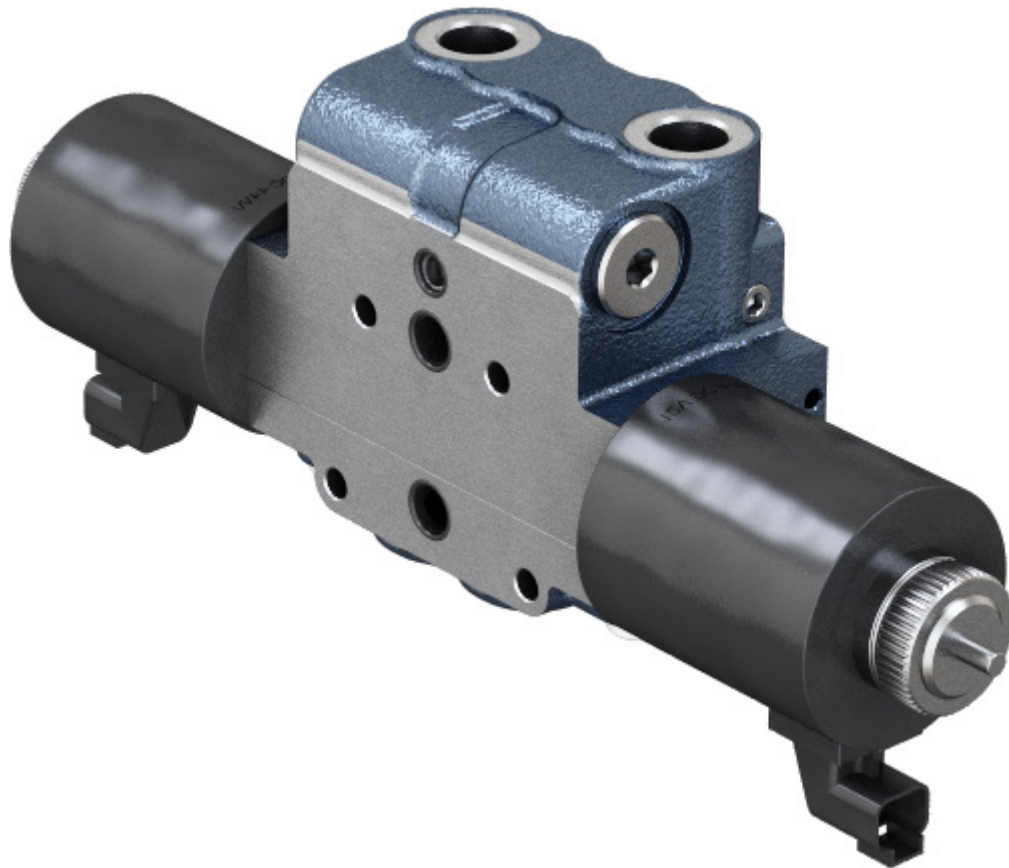
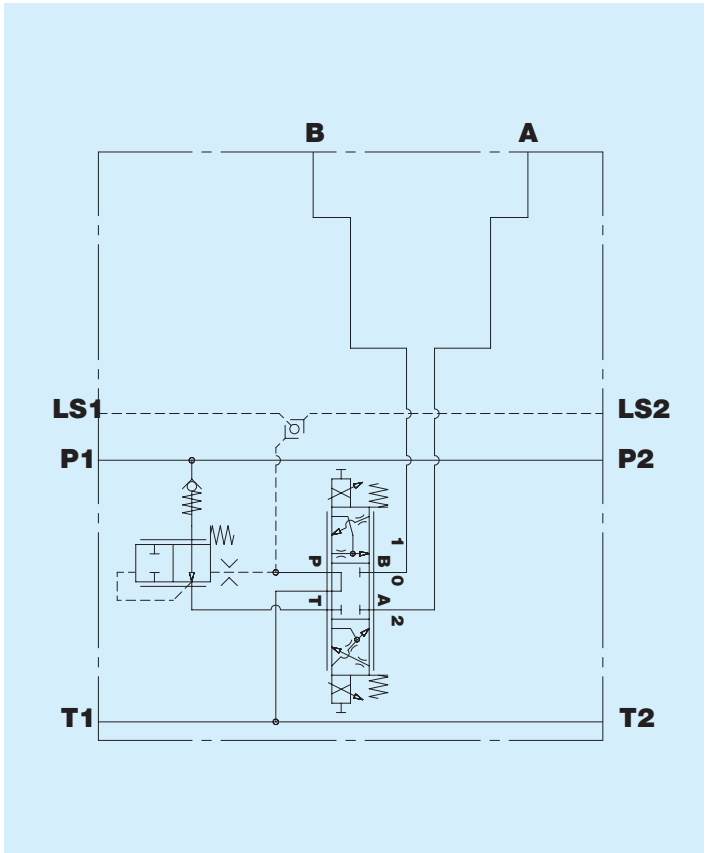


BW1033CP Element 4/3 Pre-compensated Load  
Sensing proportional  
Interface IBW1033

