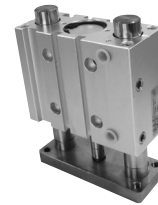


# series BG

## Compact guided cylinders

### DESCRIPTION

Compact guided cylinders series "BG" have reduced dimensions and high precision movement. These cylinders assure great strenght 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

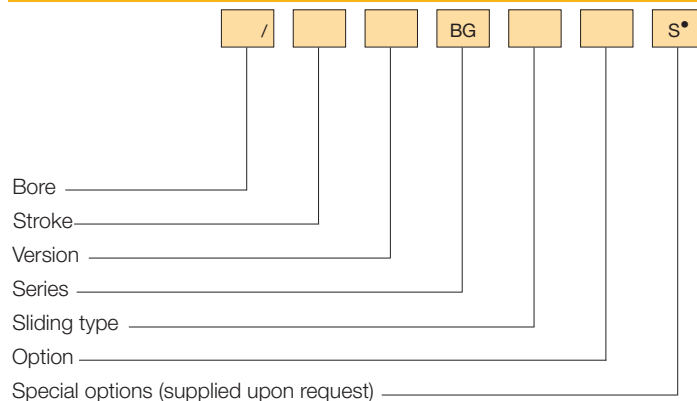
Operating pressure	1 ÷ 10 bar
Working temperature	0 ÷ +80 °C (-20 °C with dry air)
Fluid	Filtered, unlubricated, continuous lubricated or dry compressed air
Bore	Ø 16, 20, 25, 32, 40, 50, 63
Port size	Ø 16 = M 5 Ø 20 ÷ 40 = G 1/8 Ø 50 - 63 = G 1/4
Standard strokes (mm)*	Ø 16 = 10, 20, 30, 40, 50, 75,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

Cylinders with intermediate strokes have the same dimensions of the ones referring to the right higher standard stroke; e.g.: Ø32, 45 mm stroke cylinder has the same dimensions of the cylinder with 50 mm stroke.

### MATERIALS

End caps	Anodized aluminium alloy
Corpo	Anodized aluminium alloy
Piston rod	Ø16 ÷ 25 AISI 303 stainless steel Ø32 ÷ 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
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

### ORDER KEY



• See Chapter 1 on page 1.1.

### VERSION

D Double acting

### SLIDING TYPE

B On bushing M With sleeves

### OPTION

Single steel plate D Double steel plate

### ORDER EXAMPLES

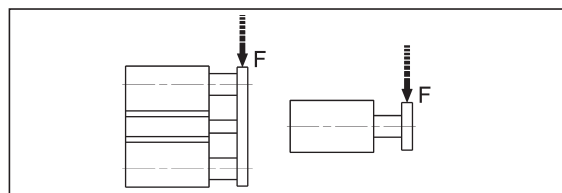
Cylinder Ø 50, double acting, 50 mm stroke, with sleeves, double steel plate:  
**50/50 DBGMD**

### SPARE PARTS

#### SEALS KIT

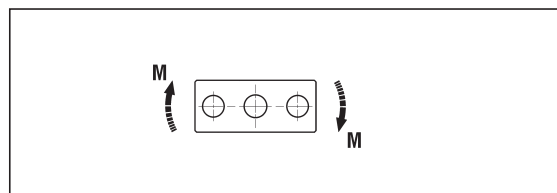
Polyurethane (Bushing sliding type) Ø/SG/BGB  
Polyurethane (Recirculating ball bearing sleeves sliding type) Ø/SG/BGM

### TECHNICAL DATA



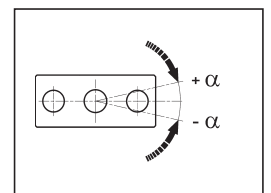
#### MAXIMUM PERMISSIBLE TRANSVERSE FORCE "F" (N)

