



Mould Hydraulic Systems

Self-locking rod hydraulic cylinders 260 bar



V260LK

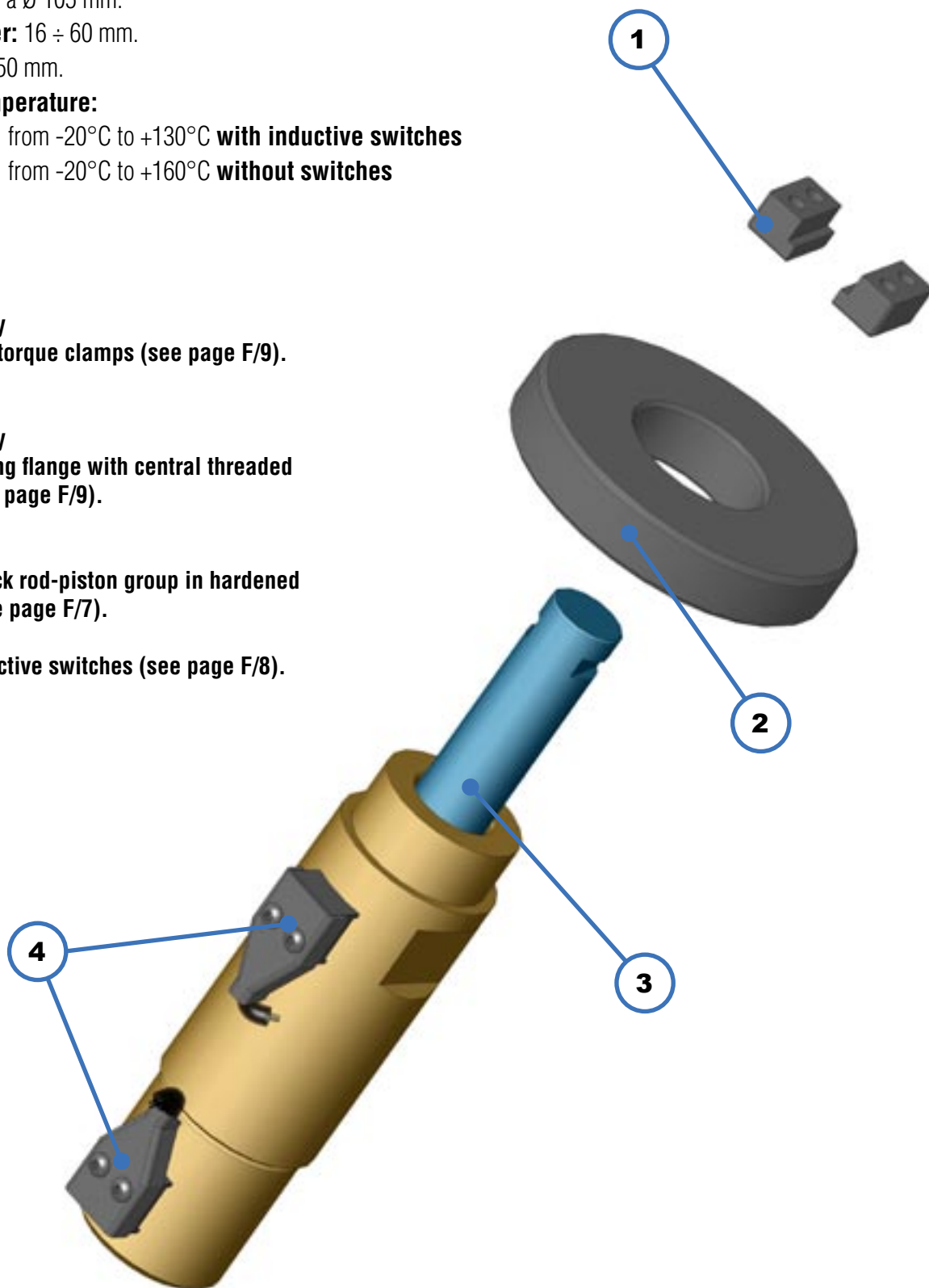
V260LK

Self-locking rod hydraulic cylinders

General Characteristics

- **Max. working pressure:** up to 260 bar
- **Bore:** da Ø 24 a Ø 105 mm.
- **Rod diameter:** 16 ÷ 60 mm.
- **Stroke:** 5 ÷ 150 mm.
- **Working temperature:**
 - from -20°C to +130°C **with inductive switches**
 - from -20°C to +160°C **without switches**

- ① **Accessory**
Rod anti-torque clamps (see page F/9).
- ② **Accessory**
Steel fixing flange with central threaded hole (see page F/9).
- ③ **Monoblock rod-piston group in hardened steel** (see page F/7).
- ④ **PNP inductive switches** (see page F/8).



