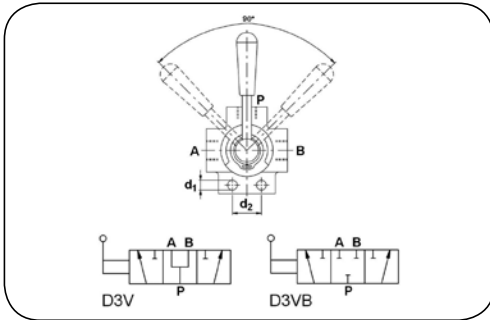


# HIGH PRESSURE - valves

## Hydraulic directional control valves



### Hand switching valve D3V

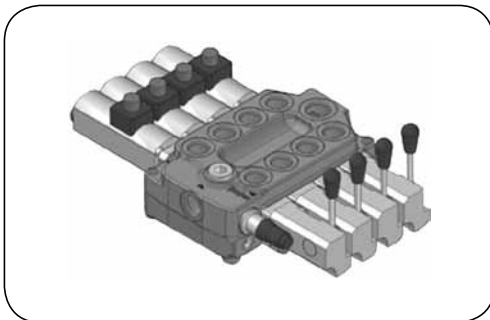
**Material:** Body - iron casting  
Stem - hardened steel

**Seal:** NBR

**Working temp.:** From -20°C up to +90°C

Hand switching 3-way valve used in hydraulic systems to control fluid flow direction. Controlled by manual lever.

code	thread size [inch]	working pressure [bar]	flow rate [l/min]	D1 [mm]	D2 [mm]
DC-D3V-04	1/4	300	30	8.5	24
DC-D3V-06	3/8	250	35	8.5	24
DC-D3V-08	1/2	250	60	10.5	32
DC-D3V-12	3/4	250	100	10.5	32
DC-D3V-16	1	250	180	11	32
DC-D3VB-04	1/4	300	30	8.5	24
DC-D3VB-06	3/8	250	35	8.5	24
DC-D3VB-08	1/2	250	60	10.5	32
DC-D3VB-12	3/4	250	100	10.5	32
DC-D3VB-16	1	250	180	11	32



### Directional control valves SALAMI

6-way, spool, directional control valves designed for hydraulic installations of cranes, hoists but also other construction, agricultural and industrial machines. They are used to control the fluid flow direction. There are two versions of the valves: sectional or monoblock (cast iron housing). The flow rate depends on a type and ranges from 45 to 180 l/min at maximum working pressure 350 bar. A single directional control valve can have up to 8 working sections.

type	version	nominal flow [l/min]	max. working pressure [bar]	number of working sections
VDM6	monoblock	45	350	7
VDM6A	monoblock	45	350	7
VDM09	monoblock	75	280	6
VDM8	monoblock	75	350	5
VD6A	sectional	45	350	8
VD8A	sectional	75	350	8
VD10A	sectional	120	280	8
VD12A	sectional	180	280	8

# HIGH PRESSURE - valves

## Hydraulic directional control valves



### YFM35, YFM55 type

**Material:** Body - cast iron  
Spools - hardened steel

**Seal:** NBR

**Max. working press.:** 315 bar

**Max. return pressure:** 25 bar

**Working temp.:** From -20°C up to +80°C

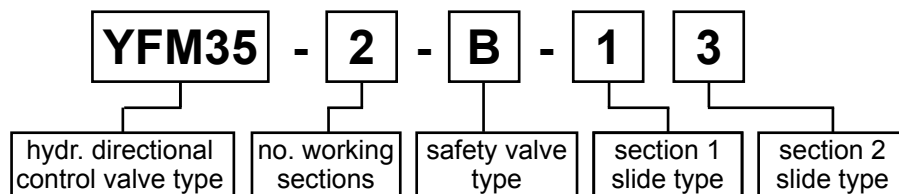
Monoblock spool directional control valve with a manual lever and centring springs. Designed for hydraulic systems used in cranes, hoists, construction, agricultural and industrial machines. Equipped with C type safety valve (set at 140 bar) and type 1 spool as a standard.

