



V230T

## *Mould Hydraulic Systems*

*Hydraulic cylinders - high temperature 230 bar*



# **V230T**

# Hydraulic cylinders-with tie rods

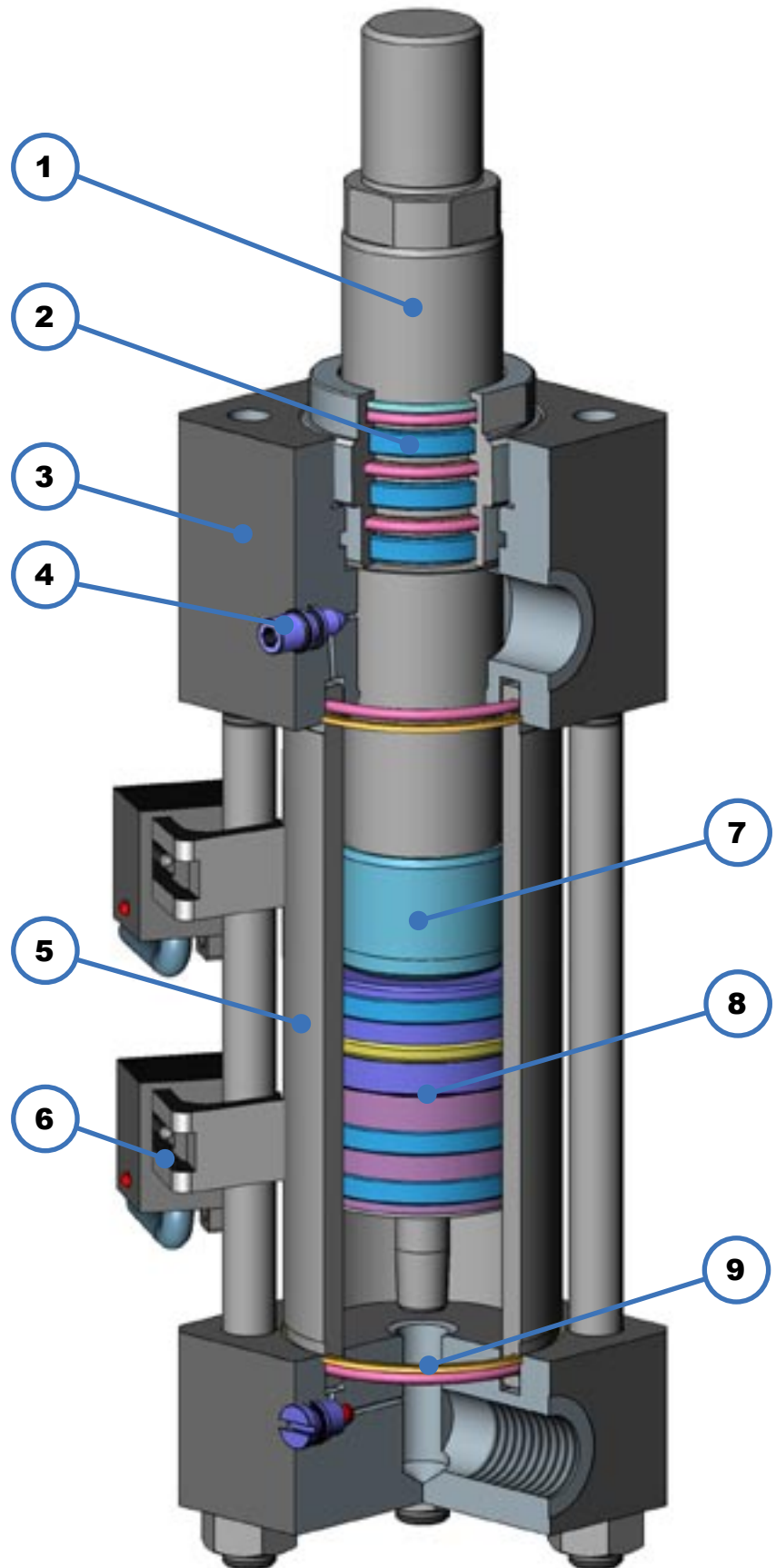
- ① Chrome-plated steel rod, hardened or tempered and polished. Thickness of chromium plating 20 µm and surface finish 0.4 µm Ra, for a longer durability of the seals.
- ② Rod cartridge with low friction seals; scrapers in PTFE+Bronze and O-Rings in Viton® for high temperatures.
- ③ Steel heads and mountings.
- ④ Cushioning adjustment screw.
- ⑤ Stainless steel tube, highly resistant to heat and pressure, with extensive mechanical properties. Inner low roughness finish for high running speeds.
- ⑥ Optional magnetic proximity switches with armoured cable (see pages I/16 ÷ B/17).
- 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.
- ⑨ O-Rings in Viton® and anti-extrusion rings between tube and head to ensure a perfect seal in the event of pressure peaks.

## CONSTRUCTION CHARACTERISTICS

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

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

**All cylinders can be fitted with adjustable magnetic proximity switches.**

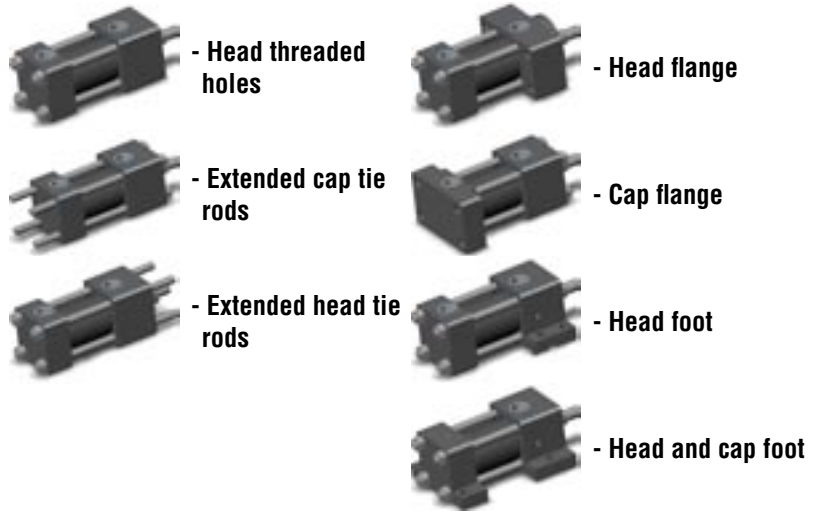


# s, for high temperatures 230 bar

## General Characteristics

- **Max. working pressure:** up to 230 bar  
(see table below)
- **Bore:** da Ø 32 a Ø 160 mm.
- **Rod diameter:** 14 ÷ 110 mm.
- **Stroke:** 20 ÷ 1100 mm.
- **Working temperature:**
  - Normal version:** from -20°C to + 160°C
  - Magnetic version :** from -20°C to + 80°C
- **Seal Kit :** in Viton® (standard)

## POSSIBLE CLAMPINGS (see pages I/6 ÷ I/9)



## MAXIMUM WORKING PRESSURE AND FLOW

Ø Bore	Pressure Kg/cm <sup>2</sup>		Flow l/min.	
	without cushioning	with cushioning	without cushioning	with cushioning
32	230	210	3	25
40	230	210	5	37,5
50	230	210	7	60
63	220	200	12	90
80	220	200	20	100
100	200	180	30	150
125	180	180	50	225
160	-	-	-	-

## MAXIMUM PISTON SPEED

Ø Bore	32	40	50	63	80	100	125	160
Speed m/sec.	0,5				0,3			

- 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 pages I/10).