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

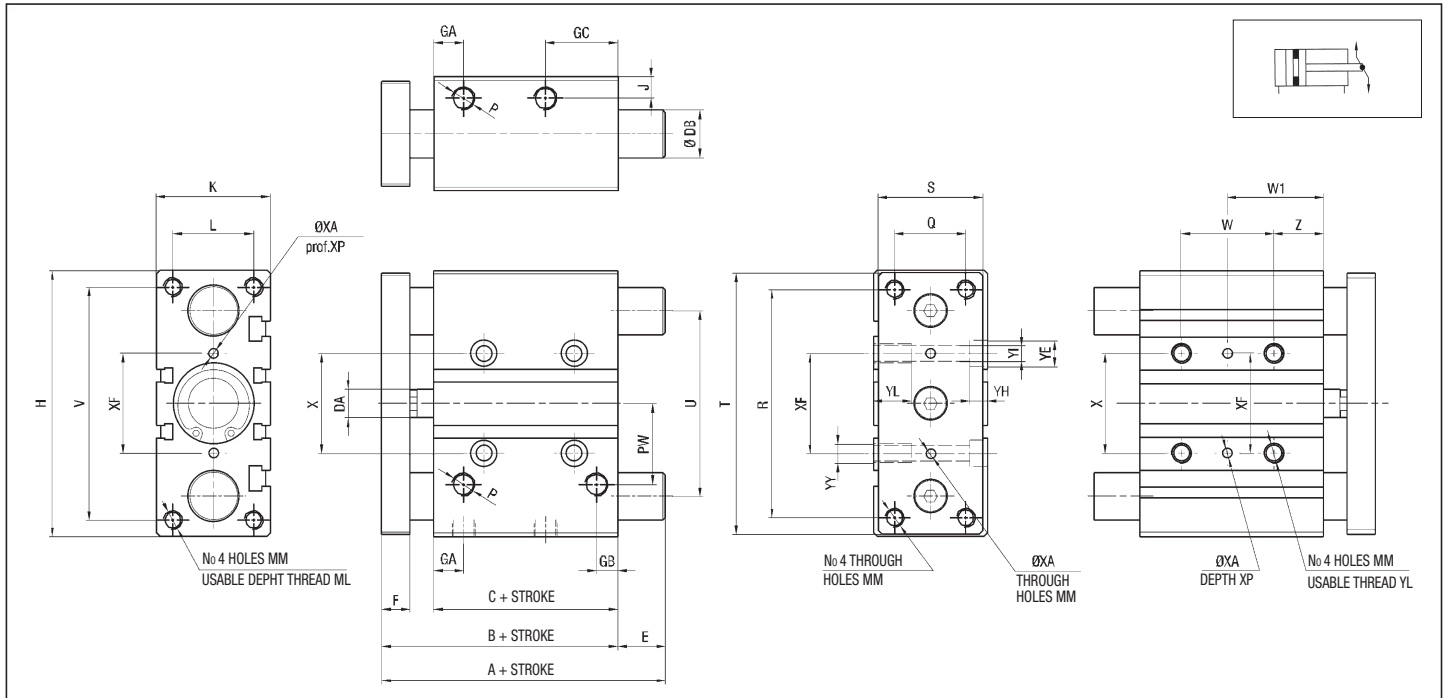
Ø	Sliding type	
	B	M
16	±0,08°	±0,10°
20	±0,07°	±0,09°
25	±0,07°	±0,09°
32	±0,06°	±0,08°
40	±0,06°	±0,08°
50	±0,05°	±0,06°
63	±0,05°	±0,06°

B - Bushing  
M - Sleeves

Compact guided cylinders

series **BG**

COMPACT GUIDED CYLINDER



DIMENSIONS AND WEIGHTS BASIC CYLINDER

Ø	B	C	DA	F	GA	GB	GC	H	J	K	L	MM	ML	NN	P	PW	Q	R	S	T	U	V	X	YY	YL	YE	YH	YI	Z	XF	XA	XP	XB
16	46	33	8	8	11	8	18	64	5	30	22	M5	12	M5	M5	19	16	54	25	62	46	56	24	M5	10	8	4,5	4,3	5	24	3	6	3,5
20	5	37	10	10	10,5	8,5	24,5	83	6,5	36	24	M5	13	M5	G1/8	25	18	70	30	81	54	72	28	M6	12	9,5	5,5	5,6	17	28	3	6	3,5
25	53,5	37,5	10	10	11,5	9	25	93	7,5	42	30	M6	15	M6	G1/8	28,5	26	78	38	91	64	82	34	M6	12	9,5	5,5	5,6	17	34	4	6	4,5
32	59,5	37,5	12	12	12,5	9	30,5	112	9	48	34	M8	20	M8	G1/8	34	30	96	44	110	78	98	42	M8	16	11	7,5	6,6	21	42	4	6	4,5
40	66	44	12	12	14	10	31	120	9	54	40	M8	20	M8	G1/8	38	30	104	44	118	86	106	50	M8	16	11	7,5	6,6	22	50	4	6	4,5
50	72	44	16	16	14	11	35	148	9,5	64	46	M10	22	M10	G1/4	47	40	130	60	146	110	130	66	M10	20	14	9	8,6	24	66	5	8	6
63	77	49	16	16	16,5	13,5	35	162	11	78	58	M10	22	M10	G1/4	55	50	130	70	158	124	142	80	M10	20	14	9	8,6	24	80	5	8	6

