DIRECTIONAL CONTROL VALVES 1STB442***

GENERAL DESCRIPTION

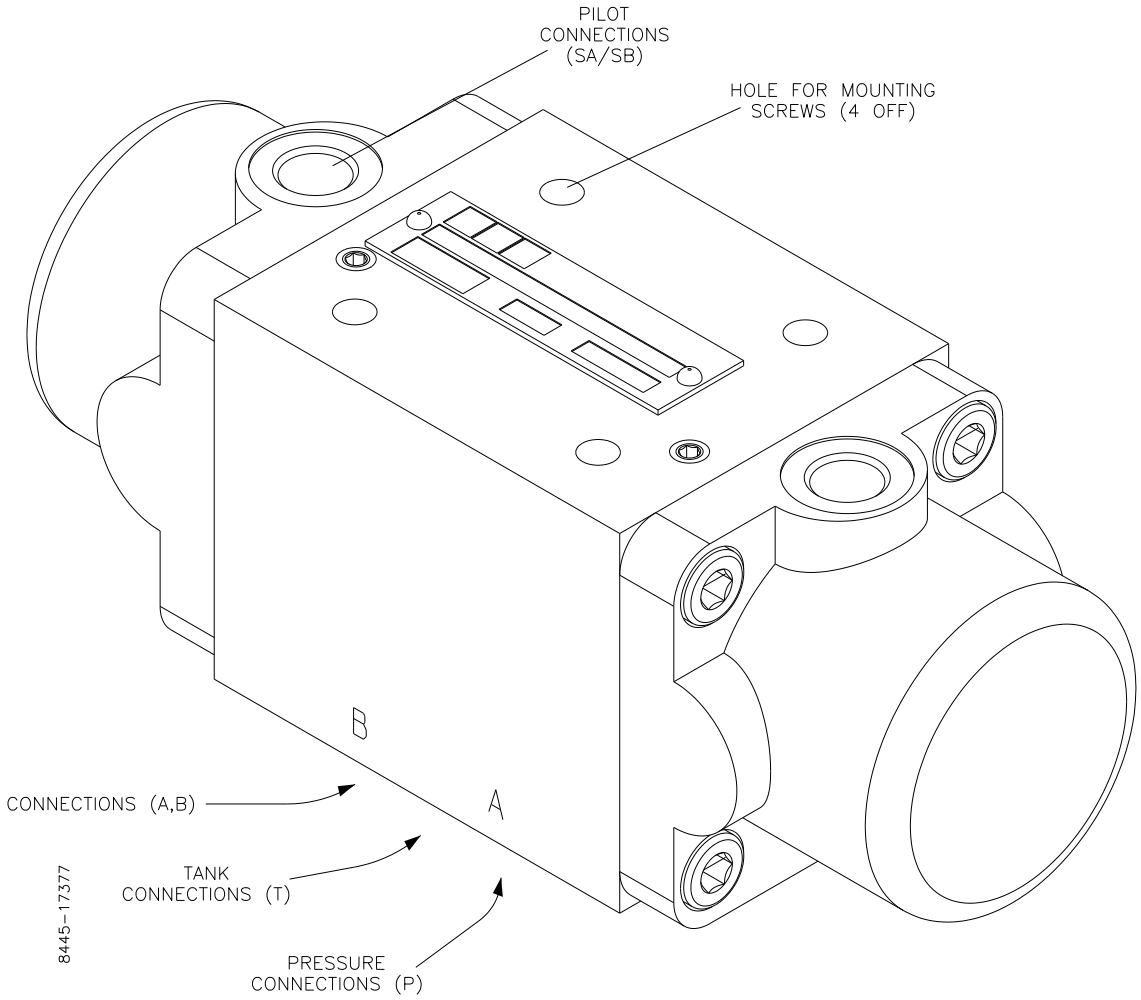


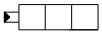
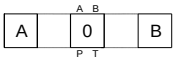
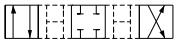
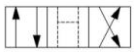
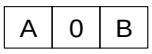
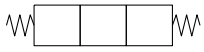
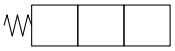
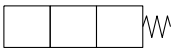
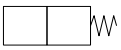
*Figure 1 1STB442*** General Arrangement*

The Directional Control Valves 1STB442*** are 4-ways seawater resistant valves for distribution and stopping of flow in hydraulic systems. The valves have the following characteristics:

- Delivered for gasket mounting to a sub plate according to ISO standard 4401.
- Remote controlled (on/off) by hydraulic pilot pressure.
- Delivered with a flow capacity up to 50 l/min (NG6/10 – ISO 03/05).
- Six standard spools for start and stop are available.
- A number of possibilities for spool positioning, spring or detents.