code	number of work. sections	safety valve type	nominal flow	connection port size		
				P (pump)	T (tank)	A, B (receiver)
<b>YFM35 type</b>						
TL-YFM35-1-C-1	1	C	45 l/min	3/8" BSP female thread	3/8" BSP female thread	3/8" BSP female thread
TL-YFM35-2-C-11	2					
TL-YFM35-3-C-111	3					
TL-YFM35-4-C-1111	4					
TL-YFM35-5-C-11111	5					
TL-YFM35-6-C-111111	6					
<b>YFM55 type</b>						
TL-YFM55-1-C-1	1	C	60 l/min	1/2" BSP female thread	1/2" BSP female thread	1/2" BSP female thread
TL-YFM55-2-C-11	2					
TL-YFM55-3-C-111	3					
TL-YFM55-4-C-1111	4					
TL-YFM55-5-C-11111	5					
TL-YFM55-6-C-111111	6					

safety valve types			
A type (without a valve)	B type (40 ÷ 80 bar)	C type (63 ÷ 200 bar)	D type (160 ÷ 315 bar)

slide types		
1 type 	2 type 	3 type 

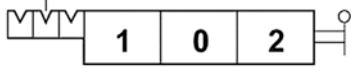
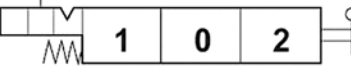
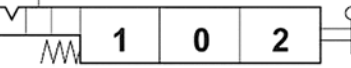
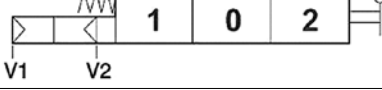
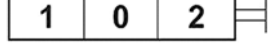
### Code structure



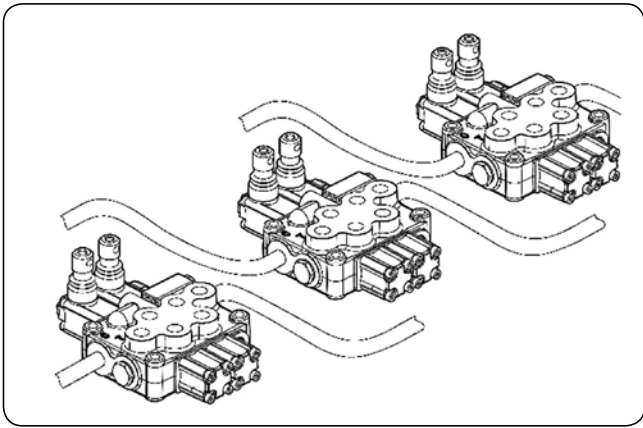
# HIGH PRESSURE - valves

## Hydraulic directional control valves

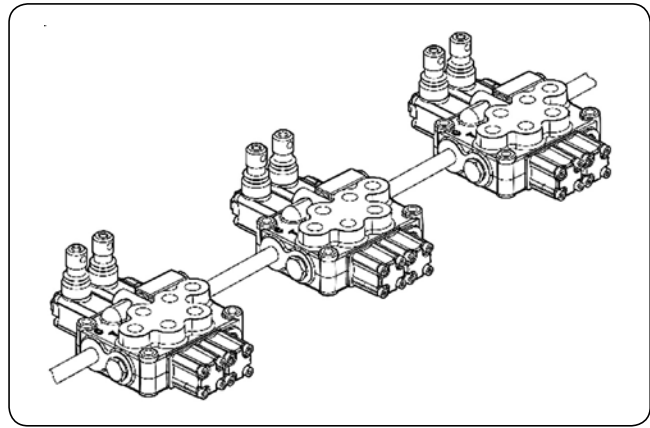
Other solutions - on request

type	description	hydraulic symbol
YFM35 YFM55	detent mechanism 3 positions spool control locked(1, 0, 2)	
YFM35 YFM55	detent mechanism 3 positions spool control locked (2)	
YFM35 YFM55	detent mechanism 3 positions spool control locked (1)	
YFM35 YFM55	pneumatic spool control min. 5.5 bar; max. 10 bar; 1/8" NPT	
YFM35 YFM55	remote control mechanism cable length from 1 to 6 meters	

