



Mould Hydraulic Systems

Hydraulic cylinders-ISO 6020/2 compact 160 bar



V160C

Hydraulic cylinders-ISO

- ① Chrome-plated steel rod, hardened or tempered and polished. Thickness of chromium plating 20 µm and surface finish 0.4 µm Ra, for a longer durability of the seals.
- ② Rod cartridge with low friction seals and scrapers in PTFE+Bronze. Viton® O-Rings for high temperature.
- ③ Steel heads and mountings.
- ④ Cushioning adjustment screw.
- ⑤ Stainless steel tube, for the series equipped with magnetic proximity switches; steel tube for the non-magnetic series. Inner low roughness finish for high running speeds.
- ⑥ Optional magnetic proximity switches with armoured cable (see pages B/18 ÷ B/19).
- ⑦ Self-centring floating shock absorber bushing.
- ⑧ Piston connected to the rod through a large-sized thread. For greater safety, the piston is secured with Loctite® and is equipped with a safety screw. The piston is also equipped with low friction seals in PTFE+Bronze. Viton® O-Rings.

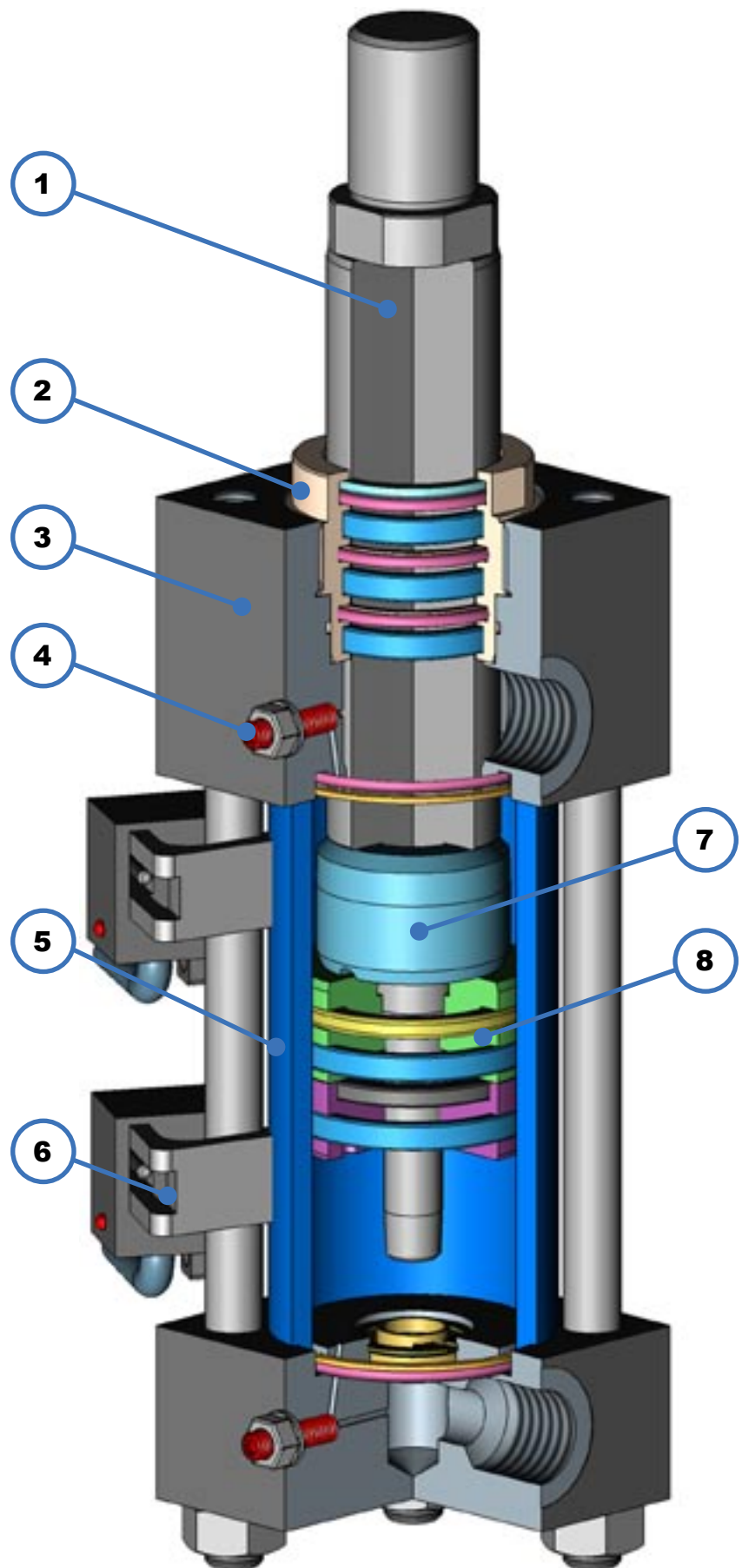
CONSTRUCTION CHARACTERISTICS

Designed for use in hard working conditions where maximum working reliability is required.

The standard model is equipped with seals in PTFE+Bronze to avoid the STICK-SLIP problems generally associated with rubber seals and to guarantee a prolonged durability and high running speeds.

O-Rings are in Viton® to stand high temperatures.

All cylinders can be equipped with adjustable magnetic proximity switches.

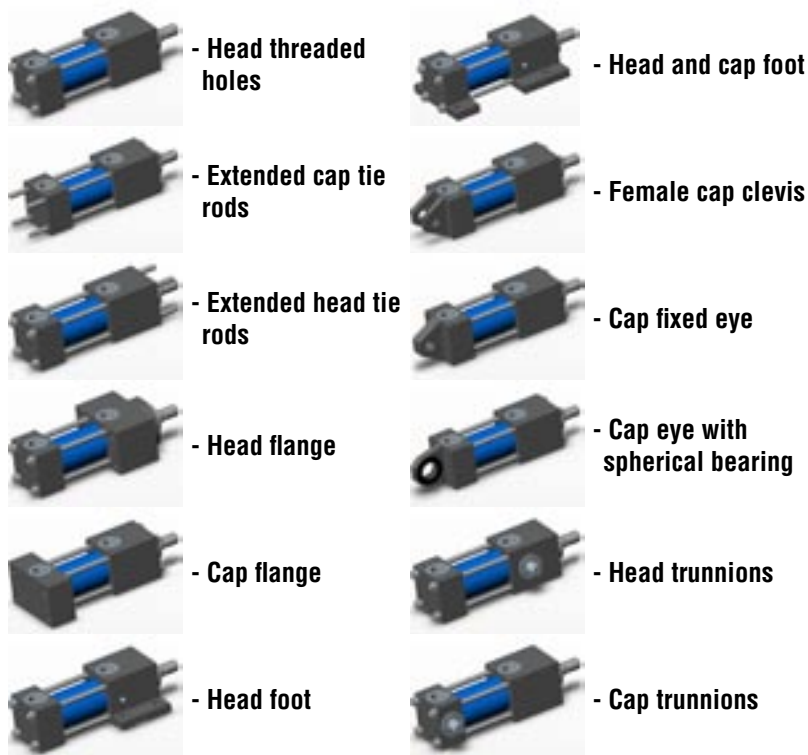


6020/2 compact 160 bar

General Characteristics

- **Max. working pressure:** up to 160 Bar
(for details see page B/3)
- **Bore :**
 - Magnetic version:** from Ø 25 to Ø 100 mm.
 - Normal version:** from Ø 25 to Ø 200 mm.
- **Rod diameter :** 12 ÷ 140 mm.
- **Stroke :** 20 ÷ 1500 mm.
- **Working temperature:**
 - Normal version:** from -20°C to + 120°C
 - Magnetic version:** from -20°C to + 80°C

POSSIBLE CLAMPINGS (for details see pages B/6 ÷ B/11).



MAXIMUM WORKING PRESSURE AND FLOW

Ø Bore	Pressure Kg/cm ²				Flow l/min.	
	Magnetic without cushioning	Magnetic with cushioning	Non-magnetic without cushioning	Non-magnetic with cushioning	Without cushioning	With cushioning
25	160	160	160	160	2	10
32	160	160	160	160	3	15
40	160	160	160	160	7	20
50	160	120	160	140	10	30
63	160	90	160	140	15	40
80	140	90	160	120	25	50
100	140	90	160	120	40	70
125			150	120	80	150
160			150	120	120	
200			140	110	180	

MAXIMUM PISTON SPEED

Ø Bore	25	32	40	50	63	80	100	125	160	200
Speed m/sec.	0,8					0,6			0,4	

- The maximum impact speed between the piston and the heads, where a cushioning system has not been adopted, must never exceed 0.1 m/sec.
- As the cylinder will be operating at high speeds, check the maximum impact speed in relation to the mass and pressure (see page B/12).



