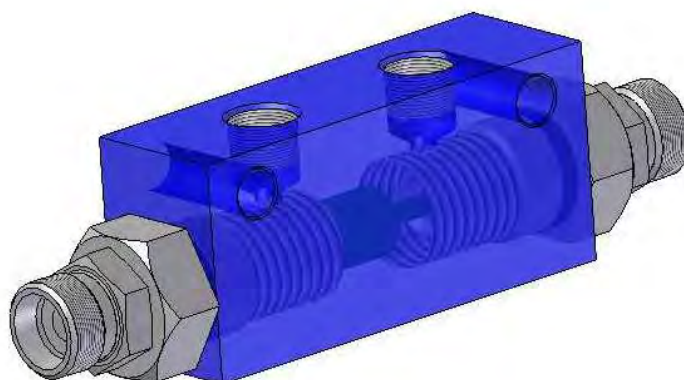


Catalogue

OF HYDRAULIC VALVES



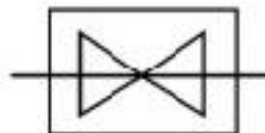
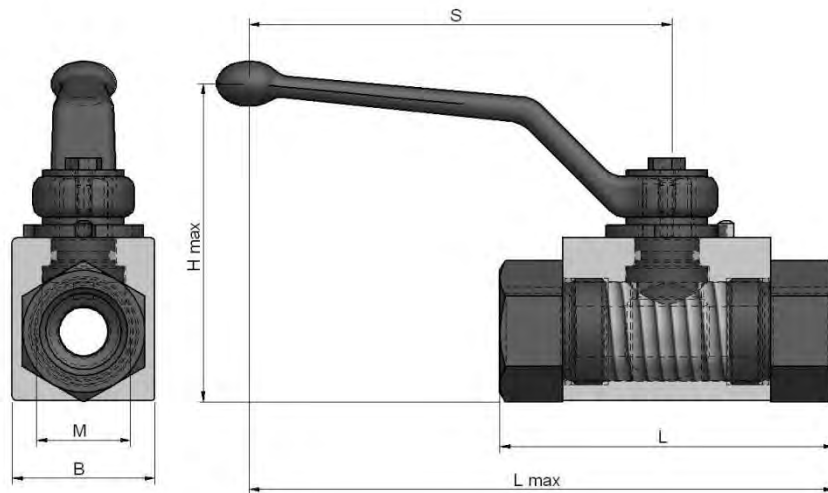
VER. CATALOG / WHS / 2020-04 / EN

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SHUT-OFF VALVES – Z01

Intended use: Z01 shut-off ball valves are used for opening and shutting-off flow of working liquid (hydraulic oil). They can be installed in both high-pressure and low-pressure systems.

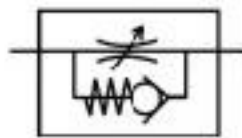
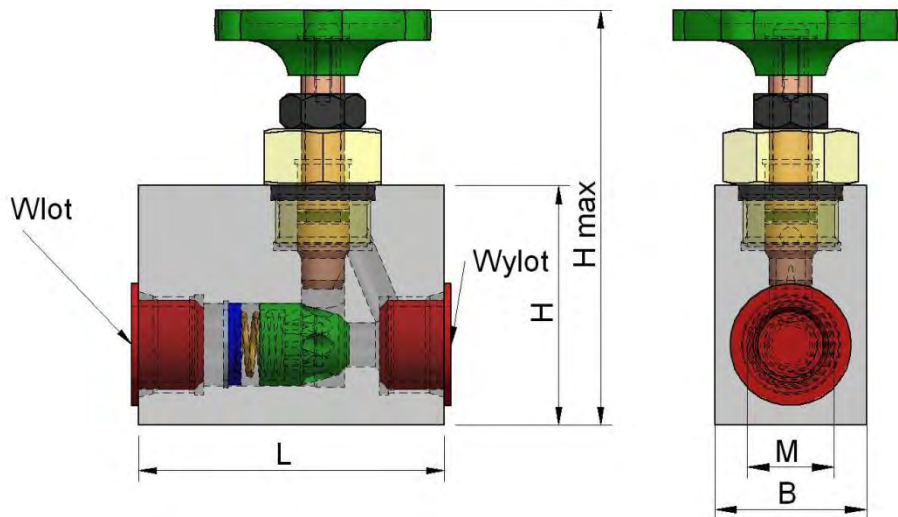


