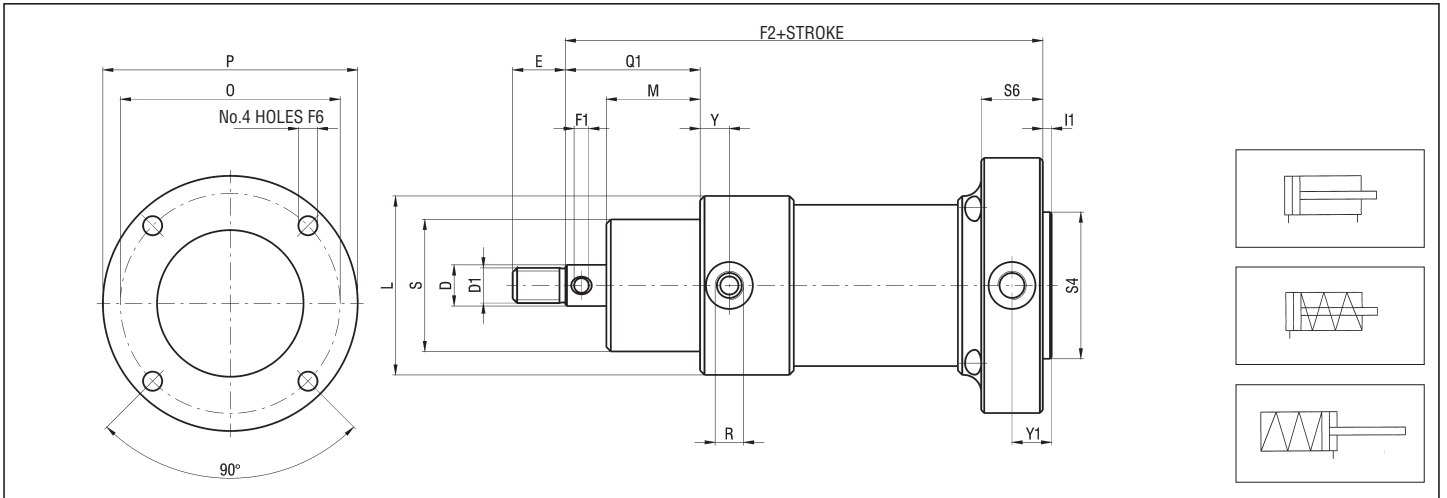
THROUGH ROD, REDUCED END CAP



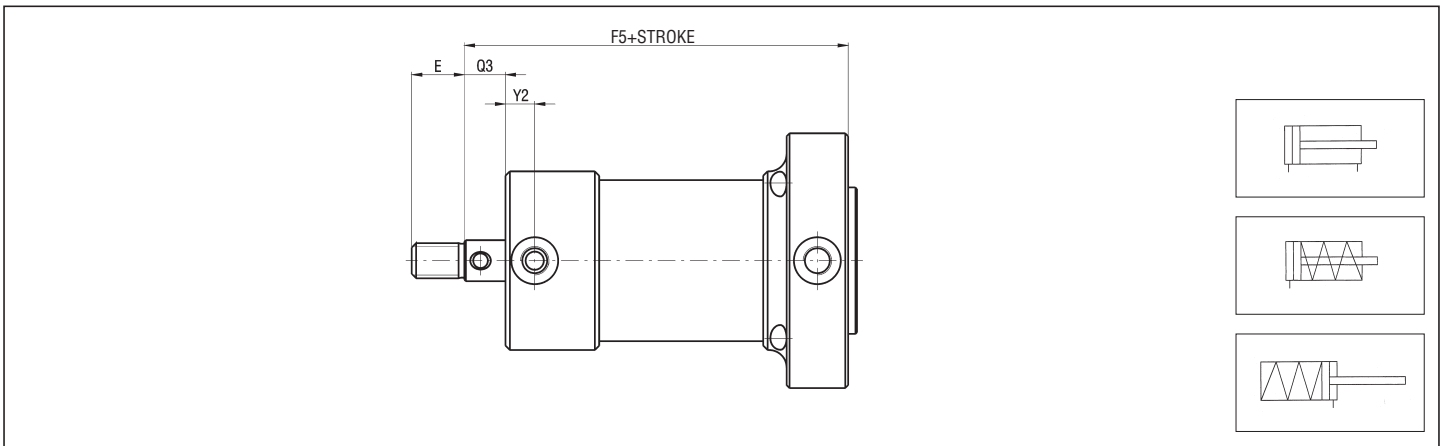
BASIC CYLINDER FRONT FLANGE-MOUNTED - FAB