ORDER COMPILATION SYMBOLS

(see page B/5)

Bore	025	032	040	050	063	080	100	125	160	200
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(see page B/5)

Rod	012	014	018	022	028	036	045	056	070	090
	018	022	028	036	045	056	070	090	110	140

(see pages B/6 ÷ B/11)

Clampings style	A	B	C	D	E	F
	G	H	I	L	J	K

(see page B/12)

Cushioning or bleeder	0	1	2	3
	4	5	6	

(see page B/13)

Type of ports	G	M	N	O
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CB 032 022 C 0 G H G M 0125,0

V160C

(see page B/14 - B/15)

A	B	C	D	E	G	H	I	Position of ports
L	M	N	O	P	Q	T	U	

(see pages B/16 ÷ B/17)

A	E	F	Rod end style
G	H	I	

(see pages B/16 ÷ B/17)

M	N	Version
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(see pages B/5)

....	Stroke
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Hydraulic cylinders-ISO 6020/2 compact 160 bar

BORE AND STROKE (expressed in mm.)

ORDER CODE : **CB** **032** **022** **0125,0**

THRUST (P) and TRACTION FORCE (T) in Kg.

∅ Bore	∅ Rod	80 bar		100 bar		125 bar		160 bar	
		P	T	P	T	P	T	P	T
025	012	393	302	491	378	613	472	785	604
	018		189		236		295		378
032	014	643	520	804	650	1005	812	1286	1040
	022		339		424		530		678
040	018	1005	801	1256	1002	1570	1252	2010	1603
	028		512		641		801		1025
050	022	1570	1266	1963	1583	2453	1978	3140	2532
	036		756		945		1181		1512
063	028	2493	2000	3116	2500	3895	3125	4985	4000
	045		1221		1526		1908		2442
080	036	4019	3205	5024	4007	6280	5008	8038	6411
	056		2050		2562		3203		4100
100	045	6280	5008	7850	6260	9813	7825	12560	10017
	070		3203		4004		5004		6406
125	056	9813	7843	12266	9804	15332	12255	-	-
	090		4726		5907		7384		-
160	070	16077	13000	20096	16250	25120	20312	-	-
	110		8478		10598		13247		-
200	090	25120	20033	31400	25042	39250	31302	-	-
	140		12811		16014		20018		-

Stroke in mm. (stroke tolerance + 0,5^{mm.})

ALL STROKES ARE AVAILABLE BY REQUEST. THE TABLE BELOW SHOWS THE MINIMUM, MAXIMUM AND STANDARD STROKES.

∅ BORE	0020,0	0050,0	0080,0	0100,0	0125,0	0160,0	0200,0	0250,0	0300,0	0350,0	0400,0	0500,0	0600,0	0700,0	0800,0	0900,0	1000,0	1200,0	1400,0	1500,0	
25																					
32																					
40																					
50																					
63																					
80																					
100																					
125																					
160																					
200																					

For cylinders with special strokes, the guide spacer is recommended. In case, please contact our technical department.

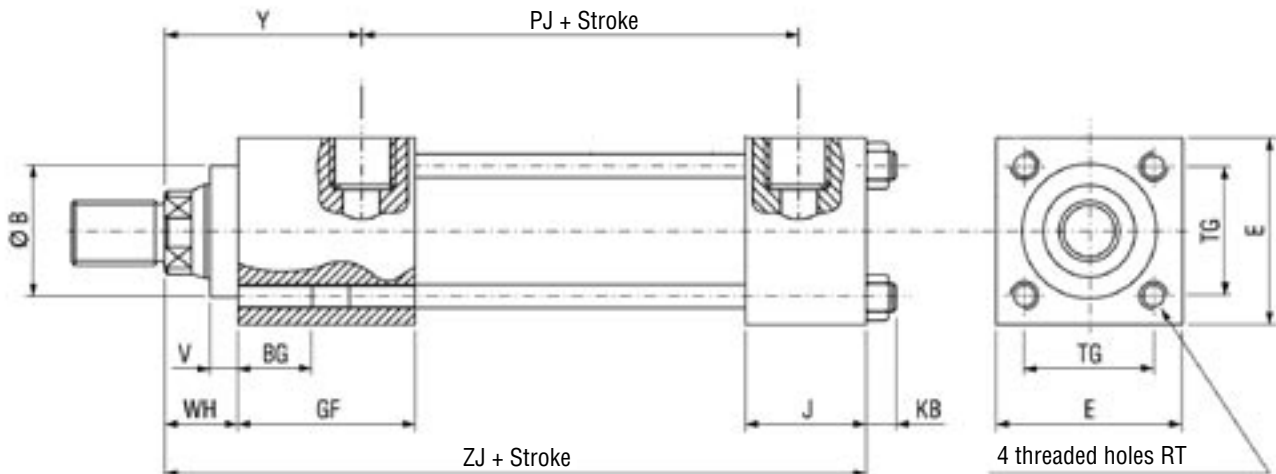
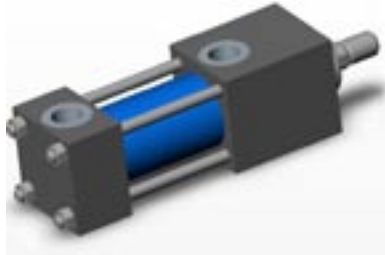
Hydraulic cylinders-ISO 6020/2 compact 160 bar

CLAMPING STYLE

ORDER CODE : **CB** **C**

C

BASE CYLINDER - HEAD THREADED HOLES (4) – ISO MX5



ALSO AVAILABLE WITH DOUBLE ROD. FOR FURTHER INFORMATION, PLEASE CONTACT OUR TECHNICAL DEPARTMENT.

Ø Bore	Ø Rod	Ø B f 9	V	BG	E	GF	J	KB	PJ+	RT	TG Js 13	WH	Y	ZJ+
25	12	24	7	12	40	48	24	8	51	M5×0,8	28,3	15	51	114
	18	30												
32	14	26	8	15	46	48	25	10	55	M6×1	33,2	25	60,5	128
	22	34												
40	18	30	8	20	60	53	37	12	68	M8×1,25	41,7	25	63	153
	28	42												
50	22	34	9	25	75	59	37	16	72	M12×1,75	52,3	25	67	159
	36	50												
63	28	42	11	25	90	60	37	16	74	M12×1,75	64,3	32	74,5	168
	45	60												
80	36	50	9	30	115	69	44	20	86	M16×2	82,7	31	80	190
	56	72												
100	45	60	9	30	127	72	45	20	93	M16×2	96,9	35	86	203
	70	88												
125	56	72	10	30	165	72	45	26	107	M22×2,5	125,9	35	86	216
	90	108												
160	70	88	12	30	210	83	58	33	132	M27×3	154,9	32	90	250
	110	133												
200	90	108	12	40	250	99	76	35	159	M30×3,5	190,2	32	99	299
	140	163												

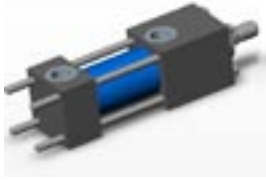
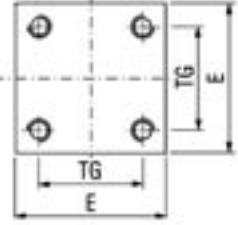
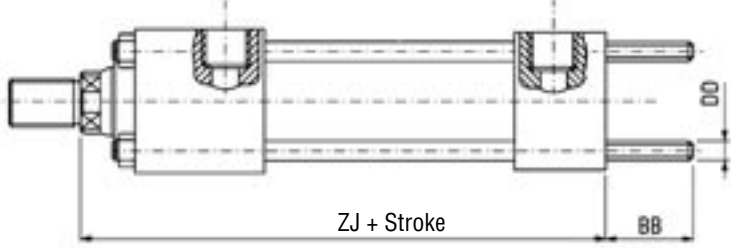
Hydraulic cylinders-ISO 6020/2 compact 160 bar

CLAMPING STYLE

ORDER CODE : **CB** **A**

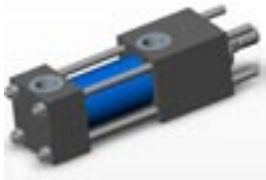
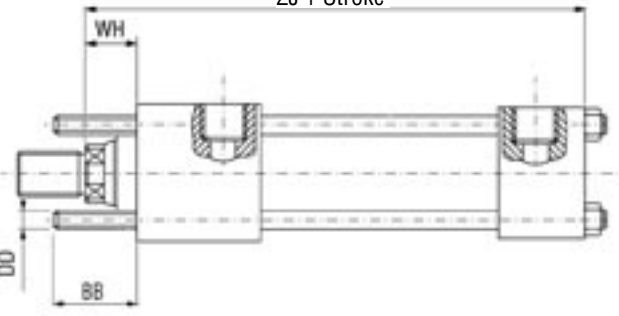
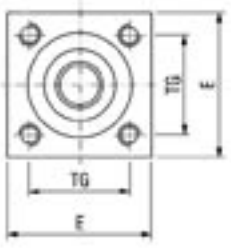
A