Self-locking rod hydraulic cylinders – 260 bar

GENERAL AND FUNCTIONING FEATURES

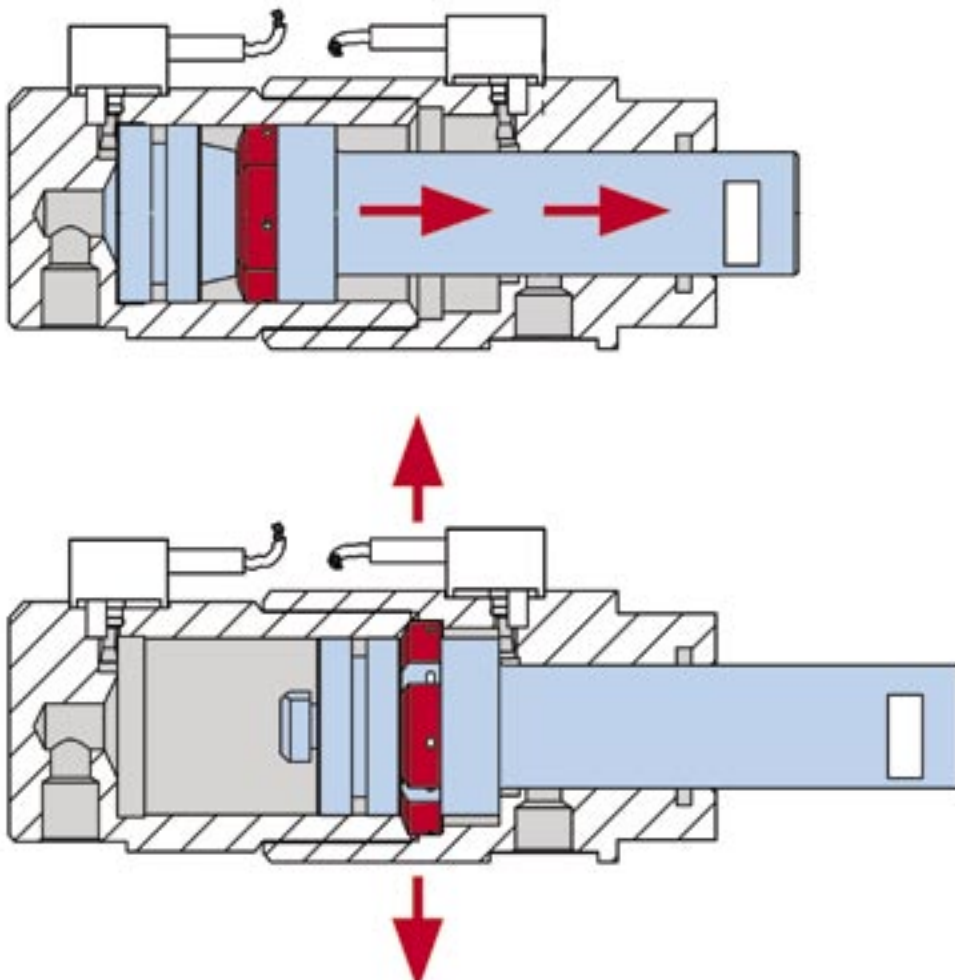
The V260LK are double-acting hydraulic cylinders with a mechanical locking system of the rod in the end stroke position (extended rod), which permits to contrast very high opposite thrusts.

Such a solution is widely applicable in the field of plastic injection and die-casting molds, in order for them to stand the injection pressure on large molding surfaces.

The rod is hydraulically unlocked automatically when the piston comes back.