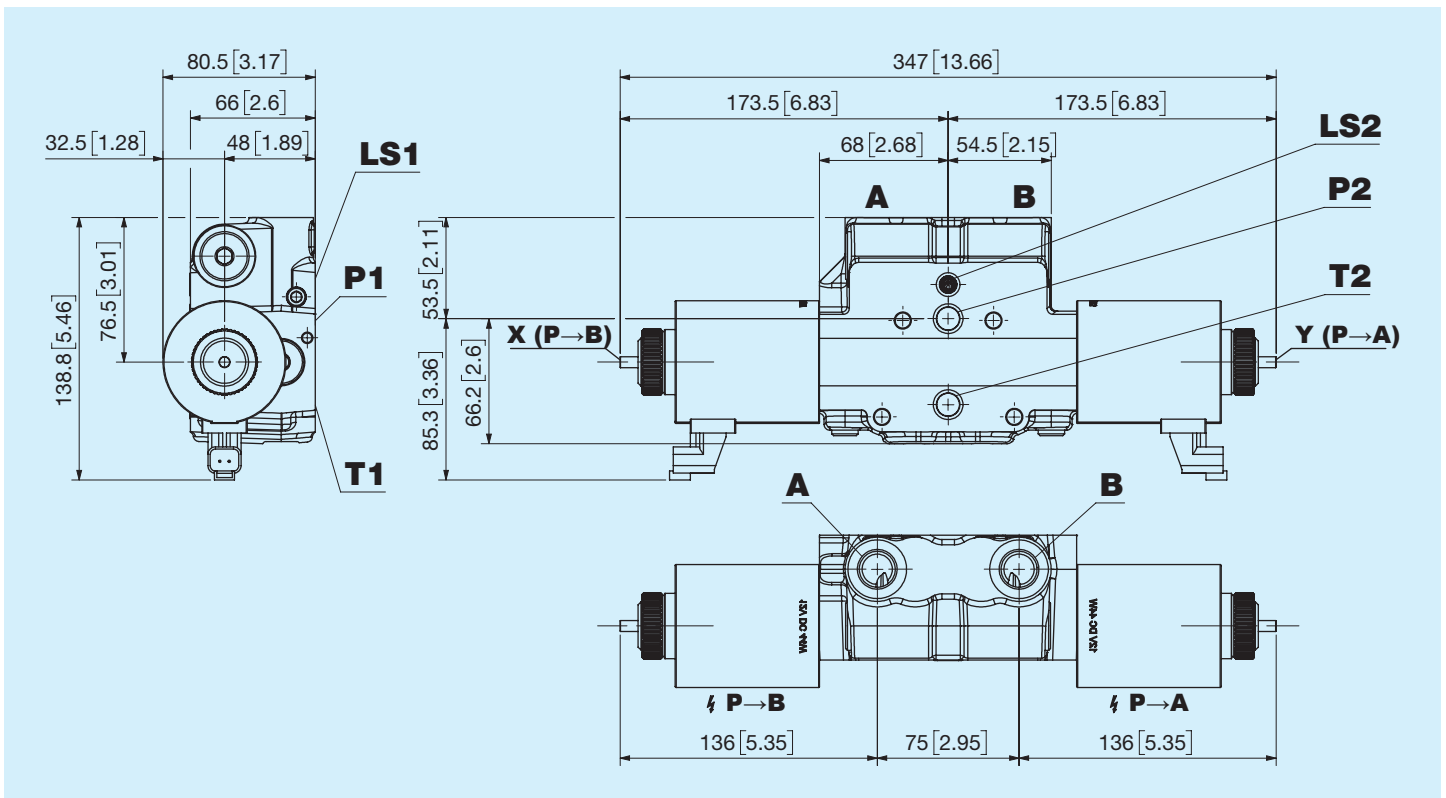


Before use, carefully read the GENERAL INSTRUCTIONS FOR USE OF DIRECTIONAL CONTROL VALVES

Nominal flow	<b>90 l/min - <math>\Delta P=10</math> bar</b> <b>23.78 US gpm - <math>\Delta P=145</math> psi</b>
Nominal pressure	<b>300 bar</b> <b>4351 psi</b>
Maximum tank pressure	<b>50 bar</b> <b>725 psi</b>
Temperature range	<b>-20°C +85°C NBR seals(max peak +100°C)</b> <b>-20°C + 130°C HNBR seals</b>
Oil viscosity	<b>from 15 mm<sup>2</sup>/s to 90 mm<sup>2</sup>/s</b> <b>(15 cSt to 90 cSt)</b>
Fluid	<b>Hydraulic fluids as defined in ISO 6743-4 standard</b>
Weight	<b>6.8 kg</b> <b>15 lb</b>
Interface	<b>IBW1033</b>
Hysteresis	<b>&lt;10%</b>