EXTENDED CAP
TIE RODS – ISO MX2

B

EXTENDED HEAD
TIE RODS – ISO MX3

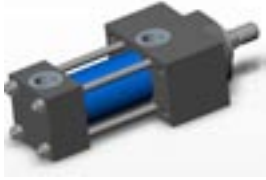
Ø Bore	Ø Rod	BB	DD	E	WH	TG Js 13	ZJ +
25	12	19	M5×0,8	40	15	28,3	114
	18						
32	14	24	M6×1	46	25	33,2	128
	22						
40	18	35	M8×1	60	25	41,7	153
	28						
50	22	46	M12×1,25	75	25	52,3	159
	36						
63	28	46	M12×1,25	90	32	64,3	168
	45						
80	36	59	M16×1,5	115	31	82,7	190
	56						
100	45	59	M16×1,5	127	35	96,9	203
	70						
125	56	81	M22×1,5	165	35	125,9	216
	90						
160	70	92	M27×2	210	32	154,9	250
	110						
200	90	115	M30×2	250	32	190,2	299
	140						

Hydraulic cylinders-ISO 6020/2 compact 160 bar

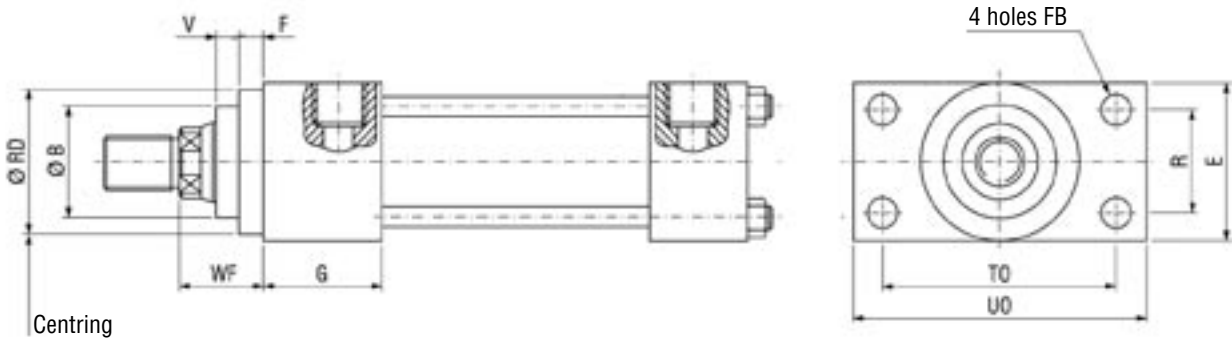
CLAMPING STYLE

ORDER CODE : **CB** **D**

D

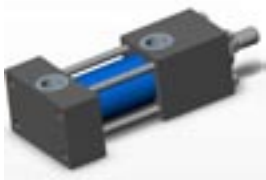


HEAD FLANGE
ISO ME5

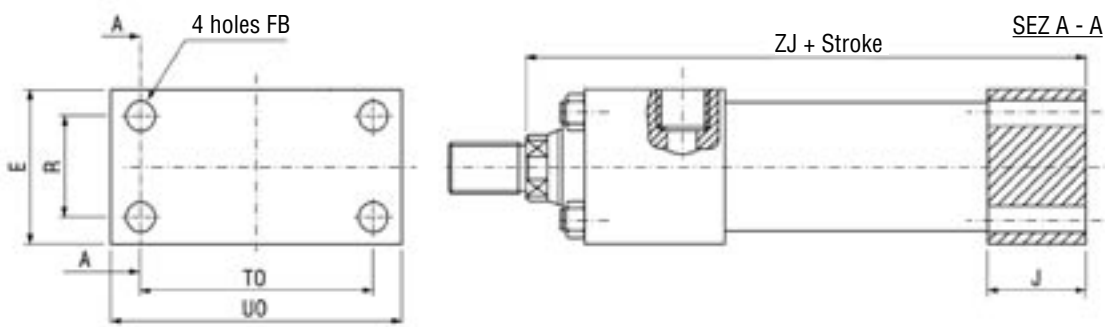


Centring

E



CAP FLANGE
ISO ME6



Ø Bore	Ø Rod	Ø B f 9	V	E	F	FB H 13	G	J	R Js 14	Ø RD* f 10	TO Js 14	UO	WF	ZJ +
25	12	24	7	40	10	5,5	38	24	27	44	51	64	25	114
	18	30												
32	14	26	9	46	10	6,5	38	25	33,2	50	58	70	35	128
	22	34												
40	18	30	8	60	10	11	43	37	41	57	87	109	35	153
	28	42												
50	22	34	9	75	16	13,5	43	37	52	70	105	128	41	159
	36	50												
63	28	42	11	90	16	13,5	44	37	65	76	117	142	48	168
	45	60												
80	36	50	9	115	20	17	49	44	83	89	149	180	51	190
	56	72												
100	45	60	9	127	22	17	50	45	97	110	162	190	57	203
	70	88												
125	56	72	10	165	22	22	50	45	126	130	208	247	57	216
	90	108												
160	70	88	12	210	25	26	58	58	155	160	253	300	57	250
	110	133												
200	90	108	12	250	25	32	74	76	190	200	300	350	57	299
	140	163												

* Dimension non ISO 6020/2


B/8

Hydraulic cylinders-ISO 6020/2 compact 160 bar

CLAMPING STYLE

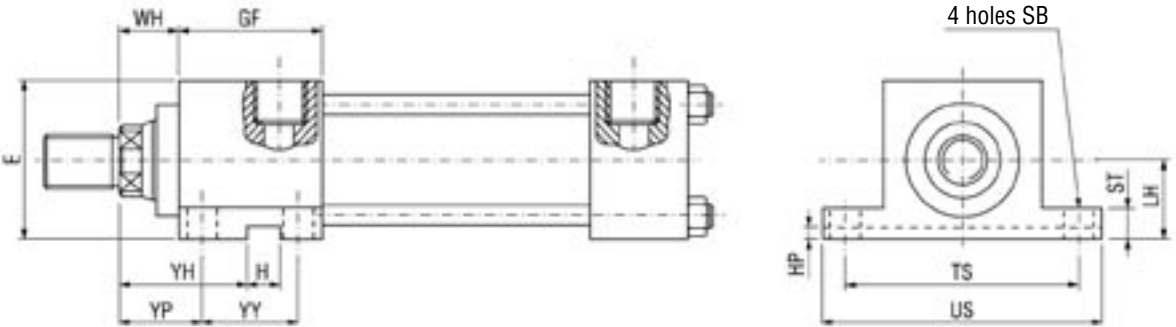
ORDER CODE : **CB** **F**

F

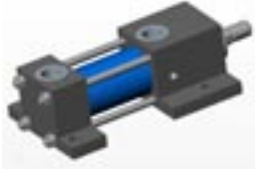


Available up to bore 100 mm only.

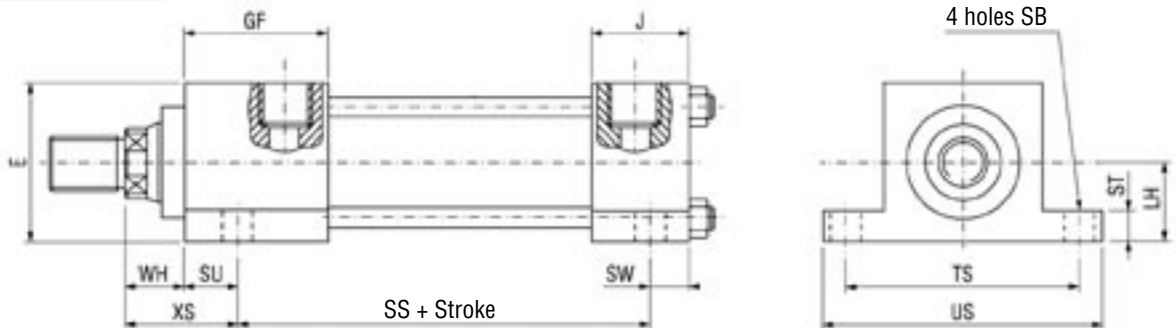
HEAD FOOT
(Non ISO mounting style)



G



HEAD AND CAP
FOOT – ISO MS2

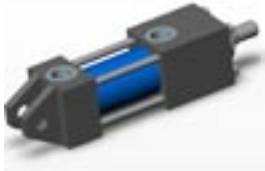
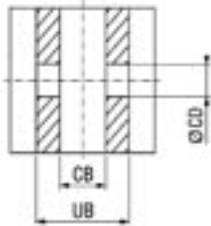
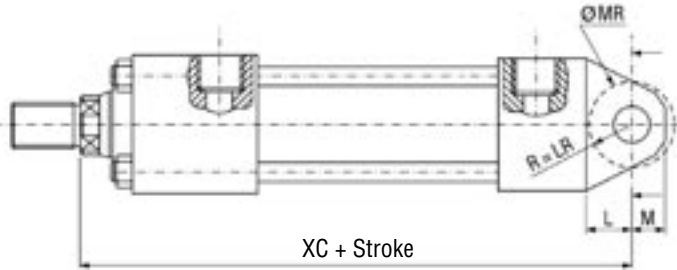