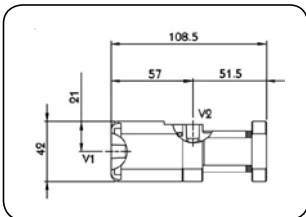
Power beyond - YFM35 and YFM55 directional control valves featuring an adapter. If installed inside the valve housing, the adapter allows to carry over the power beyond the circuit. In other words, the adapter blocks a direct connection between a pressure channel (P) and a tank channel (T). So as a result, unused hydraulic fluid under pressure gets directed to other parts of hydraulic system in order to supply other elements.



regular operation mode



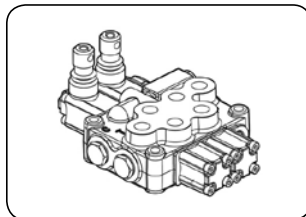
operation with power beyond function



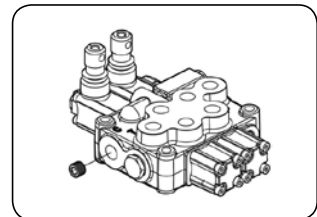
pneumatic control



remote control



regular operation mode



operation with power beyond function

# HIGH PRESSURE - valves

## Hydraulic directional control valves



### YE45 type

**Material:** Body - iron cast  
 Spools - hardened steel  
**Seal:** NBR  
**Max. working press.:** 250 bar  
**Max. return pressure:** 25 bar  
**Control voltage:** 12 V DC  
**Working temp.:** From -20°C up to +80°C

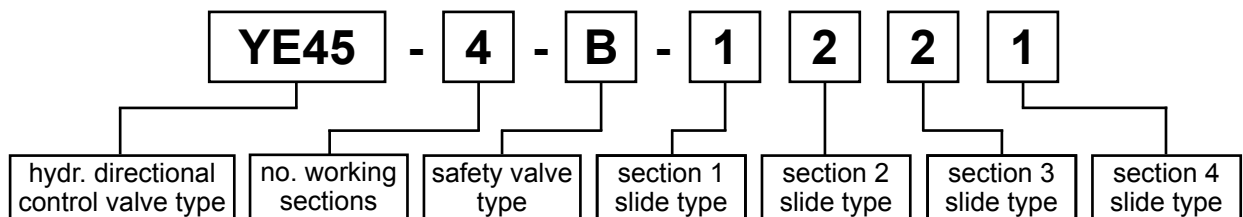
Monoblock spool directional control valve with electrically controlled centring springs. Designed for hydraulic systems used in cranes, hoists, construction, agricultural and industrial machines. Equipped with C type safety valve (set at 140 bar) and type 1 spools.

code	number of work. sections	safety valve type	nominal flow	connection port size		
				P (pump)	T (tank)	A, B (receiver)
TL-YE45-1-C-1	1	C	45 l/min	3/8" BSP female thread	3/8" BSP female thread	3/8" BSP female thread
TL-YE45-2-C-11	2					
TL-YE45-3-C-111	3					
TL-YE45-4-C-1111	4					
TL-YE45-5-C-11111	5					
TL-YE45-6-C-111111	6					

safety valve types			
A type (without valve)	B type (40 ÷ 80 bar)	C type (63 ÷ 200 bar)	D type (160 ÷ 315 bar)