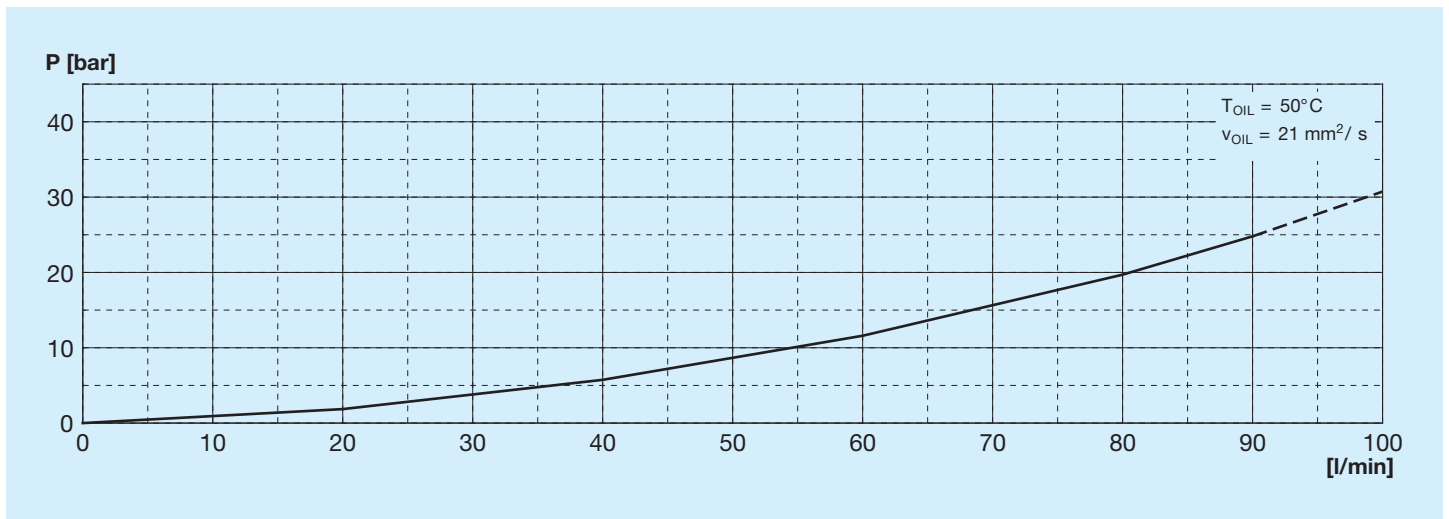


## Dimension

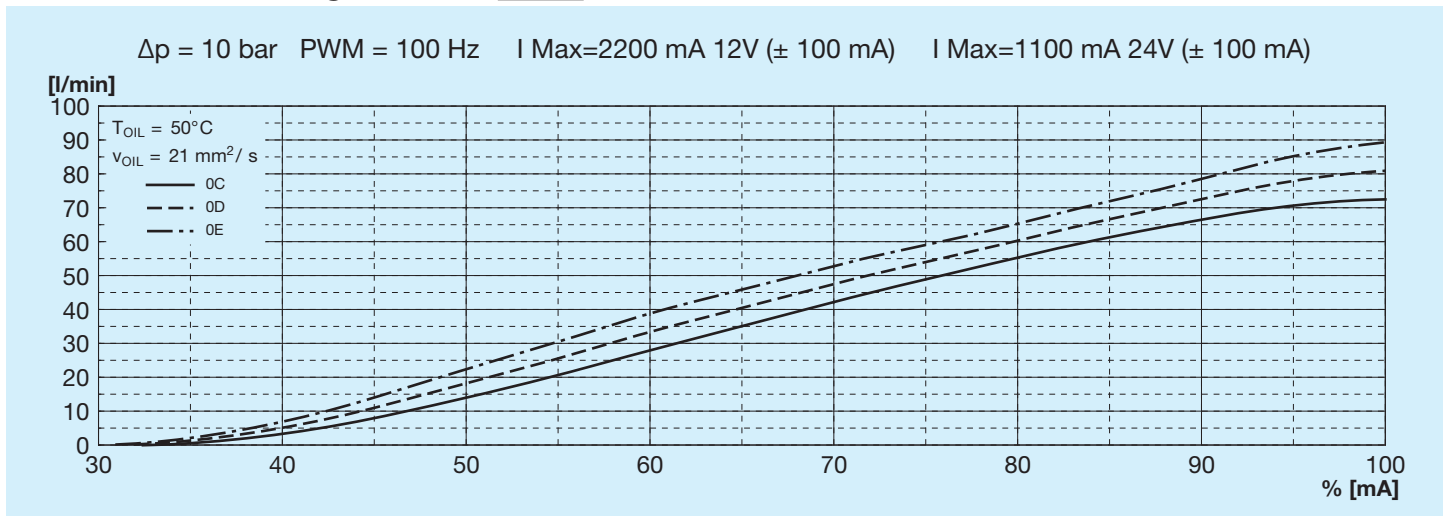


X - Y = Push type switch override

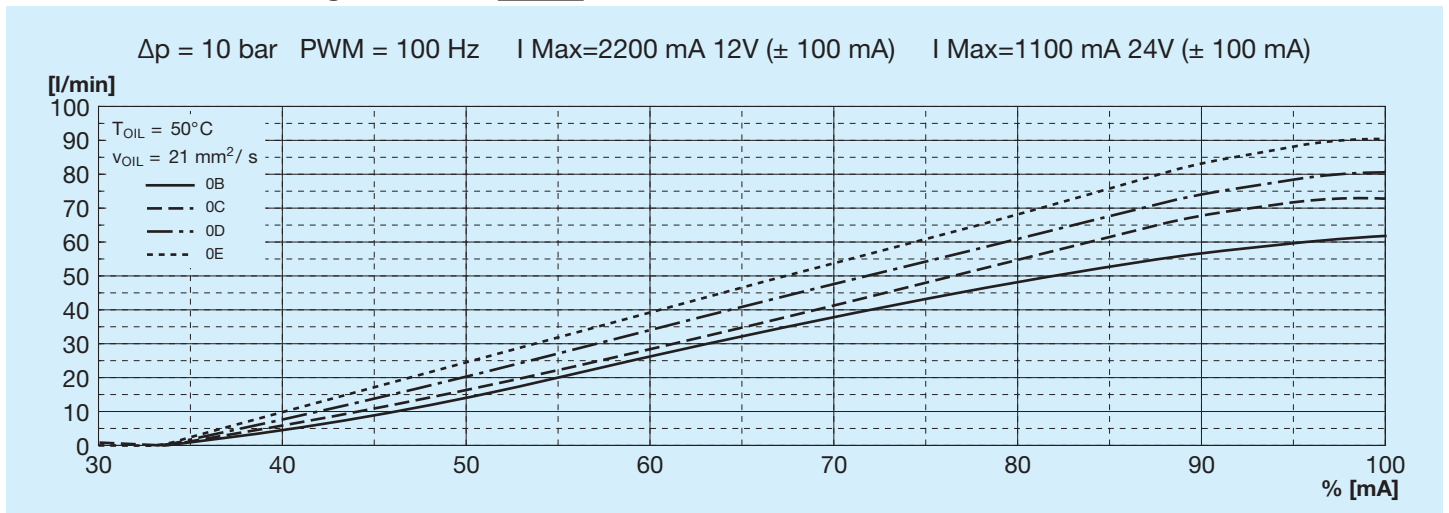
## Flow curve A/B-T



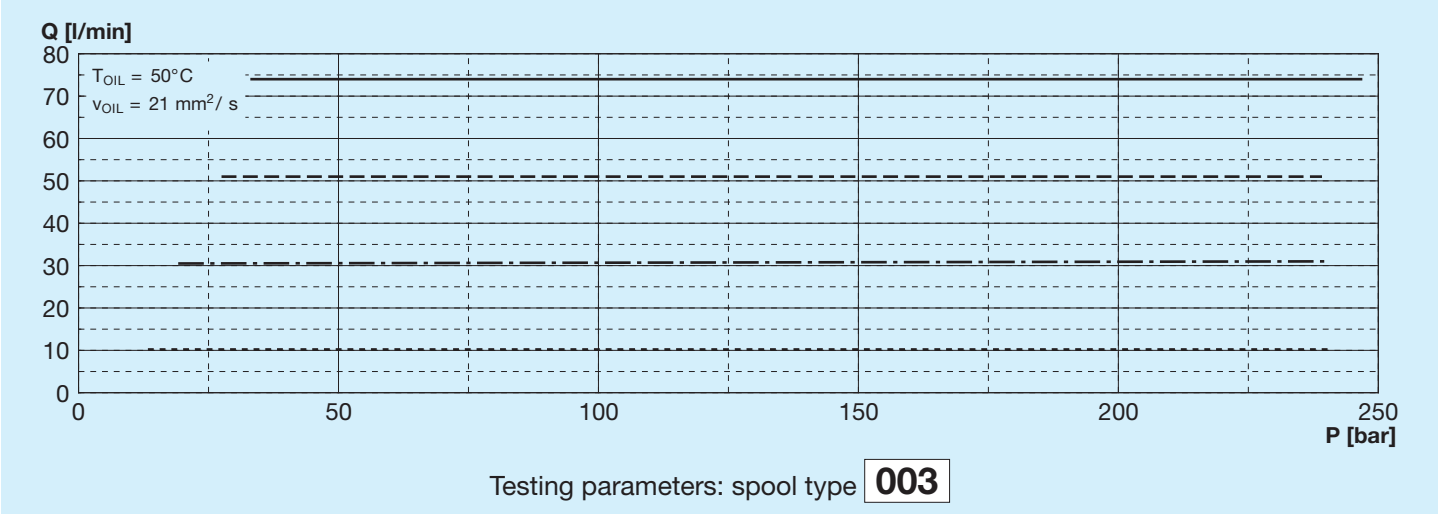
## Flow curve Metering - Circuit 001



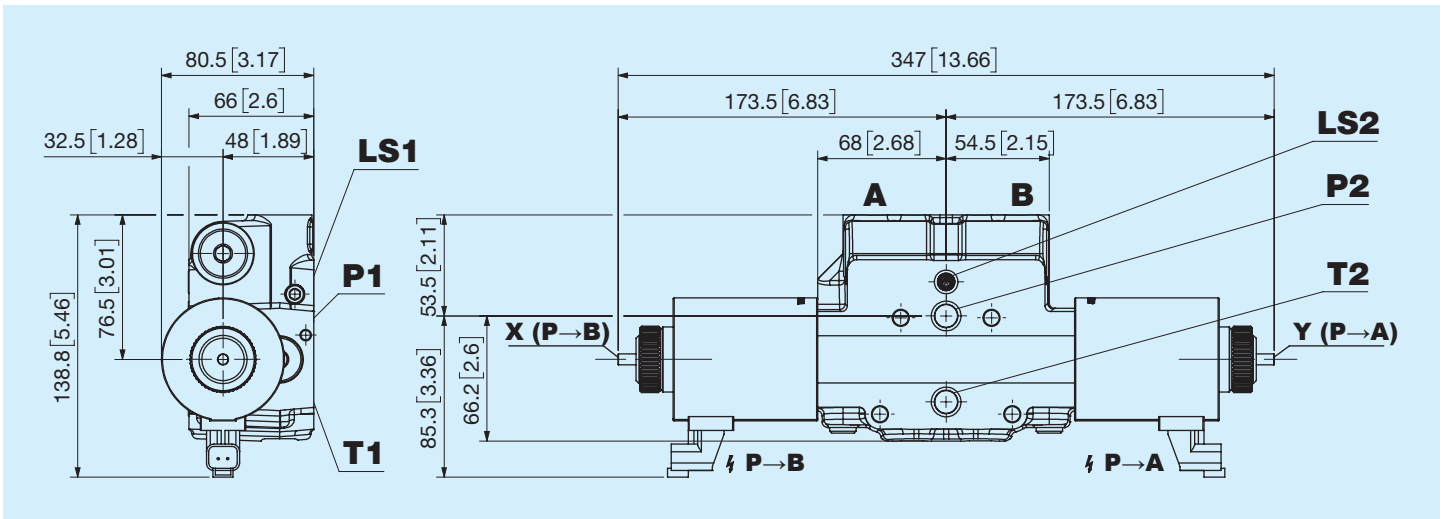