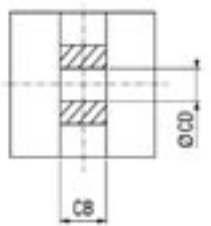
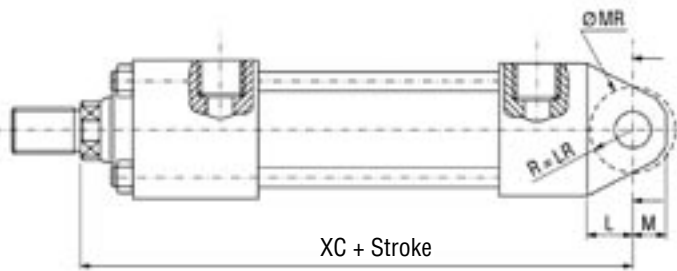
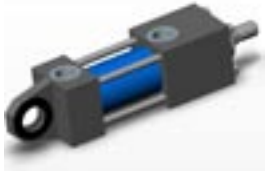
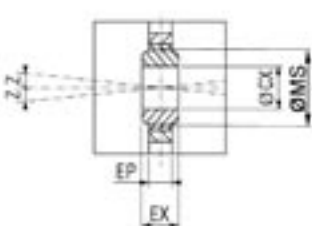
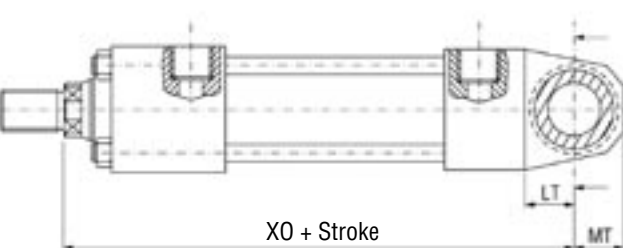


Ø Bore	Ø Rod	E	GF	J	H	HP	LH	SB	SU	SW	ST	TS	US	XS	SS+	WH	YH	YY	YP
25	12	40	48	24	12	2,5	19	6,5	18	8	8	54	72	33	73	15	38	32	23
	18																		
32	14	46	48	25	12	2,5	22	8,5	20	10	12	63	84	45	73	25	50	32	34,5
	22																		
40	18	60	53	37	12	4	31	11	20	10	12	83	103	45	98	25	51	35	34
	28																		
50	22	75	59	37	12	5,5	38	11	29	13	19	102	127	54	92	25	57	40	35
	36																		
63	28	90	59	37	16	6	44	14	32	17	24	124	160	65	86	33	57	38	43
	45																		
80	36	115	69	44	16	6	57	18	37	17	26	149	185	68	105	31	59	39	46
	56																		
100	45	127	72	45	16	6	63	18	44	22	32	172	216	79	102	35	67	40	52
	70																		
125	56	165	72	45	-	-	82	26	44	22	32	210	254	79	115	35	-	-	-
	90																		
160	70	210	83	58	-	-	101	26	54	29	38	260	318	86	135	32	-	-	-
	110																		
200	90	250	99	76	-	-	122	32	74	35	40	311	381	106	158	32	-	-	-
	140																		

Hydraulic cylinders-ISO 6020/2 compact 160 bar

CLAMPING STYLE

ORDER CODE : **CB** **H**

H			
FEMALE CAP CLEVIS – ISO MP1			XC + Stroke
I			
CAP FIXED EYE – ISO MP3			XC + Stroke
J			
CAP EYE WITH SPHERICAL BEARING – ISO MP5			XO + Stroke

Z : minimum tilting angle 3°

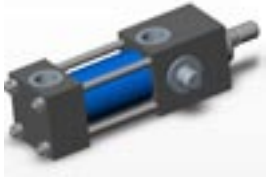
Ø Bore	Ø Rod	CB A 16	CD h 9	L	LR min.	M	MR max.	UB	XC+	CX h 7	EP h 14	EX h 12	LT	MS max.	MT	XO+
25	12	12	10	13	12	10	24	24	127	12	8	10	16	18	15	130
	18															
32	14	16	12	19	17	11	34	32	147	16	10	14	21	25	18	148
	22															
40	18	20	14	19	17	14	34	40	172	20	13	16	25	29	23	178
	28															
50	22	30	20	32	29	20	58	60	191	25	12	20	31	35,5	31	190
	36															
63	28	30	20	32	29	20	58	60	200	30	18	22	38	40,7	35	206
	45															
80	36	40	28	39	34	28	68	80	229	40	22	28	48	53	43	238
	56															
100	45	50	36	54	50	36	100	100	257	50	28	35	58	66	55	261
	70															
125	56	60	45	57	53	45	106	120	273	60	38	44	72	80	72	288
	90															
160	70	70	56	63	59	59	118	140	313	80	47	55	92	105	90	342
	110															
200	90	80	70	82	78	70	156	160	381	100	57	70	116	130	110	415
	140															

Hydraulic cylinders-ISO 6020/2 compact 160 bar

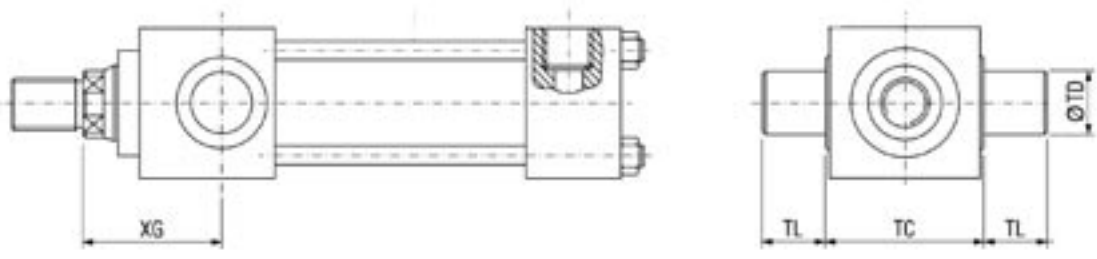
CLAMPING STYLE

ORDER CODE : **CB** **K**

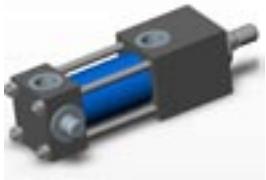
K



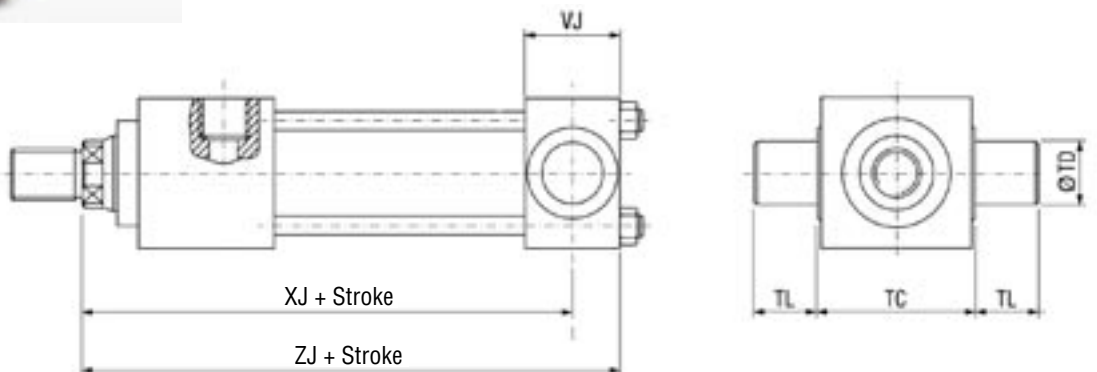
HEAD TRUNNIONS – ISO MT1



L



CAP TRUNNIONS – ISO MT2



∅ Bore	∅ Rod	TC H 14	TD f 9	TL	XJ+	XG	VJ	ZJ+
25	12	38	12	10	101	44	24	114
	18							
32	14	44	16	12	115	54	25	128
	22							
40	18	63	20	16	134	57	37	153
	28							
50	22	76	25	20	140	64	37	159
	36							
63	28	89	32	25	149	70	37	168
	45							
80	36	114	40	32	168	76	44	190
	56							
100	45	127	50	40	185,5	76	55	213
	70							
125	56	165	50*	50	198,5	75	55	226
	90							
160	70	203	56*	63	222	75	60	252
	110							
200	90	241	75*	80	263	85	80	303
	140							

* Dimension non ISO 6020/2

Hydraulic cylinders-ISO 6020/2 compact 160 bar

CYLINDER CUSHIONING

ORDER CODE : **CB** **0**

CHARACTERISTICS	ORDER CODE
No cushioning or air bleed	0
Head cushioning	1
Cap cushioning	2
Head and cap cushioning	3
Head air bleed	4
Cap air bleed	5
Head and cap air bleed	6

Cushion length

Ø Bore	Head	Cap
25	16	16
32	17	17
40	20	20
50	20	20
63	22	22
80	26	26
100	26	26
125	28	28
160	30	32
200	32	32

The cushioning screw also works as air bleeder.