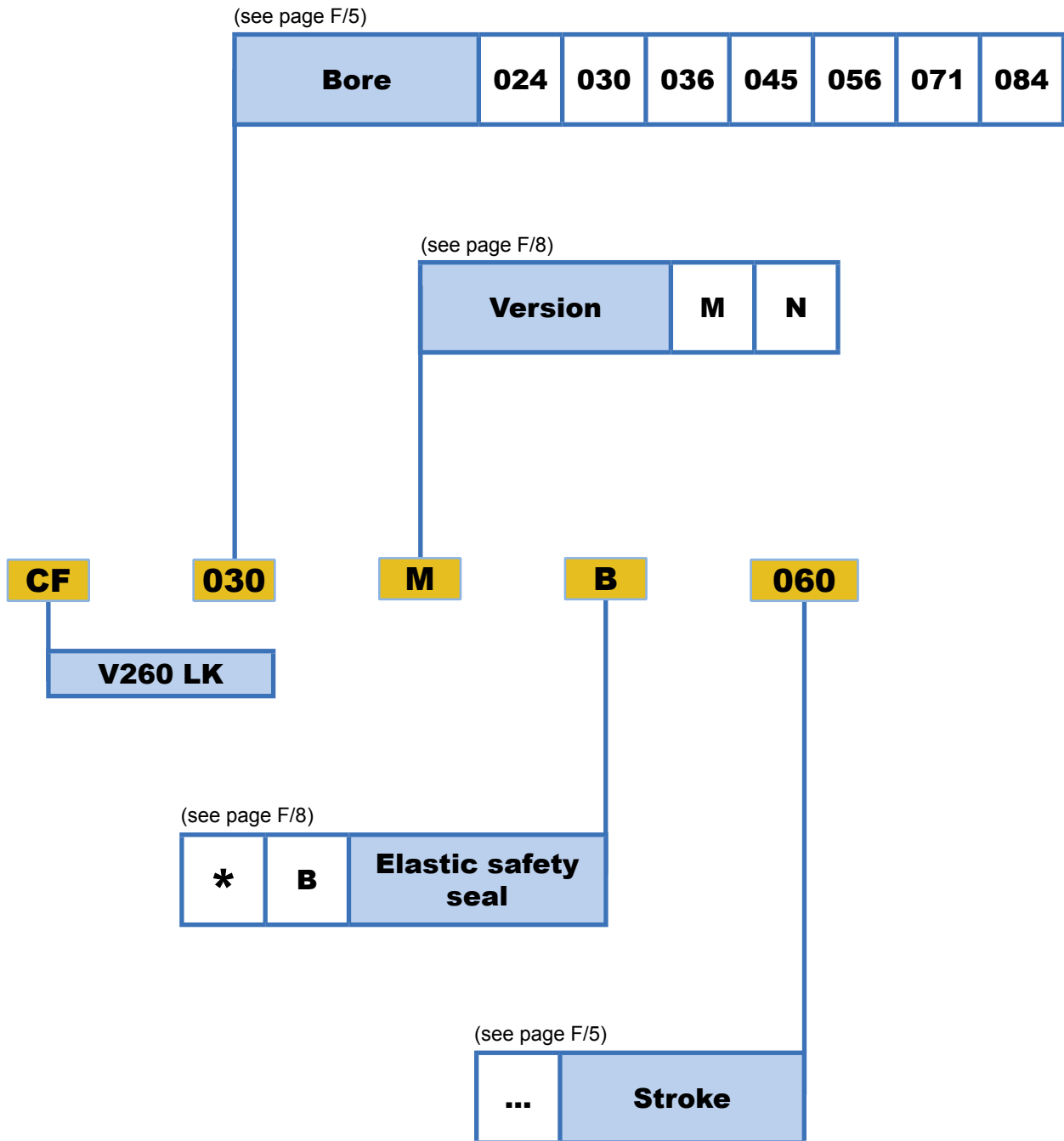
WARNING:

- For a firm locking it is necessary to keep the oil in pressure, when pushing, at a minimum of 60 bar.
- For a correct functioning the cylinder must always work in the end stroke position (both forward and backward), in order to guarantee the locking on one side and to avoid pressure shocks on the piston when it comes back from the other side
- Pay great attention to the traction force, which is considerably lower than the thrust.
- Before making a drawing of an application, pay attention on Pre-load notes stated at pag. F/6.





ORDER COMPILATION SYMBOLS



Self-locking rod hydraulic cylinders – 260 bar

BORE AND STROKE (expressed in mm.)

ORDER CODE :

CF

030

060

FORCE

∅ Bore	∅ Rod	80 bar				120 bar				140 bar			
		P	F	FV	T	P	F	FV	T	P	F	FV	T
024	16	362	7000	4000	201	543	7000	4000	301	633	7000	4000	352
030	20	565	10000	6000	314	848	10000	6000	471	989	10000	6000	550
036	25	814	13000	8000	421	1221	13000	8000	632	1424	13000	8000	737
045	32	1272	20000	12000	629	1908	20000	12000	943	2225	20000	12000	1100
056	42	1969	28000	17000	862	2954	28000	17000	1292	3446	28000	17000	1508
071	50	3166	45000	32000	1569	4749	45000	32000	2394	5540	45000	32000	2793
084	60	4431	70000	43000	2170	6647	70000	43000	3256	7755	70000	43000	3798

P : Maximum thrust force in Kg.

F : Maximum holding force during locking, end stroke position, extended rod, in Kg.

FV : Force with pre-load (see table on page F/6).

T : Traction force in Kg.

The forces F and FV do not vary when the oil pressure varies.

Minimum pressure to guarantee the piston locking: 60 bar. The pressure must be kept during the whole holding stage.

STROKE (stroke tolerance +₀^{0,02} mm.)

∅ Bore	005	010	015	020	025	030	035	040	045	050	055	060	065	070	075	080	085	090	095	100	120	150	
24				Standard strokes				Standard strokes	Unavailable strokes	Unavailable strokes	Unavailable strokes	Unavailable strokes	Unavailable strokes	Unavailable strokes	Unavailable strokes	Unavailable strokes	Unavailable strokes	Unavailable strokes	Unavailable strokes	Unavailable strokes	Unavailable strokes	Unavailable strokes	
30					Standard strokes							Standard strokes	Unavailable strokes	Unavailable strokes	Unavailable strokes	Unavailable strokes	Unavailable strokes	Unavailable strokes	Unavailable strokes	Unavailable strokes	Unavailable strokes	Unavailable strokes	
36	Unavailable strokes						Standard strokes							Standard strokes	Unavailable strokes	Unavailable strokes	Unavailable strokes	Unavailable strokes	Unavailable strokes	Unavailable strokes	Unavailable strokes	Unavailable strokes	
45	Unavailable strokes							Standard strokes											Standard strokes	Unavailable strokes	Unavailable strokes	Unavailable strokes	Unavailable strokes
56	Unavailable strokes								Standard strokes												Standard strokes	Unavailable strokes	Unavailable strokes
71	Unavailable strokes											Standard strokes										Standard strokes	Unavailable strokes
84	Unavailable strokes	Unavailable strokes														Standard strokes							Standard strokes

 Standard strokes

 Special strokes

 Unavailable strokes

For the overall dimensions of the cylinders with special stroke, consider those concerning the higher standard stroke.

