

DESCRIPTION

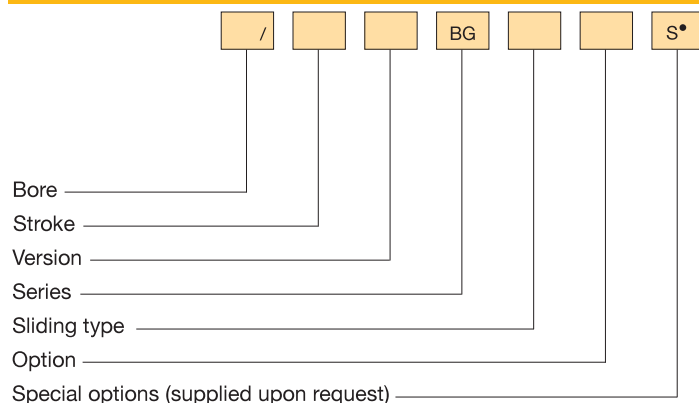
Compact guided cylinders series "BG" have reduced dimensions and high precision movement. These cylinders assure great strength to transversal forces thanks to stout bars guided on bushings or sleeves. Cylinders series "BG" are double acting and they have the magnetic piston type and the steel plate as standard, so they can be supplied with magnetic sensors.



TECHNICAL DATA

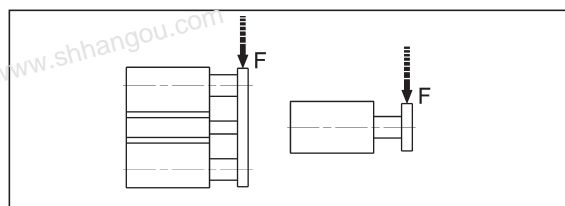
Operating pressure	1 ÷ 10 bar
Working temperature	0 ÷ +80 °C (-20 °C with dry air)
Fluid	Filtered, unlubricated or continuous lubricated compressed air
Bore	Ø 16, 20, 25, 32, 40, 50, 63
Port size	Ø 16 = M 5 Ø 20 ÷ 40 = G 1/8 Ø 50 = G 1/4
Standard strokes (mm)	Ø 16 = 10, 20, 30, 40, 50, 75, 100 Ø 20 = 20, 30, 40, 50, 75, 100, 125, 150, 175, 200 Ø 25 = 20, 25, 30, 40, 50, 75, 100, 125, 150, 175, 200 Ø 32 ÷ 63 = 25, 50, 75, 100, 125, 150, 175, 200

ORDER KEY



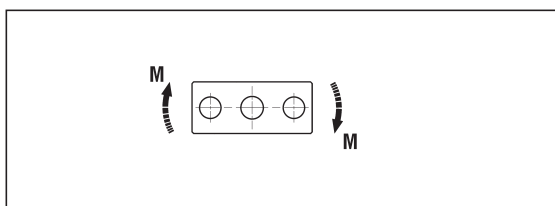
P.S.: *Magnetic sensors FM 100* (see chapter magnetic sensors from page 1.93)
 • See technical data on page 0.12

TECHNICAL DATA



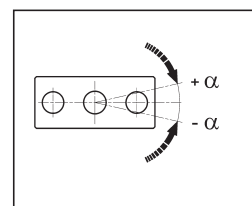
MAXIMUM PERMISSIBLE TRANSVERSE FORCE F (N)

Ø	Sliding type	STROKE (mm)								
		10	20	25	30	40	50	75	100	
16	B	41	32	-	26	23	20	27	22	
	M	44	34	-	27	23	21	27	22	
20	B	-	53	-	45	38	34	52	42	
	M	-	62	-	50	42	36	53	44	
25	B	-	93	-	78	68	60	81	67	
	M	-	94	-	79	68	60	59	51	
32	B	-	-	168	-	-	131	163	138	
	M	-	-	84	-	-	58	270	213	
40	B	-	-	168	-	-	131	163	138	
	M	-	-	92	-	-	64	270	213	
50	B	-	-	240	-	-	189	243	208	
	M	-	-	117	-	-	81	370	312	
63	B	-	-	250	-	-	190	265	227	
	M	-	-	117	-	-	81	370	312	