Before establishing the bore of a cushioned cylinder V160C, it is advisable to verify whether the maximum amount of energy absorbed is commensurate with the values shown in the cushioning performance diagram.

INSPECTION PARAMETERS FOR CUSHIONED CYLINDERS

E = energy in joules

P = oil delivery pressure in bar

V = Max. speed in m/sec.

m = total mass in Kg.

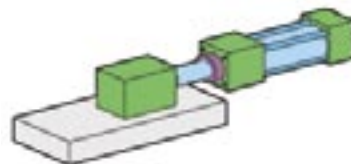
g = acceleration due to gravity in 9,81 m/sec².

A = Traction

B = Thrust

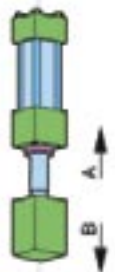
CYLINDER IN HORIZONTAL

$$E = \frac{1}{2} mV^2$$



FRONT SIDE (rod forward)

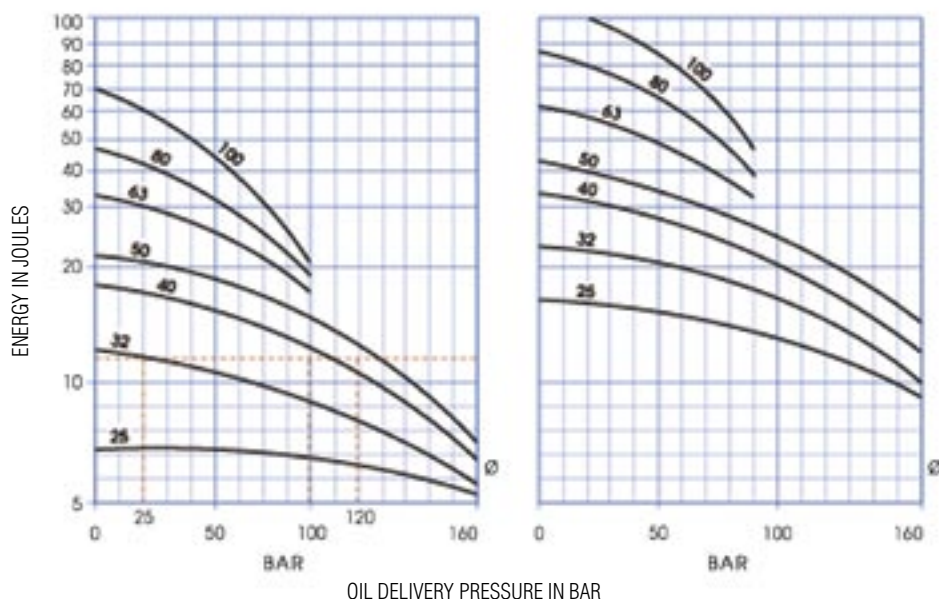
CYLINDER IN VERTICAL



$$EA = \frac{1}{2} mV^2 - mg \times 0,02$$

$$EB = \frac{1}{2} mV^2 + mg \times 0,02$$

BACK SIDE (rod backward)



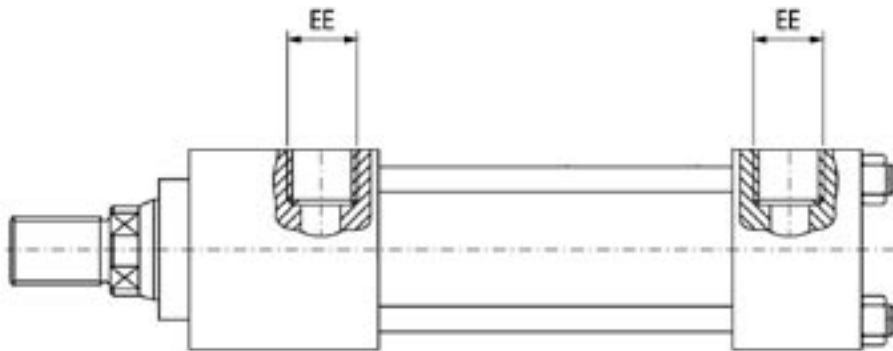
FOR THE MAX. WORKING PRESSURE, SEE PAGE B/3

Hydraulic cylinders-ISO 6020/2 compact 160 bar

TYPE OF PORTS

ORDER CODE : **CB** **G**

CODE	O	G	M	N
Type of ports	O-Ring*	BSP (Gas)	Metric	NPT



For other delivery ports-related dimensions, see page B/6.

EE				
Ø Bore	O-Ring*	BSP (Gas)	Metric	NPT
25	-	G 1/4	M14×1,5	1/4
32	-	G 1/4	M14×1,5	1/4
40	-	G 3/8	M18×1,5	3/8
50	-	G 1/2	M22×1,5	1/2
63	-	G 1/2	M22×1,5	1/2
80	-	G 3/4	M27×2	3/4
100	-	G 3/4	M27×2	3/4
125	-	G 3/4	M27×2	3/4
160	-	G 1	M33×2	1
200	-	G 1-1/4	M42×2	1-1/4

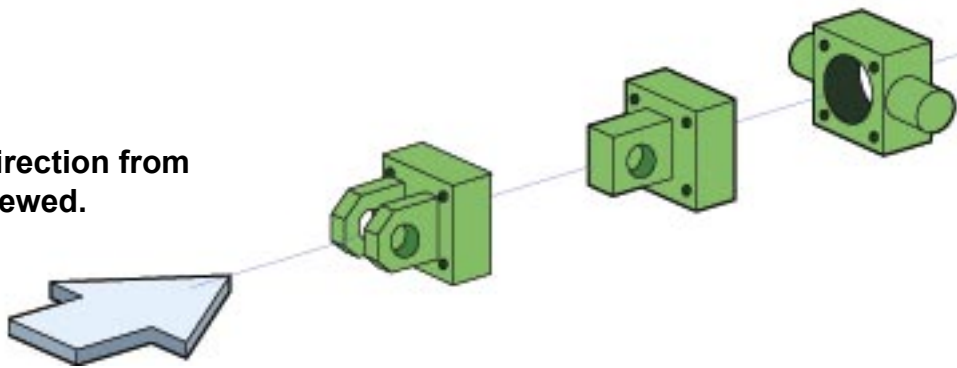
* For the ports with O-Rings (only available with mounting style « G ») please contact our technical department.

Hydraulic cylinders-ISO 6020/2 compact 160 bar

OIL DELIVERY PORT POSITION AND CUSHIONING ADJUSTMENT SCREWS

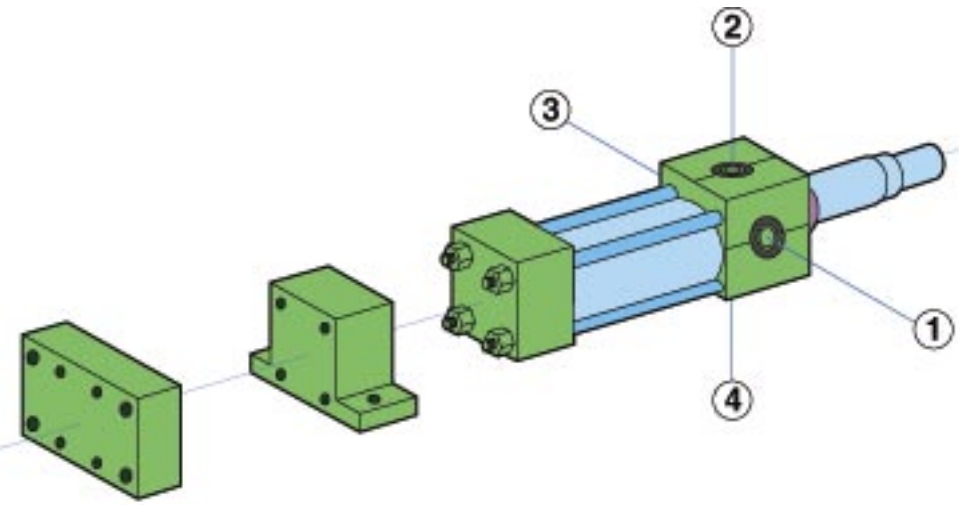
ORDER CODE : **CB** **H**

The arrow shows the direction from which the cylinder is viewed.