# ORDER COMPILATION SYMBOLS

(see page I/5)

<b>Bore</b>	<b>032</b>	<b>040</b>	<b>050</b>	<b>063</b>	<b>080</b>	<b>100</b>	<b>125</b>	<b>160</b>
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(see page I/5)

<b>Rod</b>	<b>014</b>	<b>018</b>	<b>022</b>	<b>028</b>	<b>036</b>	<b>045</b>	<b>056</b>	<b>070</b>
	<b>022</b>	<b>028</b>	<b>028</b>	<b>036</b>	<b>045</b>	<b>056</b>	<b>070</b>	<b>110</b>
			<b>036</b>	<b>045</b>	<b>056</b>	<b>070</b>	<b>090</b>	

(see pages I/6 + I/9)

<b>Clamping style</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
	<b>E</b>	<b>F</b>	<b>G</b>	

(see page I/10)

<b>Cushioning or bleeder</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
	<b>4</b>	<b>5</b>	<b>6</b>	

(see page I/11)

<b>Type of ports</b>	<b>G</b>	<b>M</b>	<b>N</b>
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**CI 040 028 C O G H A M 0200,0**

**V230T**

(see pages I/12 - I/13)

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

(see pages I/14 - I/15)

<b>A</b>	<b>G</b>	<b>F</b>	<b>Rod end style</b>
	<b>H</b>	<b>I</b>	

(see page I/16)

<b>M</b>	<b>N</b>	<b>Version</b>
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(see page I/5)

<b>Stroke</b>
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# Hydraulic cylinders- high temperatures 230 bar

BORE AND STROKE (expressed in mm.)

ORDER CODE :

**CI** **040** **028**             **0200,0**

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

∅ Bore	∅ Rod	80 bar		120 bar		160 bar		200 bar		230 bar	
		P	T	P	T	P	T	P	T	P	T
<b>032</b>	<b>014</b>	643	520	965	780	1286	1040	1608	1300	1849	1495
	<b>022</b>		339		509		678		848		975
<b>040</b>	<b>018</b>	1005	801	1507	1202	2010	1603	2512	2003	2889	2304
	<b>028</b>		512		769		1025		1281		1473
<b>050</b>	<b>022</b>	1570	1266	2355	1899	3140	2532	3925	3165	4514	3640
	<b>028</b>		1078		1616		2155		2694		3098
	<b>036</b>		756		1134		1512		1890		2174
<b>063</b>	<b>028</b>	2493	2000	3739	3000	4985	4000	6231	5000	7166	5751
	<b>036</b>		1679		2518		3357		4197		4826
	<b>045</b>		1221		1831		2442		3052		3510
<b>080</b>	<b>036</b>	4019	3205	6029	4808	8038	6411	10048	8013	11555	9215
	<b>045</b>		2748		4121		5495		6869		7899
	<b>056</b>		2050		3075		4100		5124		5893
<b>100</b>	<b>045</b>	6280	5008	9420	7512	12560	10017	15700	12521	18055	14399
	<b>056</b>		4311		6466		8621		10776		12393
	<b>070</b>		3203		4804		6406		8007		9208
<b>125</b>	<b>056</b>	9813	7843	14719	11765	19625	15686	24531	19608	28211	22549
	<b>070</b>		6735		10103		13471		16838		19364
	<b>090</b>		4726		7089		9451		11814		13586
<b>160</b>	<b>070</b>	16077	13000	24115	19499	32154	25999	40192	32499	46221	37374
	<b>110</b>		8478		12717		16956		21195		24374

**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	1100,0
32																		
40																		
50																		
63																		
80																		
100																		
125																		
160																		

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

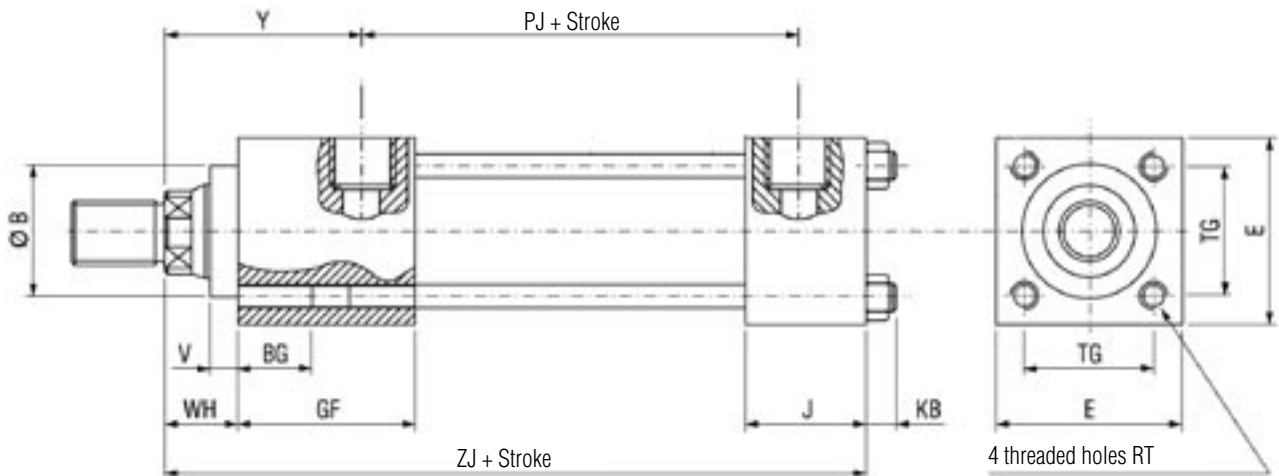
# Hydraulic cylinders- high temperatures 230 bar