MAXIMUM PERMISSIBLE TORQUE M (Nm)

Ø	Sliding type	STROKE (mm)								
		10	20	25	30	40	50	75	100	
16	B	0,65	0,51	-	0,42	0,36	0,32	-	-	
	M	0,83	0,65	-	0,52	0,44	0,40	-	-	
20	B	-	0,99	-	0,84	0,71	0,64	0,97	0,78	
	M	-	1,20	-	0,96	0,81	0,69	1,02	0,85	
25	B	-	1,98	-	1,67	1,45	1,28	1,73	1,43	
	M	-	2,00	-	1,69	1,45	1,28	1,26	1,09	
32	B	-	-	4,10	-	-	3,19	3,97	3,36	
	M	-	-	2,04	-	-	1,41	6,58	5,19	
40	B	-	-	4,51	-	-	3,51	4,38	3,70	
	M	-	-	2,47	-	-	1,72	7,25	5,72	
50	B	-	-	6,60	-	-	5,19	6,68	5,72	
	M	-	-	3,22	-	-	2,22	10,17	8,58	
63	B	-	-	6,60	-	-	5,19	6,68	5,72	
	M	-	-	3,22	-	-	2,22	10,17	8,58	



ANTI-ROLL ACCURACY α

Ø	Sliding type	
	B	M
16	±0,08°	±0,10°
20	±0,07°	±0,09°
25	±0,07°	±0,09°
32	±0,06°	±0,08°
40	±0,06°	±0,08°
50	±0,05°	±0,06°
63	±0,05°	±0,06°

B - Bushing
 M - Sleeves

MATERIALS

End caps	Anodized aluminium alloy
Body	Anodized aluminium alloy
Piston rod	Ø 16 ÷ 25 : AISI 303 stainless steel Ø 32 ÷ 63 : C45 chromium-plated steel
Piston	Aluminium alloy with magnet
Guide bars	C45 chromium-plated steel (bushings sliding type) Hardened steel (recirculating ball bearing sleeves sliding type)
Plate	Nickel-plated steel Anodized aluminium alloy
Bushings	Self-lubricating sintered bronze with wiper ring No.2 pcs. for strokes 20 ÷ 50 mm; No.4 pcs. for strokes 75 ÷ 200 mm
Sleeves	Recirculating ball bearings with wiper ring No.2 pcs. for strokes 20 ÷ 50 mm; No.4 pcs. for strokes 75 ÷ 200 mm
Seals	Polyurethane

VERSION

D Double acting

SLIDING TYPE

B On bushing M With sleeves

OPTION

Single steel plate D Double steel plate
 S Single aluminium plate L Double aluminium plate