Clamping style		A - B - C - H - I - J												D - E																			
Ports	Head	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4
	Cap	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Adjustment screws	Head	3	3	3	3	4	4	4	4	1	1	1	1	2	2	2	2	2	2	2	2	4	4	4	4	2	2	4	2	2	2	2	2
	Cap	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	2	4	2	2	2	4	2	2	2	4	4	2	2	4	2	2
ORDER CODE		H	A	B	C	D	G	I	L	N	O	M	P	Q	T	U	E	H	A	B	C	D	G	I	L	N	O	M	P	Q	T	U	E

Hydraulic cylinders-ISO 6020/2 compact 160 bar



Clamping style		F - G																K				L												
Ports	Head	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	2	2	2	2	4	4	4	4	1	1	2	2	3	3	4	4	
	Cap	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	2	4	2	4	2	4	2	4	
Adjustment screws	Head	3	3	3	3	1	1	1	1	1	1	1	1	1	2	2	2	2	4	4	4	4	2	2	2	2	3	3	4	4	1	1	2	2
	Cap	3	1	1	2	3	1	1	2	3	1	1	2	3	1	1	2	3	4	1	2	3	4	1	2	4	2	4	2	4	2	4	2	
ORDER CODE		H	A	B	C	D	G	I	L	N	O	M	P	Q	T	U	E	D	G	I	L	Q	T	U	E	A	C	G	L	O	P	T	E	

• Not available with mounting style « F ».

☒ Cannot be connectable with elbow joints.

Hydraulic cylinders-ISO 6020/2 compact 160 bar

ROD END STYLES

ORDER CODE :

CB

✓

✓

✓

✓

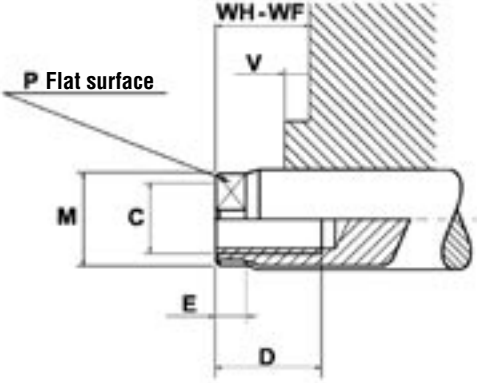
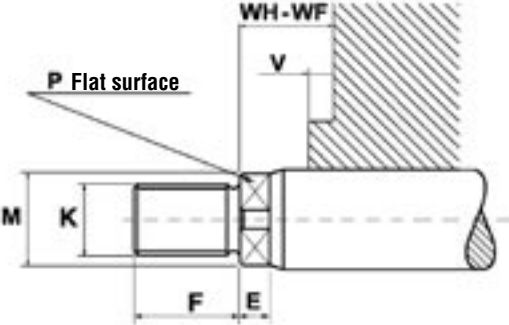
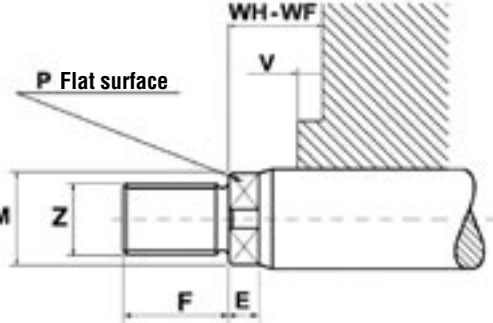
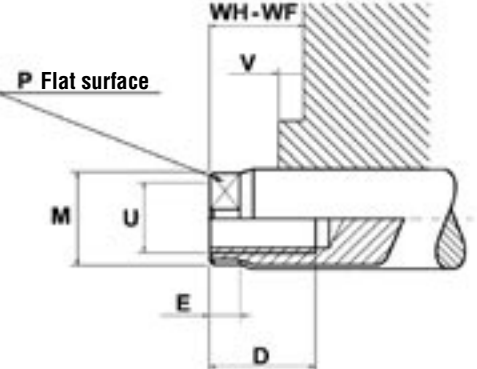
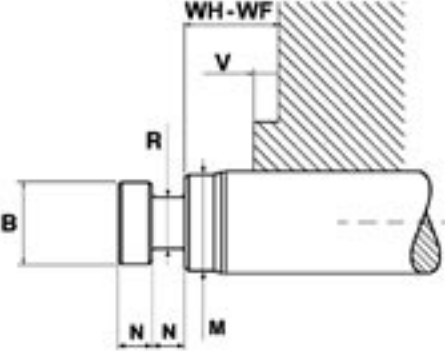
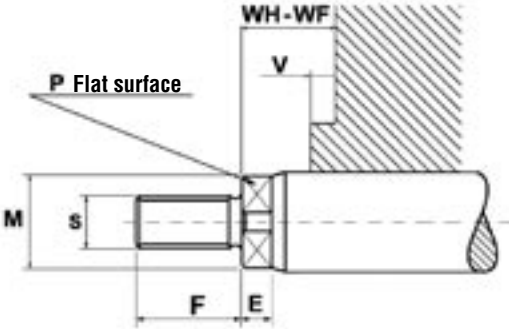
✓

✓

G

✓

✓

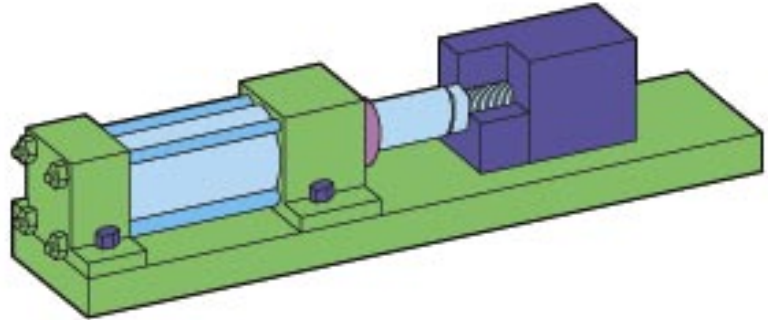
<p>G</p> <p>METRIC FEMALE THREAD</p>	<p>STANDARD</p> 	<p>A</p> <p>METRIC MALE THREAD</p> 
<p>H</p> <p>UNF-UNEF MALE THREAD</p>		<p>I</p> <p>UNF-UNEF FEMALE THREAD</p> 
<p>F</p> <p>FLOATING JOINT</p>	<p>For bores over \varnothing 125, 160, 200 mm. please contact our technical department.</p> 	<p>E</p> <p>SMALL MALE THREAD (for accessory)</p> 

Hydraulic cylinders-ISO 6020/2 compact 160 bar

The end and the length of the rod can be supplied differently from the options shown in this catalogue. In such a case, the customer should specify the code "S" (special) when placing the order, and forward the required dimensions of the rod accompanied by a sketch.

"If one of the rigid MOUNTING STYLE is chosen (A, B, C, D, E, F, G) it is important to make a careful assessment of the most suitable type of coupling between the piston rod and the part to be actuated. This is due to the fact that technical and practical considerations (such as inclined

THREADED ROD

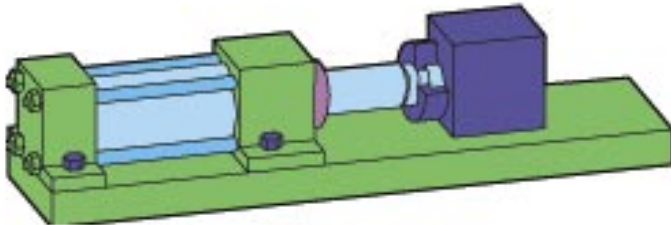


planes, die pins, die cheeks, extractor carriages, etc.) frequently make it impossible to achieve a correct alignment between the piston rod movement axis and the actuated mechanical part.

A simple corrective system is to fit a floating joint rod end "F" which, unlike a threaded attachment system, allows a radial clearance between the rod and the moving part.

As an alternative, you might use a female floating joint on the female thread "G"; in such a case, see the page concerning the ACCESSORIES.

FLOATING JOINT



Ø Bore	Ø Rod	B	D	E	F	ØM	N	P	R	S	V	K	Z	WH	WF*	C	U
25	12	11	15	5	14	11	5	10	6,5	-	7	M10×1,25	3/8-24	15	25	M8×1,25	5/16-24
	18	16	18	6	18	17	7	15	10	M10×1,25	M14×1,5	9/16-18	M10×1,5			3/8-24	
32	14	12	15	8	16	13	6	11	8	-	9	M12×1,25	1/2-20	25	35	M8×1,25	5/16-24
	22	18	20		22	21	8	18	11	M12×1,25	14	M16×1,5	5/8-18			M12×1,75	1/2-20
40	18	16	18	6	18	17	7	15	10	-	8	M14×1,5	9/16-18	25	35	M10×1,5	3/8-24
	28	22	30	8	28	27	10	24	14	M14×1,5	13	M20×1,5	3/4-16			M20×2,5	3/4-16
50	22	18	20	8	22	21	8	18	11	-	9	M16×1,5	5/8-18	25	41	M12×1,75	1/2-20
	36	28	40	11	36	35	12,5	32	18	M16×1,5		M27×2	1-12			M27×3	1-12
63	28	22	30	8	28	27	10	24	14	-	11	M20×1,5	3/4-16	32	48	M20×2,5	3/4-16
	45	35	50	12	45	44	16	40	22	M20×1,5	15	M33×2	1-1/4-12			M33×3,5	1-1/4-12
80	36	28	40	11	36	35	12,5	32	18	-	9	M27×2	1-12	31	51	M27×3	1-12
	56	45	50	14	56	54	20	50	28	M27×2	11	M42×2	1-11/16-18			M42×2	1-11/16-18
100	45	35	50	12	45	44	16	40	22	-	9	M33×2	1-1/4-12	35	57	M33×3,5	1-1/4-12
	70	56	60	15	63	68	25	•	35	M33×2	10	M48×2	1-7/8-16			M48×2	1-7/8-16
125	56	-	-	14	56	54	-	50	-	-	10	M42×2	1-11/16-18	35	57	M42×2	1-11/16-18
	90	-	-	18	85	88	-	•	-	M42×2	11	M64×3	2-1/2-16			-	-
160	70	-	-	15	63	68	-	•	-	-	12	M48×2	1-7/8-16	32	57	M48×2	1-7/8-16
	110	-	-	18	95	108	-	•	-	M48×2		-	M80×3			3-1/8-16	-
200	90	-	-	18	85	88	-	•	-	-	12	M64×3	2-1/2-16	32	57	-	-
	140	-	-		112	136	-	•	-	M64×3		-	M100×3			3-7/8-16	-