Ø	D	D1	E	F	F1	I	I2	L	M	O	P	Q	Q1	Q3	R	S	S2	S3	S5	W1	W2	W5	Y	Y2	WEIGHT (g)	INCREM. (g) every 10 mm
20	8	M6	9	4,2	3	2	3,5	30	16	39	50	10	24	8	G 1/8	24	23	4	14	55	72	75	10	11,5	91	15
27	10	M8	12	4,5	4	2	3,5	35	20	48	58	12	30	10	G 1/8	28	30	6	14	63,5	78,5	80,5	9,5	11,5	178	20
35	12	M10	15	5,5	4	2	3,5	45	24	54	66	14	36	12	G 1/8	32	36	6	18	69,5	83,5	85,5	9,5	10	317	32
40	12	M10	15	6,5	4	3	3	50	32	57	69	15	44	12	G 1/8	36	40	7	24	80	97	98	10	10	427	35
50	14	M12	18	6,5	5	3	3	61	32	75	87	17	46	14	G 1/8	42	54	7	26	85	99	102	10	10	689	44
58	16	M14	21	6,5	5	3	4	70	32	82	100	19	48	16	G 1/4	45	60	8	30	88	104	106	12	14	915	53
70	18	M16	24	8,5	5	4	4	82	35	100	119	22	53	18	G 1/4	50	70	10	30	94	111	117	14	16	1244	64
85	20	M18	27	10,5	6	4	4	98	44,5	120	140	24	64,5	20	G 1/4	60	80	11	40	103	119,5	124	12,5	14	2113	89
100	24	M20	30	10,5	6	4	4	114	50	137	160	28	74	24	G 1/4	70	88	12	40	118	135	136	14	19	3200	110

1 BASIC CYLINDER REAR FLANGE-MOUNTED - FPB



REDUCED END CAP



DIMENSIONS AND WEIGHTS BASIC CYLINDER FPB

Ø	D	D1	E	F1	F2	F5	F6	I1	L	M	O	P	Q1	Q3	R	S	S4	S6	Y	Y1	Y2	WEIGHT (g)	INCREM. (g) every 10 mm
20	8	M6	9	3	78	65	4,2	2	30	16	39	50	24	8	G1/8	24	23	18	10	11	11,5	91	15
27	10	M8	12	4	89	69	4,5	2	35	20	48	58	30	10	G1/8	28	30	19	9,5	11,5	11,5	178	20
35	12	M10	15	4	97	75	5,5	2	45	24	59	69	36	12	G1/8	32	38	19	9,5	11,5	10	317	32
40	12	M10	15	4	109	78	5,5	3	50	32	62	74	44	12	G1/8	36	40	21	10	13,5	10	427	35
50	14	M12	18	5	113	84	6,5	3	61	32	75	87	46	14	G1/8	42	50	21	10	13,5	10	689	44
58	16	M14	21	5	122	92	8,5	3	70	32	86	100	48	16	G1/4	45	62	24	12	15	14	915	53
70	18	M16	24	5	131	102	8,5	4	82	35	100	119	53	18	G1/4	50	72	22	14	15	16	1244	64
85	20	M18	27	6	147	107	10,5	4	98	44,5	120	140	64,5	20	G1/4	60	80	25	12,5	16,5	14	2113	89
100	24	M20	30	6	164	115	10,5	4	114	50	137	160	74	24	G1/4	70	88	28	14	18	19	3200	110