ORDER EXAMPLE

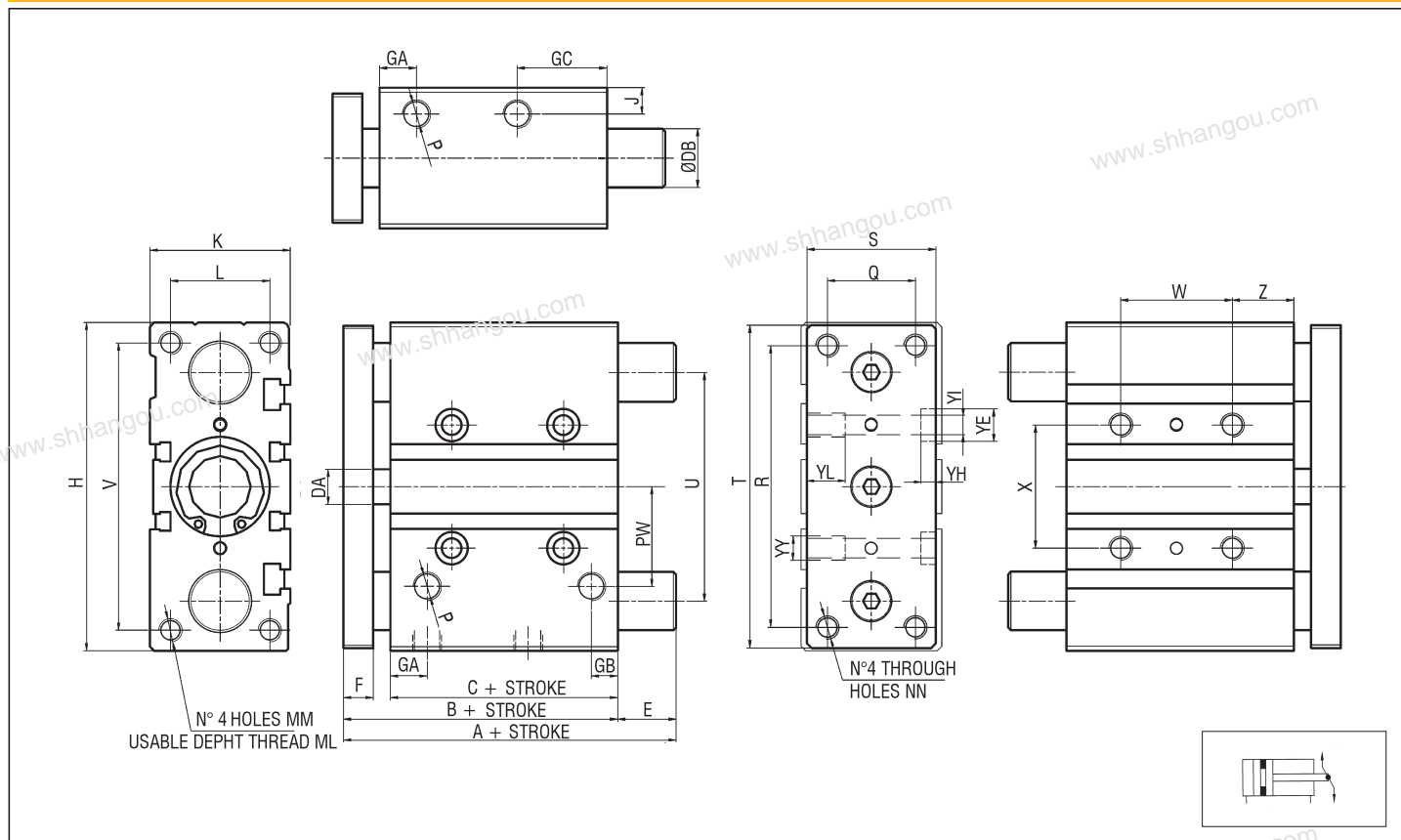
Cylinder Ø 50, double acting, 50 mm stroke, with sleeves, double steel plate 50/50 DBGMD

SEALS KIT

Polyurethane	Ø/SG/BG
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BG COMPACT GUIDED CYLINDER