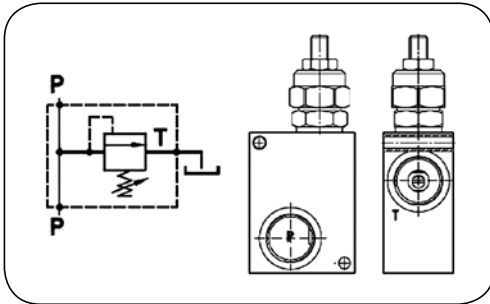
slide types	
1 type 	2 type 

### code structure



# HIGH PRESSURE - valves

## Hydraulic safety valves



### Pressure relief valve FPM

**Material:** Body - aluminium  
Stem - zinc-plated steel

**Seal:** NBR

**Working temp.:** From -20°C up to +90°C

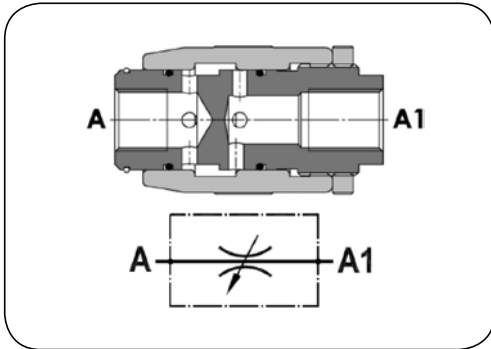
FPM safety valve limits the maximum pressure in a hydraulic system. The valve enables hydraulic fluid to flow freely between P connection ports. When the pressure rises above the set value, T passage opens and the excessive pressurised fluid is relieved out of the system, into the tank. The maximum pressure value is set with an adjusting screw (set with a hex wrench, locked with a locking nut).

code	thread size [inch]	flow rate [l/min]	set pressure range [bar]	set pressure adjustment [bar/turn]	weight [kg]
DC-FPM-40P05-06	3/8	40	5 ÷ 50	10	0.41
DC-FPM-40P10-06	3/8	40	30 ÷ 100	20	0.41
DC-FPM-40P20-06	3/8	40	50 ÷ 220	40	0.41
DC-FPM-40P05-08	1/2	40	5 ÷ 50	10	0.41
DC-FPM-40P10-08	1/2	40	30 ÷ 100	20	0.41
DC-FPM-40P20-08	1/2	40	50 ÷ 220	40	0.41
DC-FPM-70P05-08	1/2	80	5 ÷ 50	10	0.73
DC-FPM-70P10-08	1/2	80	30 ÷ 100	20	0.73
DC-FPM-70P20-08	1/2	80	80 - 280*	40	0.73
DC-FPM-70P05-12	3/4	80	5 ÷ 50	10	0.73
DC-FPM-70P10-12	3/4	80	30 ÷ 100	20	0.73
DC-FPM-70P20-12	3/4	80	80 ÷ 280*	40	0.73

\* - be very careful not to set the pressure value higher than 250 bar (max. working pressure of the valve body).

# HIGH PRESSURE - valves

## Throttle and safety valves



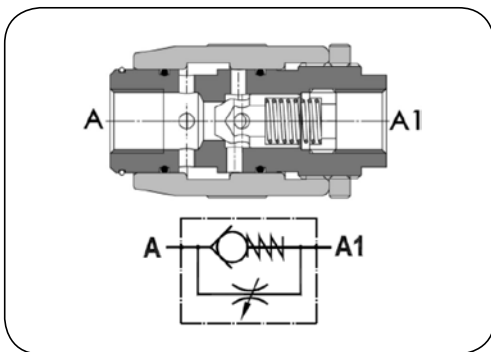
### Throttle valve FPMB

**Material:** Body - galvanized steel  
**Seal:** NBR  
**Working temp.:** From -20°C up to +90°C

Adjustable throttle valve, FPMB type, used in hydraulic systems to control a flow rate. The flow rate is controlled by a rotary ring.

Allowable flow direction: A → A1, A1 → A.

code	thread size [inch]	working pressure [bar]	bursting pressure [bar]	flow rate [l/min]	weight [kg]
DC-FPMB-04	1/4	350	1400	12	0.28
DC-FPMB-06	3/8	350	1400	30	0.43
DC-FPMB-08	1/2	310	1240	45	0.63
DC-FPMB-12	3/4	280	1120	85	1.05
DC-FPMB-16	1	250	1000	150	1.96



### Throttle check valve FPMU

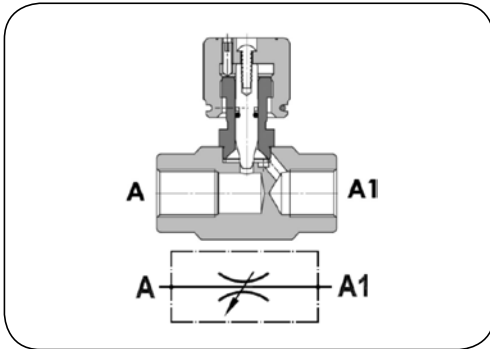
**Material:** Body - galvanized steel  
 Stem - hardened steel  
**Seal:** NBR  
**Working temp.:** From -20°C up to +90°C