Technical data:

Product symbol / Valve		Z01-160-13	Z01-160-16	Z01-160-20	Z01-160-25	Z01-160-32
Fixed	Pressure [MPa]	16 [MPa]				
	Viscosity range [cSt]	10÷300 [cSt]				
	Temperature range [C] K	-30 ÷ +80 [C] ; 243 ÷ 353 [K]				
Changeable	Nominal value	13	16	20	25	32
	Flow [L/min]	40	63	100	160	250
	L – Length [mm]	75	75	94	99	126
	H – Height [mm]	61	61	68	73	103
	B – Breadth [mm]	51	51	50	60	82
	L max – Max. length [mm]					
	H max – Max. height [mm]	87	87	101	106	141
	S - handle length [mm]	137	177	227	227	224
	g – seat depth	18	18	20	22	24
M - thread	M 20 x 1.5	M 20 x 1.5	M 27 x 2	M 33 x 2	M 42 x 2	

THROTTLE CHECK VALVES – ZDZ1

Intended use: Throttle check valves are to be used in hydraulic systems in which they are responsible for throttling – in liquid flow in the check direction and free flow of the entire liquid output in flow in the opposite direction. Degree of throttling is adjusted smoothly (not by steps). Adjustment may be performed while valves are in operation. They may be installed on high pressure conduits in front of pressure receivers.

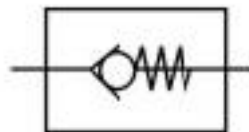
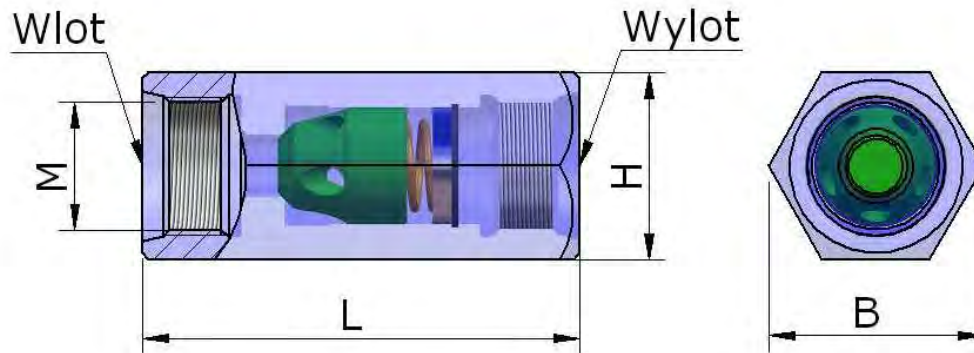


Technical data:

Product symbol/Valve		ZDZ1 -320 R6	ZDZ1 -320 R10	ZDZ1 -320 R16	ZDZ1 -320 R20	ZDZ1 -320 R25
Fixe	Pressure [MPa]	32 [MPa]				
	Viscosity range [cSt]	10÷300 [cSt]				
	Temperature range [C] [K]	-20 ÷ +80 [C] ; 253 ÷ 353 [K]				
Changeable	Nominal value					
	Flow [L/min]	10	25	63	100	140
	L - Length [mm]	57	70.5	90.5	104	127
	H – Height [mm]	50	55	70	80	90
	B – Breadth [mm]	35	35	45	60	60
	H max – Max. height [mm]	100	102	120	140	142
	g – seat depth	16	18	22	24	32
	M - thread	M16 x 1.5	M22 x 1.5	M33 x 2	M42 x 2	M48 x 2

CHECK VALVES – ZZ

Intended use: Check valves are used in hydraulic systems in order to enable free flow of working liquid in one direction and check the flow in the opposite direction. Working liquid – oils or other liquids which do not cause corrosion.

