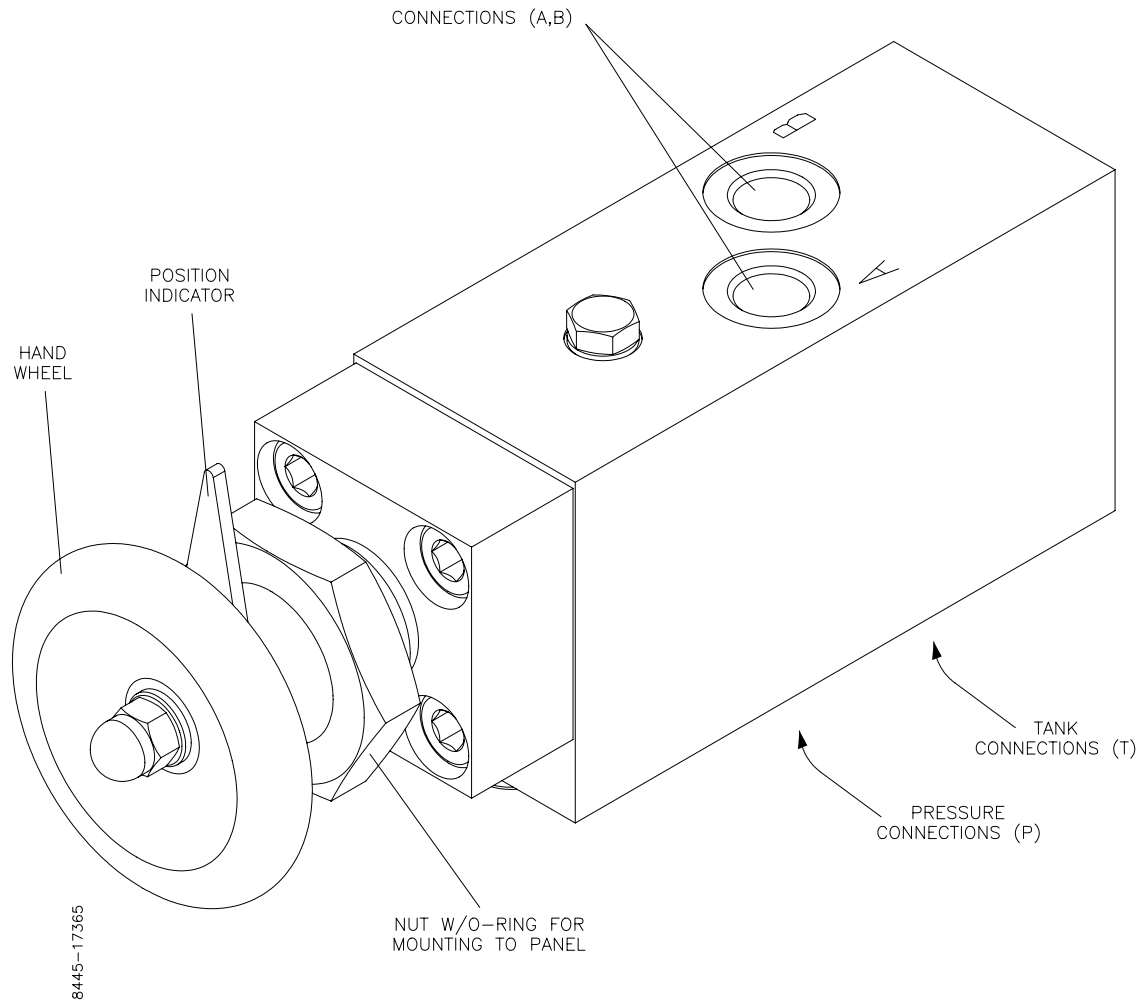


## DIRECTIONAL CONTROL VALVES 29ST

### GENERAL DESCRIPTION



*Figure 1 29ST General Arrangement*

The Directional Control Valves 29ST are 4-ways seawater resistant valves for distribution and stopping of flow in hydraulic systems. The valves have the following characteristics:

- Delivered for mounting to a valve panel, and with threaded connections.
- Manually controlled by hand wheel.
- Delivered with a flow capacity of 25 l/min.
- Six standard spools are available.