* dimensions with fixing type « D » ✘ With mounting styles « F » or « G » the quote is 33

• The rod is made with 3 equidistant holes and not with the standard key-way.

Hydraulic cylinders-ISO 6020/2 compact 160 bar

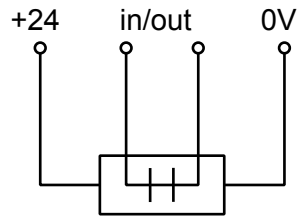
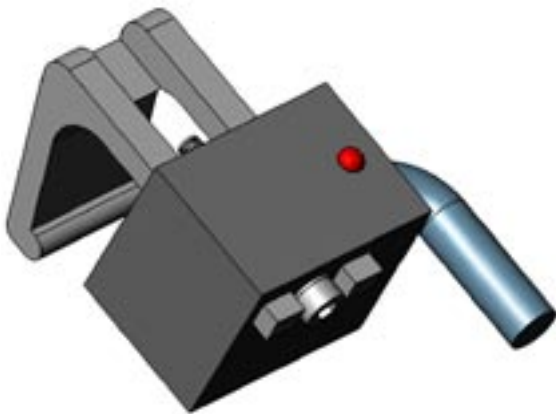
CYLINDER VERSION

ORDER CODE : **CB** ✓ ✓ ✓ ✓ ✓ ✓ ✓ **M** ✓

M	WITH PRESET FOR MAGNETIC SWITCHES (Available only to bore 100 mm.)
N	WITHOUT PRESET FOR MAGNETIC SWITCHES

MAGNETIC PROXIMITY SWITCH (to be ordered separately)

ORDER CODE : **MSU1**



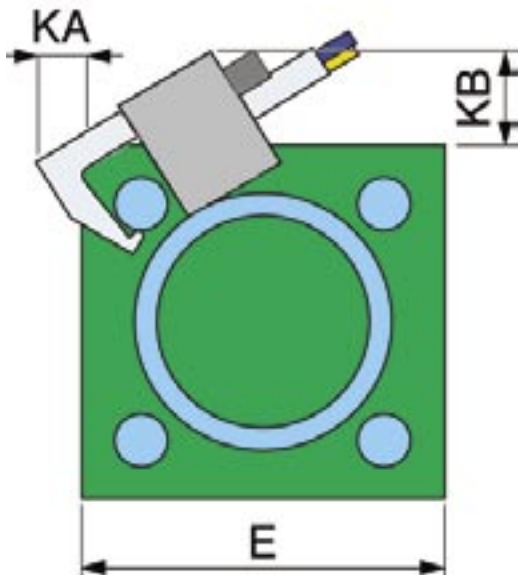
Wire colours

Brown = +24V DC

Blue = 0V DC

Black = in/out contact

White = in/out contact



Ø Bore	E	KA	KB
25	40	9,2	23,2
32	46	9	23,5
40	60	8	21
50	75	7,7	18,5
63	90	7	18
80	115	5,2	14,7
100	127	6,7	16,5

Hydraulic cylinders-ISO 6020/2 compact 160 bar

MAGNETIC PROXIMITY SWITCH (to be ordered separately)

TECHNICAL DATA		
Dimensions	mm.	39×24×28
Contact	N.O.	Relay normally open
Voltage rating	V	from 18 to 30 ripple Max. 10%
Max. switching voltage	V	300 DC
Max. current (resistive load)	mA	800
Max. switching power	W	20
Extraflex armoured cable. With transparent PVC external sheath	mm.	Ø6×3000
Cable length	mt.	3
Max. switching frequency	Hz	60
24 volt disconnection delay	msec.	15
Cable outlet with mechanical clamp	-	right or left positioned
Mounting on tie rods	-	with bracket
Working temperature	°C	-20 / +80
Signal	Led	red
Degree of protection	-	IP 67 (DIN 40050)
Hysteresis	mm.	0,6 typical ±0,02
Repeatability	mm.	0,05 ±0,02
Max. flow speed	mt/sec.	15
Sensor type	-	magnet-resistive
Electric life at rated power (operations)	n°	10.000.000

Minimum stroke regulation in mm.

Ø Alesaggio	SWITCH MOUNTING 1	SWITCH MOUNTING 2	SWITCH MOUNTING 3
25	45	65	20
32	45	65	20
40	45	56	20
50	45	47	20
63	45	10	20
80	45	10	20
100	45	10	20

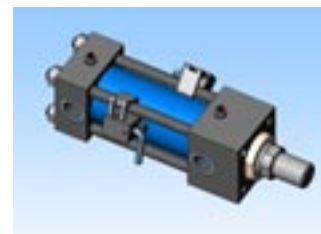
SWITCH MOUNTING 1



SWITCH MOUNTING 2



SWITCH MOUNTING 3



Hydraulic cylinders-ISO 6020/2 compact 160 bar

ACCESSORIES

ORDER CODE :

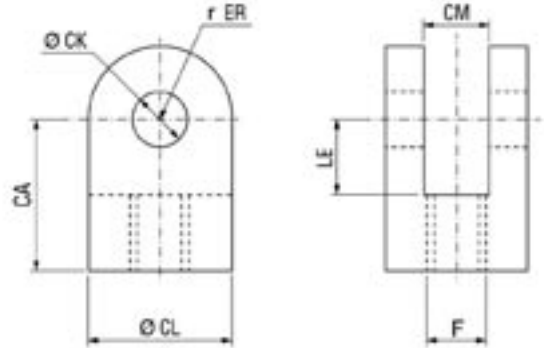
RCA

10×1,25

Thread pitch F (Metric)