## CLAMPING STYLE

ORDER CODE : **CI**   **C**

**C**

**BASIC CYLINDER – Head threaded holes (4), ISO MX5**



$\varnothing$ Bore	$\varnothing$ Rod	$\varnothing B_{f9}$	V	BG	E	GF	J	KB	PJ+	RT	TG Js 13	WH	Y	ZJ+
32	14	26	8	20	60	55	32	12	72	M8×1,25	36,8	24	60	143
	22	34	14											
40	18	30	8	20	65	60	40	14	88	M10×1,5	46	24	63	169
	28	42	13											
50	22	34	9	22	80	65	40	16	98	M12×1,75	54,4	25	67	183
	28	42	11											
	36	50	9											
63	28	42	11	24	90	65	40	16	99	M12×1,75	65	32	74	190
	36	50	13											
	45	60	15											
80	36	50	9	30	120	75	50	20	118	M16×2	82,6	30	77	218
	45	60	11											
	56	72	11											
100	45	60	9	30	130	80	50	20	119	M16×2	100	33	83	221
	56	72	10											
	70	88	10											
125	56	72	10	35	165	80	50	26	130,5	M22×2,5	126	40	89,5	238
	70	88	12											
	90	108	10											
160	70	88	12	45	210	100	75	33	174	M27×3	161	40	95	315
	110	133	12											


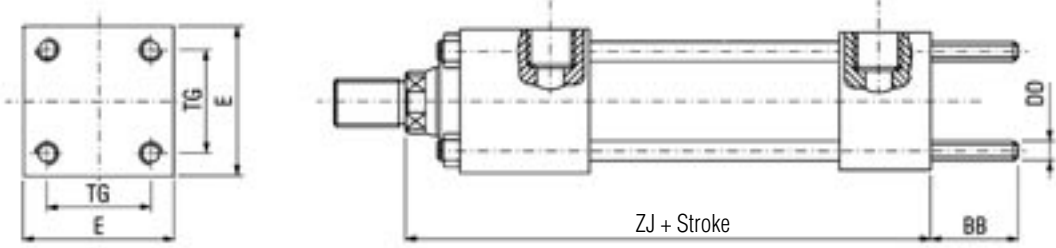
# Hydraulic cylinders- high temperatures 230 bar

## CLAMPING STYLE

ORDER CODE : **CI**   **A**

**A**


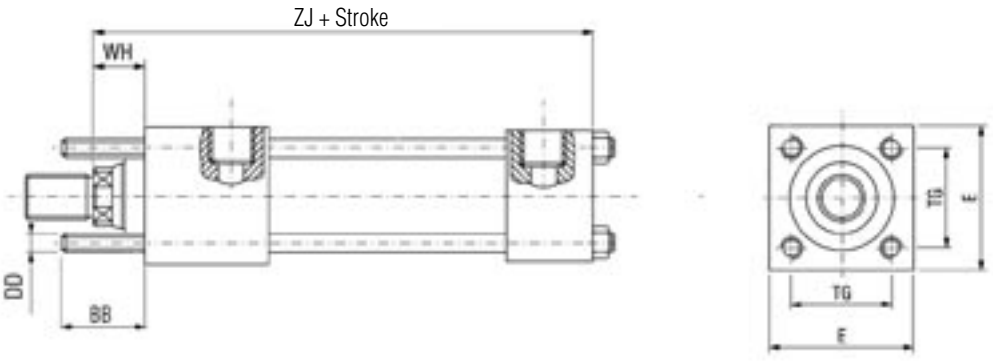
EXTENDED CAP TIE RODS, ISO MX2

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**B**

EXTENDED HEAD TIE RODS, ISO MX3


Ø Bore	Ø Rod	BB	DD	E	TG Js 13	WH	ZJ +
32	14	35	M8×1,25	60	36,8	24	143
	22						
40	18	40	M10×1,5	65	46	24	169
	28						
50	22	45	M12×1,75	80	54,4	25	183
	28						
	36						
63	28	45	M12×1,75	90	65	32	190
	36						
	45						
80	36	60	M16×2	120	82,6	30	218
	45						
	56						
100	45	60	M16×2	130	100	33	221
	56						
	70						
125	56	80	M22×2,5	165	126	40	238
	70						
	90						
160	70	100	M27×3	210	161	40	315
	110						