DIMENSIONS: W - W1 - A - E (VERSION WITH SLEEVES)

Ø stroke	W					W1					A			E			DB		
	10÷30	40÷100	125÷200	250÷300		10÷30	40÷100	125÷200	250÷300		10÷30	40÷100	125÷250	10÷30	40÷100	125÷250			
16	24	44	110	200		17	27	60	105		46	66	95	0	20	49	8		
Ø stroke	W					W1					A			E			DB		
	20÷30	40÷100	125÷200	250÷300	350÷400	20÷30	40÷100	125÷200	250÷300	350÷400	20÷30	40÷200	250÷400	20÷30	40÷200	250÷400			
20	24	44	120	200	300	29	39	77	117	167	53	85,5	122	0	32,5	69	12		
25	24	44	120	200	300	29	39	77	117	167	53,5	86	122	0	32,5	68,5	12		
Ø stroke	W					W1					A				E				DB
	25	50÷100	125÷200	250÷300	350÷400	25	50÷100	125÷200	250÷300	350÷400	25	50	75÷200	250÷400	25	50	75÷200	250÷400	
32	24	48	124	200	300	33	45	83	121	171	97	97	107	140	37,5	37,5	47,5	85,5	20
40	24	48	124	200	300	34	46	84	122	172	97	97	107	140	31	31	41	79	20
50	24	48	124	200	300	36	48	86	124	174	106,5	114	118	161	34,5	42	46	89	25
63	28	52	128	200	300	38	50	88	124	174	106,5	114	118	161	29,5	37	41	84	25

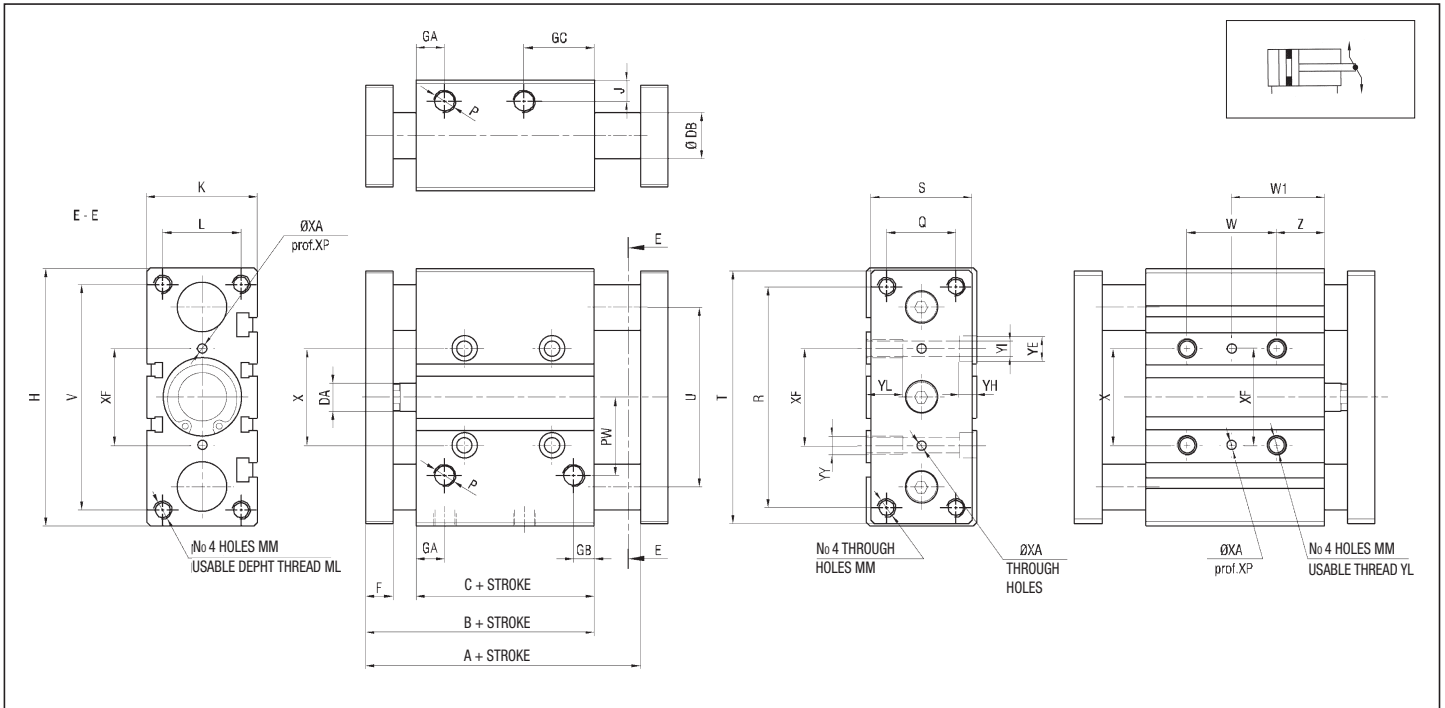
DIMENSIONS: A - E (VERSIONS WITH BUSHING)