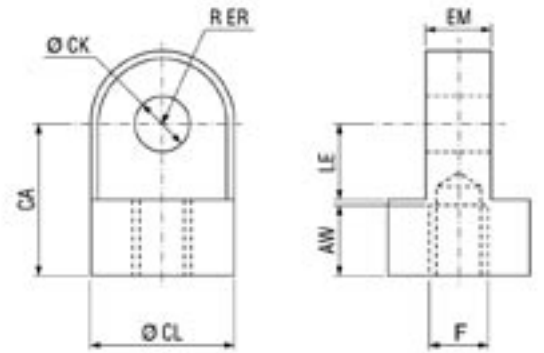
RCA

ROD CLEVIS



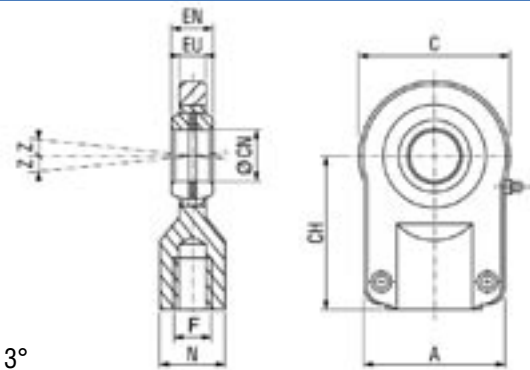
PRA

PLAIN ROD EYE



REA

ROD EYE WITH SPHERICAL BEARING

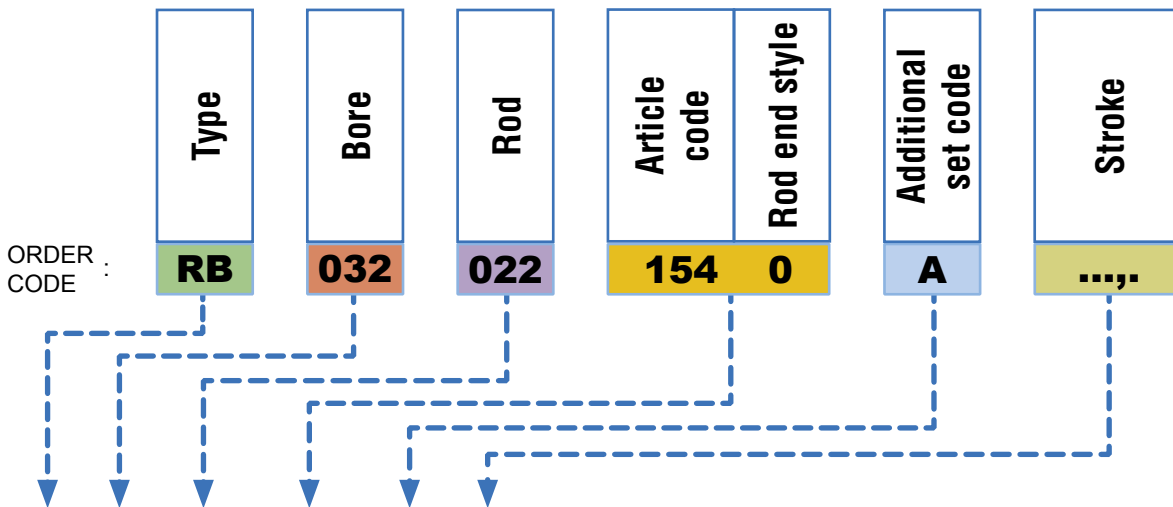


Z : minimum tilting angle 3°

	A	AW	C	CA Js13	CH Js13	CK h9	CL	CN h7	EM Js13 CM A16	EN h12	ER max.	EU h13	F	LE	N
10×1,25	40	14	40	32	42	10	28	12	12	10	12,5	8	M10×1,25	13	17
12×1,25	45	16	45	36	48	12	34	16	16	14	17	11	M12×1,25	19	21
14×1,5	55	18	55	38	58	14	45	20	20	16	19	13	M14×1,5	19	25
16×1,5	62	22	65	54	68	20	62	25	30	20	29	17	M16×1,5	32	30
20×1,5	80	28	80	60	85	20	62	30	30	22	29	19	M20×1,5	32	36
27×2	90	36	100	75	105	28	76	40	40	28	38	23	M27×2	39	45
33×2	105	45	125	99	130	36	90	50	50	35	45	30	M33×2	54	55
42×2	134	56	160	113	150	45	120	60	60	44	53	38	M42×2	57	68
48×2	156	63	205	126	185	56	140	80	70	55	59	47	M48×2	63	78
64×2	190	85	240	168	240	70	160	100	80	70	78	57	M64×3	83	100

Hydraulic cylinders-ISO 6020/2 compact 160 bar

SPARE PARTS



RB	...	...	6010	A		Rod seal kit	3
RB	...		6020	A		Pistol seal kit	7
RB	...	...	0310			Rod cartridge without seals	2
RB	...	...	0310	A		Rod cartridge with seals	2+3

RB	...		1912		...	Tube for magnetic cylinder	5
RB	...		1911		...	Tube for non-magnetic cylinder	5
RB	...		1510	A		Magnetic piston with seals and magnet ring	6+7+8
RB	...		1512	A		Non-magnetic piston with seals	6+7
RB	...		6050			Permanent magnet ring	8
RB	...		6030			O-Ring Viton® for integrated oil delivery	-
RB	...		2510	A		Screw with locknut for cushion adjustment	10

RB	...	...	110		...	Rod without cushioning	4
RB	...	...	113		...	Rod with cushioning	4
RB	...	...	154	A	...	Non-magnetic rod-piston group without cushioning	4+6+7
RB	...	...	156	A	...	Non-magnetic rod-piston group with cap cushioning	4+6+7
RB	...	...	155	A	...	Non-magnetic rod-piston group with head cushioning	4+6+7
RB	...	...	157	A	...	Non-magnetic rod-piston group with head and cap cushioning	4+6+7
RB	...	...	150	A	...	Magnetic rod-piston group without cushioning	4+6+7+8
RB	...	...	152	A	...	Magnetic rod-piston group with cap cushioning	4+6+7+8
RB	...	...	151	A	...	Magnetic rod-piston group with head cushioning	4+6+7+8
RB	...	...	153	A	...	Magnetic rod-piston group with head and cap cushioning	4+6+7+8

Rod end code.
This code must be
added to the rod or
piston/rod code.

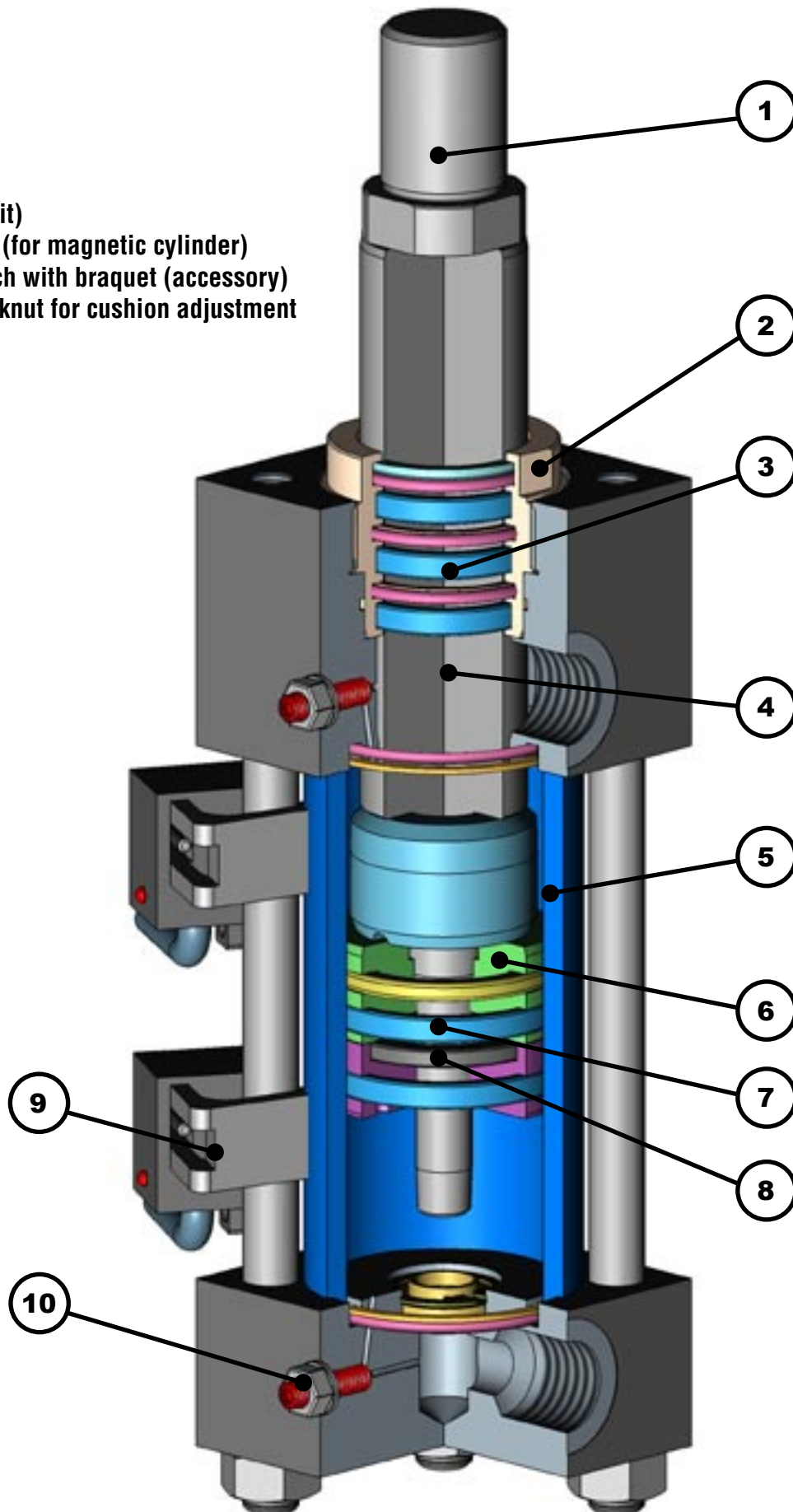
- 0
- 1
- 2
- 3
- 4
- 5
- 6

Rod end style type « A »	1
Rod end style type « G »	
Rod end style type « F »	
Rod end style type « E »	
Rod end style type « H »	
Rod end style type « I »	
Rod end style type « S » (special)	

		MSU1		Complete universal switch	9
--	--	------	--	---------------------------	---

Hydraulic cylinders-ISO 6020/2 compact 160 bar

- 1 Rod end
- 2 Rod cartridge
- 3 Rod seals (kit)
- 4 Rod
- 5 Tube
- 6 Piston
- 7 Piston seals (kit)
- 8 Piston magnet (for magnetic cylinder)
- 9 Magnetic switch with braquet (accessory)
- 10 Screw with locknut for cushion adjustment



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