# Hydraulic cylinders- high temperatures 230 bar

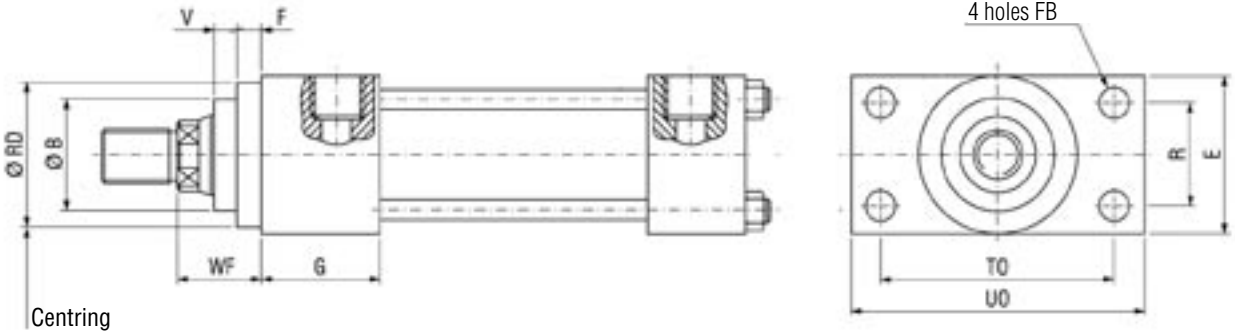
## CLAMPING STYLE

ORDER CODE : **CI**   **D**


**D**



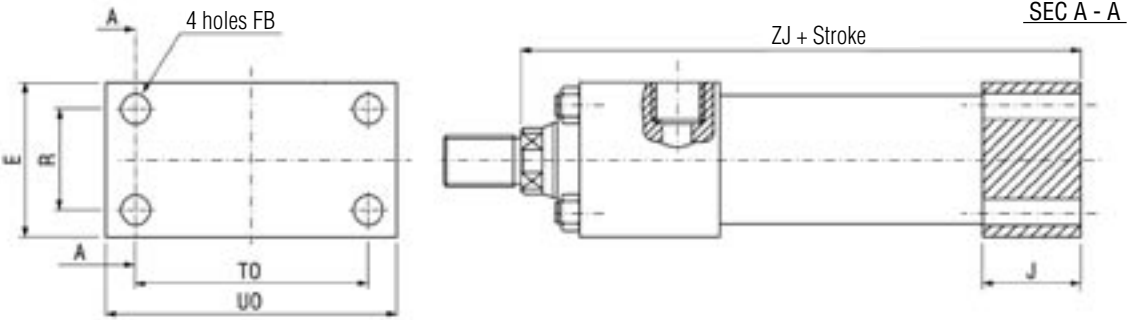
HEAD FLANGE



**E**



CAP FLANGE



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+
32	14	26	8	60	10	9	45	32	40	50	70	85	34	143
	22	34	14											
40	18	30	8	65	12	11	48	40	41	62	87	110	36	169
	28	42	13											
50	22	34	9	80	16	13,5	49	40	52	70	105	130	41	183
	28	42	11											
	36	50	9											
63	28	42	11	90	16	13,5	49	40	65	76	117	145	48	190
	36	50	13											
	45	60	15											
80	36	50	9	120	20	17,5	55	50	83	105	150	185	50	218
	45	60	11											
	56	72	11											
100	45	60	9	130	22	17,5	58	50	97	110	170	210	55	221
	56	72	10											
	70	88	10											
125	56	72	10	165	22	23	58	50	126	135	208	250	62	238
	70	88	12											
	90	108	10											
160	70	88	12	210	22	28	78	75	161	170	261	310	62	315
	90	108	14											
	110	133	12											



# Hydraulic cylinders- high temperatures 230 bar

## CLAMPING STYLE

ORDER CODE :

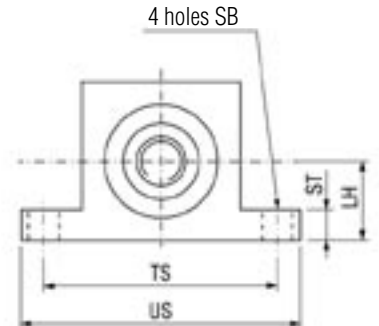
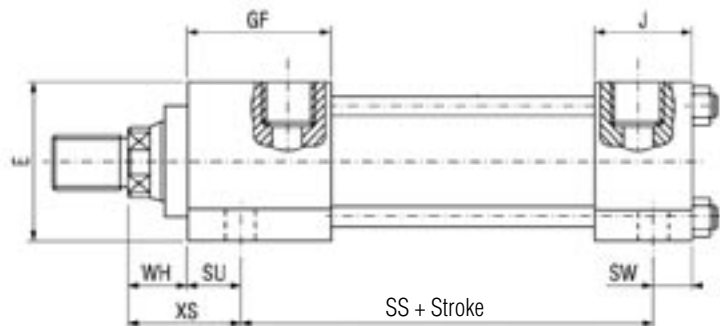
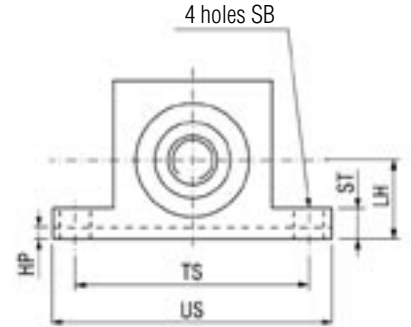
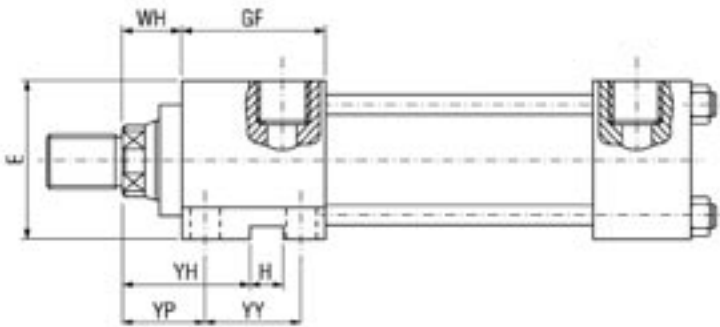


HEAD FOOT

HEAD AND CAP FOOT

Available only up to bore Ø125

Available only up to bore Ø125



Ø Bore	Ø Rod	E	GF	J	H	HP	LH	SB	SU	SW	ST	TS	US	XS	SS+	WH	YH	YY	YP
32	14	60	55	32	12	4	30	9	24	10	12	77	95	48	85	24	51	37	33
	22																		
40	18	65	60	40	12	4	32,5	11	20	12	13	87	110	44	113	24	54	40	34
	28																		
50	22	80	65	40	12	4	40	13,5	34	13	19	105	130	59	111	25	57	41	37
	28																		
	36																		
63	28	90	65	40	15	5	45	13,5	33	17	24	120	150	65	108	32	62	41	44
	36																		
	45																		
80	36	120	75	50	16	5	60	17,5	37	19	26	150	185	67	132	30	60	43	46
	45																		
	56																		
100	45	130	80	50	16	5	65	17,5	44	28	32	170	210	77	116	33	65	48	49
	56																		
	70																		
125	56	165	80	50	16	6	82,5	20	44	22	32	210	255	84	132	40	74	44	58
	70																		
	90																		

# Hydraulic cylinders- high temperatures 230 bar

## CYLINDER CUSHIONING

ORDER CODE : **CI**    **0**

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

### Cushion length

Ø Bore	Head	Cap
32	17	17
40	20	20
50	20	20
63	20	20
80	23	23
100	23	23
125	25	25
160	-	-

The cushioning screw also works as air bleeder.

**Before establishing the bore of a cushioned cylinder V230T, it is advisable to verify whether the maximum amount of energy absorbed by the cushioning 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 9,81 m/sec<sup>2</sup>.