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

MODULAR CODE

Options	Remarks	Design Code	Fill in
Mounting			**1ST**
SUB Plate	ISO 4401	**B**	**B**
Type			
4-ways	No options	**4**	**4**
Pressure			
350 bar	No options	**4**	**4**
Operation			
Remote		**2**	**2**
Size			
NG6 (ISO-03)	25 l/min	**1**	
NG10 (ISO-05)	50 l/min	**2**	
Spool Type			
		**01**	
		**02**	
		**03**	
		**06**	
		**07**	
		**2C**	
Spring / Detents Positions			
No spring		**0**	
Spring centred		**1**	
Spring offset to A		**2**	
Spring offset to B		**3**	
Spring offset to B, A blocked		**8**	

In example a 1STB442 valve with 25 l/min flow, spool type 02 and spring centred will have modular code: **1STB4421021**.

DIMENSIONS

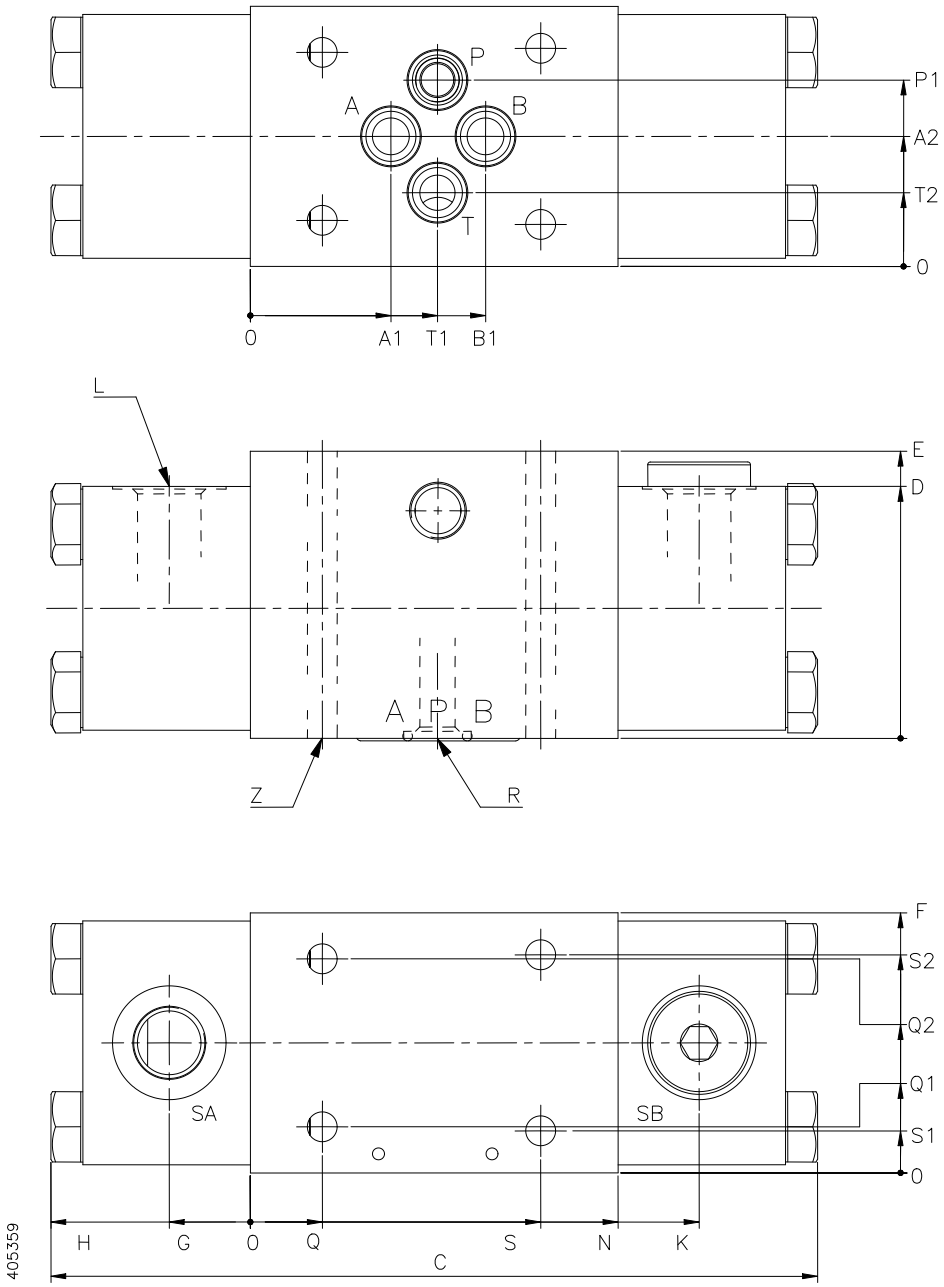


Figure 2 1STB4421 Dimensions

Size [mm]	C	D	E	F	G	H	K	N	Z	A1	A2
6	142	47	53	48	15	37	83	68	5.5	26	24
	B1	**T1**	**T2**	**P1**	**Q**	**Q1**	**Q2**	**S**	**S1**	**S2**	**SA/SB**
	43.5	34.6	13.6	34.4	13.3	8.5	39.5	57.3	7.75	40.25	¼“BSPP