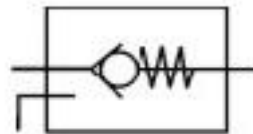
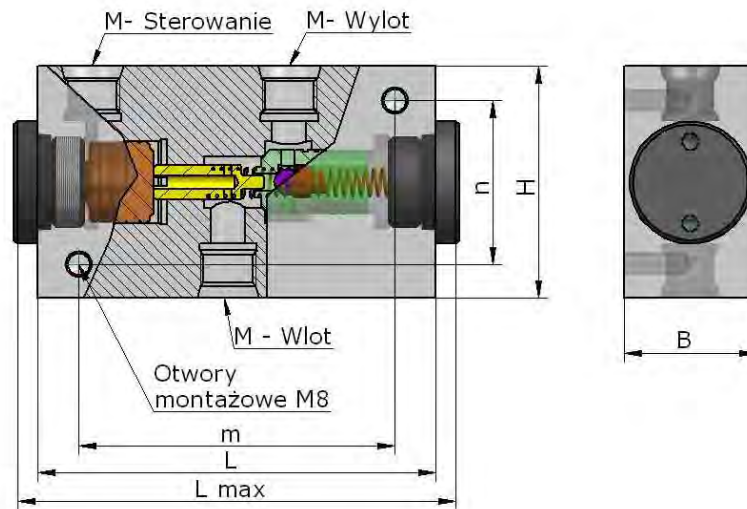


Technical data:

Product symbol/Valve		ZZ-320-6	ZZ-320-10	ZZ-320-16	ZZ-320-20	ZZ-320-25
Fixe	Pressure [MPa]	32 [MPa]				
	Viscosity range [cSt]	10÷300 [cSt]				
	Temperature range [C] [K]	-20 ÷ +80 [C] ; 253 ÷ 353 [K]				
Changeable	Nominal value	6	10	16	20	25
	Flow [L/min]	10	25	63	100	100
	L - Length [mm]	57	70.5	90.5	104	127
	H – Height [mm]	47	47	47	55	70
	B – Breadth [mm]	22	30	41	46	60
	L max – Max. length [mm]	57	70.5	90.5	104	127
	a – opening pressure	0.05				
	b – opening pressure	0.10				
	c – opening pressure	0.30				
	d – opening pressure	0.50				
g – seat depth	16	18	22	24	26	
M - thread	M16 x 1.5	M22 x 2	M33 x 2	M42 x 2	M48 x 2	

CONTROLLED CHECK VALVES – ZSZ2

Intended use: Controlled check valves with ZST hydraulic control are to be used in open hydraulic systems in which it is necessary to close the flow from receiver to sink with a possibility to control this flow. ZSZ valves can be installed on a hydraulic installation conduit. Position of installed valve in space can be chosen arbitrarily.



Technical data:

Product symbol/Valve		ZSZ2-320-10H	ZSZ2-320-13H	ZSZ2-320-16H
Fixe	Pressure [MPa]	32 [MPa]		
	Viscosity range [cSt]	10÷300 [cSt]		
	Temperature range [C] [K]	-20 ÷ +80 [C] ; 253 ÷ 353 [K]		
Changeable	Nominal value	10	13	16
	Flow [L/min]	25	40	63
	L - Length [mm]	117	117	147
	H – Height [mm]	68	68	70
	B – Breadth [mm]	39	39	39
	L max – Max. length [mm]			
	M Inlet	M16 x 1.5	M20 x 1.5	M22 x 1.5
	M Outlet	M16 x 1.5	M20 x 1.5	M22 x 1.5
	M Control	M16 x 1.5	M16 x 1.5	M16 x 1.5
	m [mm]			
	n [mm]			
	Pressure of valve opening [MN/cm ²] [kG/cm ²]	[0.2] [2]	[0.2] [2]	[0.15] [1.5]
Control of valve for slow release [MN/cm ²] [kG/cm ²]	[1.6] [16]	[1.6] [16]	[3] [30]	
Control of main valve [MN/cm ²] [kG/cm ²]	[1.72] [17.2]	[1.72] [17.2]	[3.2] [32]	