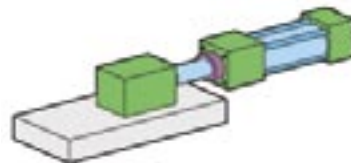
**A** = traction

**B** = thrust

CYLINDER IN HORIZONTAL

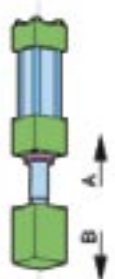
CYLINDER IN VERTICAL

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



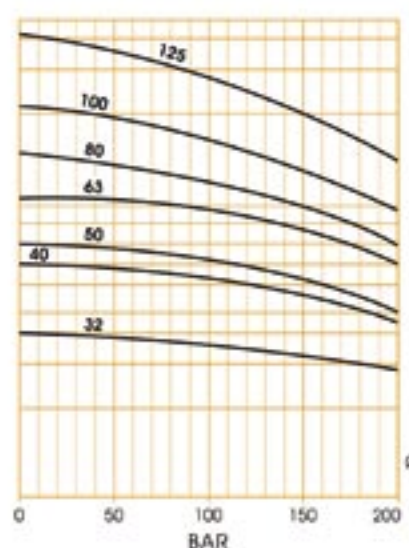
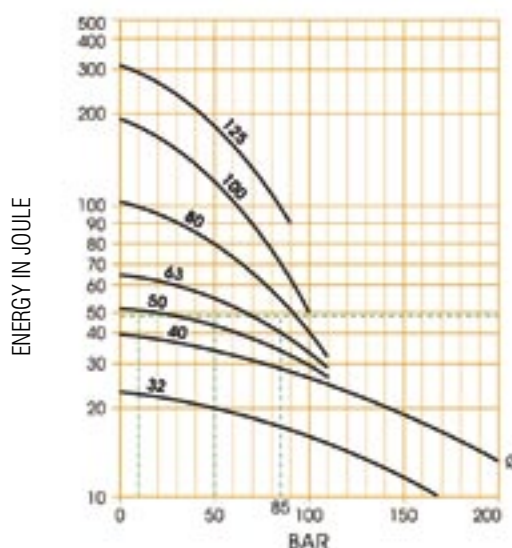
$$EA = \frac{1}{2} mV^2 - mg \times 0,02$$

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



FRONT SIDE ( rod forward)

BACK SIDE ( rod backward)



OIL DELIVERY PRESSURE IN BAR

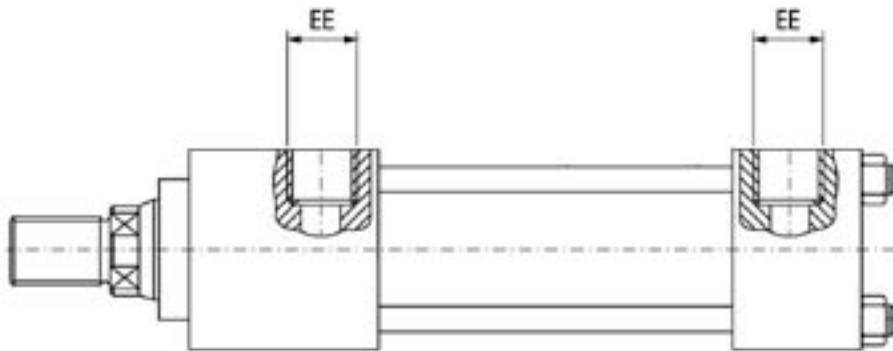
For the max. working pressure, see pag. I/3

# Hydraulic cylinders- high temperatures 230 bar

## TYPE OF PORTS

ORDER CODE : **CI**     **G**

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



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

EE				
Ø Bore	O-Ring*	BSP (gas)	Metric	NPT
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

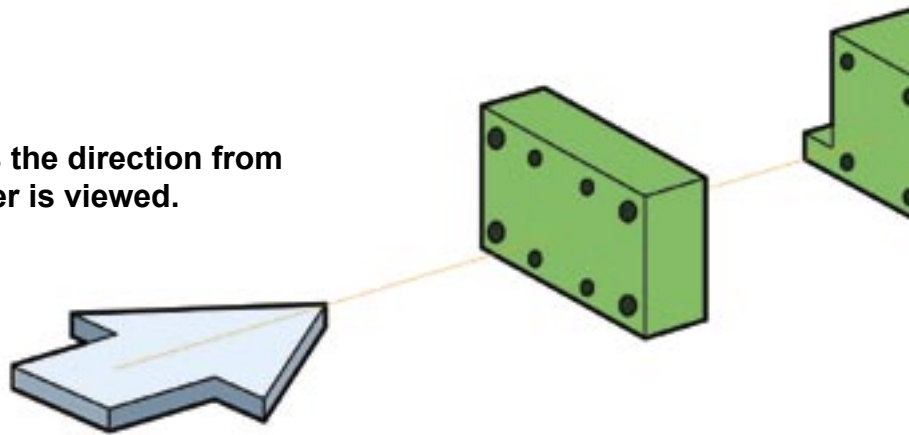
\* For the ports with O-Rings (only available with Clamping style « G ») please contact our technical department.

# Hydraulic cylinders- high temperatures 230 bar

## OIL DELIVERY PORT POSITION AND CUSHIONING ADJUSTMENT SCREWS

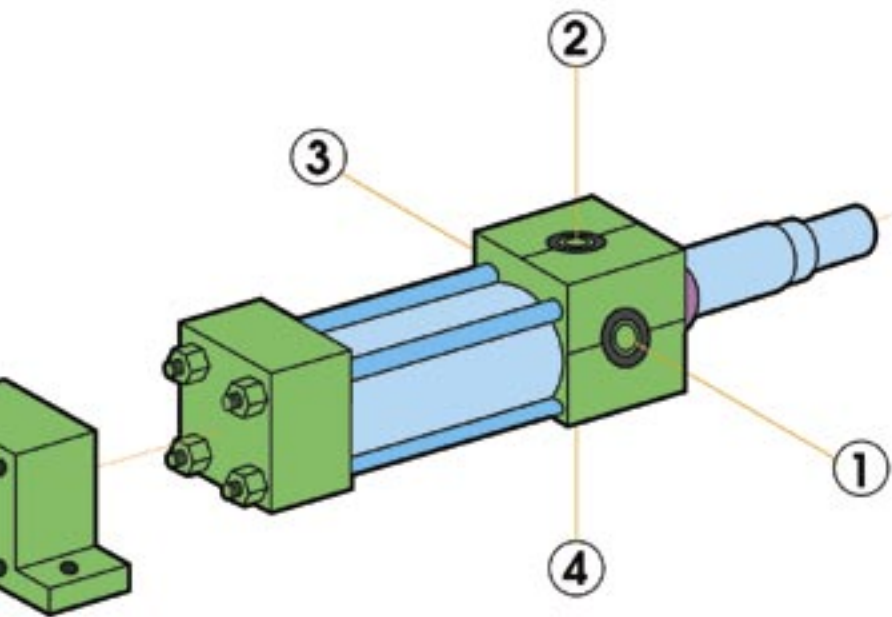
ORDER CODE :

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



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

# Hydraulic cylinders- high temperatures 230 bar



Clamping style		D - E												F - G																				
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	2	2	2	2	4	4	4	4	2	2	2	2	2	2	2	2	3	3	3	3	1	1	1	1	1	1	1	1	1	2	2	2	2
	Cap	2	4	2	2	2	4	2	2	2	2	4	2	2	2	4	2	2	3	1	1	2	3	1	1	2	3	1	1	2	3	1	1	2
ORDER CODE		<b>H</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>G</b>	<b>I</b>	<b>L</b>	<b>N</b>	<b>O</b>	<b>M</b>	<b>P</b>	<b>Q</b>	<b>T</b>	<b>U</b>	<b>E</b>	<b>H</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>G</b>	<b>I</b>	<b>L</b>	<b>N</b>	<b>O</b>	<b>M</b>	<b>P</b>	<b>Q</b>	<b>T</b>	<b>U</b>	<b>E</b>	