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PRE-LOAD

As indicated in the general characteristics, for the correct functioning of the cylinder it is necessary that the piston be brought into the most extreme forward end stroke position.

For applications on molds, for punches and plugs which are to be fixed at the end on the matrix, this could cause material infiltrations.

“To erase such infiltrations it is possible to foresee a “pre-load”, by making a cylinder seat in the mould, with a reduction of the cylinder length **L2** equal to the pre-load. The result will be **L2-V** (see table below).

This will guarantee the positioning of the punch or plug in its beat (with consequent erasing of potential infiltrations) and also allow for the contemporary rod locking.

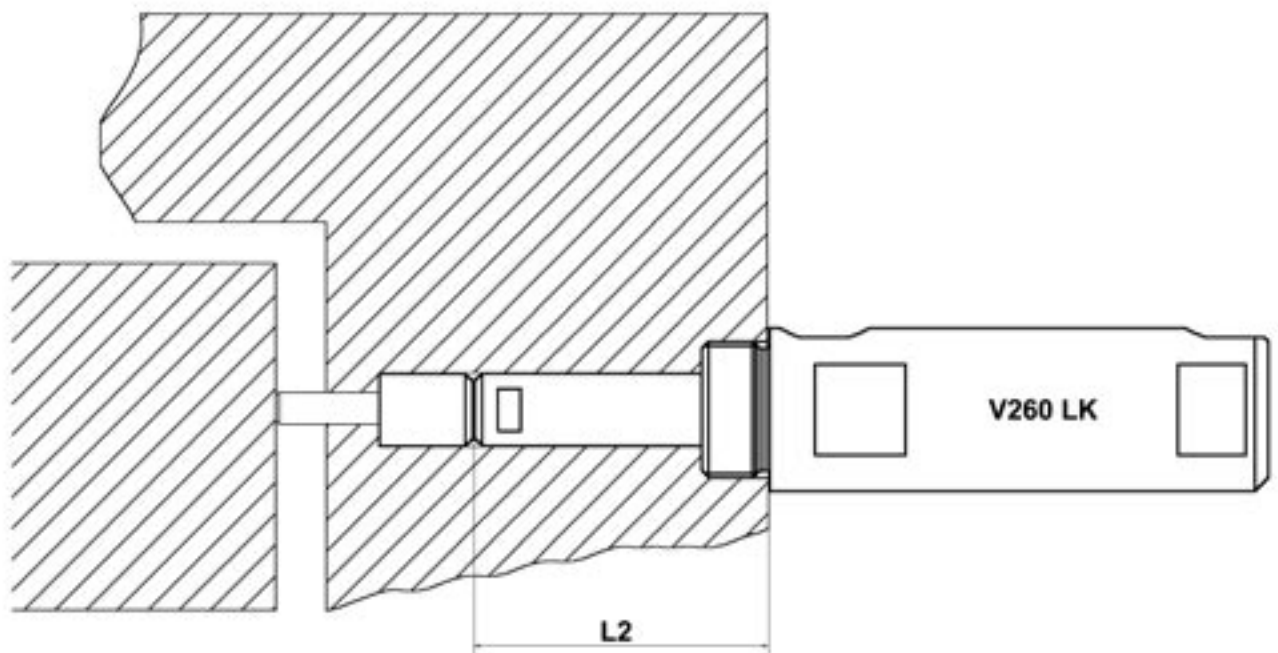
WARNING:

An excessive reduction of the dimension L2 can lead to a rod locking failure. The use of the pre-load determines a reduction in the maximum thrust force of the cylinder (FV, see table below).

Ø Bore	Ø Rod	V (mm.)		FV (Kg)
		Short stroke	long stroke	
024	16	0,12	0,18	4000
030	20	0,12	0,2	6000
036	25	0,08	0,1	8000
045	32	0,12	0,15	12000
056	42	0,1	0,15	17000
071	50	0,2	0,2	32000
084	60	0,2	0,2	43000