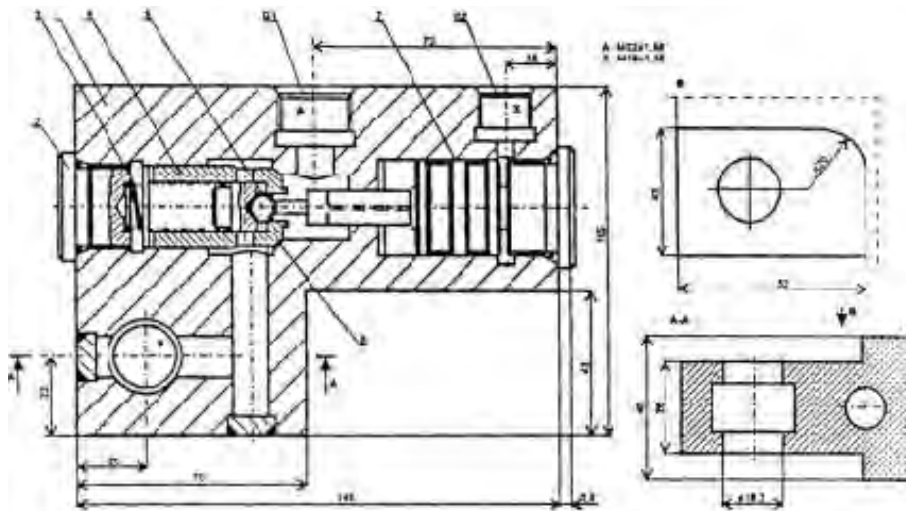
GMGMZSZ2-160-16-H CONTROLLED CHECK VALVE

Intended use: GMZSZ2-16-16-H controlled check valve is used for shutting-off oil in flow in one direction with the possibility to control its opening, and for opening the free flow in the opposite direction after control pressure is given.

It is used in the following situations:

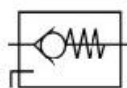
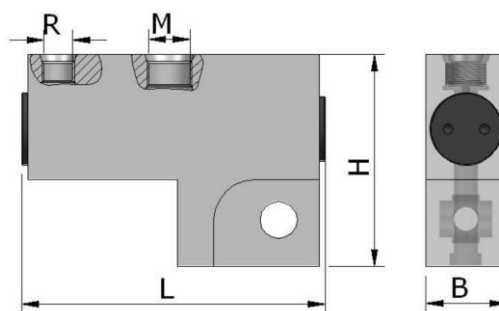
- to relieve a circuit which is under pressure
- as protection against falling of load in case when circuit is broken
- against creeping movements of blocked receivers

It is manufactured in a version allowing its direct installation on a hydraulic cylinder.



Operation: In body (1) a plug (2) is screwed in. This plug at the same time constitutes resistance for spring (3).

The spring using the head (4) presses ball (5) against edge (6) and keeps the valve in a closed position. If differential pressure in channel A exceeds opening pressure value set by the spring, the ball (5) moves and the flow from A to B opens. Flow from space B to A will take place when control pressure is supplied to channel X. Pressure in channel X operates on piston rod (7) surface. Piston rod moves and presses head (4) and, having overcome pressure in channel B and spring tensions, it allows for flow from B to A as long as the control pressure in channel X operates.