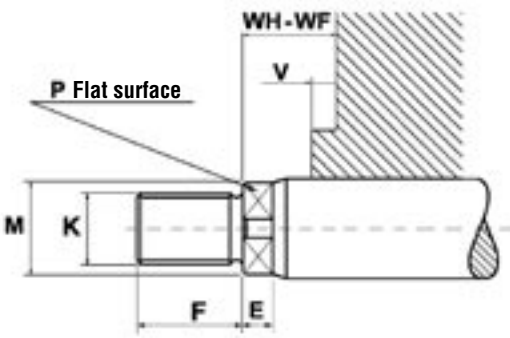
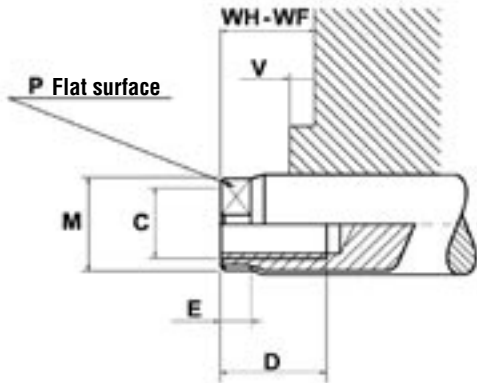
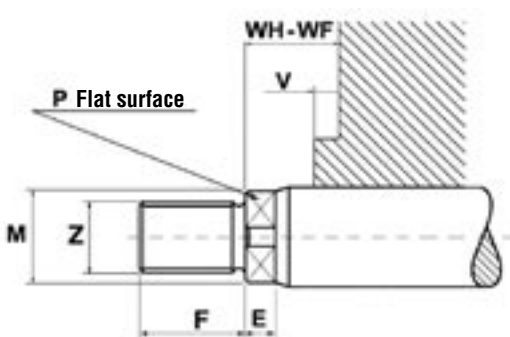
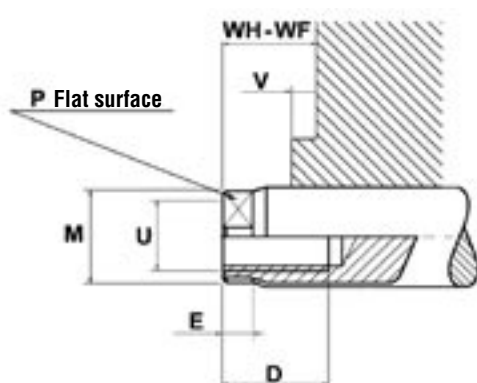
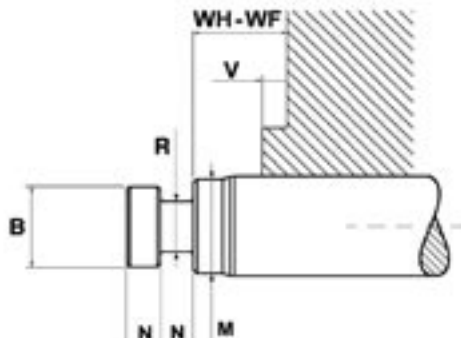
- Not available with this mounting F
- ✘ Cannot be connectable with elbow joints.

# Hydraulic cylinders- high temperatures 230 bar

## ROD END STYLES

ORDER CODE :

**CI**

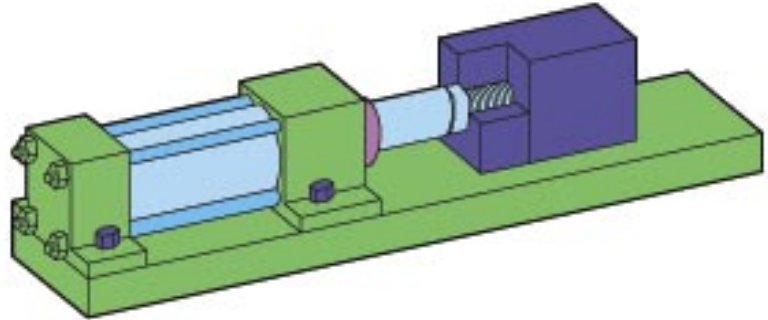
<p><b>A</b></p> <p>METRIC MALE THREAD</p>	<p>STANDARD</p> 	<p><b>G</b></p> <p>METRIC FEMALE THREAD</p> 
<p><b>H</b></p> <p>UNF-UNEF MALE THREAD</p>		<p><b>I</b></p> <p>UNF-UNEF FEMALE THREAD</p> 
<p><b>F</b></p> <p>FLOATING JOINT</p>		

# Hydraulic cylinders- high temperatures 230 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.

Once a clamping style is chosen, it is important to make the most suitable assessment between the piston rod and the part to be actuated. This is due to the fact that technical and practical considerations ( such as inclined