## Flow curve Metering - Circuit 003



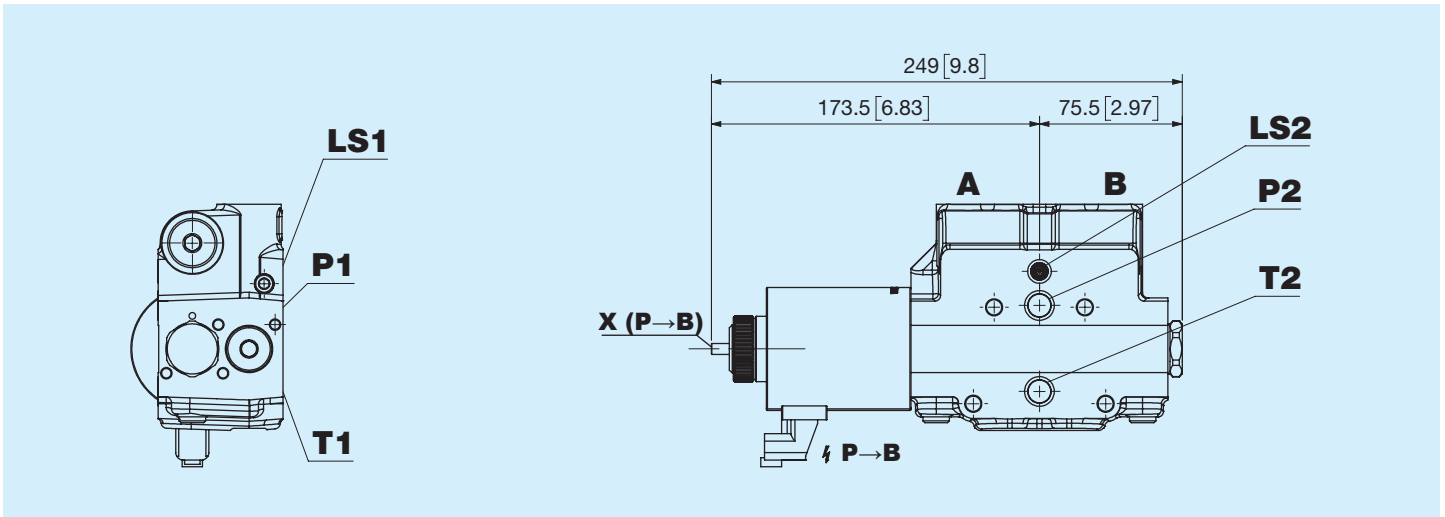
## Compensation curve



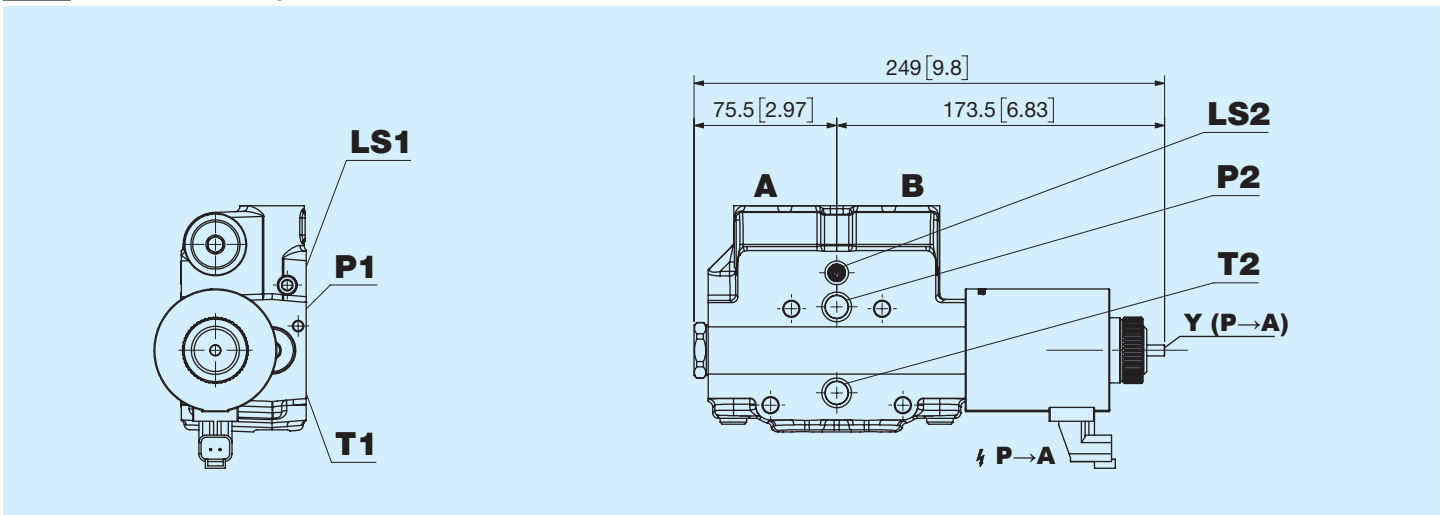
## A Two coils, A and B port side



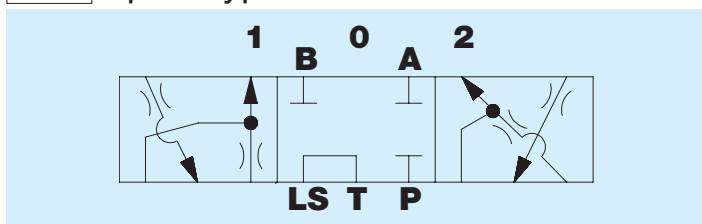
## E One coil, A port side



## F One coil, B port side



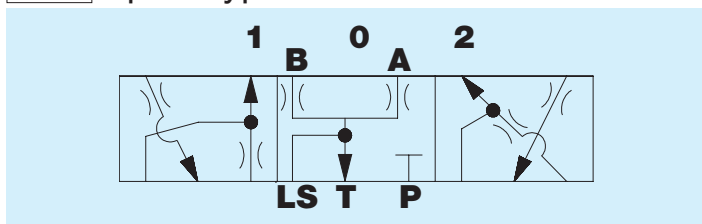