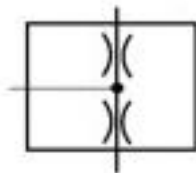
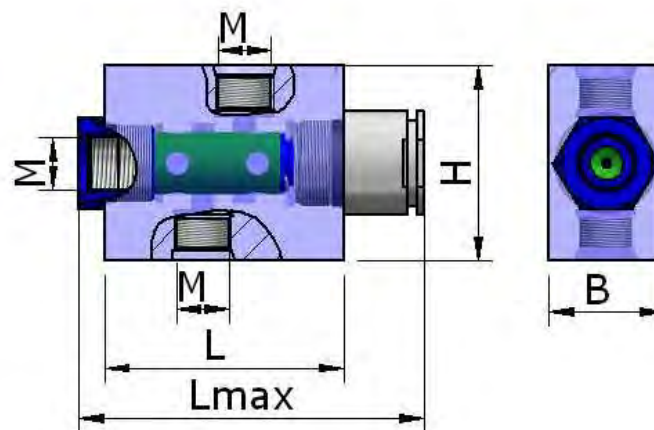


Technical data:

Product symbol/Valve		GMGMZSZ2-160-16-H CONTROLLED CHECK VALVE
Fixe	Pressure [MPa]	16 [MPa]
	Viscosity range [cSt]	10÷300 [cSt]
	Temperature range [C] [K]	-20 ÷ +80 [C] ; 253 ÷ 353 [K]
Changeable	Nominal value	16
	Flow [L/min]	63 [L/min]
	Pressure of valve opening	0,2 [MPa]
	Control pressure of slow release valve	3 [MPa]
	Control pressure of main valve	4 [MPa]
	Liquid filtering accuracy [µm]	10 [µm]
	L - Length [mm]	147
	L max – Max. length [mm]	153
	H – Height [mm]	101
B – Breadth [mm]	38	

THREE-WAY ANTIPULSE DIVIDER - DTA

Intended use: DTA valves – stream dividers – are to be used in closed hydraulic systems in which it is necessary to divide liquid stream into two equal parts in the ratio of 50% to 50%. DTA valves can be installed on a hydraulic installation conduit. Position of installed valve in space can be chosen arbitrarily.

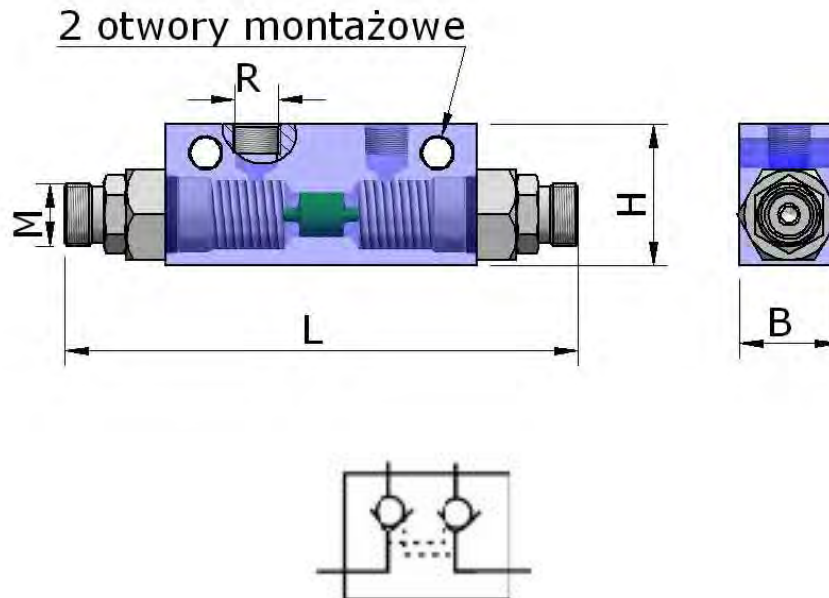


Technical data:

Product symbol/Valve		THREE-WAY ANTIPULSE DIVIDER - DTA
Fixe	Pressure [MPa]	16 [MPa]
	Viscosity range [cSt]	10÷300 [cSt]
	Temperature range [C] [K]	-30 ÷ +80 [C] ; 243 ÷ 353 [K]
Changeable	Nominal value	16
	Stream Q no greater than	55 [L/min]
	Stream regulated Q reg.	23 [L/min]
	Liquid filtering accuracy [µm]	10 [µm]
	L - Length [mm]	120
	L max – Max. length [mm]	83
	H – Height [mm]	68
	B – Breadth [mm]	40
M - thread	M 20x1.5	

CONTROLLED DOUBLE CHECK VALVE - HZ 11

Intended use: HZ11 controlled double check valve is used for shutting-off oil in flow in one direction with the possibility to control its opening, and for opening the free flow in the opposite direction. It is manufactured in a version allowing its direct installation on a hydraulic cylinder.