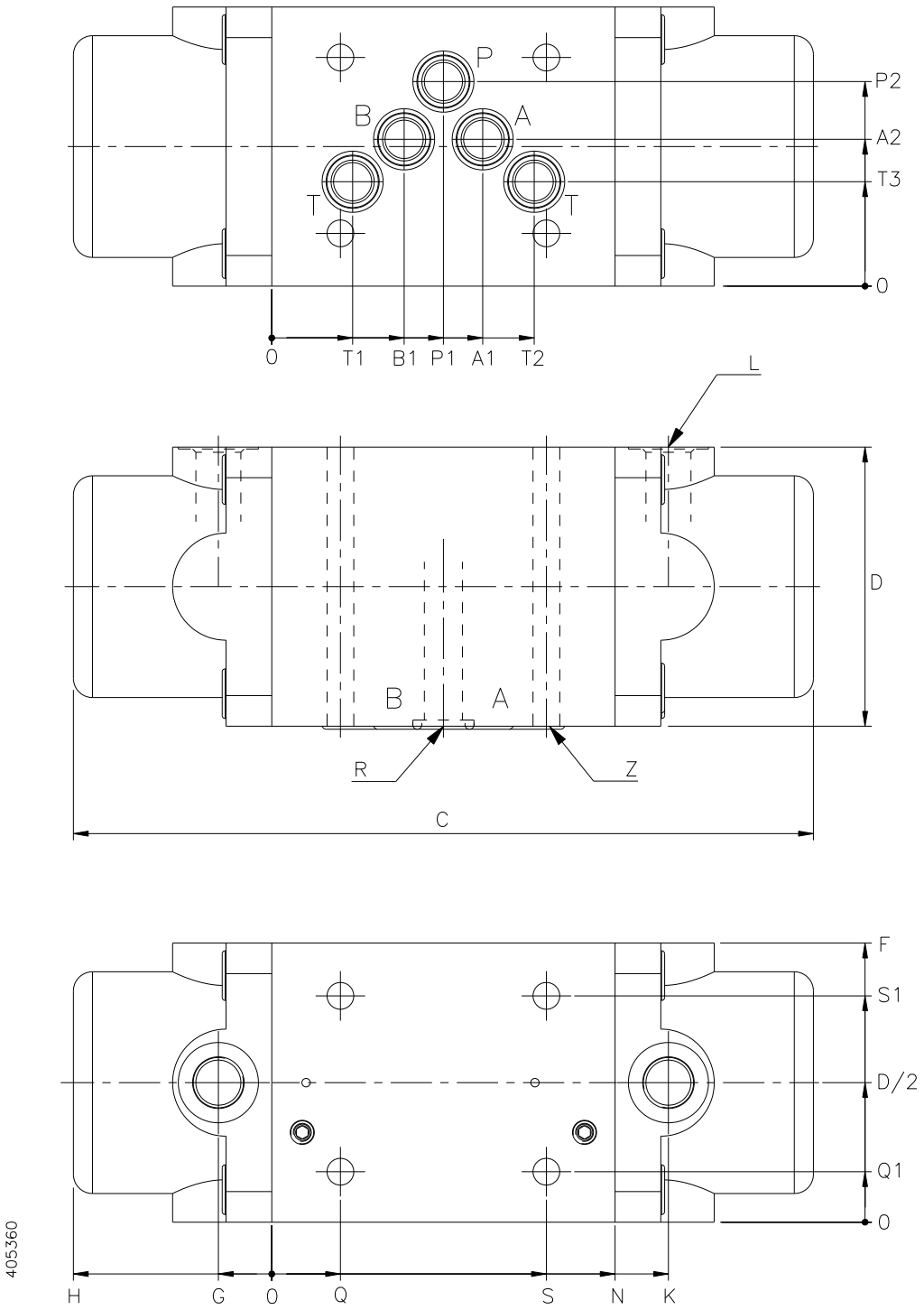
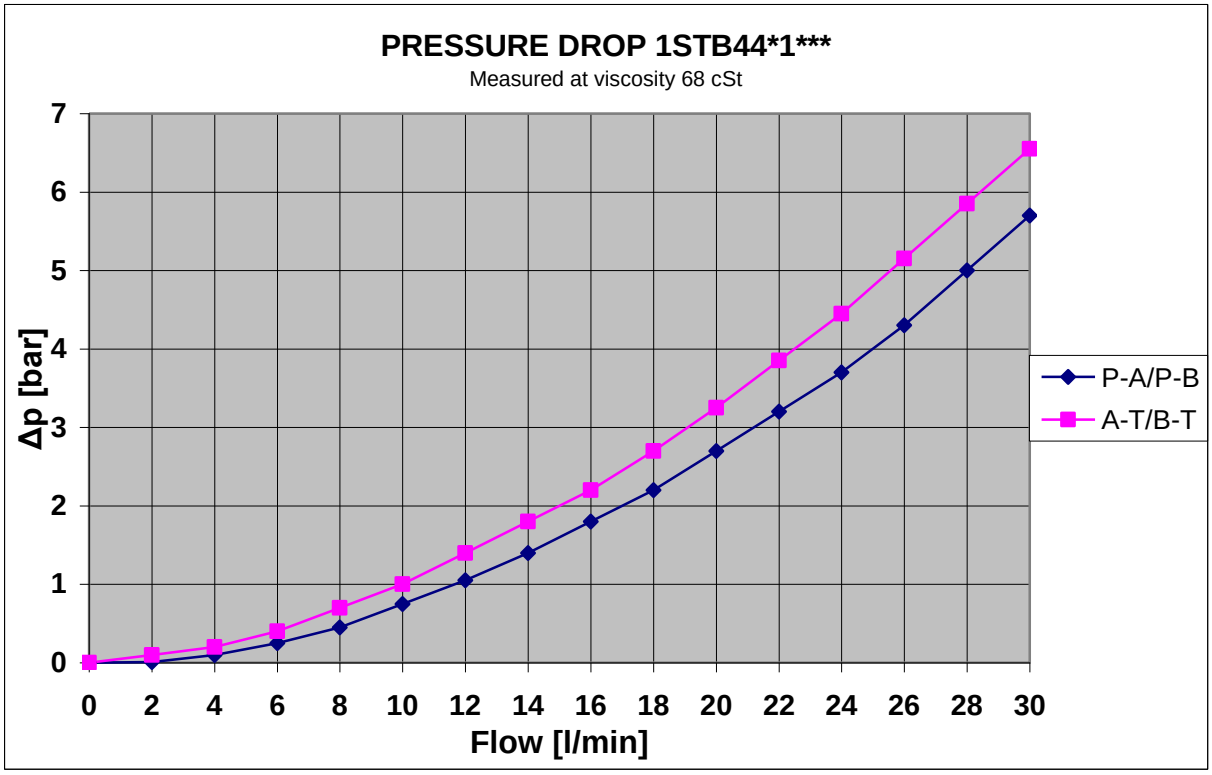