### 001 Spool type



### Positions

1	0	2
P,LS → A B → T	P,A,B —  LS → T	P,LS → B A → T

### 003 Spool type

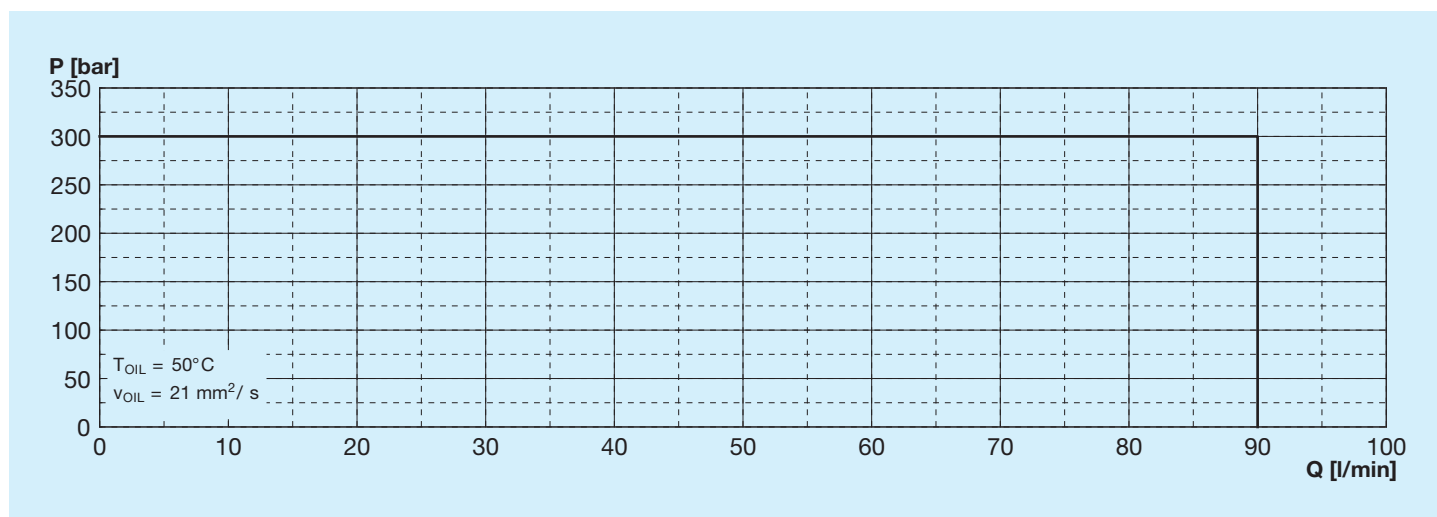


1	0	2
P,LS → A B → T	A,B,LS → T P —	P,LS → B A → T

### Flow rate

Model	l/min	US gpm
<b>0A</b>	50	13.21