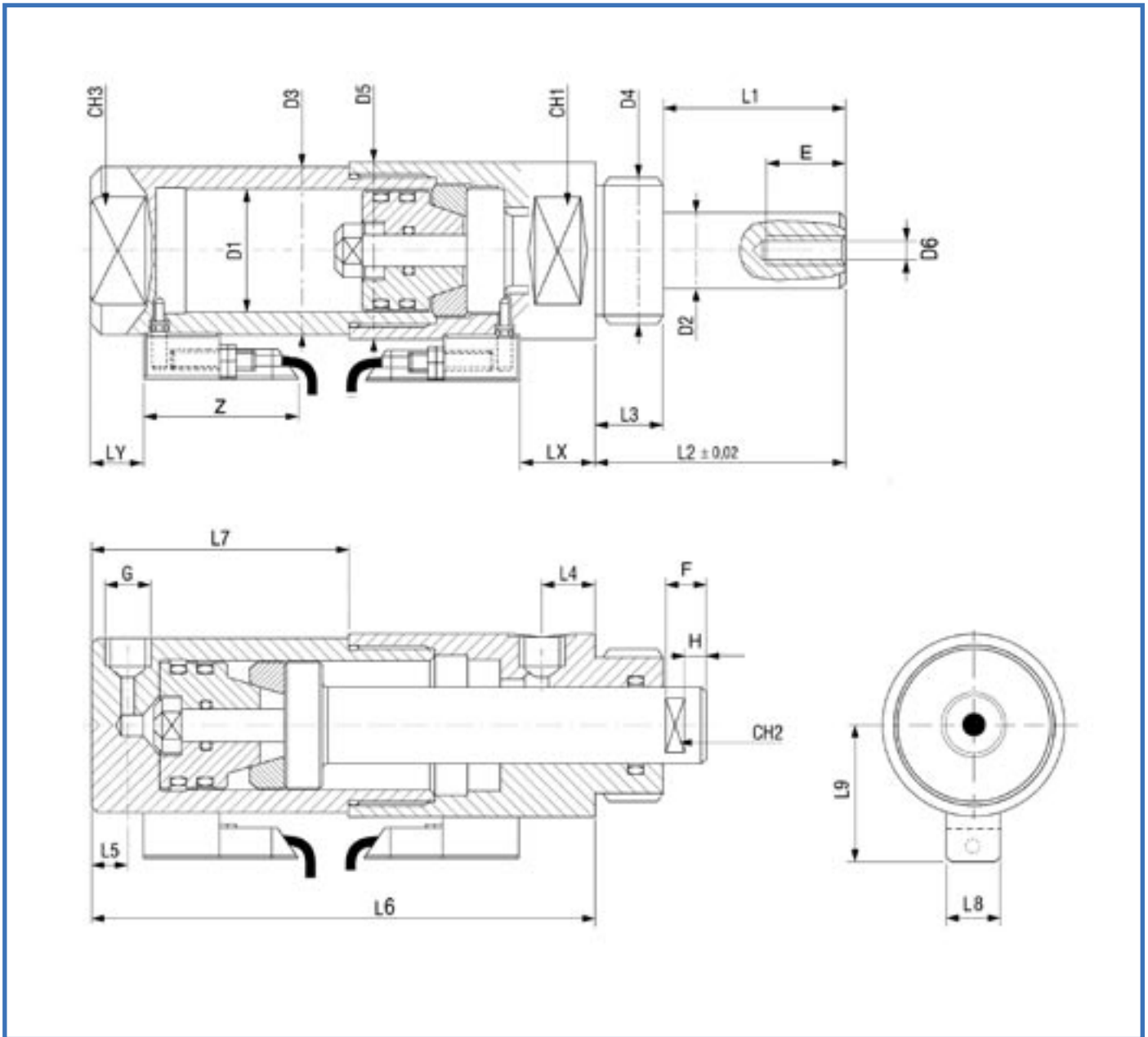
V: maximum pre-load on the dimension L2 of the standard strokes.

FV: maximum thrust with pre-load.



Self-locking rod hydraulic cylinders – 260 bar

OVERALL DIMENSIONS



D1	CH1	CH2	CH3	D2	D3	D4	D5	D6	E	F	G	L1	L2	L3	L4	L5	L6	L7	L8	L9	LY	LX	H	Z
24	30	13	30	16	36	M30×1,5	38	M8	20	11	1/8"	30	45	15	12	8,4	90	30	15	28,5	5,5	8,5	5	41,5
												50	65				110	50						
30	38	14	41	20	46	M40×1,5	48	M8	26	13	1/4"	42	60	18	14	11	115	47	23	37,5	12,5	14,5	6	42
												72	90				145	77						
36	46	18	41	25	53	M48×1,5	57	M10	28	15,5	1/4"	50	70	20	15	12	125	51	23	41	12,5	14,5	8	42
												85	105				160	86						
45	55	24	50	32	64	M60×1,5	71	M12	35	20	1/4"	65	90	25	20	13	155	65	23	46,5	15	20,5	10	42
												110	135				200	110						
56	75	32	65	42	79	M75×1,5	87	M16	40	24	3/8"	73	105	32	24	14	185	71	23	53,5	15,5	28	12	42
												123	155				235	121						
71	90	41	80	50	98	M95×2	110	M16	42	29	3/8"	88	130	42	26	17	216	78	23	64	19,5	31	14	42
												118	190				276	138						
84	105	50	95	60	114	M110×2	127	M20	50	32	1/2"	105	155	50	36	19	260	100	23	70,5	26,5	42	14	42
												180	230				335	175						