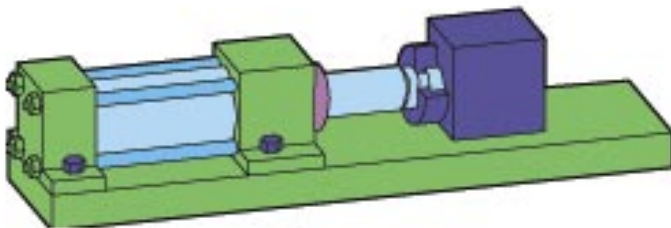
## THREADED ROD



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



∅ Bore	∅ Rod	B	C	D	E	F	M	N	K	P	R	U	V	Z	WH	WF*
32	14	13	M8×1,25	15	8	16	13	8	M12×1,25	11	8	5/16-24	8	1/2-20	24	34
	22	21	M12×1,75	20	8	22	21	14	M16×1,5	18	13	1/2-20	14	5/8-18		
40	18	17	M10×1,5	18	6	18	17	10	M14×1,5	15	11	3/8-24	8	9/16-18	24	36
	28	27	M20×2,5	30	8	28	27	14	M20×1,5	24	18	3/4-16	13	3/4-16		
50	22	21	M12×1,75	20	8	22	21	14	M16×1,5	18	13	1/2-20	9	5/8-18	25	41
	28	27	M20×2,5	30	8	28	27	14	M20×1,5	24	18	3/4-16	12	3/4-16		
	36	35	M27×3	40	11	36	35	18	M27×2	32	21	1-12	9	1-12		
63	28	27	M20×2,5	30	8	28	27	14	M20×1,5	24	18	3/4-16	11	3/4-16	32	48
	36	35	M27×3	40	11	36	35	18	M27×2	32	21	1-12	13	1-12		
	45	44	M33×3,5	50	12	45	44	22	M33×2	40	33	1-5/16-18	15	1-1/4-12		
80	36	35	M27×3	40	11	36	35	18	M27×2	32	21	1-12	9	1-12	30	50
	45	44	M33×3,5	50	12	45	44	22	M33×2	40	33	1-5/16-18	11	1-1/4-12		
	56	55	M42×2	60	14	56	55	26	M42×2	50	40	1-11/16-18	11	1-11/16-18		
100	45	44	M33×3,5	50	12	45	44	22	M33×2	40	33	1/5/16-18	9	1-1/4-12	33	55
	56	55	M42×2	60	14	56	55	26	M42×2	50	40	1-11/16-18	10	1-11/16-18		
	70	68	M48×2	60	18	63	68	34	M48×2	•	50	1-7/8-16	10	1-7/8-16		
125	56	55	M42×2	60	14	56	55	26	M42×2	50	40	1-11/16-18	10	1-11/16-18	40	62
	70	68	M48×2	60	18	63	68	34	M48×2	•	50	1-7/8-16	12	1-7/8-16		
	90	88	M64×3	80	18	85	88	40	M64×3	•	64	2-1/2-16	10	2-1/2-16		
160	70	68	M48×2	60	18	63	68	34	M48×2	•	54	1-7/8-16	12	1-7/8-16	40	62
	110	108	M80×3	100	18	95	108	50	M80×3	•	80	3-1/8-16	12	3-1/8-16		

\* DIMENSIONS WITH CLAMPING STYLE « D »

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

# Hydraulic cylinders- high temperatures 230 bar

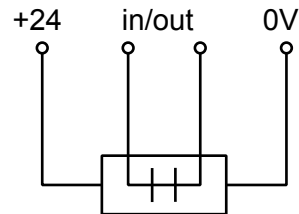
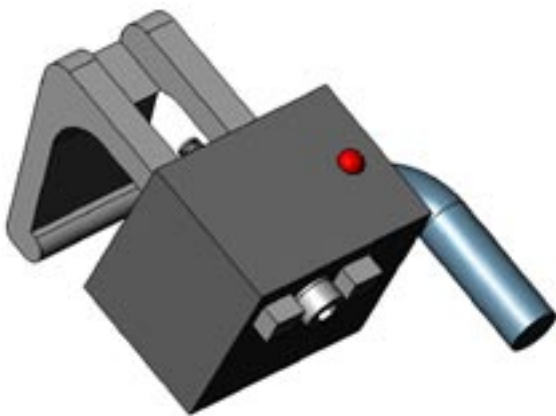
## CYLINDER VERSION

ORDER CODE : **CI** ✓ ✓ ✓ ✓ ✓ ✓ ✓ **M** ✓

<b>M</b>	WITH PRESET FOR MAGNETIC SWITCHES
<b>N</b>	WITHOUT PRESET FOR MAGNETIC SWITCHES

## MAGNETIC PROXIMITY SWITCH (to be ordered separately)

ORDER CODE : **MSU1**



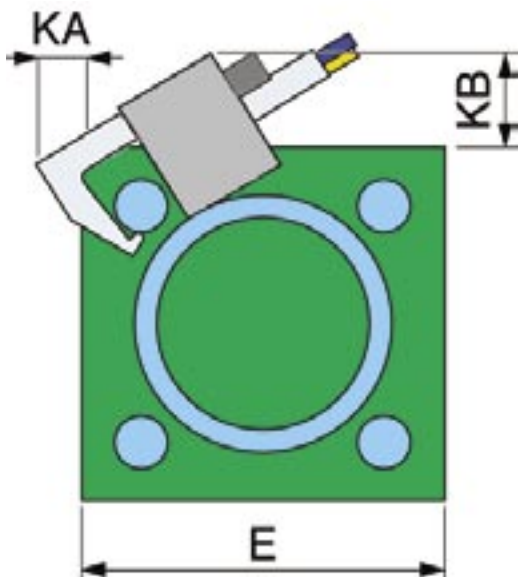
### Wire colours

Brown = +24 V dc

Blue = 0 V dc

Black = in/out contact

White = in/out contact



Ø Bore	E	KA	KB
32	60	3,4	17,3
40	65	7,2	20
50	80	6,4	17,2
63	90	7,3	18,4
80	120	2,7	12,2
100	130	6,8	16,7
125	165	4,2	11,9
160	210	9	19



## Hydraulic cylinders- high temperatures 230 bar

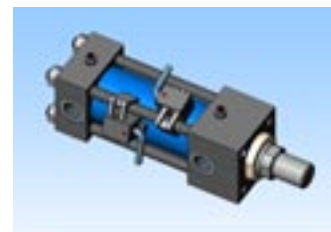
### MAGNETIC PROXIMITY SWITCH (to be ordered separately)

TECHNICAL DATA		
Dimensions	mm.	39×24×28
Contact	N.A.	Relay normally open
Voltage rating	V dc	from 18 to 30 ripple Max. 10%
Max. switching voltage	V dc	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	m/sec.	15
Sensor type	-	magneto resistivo
Electric life at rated power (operations)	n°	10.000.000

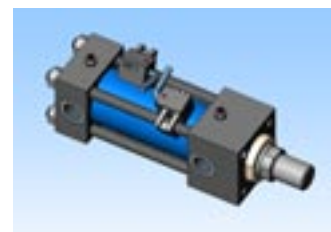
### Minimum stroke regulation in mm.

