

MECHANICAL OPERATED 2-WAY DIRECTIONAL VALVES 2ST(B)

GENERAL DESCRIPTION



Figure 1 2ST General Arrangement

The Directional Control Valves 2ST(B) are 2-ways seawater resistant valves for distribution and stopping of flow in hydraulic systems. The valves have the following characteristics:

- Delivered threaded connections or for gasket mounting to a sub plate.
- Mechanically controlled by the actuator mechanism.
- Delivered with a flow capacity up to 300 l/min.

For more details about types and options, please refer to section 'Modular Code'.



MODULAR CODE

	Options	Remarks	Design Code	Fill in
Mounting				2ST
	Threads			
S	SUB Plate		В	
Туре				
	2-ways	No options	2	2
Pressure				
	350 bar	No options	4	4
Operation				
Actuat	or Mechanism	No options	0	0
Size				
	10	35 l/min	2	
	20	125 l/min	4	
	30	300 l/min	6	
Spool Type				
		2ST(B)240*1	1	
		2ST(B)240*3	3	

In example a 2ST240 valve with 35 l/min flow, will have modular code: **2ST24021**.





DIMENSIONS



Figure 2 2ST240 Dimensions

	Size [mm]	Α	B	С	D	D1	F	G	ł	Η	K	Μ	U	V	X	Y	Z
	10	7	5	151.5	70.5	20	127.5	82	.5	60	16	8	82	100	8	14	9
	20	14	11	190.5	87.5	30	162.5	105	5.5	80	17.5	10	120	140	10	17	11
	30	20	15	274	128	40	238	14	9	110	30	15	140	165	16	25	17
28	T:																
	Size [mi	m]	L1	L2	P1	P	2	Q	Q	1	S	S1	T 1	.]	ſ 2	R	
ľ	10		39.5	12	48	4	2 1	7.5	55	.5	8	52	25	4	42	1/2"	
	20		48.5	13	58	5	5 2	3.5	68	.5	10	70	30.	5 5	55	1"	
	30		76	21	87	6	5	26	10)6	15	95	43	(55	1 1/2"	









2 <u>S</u>	STB:													
	Size [mm]	L1	L2	P1	P2	Q	Q1	Q2	Q3	S	S 1	T1	T2	R
	10	61	33	48	18		17.5	55.5		8	52	25	42	10
	20	76	44	57.5	25	15.5	23.5	68.5	72.5	10	70	30.5	55	20
	30	115	60	87	33	16	26	106	112	15	95	43	77	30



TECHNICAL DATA

Description	Symbol	Data
Max. operating pressure	P _{max}	350 bar
Test Pressure		420 bar
Max. pressure in port L (Note 1)	L _{max}	5 bar
Viscosity range:	v	10 to 350 mm ² /s (cST)
Viscosity index:	VI	> 120
Filtration, recommended filter with $\beta \ 20 \ge 100$		Class 9 according to NAS 1638, 18/15 according to ISO 4406
Fluid temperature range:	Т	-20°C to + 70°C
Ambient temperature range	Т	-20°C to + 50°C
Standard Body Material		EN-GJS-400-15 (GGG 40)
Standard O-rings		Nitrile shore 70

Note 1:

Drain connection L must always be used.

Flow and Weight:

Size	Max. Flow	Pressure drop at max flow	Weight
10	35 l/min	Δp 5 bar	2.2 kg
20	125 l/min	∆p 5 bar	5.3 kg
30	300 l/min	Δp 5 bar	13 kg





Size	Description	Description						
2ST:								
	Threaded Connections	Screws	Tightening Torque [Nm]					
10	¹ /2" BSPP	2 off M 10 – DIN931	34.4					
20	1" BSPP	2 off M 12 – DIN931	54					
30	1½" BSPP	2 off M 16 – DIN931	78.5					
2STB:								
	Screws	Screws						
10	4 off M 10 x 75 - DIN 93	4 off M 10 x 75 - DIN 931						
20	4 off M 12 x 95 – DIN 9	4 off M 12 x 95 – DIN 931						
30	4 off M 16 x 130 – DIN	4 off M 16 x 130 – DIN 931						
	O-rings [Nitrile Shore 7	[0]	Size [mm]					
10	2 off		11.91 x 2.62					
	1 off		9.92 x 2.62					
20	2 off		22.20 x 3.0					
	1 off		9.92 x 2.62					
30	2 off		31.34 x 3.53					
	1 off	9.92 x 2.62						

Interfaces:



INSTALLATION

The Directional Control Valves 2ST are installed to the pipeline with threaded connections and mounted to a bracket or similar with 2 off screws. The 2STB valves are installed with 4 off screws to a SUB plate or valve unit. Please refer to section 'Interfaces' for details about connections and screws.

OPERATION

The valve is operated by the actuator mechanism.



Figure 4 Actuator Mechanism

MAINTENANCE

Check the valve for proper function. Visually check the valve and if required, paint unpainted (damaged) areas.

STORAGE

If storage longer than 6 months is expected, the valve must be kept in a dry room, free from dust and protected against sudden large temperature variations. For storage longer than 12 months, the valve must be filled with inhibition oil. Before use check all visible seals and flush with clean oil.

MARKING

Inlets and outlets are marked, refer to figure in section 'General Description'.