Self-locking rod hydraulic cylinders – 260 bar

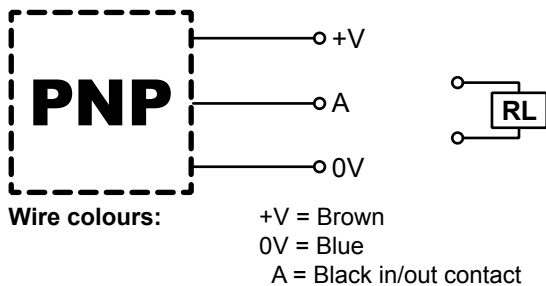
VERSION

ORDER CODE : **CF** ✓ **N** ***** ✓

N	WITHOUT INDUCTIVE SWITCHES	*	WITHOUT ELASTIC SAFETY SEAL
M	WITH INDUCTIVE SWITCHES AND PROTECTIONS	B	WITH ELASTIC SAFETY SEAL

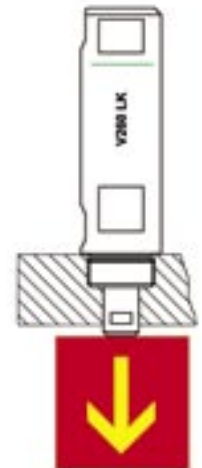


Electronic solid-state switch with PNP outputs. NPN outputs available on request



It's an elastic band applied to the piston which keeps it in the end stroke position – **retracted rod** – in case of mold standstill.

It is especially indicated for applications with the cylinder placed vertically, with the rod at the bottom, to prevent the weight of the mass applied to the rod from dragging down the rod and the molded piece applied to it.

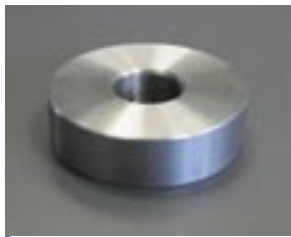


TECHNICAL DATA

Rated operating distance	mm.	0,8
Max. switching current	mA	200
Max. voltage drop	V	2
C.C. voltage range	V	10 ÷ 30
Contact operation	N.O.	
Resistance to vibrations	-	IEC947-5-2/7,4
Working temperature	°C	-30...+100
Degree of protection	-	IP 67 DIN
Max. switching frequency	Hz	5000
Repeatability at constant temp.	mm.	0,01
Cable length	mt.	2

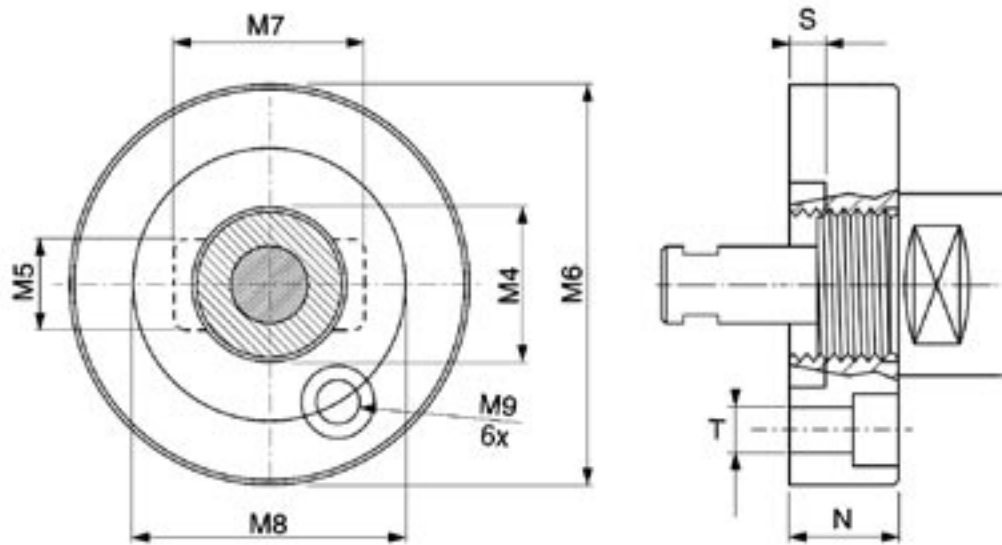
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ACCESSORIES (for the order codes, see SPARE PARTS on page F/10)



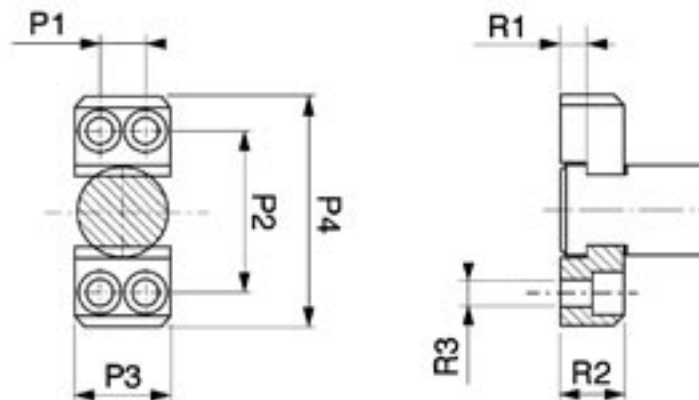
FIXING FLANGE

It's a fixing flange with only a central threaded hole. The holes for the fixing to the mold and the central cave are not included.