<b>0B</b>	60	15.85
<b>0C</b>	70	18.49
<b>0D</b>	80	21.13
<b>0E</b>	90	23.77

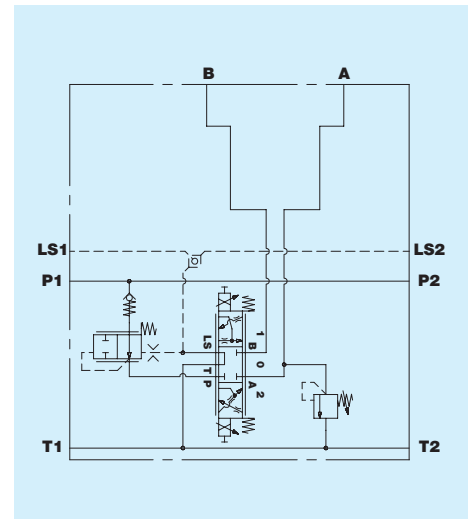
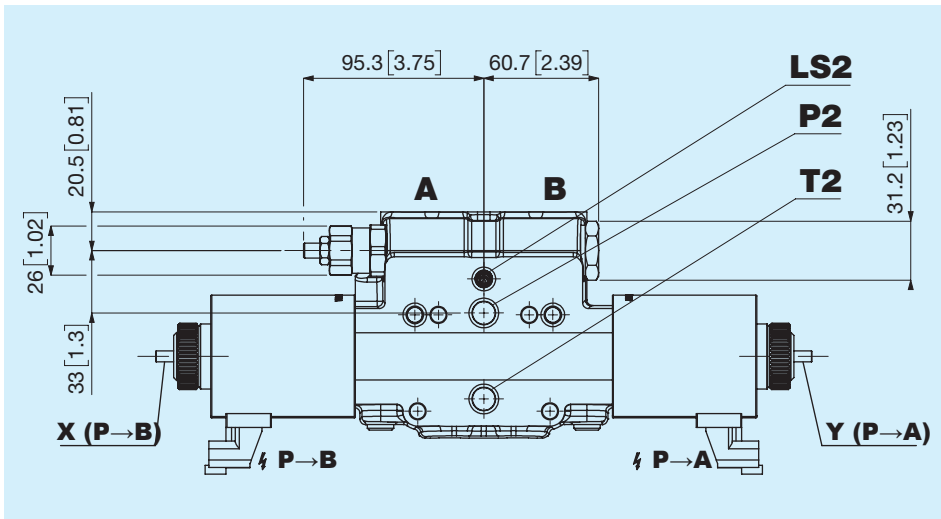
### Performance limits for spool type



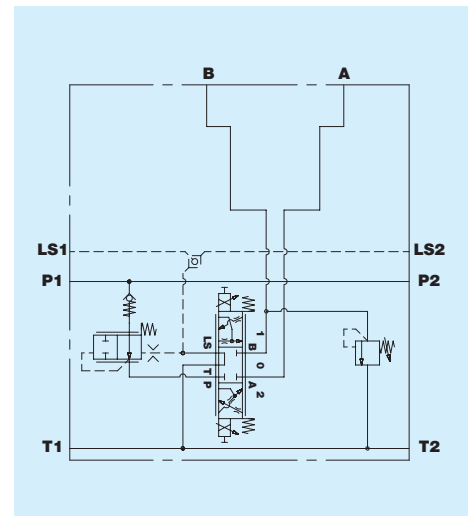
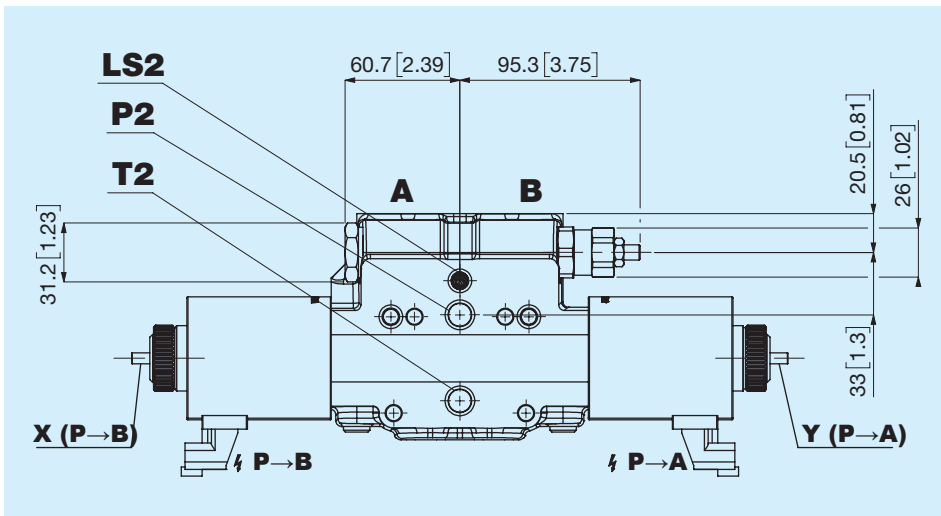
## Thread Port A and B