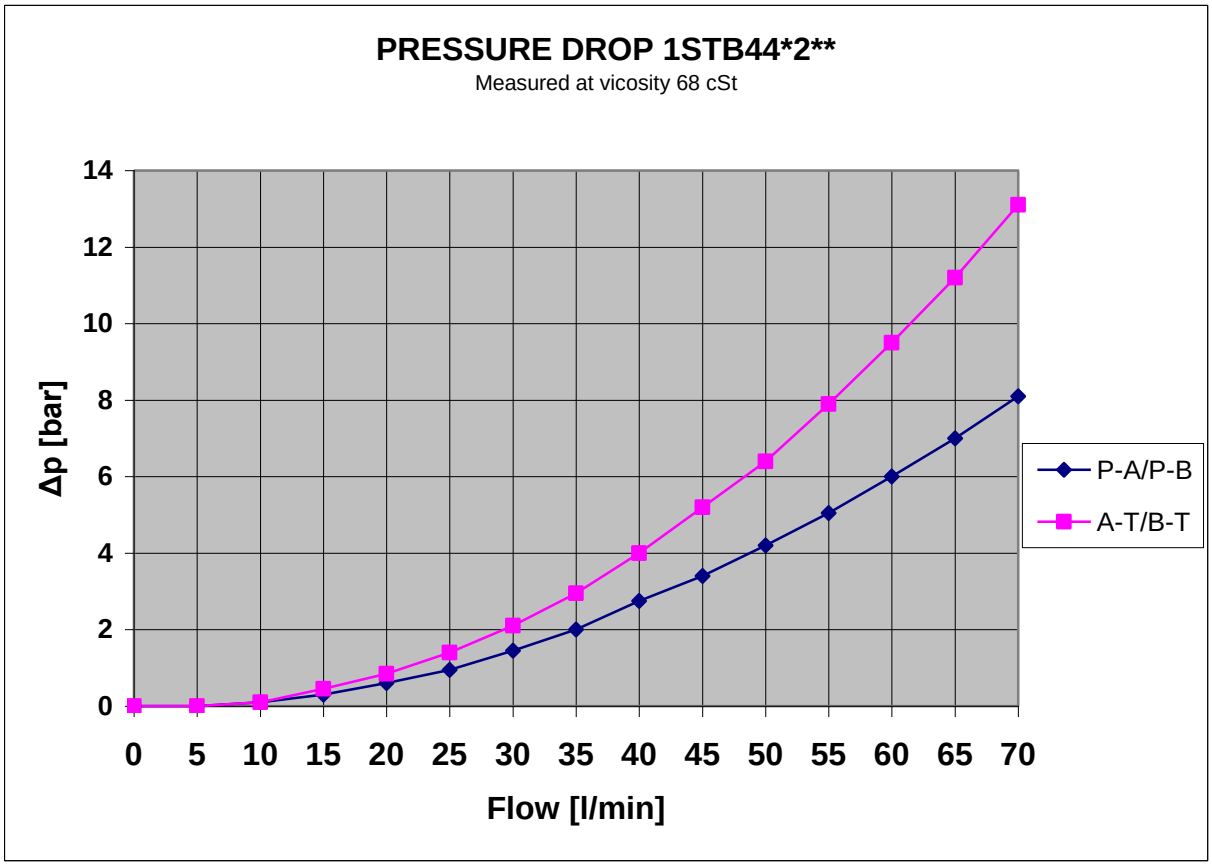