ANTI-TORQUE CLAMPS

They are created to realize a fixing of the rod to the mold, avoiding its rotation. Screws are not included.

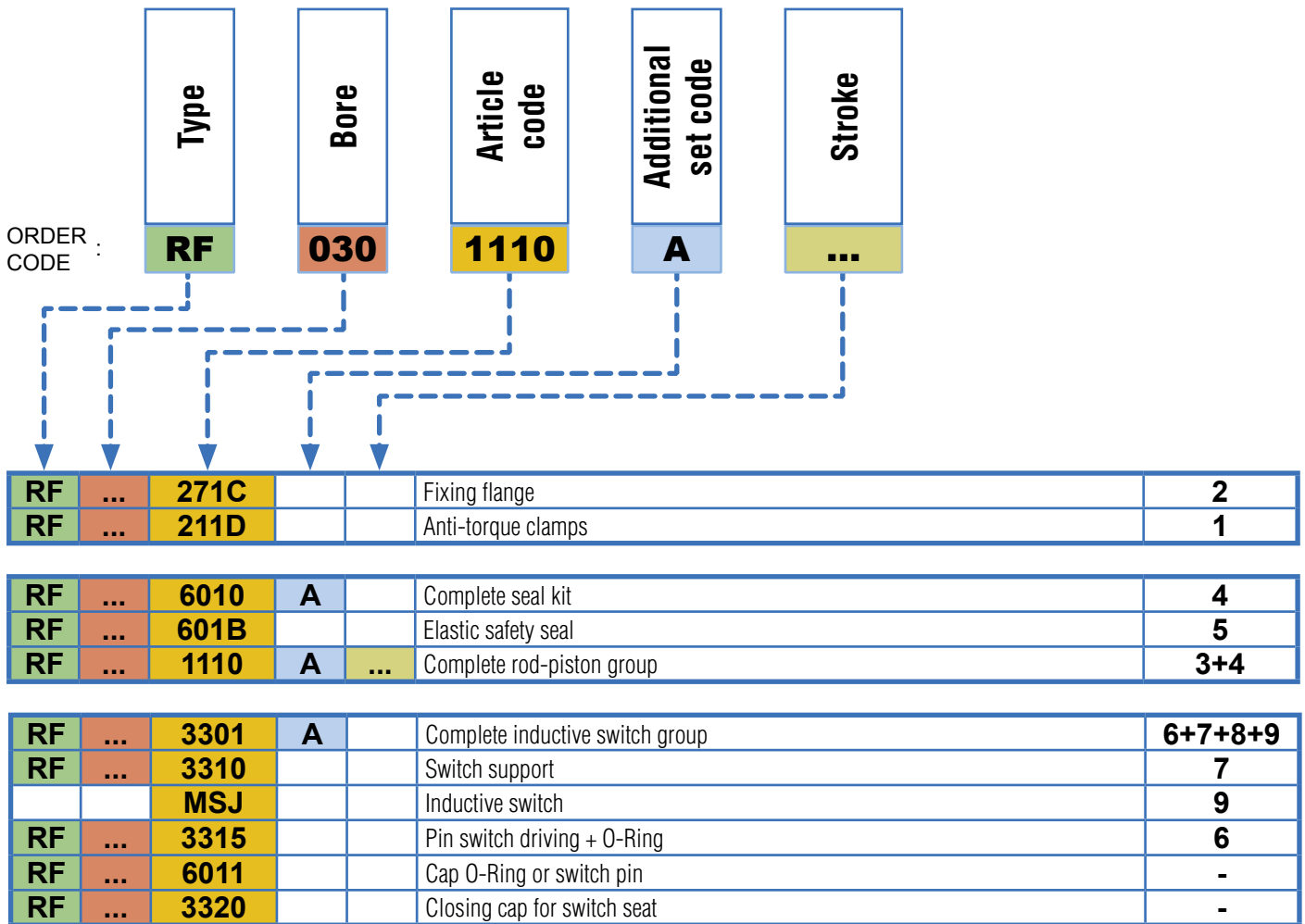


Not available for bore \varnothing 24 mm.

\varnothing Bore	M4	M5	M6	M7	M8	M9	N	P1	P2	P3	P4	R1	R2	R3	S	T
24	M30×1,5	-	82	-	56	8,5	22	-	-	-	-	-	-	-	-	8,5
30	M40×1,5	23	102	48	70	10,5	28	10	32	21	46	6	11	5,1	11	10,5
36	M48×1,5	28	112	54	80	12,5	32	12	38	26	52	8	14	6,1	13	12,5
45	M60×1,5	34	132	68	96	14,5	38	15	48	32	66	10	18	8,1	13	14,5
56	M75×1,5	38	160	80	116	16,5	46	18	58	36	78	12	22	8,1	15	16,5
71	M95×2	46	200	95	148	20,5	54	20	67	42	91	14	27	10,3	13	20,5
84	M110×2	-	238	-	172	24,5	64	20	76	42	100	14	27	10,3	-	24,5