Model	Type	Torque Nm
<b>B</b>	1/2" GAS ISO 1179	70
<b>N</b>	M22x1.5 ISO 9974	78
<b>J</b>	M22x1.5 ISO 6149	78
<b>R</b>	7/8" - 14 SAE ISO 11926	77

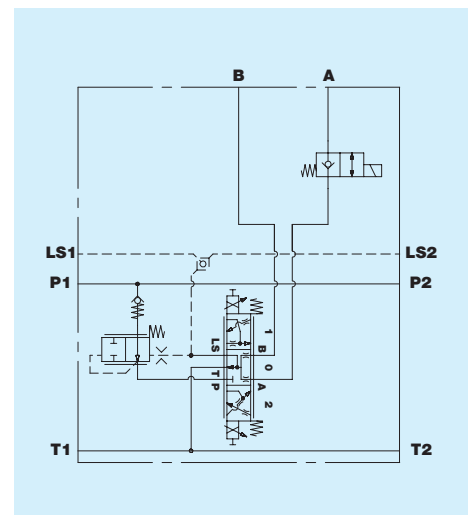
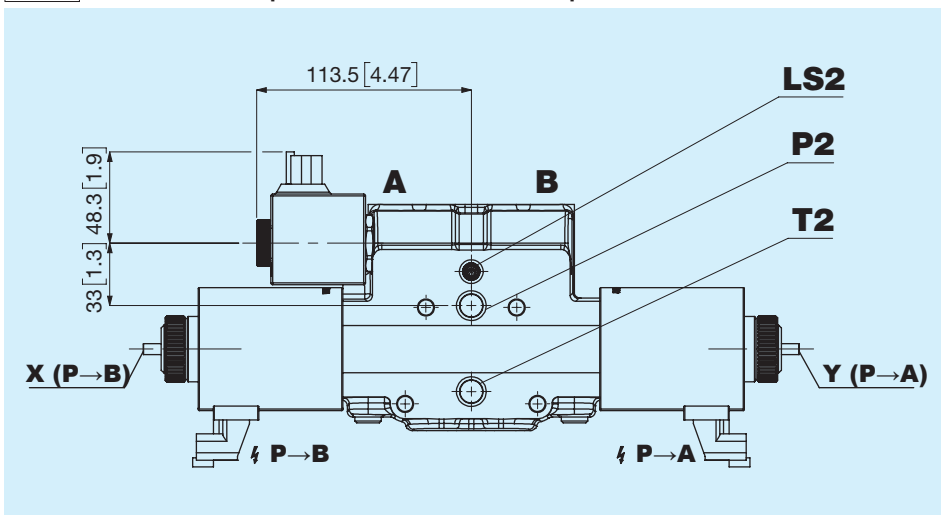
**VL** Pressure limiting valve A port



**VL** Pressure limiting valve B port



**NE** Solenoid operated valve 2/2 port A

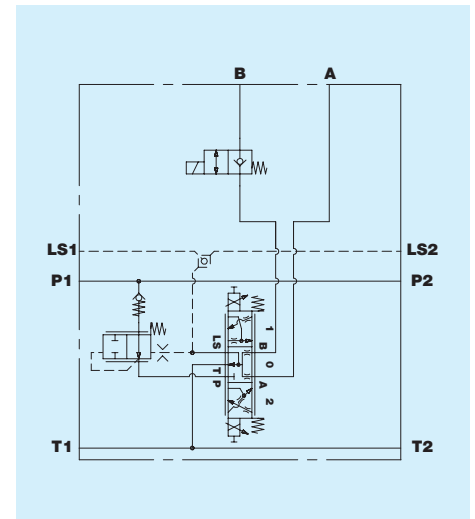
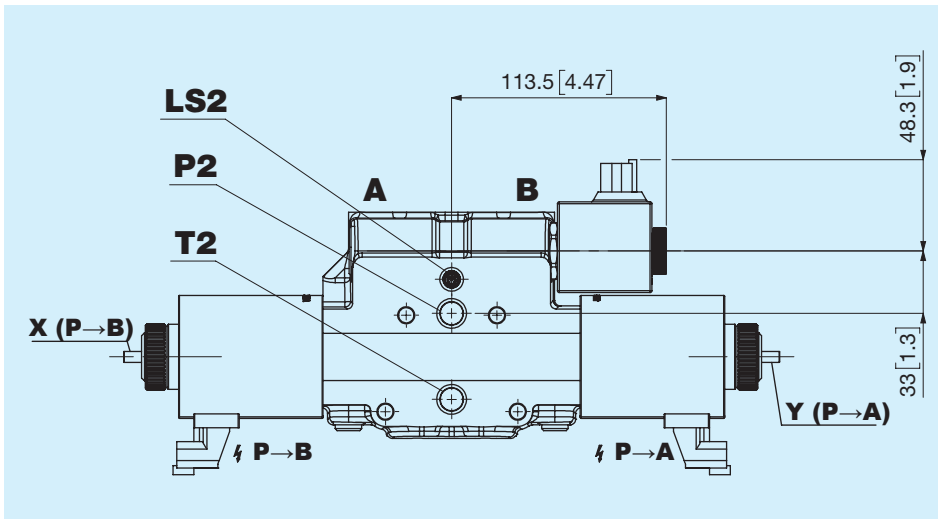