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



**MODULAR CODE**

Options	Remarks	Design Code	Fill in								
<i>Mounting</i>			<b>29ST</b>								
Threads	No options										
<i>Type</i>											
4-ways	No options	<b>4</b>	<b>4</b>								
<i>Pressure</i>											
350 bar	No options	<b>4</b>	<b>4</b>								
<i>Operation</i>											
Manual		<b>1</b>	<b>1</b>								
<i>Size</i>											
6 mm	25 l/min	<b>1</b>	<b>1</b>								
<i>Spool Type</i>	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">A</td> <td style="text-align: center;">B</td> </tr> <tr> <td style="text-align: center;">A</td> <td style="text-align: center;">0</td> <td style="text-align: center;">B</td> </tr> <tr> <td style="text-align: center;">P</td> <td style="text-align: center;">T</td> <td></td> </tr> </table>			A	B	A	0	B	P	T	
A	B										
A	0	B									
P	T										
		<b>01</b>									
		<b>02</b>									
		<b>03</b>									
		<b>06</b>									
		<b>07</b>									
		<b>2C</b>									
<i>Spring / Detents Positions</i>		<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">A</td> <td style="text-align: center;">0</td> <td style="text-align: center;">B</td> </tr> </table>		A	0	B					
A	0	B									
Detents in all positions		<b>4</b>									
Detents in positions A and 0, B blocked		<b>B</b>									

In example a 29ST valve; spool type 02 and detents in all positions will have modular code: **29ST4411024**.