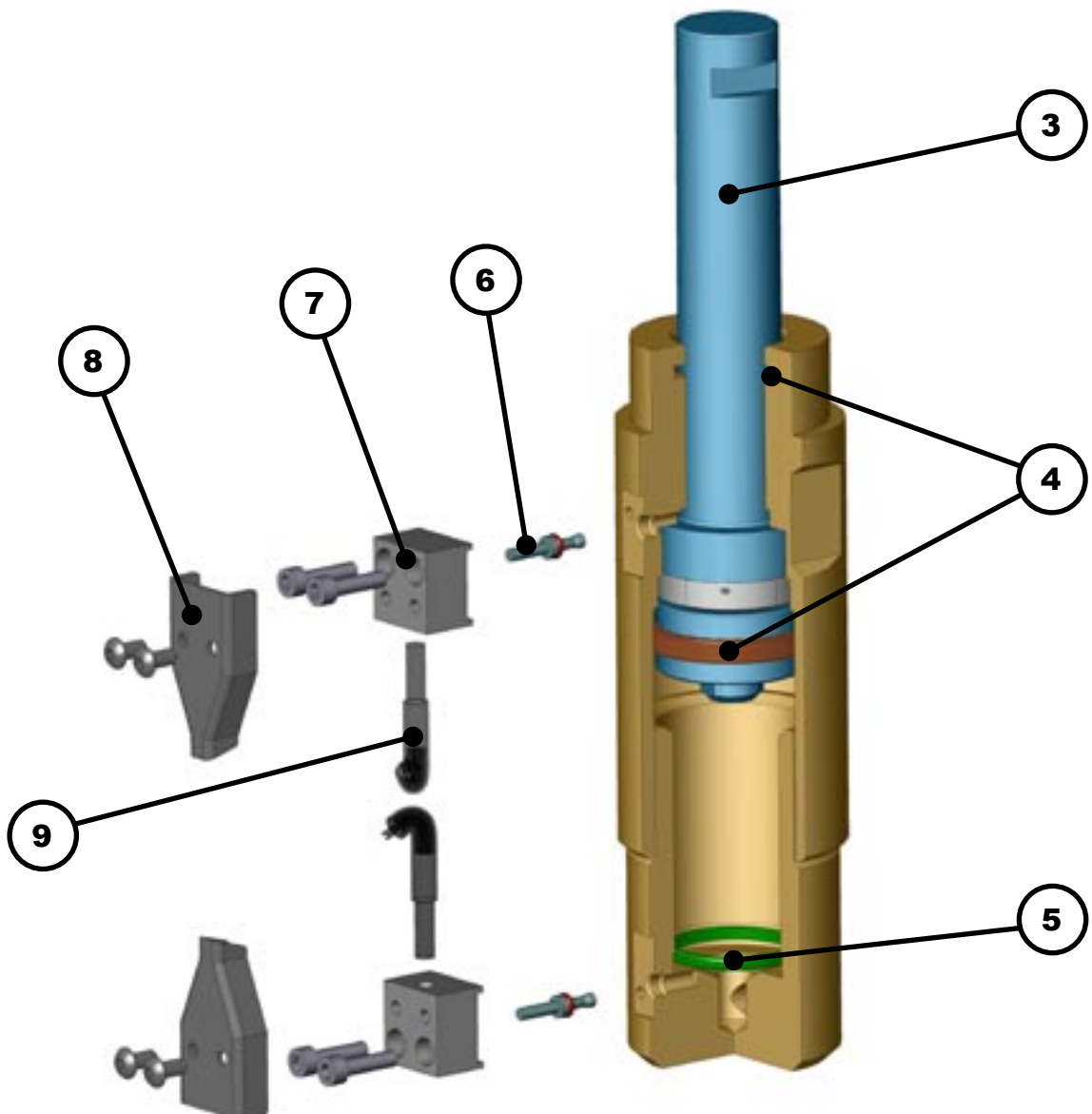
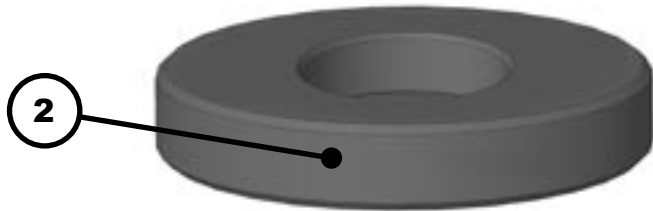
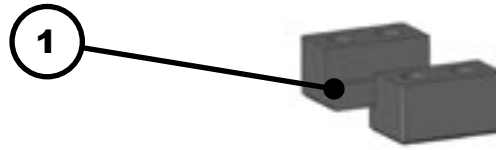
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SPARE PARTS



Self-locking rod hydraulic cylinders – 260 bar

- 1 Anti-torque clamps with screws
- 2 Fixing flange
- 3 Rod-piston group
- 4 Cylinder seals kit
- 5 Elastic safety seal
- 6 Pin switch driving + O-Ring
- 7 Switch support
- 8 Micro switch protection cover
- 9 Inductive switch



Mould Hydraulic Systems

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