Throttle check valves, FPMU type, used in hydraulic systems to open a free flow in one direction. The flow, throttled in the opposite direction, is controlled by a rotary ring. Standard opening pressure: 0.5 bar (2.5; 5 and 10 bar available). Allowable flow direction: A → A1 (free), A1 → A (throttled).

code	thread size [inch]	working pressure [bar]	bursting pressure [bar]	flow rate [l/min]	weight [kg]
DC-FPMU-04	1/4	350	1400	12	0.28
DC-FPMU-06	3/8	350	1400	30	0.43
DC-FPMU-08	1/2	310	1240	45	0.63
DC-FPMU-12	3/4	280	1120	85	1.05
DC-FPMU-16	1	250	1000	150	1.96

# HIGH PRESSURE - valves

## Throttle and safety valves



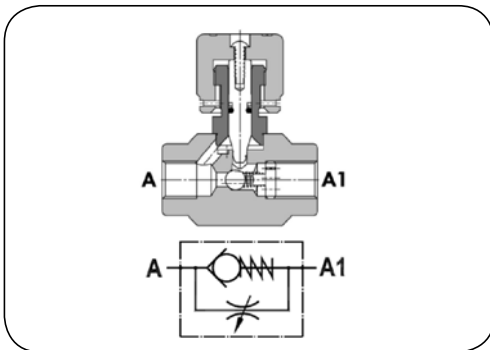
### Throttle valve FPSB

**Material:** Body - galvanized steel  
Knob - steel  
**Seal:** NBR  
**Working temp.:** From -20°C up to +90°C

Adjustable throttle valve, FPSB type, used in hydraulic systems to control a flow rate. The flow rate is controlled by a handwheel.

Allowable flow direction: A → A1, A1 → A.

code	thread size [inch]	working pressure [bar]	bursting pressure [bar]	flow rate [l/min]	weight [kg]
DC-FPSB-04	1/4	300	1200	12	0.30
DC-FPSB-06	3/8	300	1200	30	0.31
DC-FPSB-08	1/2	280	1120	45	0.31



### Throttle check valve FPSU

**Material:** Body - galvanized steel  
Spring - steel  
Ball - steel  
Knob - steel  
**Seal:** NBR  
**Working temp.:** From -20°C up to +90°C

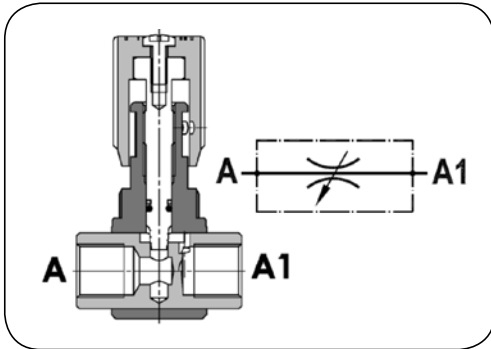
Throttle check valve, FPSU type, used in hydraulic systems to open free flow in one direction. The flow, throttled in the opposite direction, is controlled by a rotary ring. Standard opening pressure: 0.5 bar.

Allowable flow direction: A → A1 (free), A1 → A (throttled).

code	thread size [inch]	working pressure [bar]	bursting pressure [bar]	flow rate [l/min]	weight [kg]
DC-FPSU-04	1/4	300	1200	12	0.31
DC-FPSU-06	3/8	300	1200	25	0.31
DC-FPSU-08	1/2	280	1120	40	0.31

# HIGH PRESSURE - valves

## Throttle and safety valves



### Throttle valve FPB

**Material:** Body - galvanized steel  
Wheel - plastic

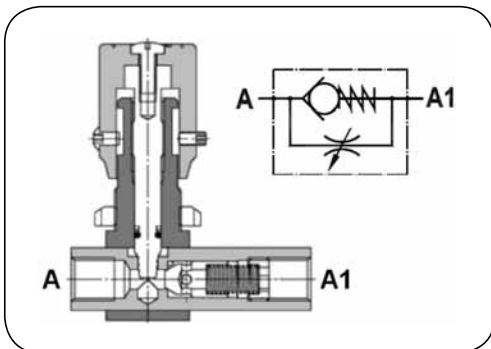
**Seal:** NBR

**Working temp.:** From -20°C up to +90°C

Adjustable throttle valve, FPB type, used in hydraulic systems to control a flow rate. The flow rate is controlled by a wheel.