Ø stroke	A			E			DB
	10÷50	75÷100	125÷200	10÷50	75÷100	125÷250	
16	46	64,5	95	0	18,5	49	10
Ø stroke	A			E			DB
	20÷50	75÷200	250÷400	20÷50	75÷200	250÷400	
20	53	84,5	122	0	31,5	69	12
25	53,5	85	122	0	31,5	68,5	16
Ø stroke	A			E			DB
	20÷50	75÷200	250÷400	20÷50	75÷200	250÷400	
32	97	107	140	37,5	47,5	80,5	20
40	97	107	140	31	41	79	20
50	106,5	118	161	34,5	46	89	25
63	106,5	118	161	29,5	41	84	25

# series BG

## Compact guided cylinders

### DOUBLE STEEL PLATE COMPACT GUIDED CYLINDER



### DIMENSIONS AND WEIGHTS BASIC CYLINDER

Ø	A	B	C	DA	F	GA	GB	GC	H	J	K	L	MM	ML	NN	P	PW	Q	R	S	T	U	V	X	XF	XA	XP	YY	YL	YE	YH	YI	Z	XF	XA	XP	XB
16	59	46	33	8	8	11	8	18	64	5	30	22	M5	12	M5	M5	19	16	54	25	62	46	56	24	24	3	6	M5	10	8	4,5	4,3	5	24	3	6	3,5
20	69	5	37	10	10	10,5	8,5	24,5	83	6,5	36	24	M5	13	M5	G1/8	25	18	70	30	81	54	72	28	28	3	6	M6	12	9,5	5,5	5,6	17	28	3	6	3,5
25	69,5	53,5	37,5	10	10	11,5	9	25	93	7,5	42	30	M6	15	M6	G1/8	28,5	26	78	38	91	64	82	34	34	4	6	M6	12	9,5	5,5	5,6	17	34	4	6	4,5
32	81,5	59,5	37,5	12	12	12,5	9	30,5	112	9	48	34	M8	20	M8	G1/8	34	30	96	44	110	78	98	42	42	4	6	M8	16	11	7,5	6,6	21	42	4	6	4,5
40	88	66	44	12	12	14	10	31	120	9	54	40	M8	20	M8	G1/8	38	30	104	44	118	86	106	50	50	4	6	M8	16	11	7,5	6,6	22	50	4	6	4,5
50	100	72	44	16	16	14	11	35	148	9,5	64	46	M10	22	M10	G1/4	47	40	130	60	146	110	130	66	66	5	8	M10	20	14	9	8,6	24	66	5	8	6
63	105	77	49	16	16	16,5	13,5	35	162	11	78	58	M10	22	M10	G1/4	55	50	130	70	158	124	142	80	80	5	8	M10	20	14	9	8,6	24	80	5	8	6

### DIMENSIONS: W - W1 (VERSION WITH SLEEVES)

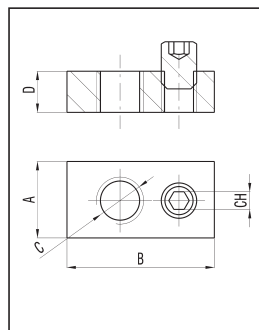
Ø stroke	W			W1			
	10÷30	40÷100		10÷30	40÷100		
16	24	44		17	27		
Ø stroke	W			W1			
	20÷30	40÷100	125÷200	20÷30	40÷100	125÷200	
	20	24	44	120	29	39	77
25	24	44	120	29	39	77	
Ø stroke	W			W1			
	25	50÷100	125÷200	25	50÷100	125÷200	
	32	24	48	124	33	45	83
	40	24	48	124	34	46	84
	50	24	48	124	36	48	86
63	28	52	128	38	50	88	

### DIMENSION: DB

Ø	DB Bushing	DB Sleeves
16	10	8
20	12	12
25	16	12
32	20	20
40	20	20
50	25	25
63	25	25

### 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