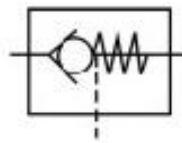
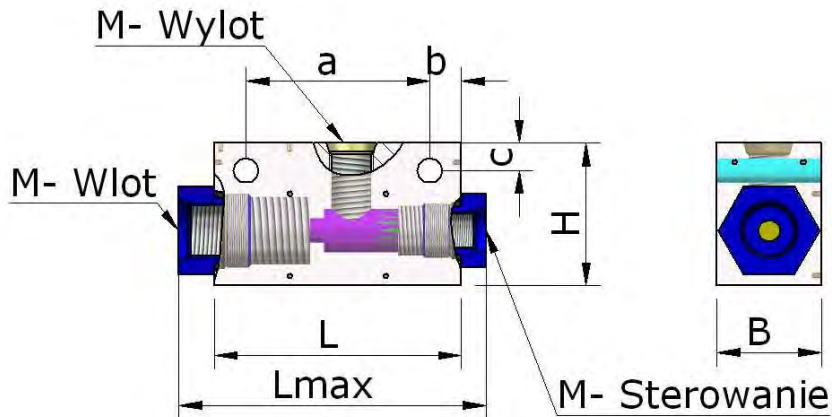


Technical data:

Product symbol/Valve		CONTROLLED DOUBLE CHECK VALVE
Fixe	Pressure [MPa]	16 [MPa]
	Viscosity range [cSt]	10÷300 [cSt]
	Temperature range [C] [K]	-20 ÷ +80 [C] ; 253 ÷ 353 [K]
Changeable	Nominal value	16
	Flow [L/min]	63 [L/min]
	Pressure of valve opening	0.2 [MPa]
	Control pressure of slow release valve	3 [MPa]
	Control pressure of main valve	4 [MPa]
	Liquid filtering accuracy [µm]	10 [µm]
	L - Length [mm]	110
	L max – Max. length [mm]	210
	H – Height [mm]	50
	B – Breadth [mm]	35
	a – opening distance [mm]	82
	b – distance form the edge [mm]	14
	c – distance from the top [mm]	10
M - thread	3/8 inch	

Z-60 CONTROLLED CHECK VALVE

Intended use: Z-60 controlled check valve is used for shutting-off oil stream in flow in one direction with the possibility to control its opening, and for opening the free flow in the opposite direction. It is manufactured in a version allowing its direct installation on a hydraulic cylinder. Position of installed valve in space can be chosen arbitrarily.

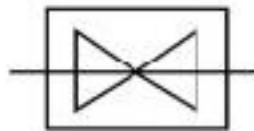
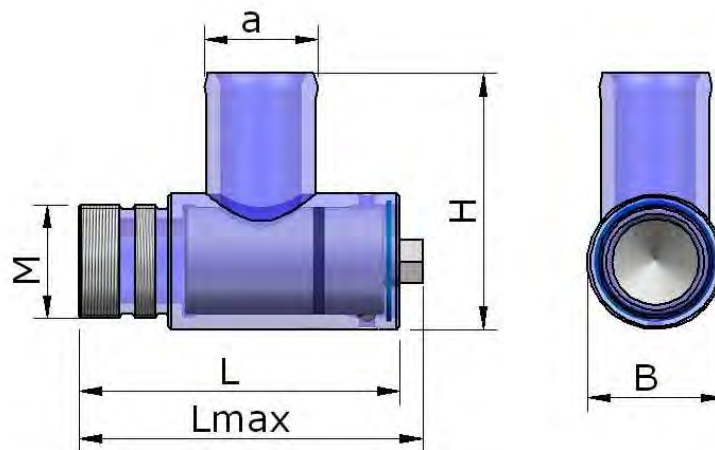