Allowable flow direction: A → A1, A1 → A.

code	thread size [inch]	working pressure [bar]	bursting pressure [bar]	flow rate [l/min]	weight [kg]
DC-FPB-04	1/4	300	1200	12	0.21
DC-FPB-06	3/8	300	1200	30	0.35
DC-FPB-08	1/2	280	1120	45	0.50
DC-FPB-12	3/4	250	1000	85	0.87



### Throttle check valve FPU

**Material:** Body - galvanized steel  
Spring - steel  
Stem - steel  
Knob - plastic

**Seal:** NBR

**Working temp.:** From -20°C up to +90°C

Throttle check valve, FPSU type, used in hydraulic systems to open free flow in one direction. The flow, throttled in the opposite direction, is controlled by a rotary ring. Standard opening pressure: 0.5 bar (2.5, 5 and 10 bar available).

Allowable flow direction: A → A1 (free), A1 → A (throttled).

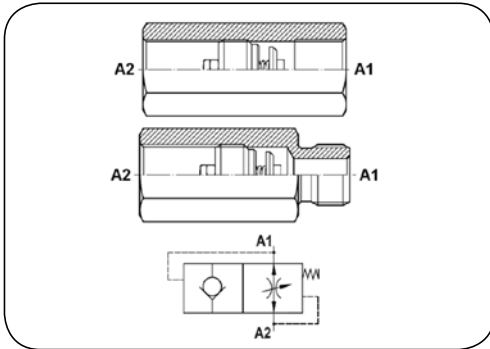
code	thread size [inch]	working pressure [bar]	bursting pressure [bar]	flow rate [l/min]	weight [kg]
DC-FPU-04	1/4	300	1200	12	0.25
DC-FPU-06	3/8	300	1200	30	0.42
DC-FPU-08	1/2	280	1120	45	0.60
DC-FPU-12	3/4	250	1000	85	1.10

picture	code	valve size [inch]	thread size [mm]	description
	DC-TP-04	1/4	M21x1	Tightening nut designed for mounting valves of FPB or FPU type. Material: galvanized steel.
	DC-TP-06	3/8	M25x1.5	
	DC-TP-08	1/2	M30x1.5	
	DC-TP-12	3/4	M35x1.5	



# HIGH PRESSURE - valves

## Throttle and safety valves



### Safety valve FFP, MFP

**Material:** Galvanized steel

Safety valve secures hydraulic system from oil leakage in case of sudden depressurisation (e.g. failure of hose assembly).

Allowable flow direction: A1 → A2 (valve), A2 → A1 (without valve).

code	thread size [inch]	working pressure [bar]	bursting pressure [bar]	flow rate [l/min]	weight [kg]
FFP type (BSP female thread)					
DC-FFP-04	1/4	350	1400	25	0.08
DC-FFP-06	3/8	350	1400	50	0.11
DC-FFP-08	1/2	350	1400	80	0.18
DC-FFP-12	3/4	350	1400	150	0.40
DC-FFP-16	1	300	1200	200	0.88
MFP type (BSP male thread)					
DC-MFP-04	1/4	350	1400	25	0.08
DC-MFP-06	3/8	350	1400	50	0.12
DC-MFP-08	1/2	350	1400	80	0.21
DC-MFP-12	3/4	350	1400	150	0.41
DC-MFP-16	1	300	1200	200	0.86