Figure 3 1STB4422 Dimensions

Size [mm]	C	D	E	F	G	H	K	N	Z	A1	A2
10	194	73		73	14	52	104	90	7	55.3	38.4
	B1	**T1**	**T2**	**T3**	**P1**	**P2**	**Q**	**Q1**	**S**	**S1**	**SA/SB**
	34.7	21.2	68.8	27.3	45	53.5	18	13.2	72	59.2	¼“BSPP

PRESSURE DROP





TECHNICAL DATA

Description	Symbol	Data
Max. operating pressure in port P, A, B, T	P_{max}	350 bar
Max. pressure in port SA/SB NG6 (ISO-03)	P_{max}	250 bar
Max. pressure in port SA/SB NG10 (ISO-05)	P_{max}	160 bar
Directional valve pilot pressure (for changing spool position)	SA/SB	6 bar
Test Pressure		420 bar
Hydraulic fluid		Mineral oils for hydraulic system
Viscosity range:	v	10 to 350 mm^2/s (cST)
Viscosity index:	VI	> 120
Filtration, recommended filter with β 20 ≥ 100		Class 9 according to NAS 1638, 18/15 according to ISO 4406
Fluid temperature range:	T	-20°C to + 70°C
Ambient temperature range	T	-20°C to + 50°C
Standard Body Material		EN-GJS-400-15 (GGG 40)
Standard O-rings		Nitrile shore 70

Flow and Weight:

Size	Max. Flow	Weight
6	25 l/min	1.8 kg
10	50 l/min	4.2 kg

Interfaces:

Size	Description	Data
	Screws	***Tightening. Torque [Nm]***
6	4 off M 5 x 65 - DIN 931	7.0
10	4 off M 6 x 85 – DIN 912-10.9	15.5
	O-rings	***Size [mm]***
6	4 off	9.25 x 1.78
10	5 off	11.3 x 2.4

INSTALLATION

The Direction Control Valves 1STB442*** are installed with 4 off screws to a SUB plate (ISO 4401). Please refer to ‘Interfaces’, for details about screws and o-rings.

OPERATION

Remote

An external pilot pressure moves the spool to the requested position – on/off.

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’.