Technical data:

Product symbol/Valve		Z-60 CONTROLLED CHECK VALVE
Fixe	Pressure [MPa]	16 [MPa]
	Viscosity range [cSt]	10÷300 [cSt]
	Temperature range [C] [K]	-20 ÷ +80 [C] ; 253 ÷ 353 [K]
Changeable	Nominal value	16
	Flow [L/min]	
	L - Length [mm]	90
	L max – Max. length [mm]	112
	H – Height [mm]	52
	B – Breadth [mm]	38
	M - inlet	M 27x2
	M - outlet	M 16x1.5
	M - control	M 20x1.5
	a – hole distance [mm]	67
	b – distance form the edge [mm]	11.5
c – distance from the top [mm]	10	

ZA9B-100/32 ANGLE VALVE

Intended use: ZA9B-100/32 angle valve is used for discharging oil from the tank. It is installed directly at the oil tank.

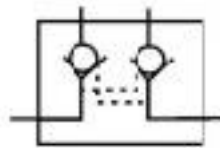
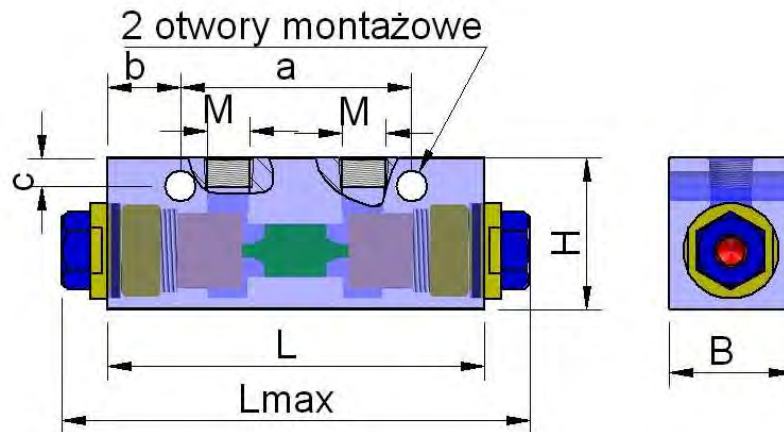


Technical data:

Product symbol/Valve		ZA9B-100/32 ANGLE VALVE
Fixe	Pressure [MPa]	16 [MPa]
	Viscosity range [cSt]	10÷300 [cSt]
	Temperature range [C] [K]	-20 ÷ +80 [C] ; 253 ÷ 353 [K]
Changeable	Nominal value	
	Flow [L/min]	
	L - Length [mm]	120
	L max – Max. length [mm]	128
	H – Height [mm]	95
	B – Breadth [mm]	50
	M - thread	M 42x2
a – outlet [mm]	39	

CONTROLLED DOUBLE CHECK VALVE - Z 229

Intended use: Z 229 controlled double check valve is used for shutting-off oil stream in flow in one direction with the possibility to control its opening, and for opening the free flow in the opposite direction. It is manufactured in a version allowing its direct installation on a hydraulic cylinder.



Technical data:

Product symbol/Valve		Z-229 VALVE
Fixe	Pressure [MPa]	16 [MPa]
	Viscosity range [cSt]	10÷300 [cSt]
	Temperature range [C] [K]	-20 ÷ +80 [C] ; 253 ÷ 353 [K]
Changeable	Nominal value	16
	Flow [L/min]	
	L - Length [mm]	134
	L max – Max. length [mm]	160
	H – Height [mm]	54
	B – Breadth [mm]	44
	M -	
	a – hole distance [mm]	82
	b – distance form the edge [mm]	26
c – distance from the top [mm]	10	

NOTES

NOTES



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