# HIGH PRESSURE - valves

## Block valves and adapters



### Control valves NG6, NG10 type

**Material:** Body - steel  
Spool - hardened steel

**Seal:** NBR

**Max. working press.:** 315 bar

**Control voltage:** 24 V DC

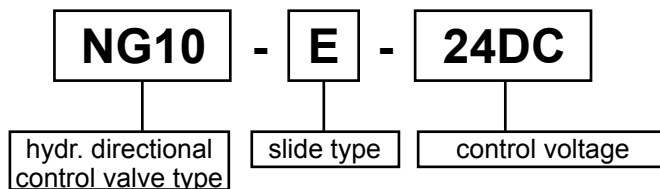
**Working temp.:** From -20°C up to +80°C

Monoblock spool directional control valve, electrically controlled, with centring springs designed for panel mounting. Used in hydraulic systems of industrial machines. Supplied with O-rings and mounting screws as a standard. Plugs are equipped with LEDs indicating status of power supply.

code	nominal flow	slide type	main view
<b>NG6 type</b>			
TL-NG6-E-24DC	60 l/min	E	
TL-NG6-G-24DC		G	
TL-NG6-H-24DC		H	
TL-NG6-J-24DC		J	
TL-NG6-HA-24DC		HA	
TL-NG6-A-24DC		A	
TL-NG6-D-24DC		D	
TL-NG6-HB-24DC		HB	
<b>NG10 type</b>			
TL-NG10-E-24DC	120 l/min	E	
TL-NG10-G-24DC		G	
TL-NG10-H-24DC		H	
TL-NG10-J-24DC		J	
TL-NG10-HA-24DC		HA	
TL-NG10-A-24DC		A	
TL-NG10-D-24DC		D	
TL-NG10-HB-24DC		HB	

slide types		
E type 	G type 	H type 
J type 	HA type 	A type 
D type 	HB type 	

#### Code structure



# HIGH PRESSURE - valves

## Block valves and adapters



**Material:** Steel  
**Seal:** NBR  
**Max: working press.:** 315 bar  
**Ambient temp.:** From -20°C up to +50°C  
**Medium temp.:** From -20°C up to +70°C

## Check valve AKV

code	type	flow rate [l/min]	working pressure [bar]	hydraulic symbol
TL-ZAKV-6-D	NG6	40	315	
TL-ZAKV-10-D	NG10	100	315	
TL-ZAKV-6-P	NG6	40	315	
TL-ZAKV-10-P	NG10	100	315	
TL-ZAKV-6-A	NG6	40	315	
TL-ZAKV-10-A-	NG10	100	315	

## Controlled check valve APKV

code	type	flow rate [l/min]	working pressure [bar]	hydraulic symbol
TL-ZAPKV-6-D	NG6	60	315	
TL-ZAPKV-10-D	NG10	80	315	
TL-ZAPKV-6-A	NG6	60	315	
TL-ZAPKV-10-A	NG10	80	315	
TL-ZAPKV-6-B	NG6	60	315	
TL-ZAPKV-10-B	NG10	80	315	

# HIGH PRESSURE - valves

## Block valves and adapters

### Safety valve LPKV

code	type	flow rate [l/min]	set pressure range [bar]	hydraulic symbol
TL-ZLPKV-6-D-100	NG6	60	0 ÷ 100	
TL-ZLPKV-6-D-315	NG6	60	0 ÷ 315	
TL-ZLPKV-10-D-100	NG10	100	0 ÷ 100	
TL-ZLPKV-10-D-315	NG10	100	0 ÷ 315	
TL-ZLPKV-6-P-100	NG6	60	0 ÷ 100	
TL-ZLPKV-6-P-315	NG6	60	0 ÷ 315	
TL-ZLPKV-10-P-100	NG10	100	0 ÷ 100	
TL-ZLPKV-10-P-315	NG10	100	0 ÷ 315	
TL-ZLPKV-6-A-100	NG6	60	0 ÷ 100	
TL-ZLPKV-6-A-315	NG6	60	0 ÷ 315	
TL-ZLPKV-10-A-100	NG10	100	0 ÷ 100	
TL-ZLPKV-10-A-315	NG10	100	0 ÷ 315	

### Throttle check valve RCKV

code	type	flow rate [l/min]	working pressure [bar]	hydraulic symbol
TL-ZRCKV-6-D	NG6	80	315	
TL-ZRCKV-10-D	NG10	160	315	