Ø Alesaggio	SWITCH MOUNTING 1	SWITCH MOUNTING 2	SWITCH MOUNTING 3
<b>32</b>	45	65	10
<b>40</b>	45	56	10
<b>50</b>	45	47	10
<b>63</b>	45	10	10
<b>80</b>	45	10	10
<b>100</b>	45	10	10
<b>125</b>	45	10	10
<b>160</b>	45	10	10

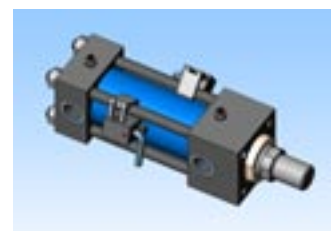
**SWITCH MOUNTING 1**



**SWITCH MOUNTING 2**

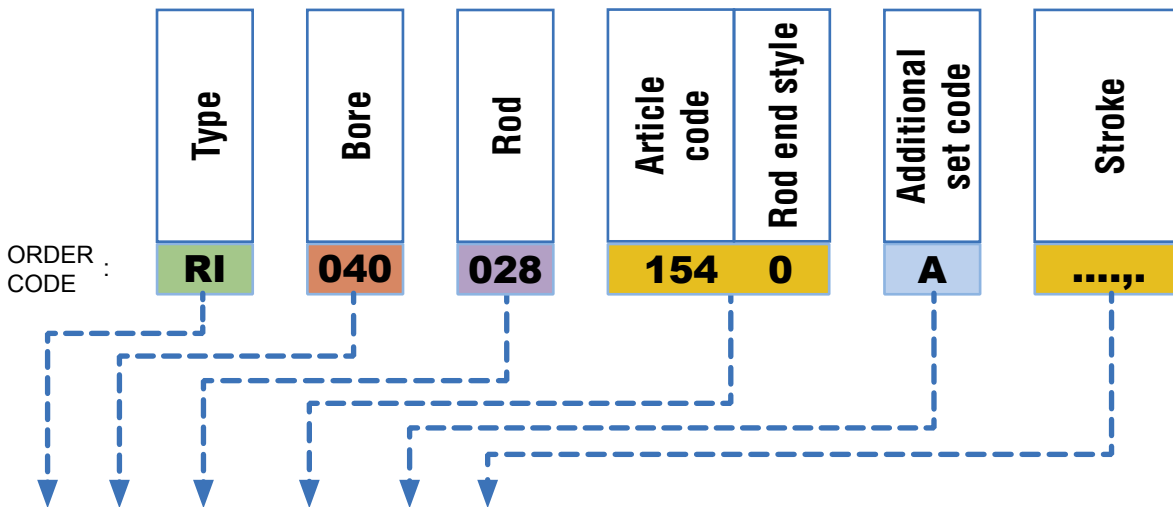


**SWITCH MOUNTING 3**



# Hydraulic cylinders- high temperatures 230 bar

## SPARE PARTS



RI	...	...	6010	A		Rod seal kit	3
RI	...		6020	A		Pistol seal kit	6
RI	...	...	0310			Rod cartridge without seals	2
RI	...	...	0310	A		Rod cartridge with seals	2+3

RI	...		1912		...	Magnetic tube	5
RI	...		1911		...	Non-magnetic tube	5
RI	...		1510	A		Magnetic piston with seals	6+7+8
RI	...		1512	A		Non-magnetic piston with seals	6+7
RI	...		6050			Permanent Magnet	8
RI	...		6030			O-Ring Viton ® for integrated oil delivery	
RI	...		2510	A		Screw with locknut for cushion adjustment	10

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

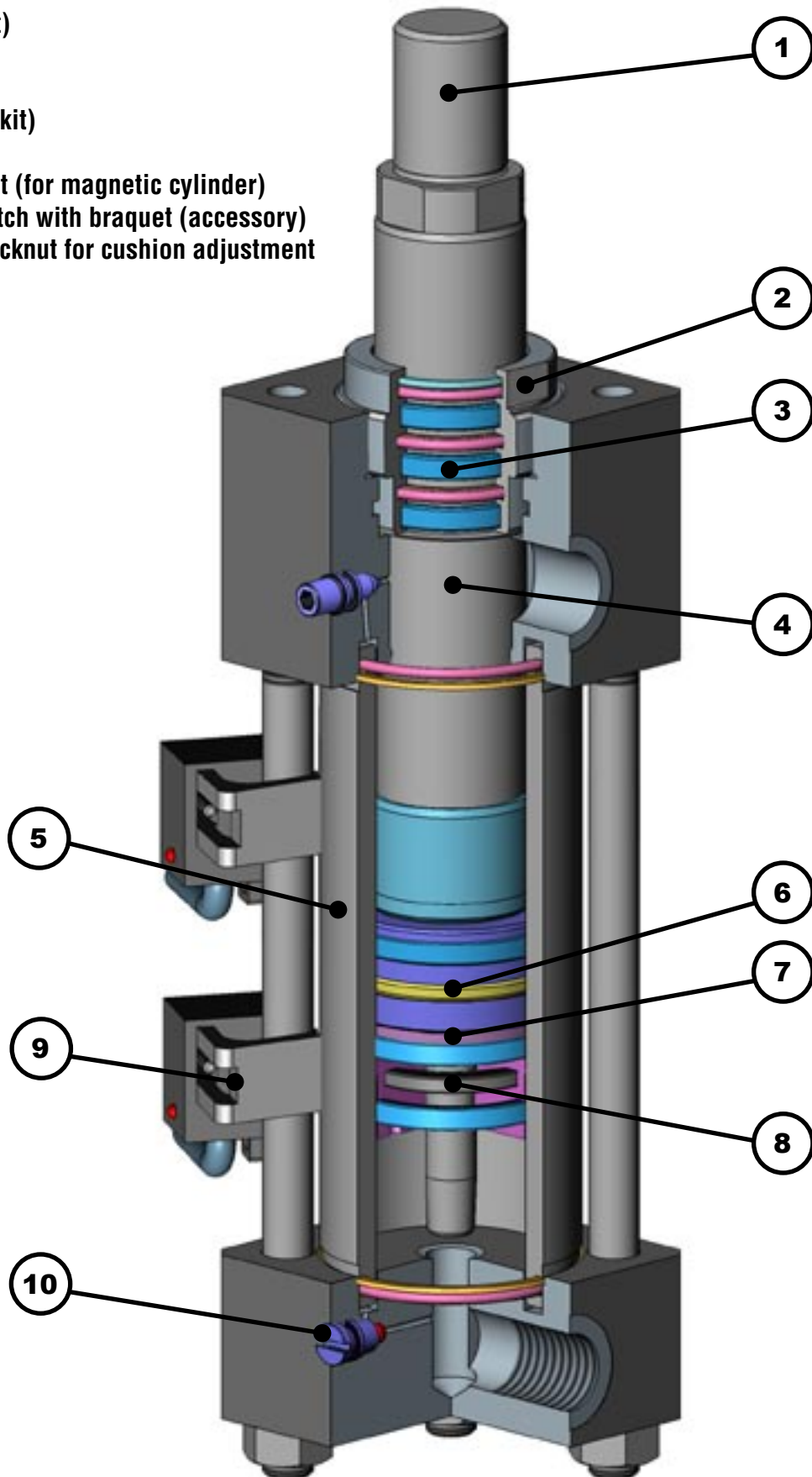
- 0
- 1
- 2
- 4
- 5
- 6

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

			MSU1			Complete universal switch	9
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## Hydraulic cylinders- high temperatures 230 bar

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



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## ***Mould Hydraulic Systems***

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