1



DIMENSIONS AND WEIGHTS BASIC CYLINDER

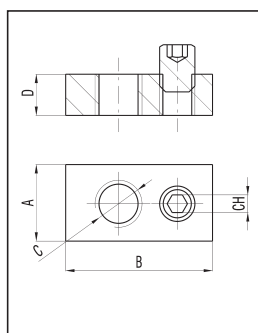
Ø	A (STROKES mm)		B	C	DA	DB	E (STROKES mm)		F	GA	GB	GC	H	J	L	K	MM	ML	NN	P
16	46 (10 ÷ 50)	64,5 (75 ÷ 100)	46	33	8	10	0 (10 ÷ 50)	18,5 (75 ÷ 100)	8	11	8	8	64	5	22	30	M5	12	M5	M5
20	53 (20 ÷ 50)	84,5 (75 ÷ 200)	53	37	10	12	0 (20 ÷ 50)	31,5 (75 ÷ 200)	10	10,5	8,5	24,5	83	7,5	24	36	M5	13	M5	G1/8
25	53,5 (20 ÷ 50)	84,5 (75 ÷ 200)	54	37,5	10	16	0 (20 ÷ 50)	31,5 (75 ÷ 200)	10	11,5	9	25	93	7,5	30	42	M6	15	M6	G1/8
32	97 (25 ÷ 50)	107 (75 ÷ 200)	60	37,5	12	20	0 (25 ÷ 50)	42,5 (75 ÷ 200)	12	12,5	9	30,5	112	9	34	48	M8	20	M8	G1/8
40	97 (25 ÷ 50)	107 (75 ÷ 200)	66	44	12	20	31 (25 ÷ 50)	36 (75 ÷ 200)	12	14	10	31	120	9	40	54	M8	20	M8	G1/8
50	106,5 (25 ÷ 50)*	118 (75 ÷ 200)	72	44	16	25	34,5 (25 ÷ 50)*	46 (75 ÷ 200)	16	14	11	35	148	10,5	46	64	M10	22	M10	G1/4
63	106,5 (25 ÷ 50)*	118 (75 ÷ 200)	77	49	16	25	29,5 (25 ÷ 50)*	41 (75 ÷ 200)	16	16,5	13,5	35	162	11	58	78	M10	22	M10	G1/4*

Ø	PW	Q	R	S	T	U	V	W (STROKES mm)			X	YE	YH	YI	YL	YY	Z	WEIGHT (g) for STROKES (mm) with aluminium plate							
								10	20	25								30	40	50	75	100			
16	19	16	54	25	62	46	56	24 (10 ÷ 30)	44 (40 ÷ 100)	-	24	8	4,5	4,3	10	M5	5	300	350	-	400	450	500	700	850
20	20,5	18	70	30	81	54	72	24 (20 - 30)	44 (40 ÷ 100)	120 (125 ÷ 200)	28	9,5	5,5	5,6	12	M5	17	-	640	-	720	800	880	1200	1400
25	28,5	26	78	38	91	64	82	24 (20 - 30)	44 (40 ÷ 100)	120 (125 ÷ 200)	34	9,5	5,5	5,6	12	M6	17	-	850	-	950	1050	1150	1600	1850
32	34	30	96	44	110	78	98	24 (25)	48 (50 ÷ 100)	124 (125 ÷ 200)	42	11	7,5	6,6	16	M8	21	-	-	1500	-	-	1850	2500	2850
40	28,5	30	104	44	118	86	106	24 (25)	48 (50 ÷ 100)	124 (125 ÷ 200)	50	11	7,5	6,6	16	M8	22	-	-	1700	-	-	2100	2650	3050
50	47	40	130	60	146	110	130	24 (25)	48 (50 ÷ 100)	124 (125 ÷ 200)	66	14	9	8,6	20	M10	22	-	-	2700	-	-	3300	4100	4700
63	55	50	130	70	158	124	142	28 (25)	52 (50 ÷ 100)	128 (125 ÷ 200)	80	14	9	8,6	20	M10	24	-	-	3100	-	-	4218	4936	5655

* With sleeves: dimension "A" (stroke 50) = 114 for Ø 50 and 63; dimension "E" (stroke 50) = 42 for Ø 50 and 37 for Ø 63

SLOTS FIXING PLATE - STEEL - BG/PF Ø

Ø	A	B	C	D	CH	WEIGHT (g)
16	7	10	M4	3,5	1,5	2
20 - 25	8	15	M5	4	2	3,5
32 - 40	10	20	M6	5	2,5	7,5
50 - 63	13	25	M8	7	3	17



FIXING EXAMPLE