**DIMENSIONS**

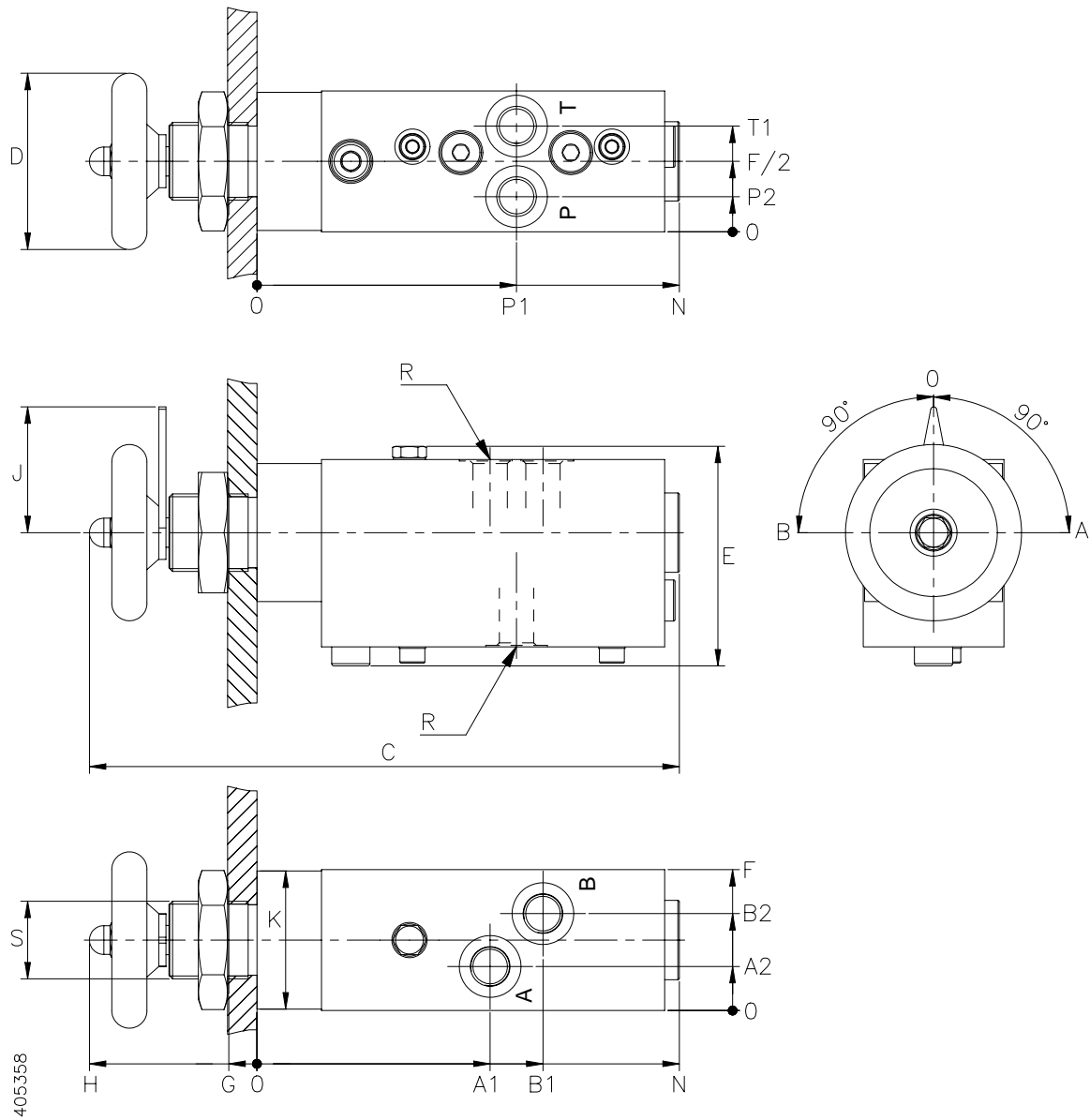


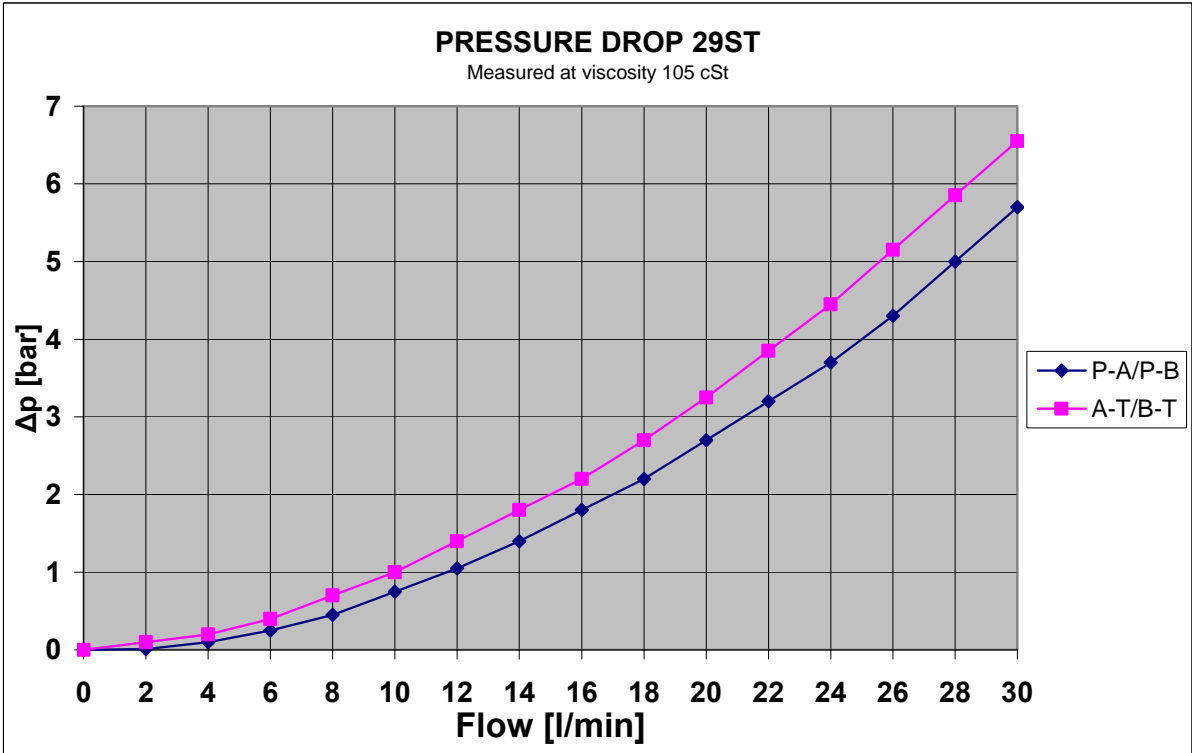
Figure 2 29ST Dimensions

**29STB:**

Size [mm]	C	D	E	F	G	H	J	K	N
6	201	Ø60	74.8	48	3-20	57.1	43	47	144
	A1	A2	B1	B2	P1	P2	T1	S	R
	79.5	15	97.5	33	88.5	12	36	Ø26.5-28.5	11.75 (21x0.5)



**PRESSURE DROP**



**TECHNICAL DATA**

Description	Symbol	Data
Maximum flow		25 l/min
Weight		2.9 kg
Nominal size	$D_n$	6 mm
Max. operating pressure in port P, A, B	$P_{max}$	350 bar
Max. pressure in port T	$T_{max}$	100 bar
Max. pressure in port SA/SB	P	100 bar
Test Pressure		420 bar
Hydraulic fluid		Mineral oils for hydraulic system
Viscosity range:	$\nu$	10 to 350 mm <sup>2</sup> /s (cST)
Viscosity index:	VI	> 120
Filtration, recommended filter with $\beta_{20} \geq 100$		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

**Interfaces:**

Description	Type
Threaded connections	1/4" BSPP
Nut	NV 41



## **INSTALLATION**

The Directional Control Valves 29ST are installed to the pipeline with threaded connections and mounted to a valve panel with 1 off nut. For more details about connections and nut, please refer to section 'Interfaces'.

## **OPERATION**

### **Manual**

Manual control is performed by the control wheel. Due to the detents the spool will remain in the position set by the control wheel, see Figure 2.

## **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'.