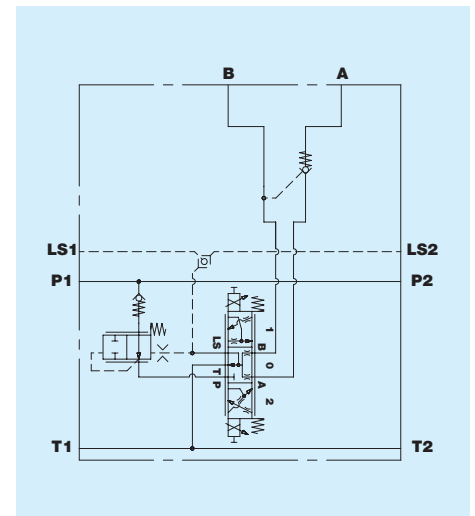
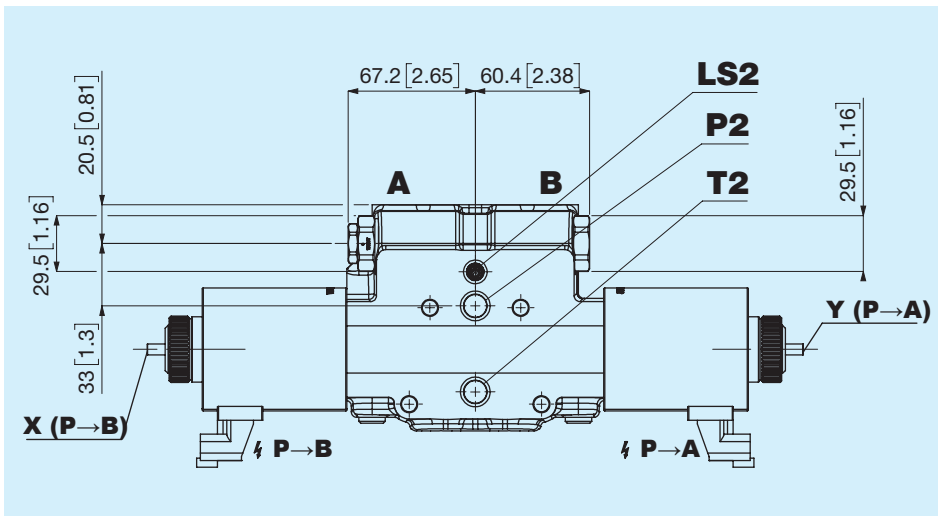
# Valve type port A B

# BW1033CP

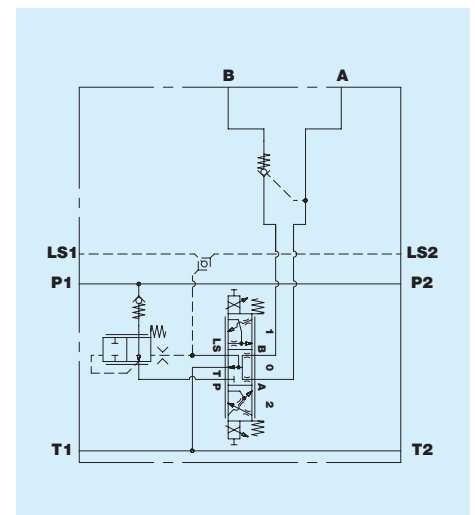
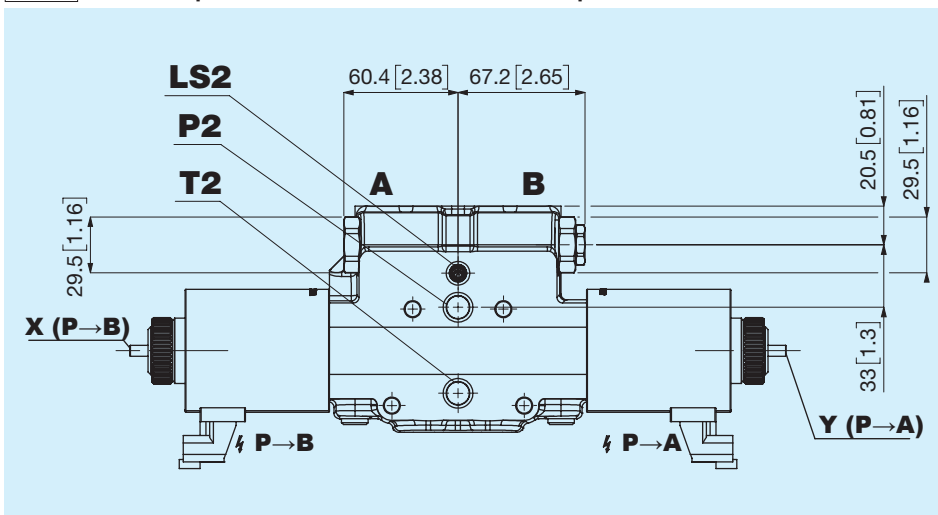
**NE** Solenoid operated valve 2/2 port B



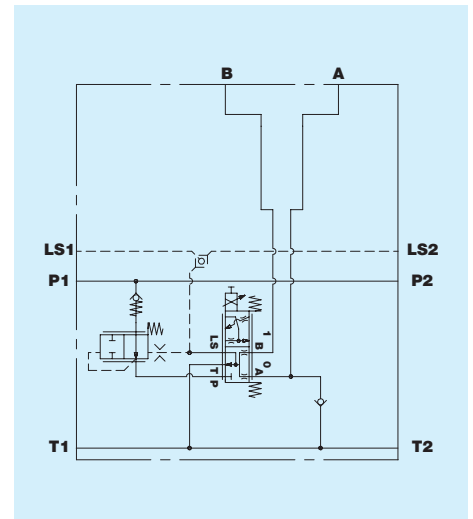
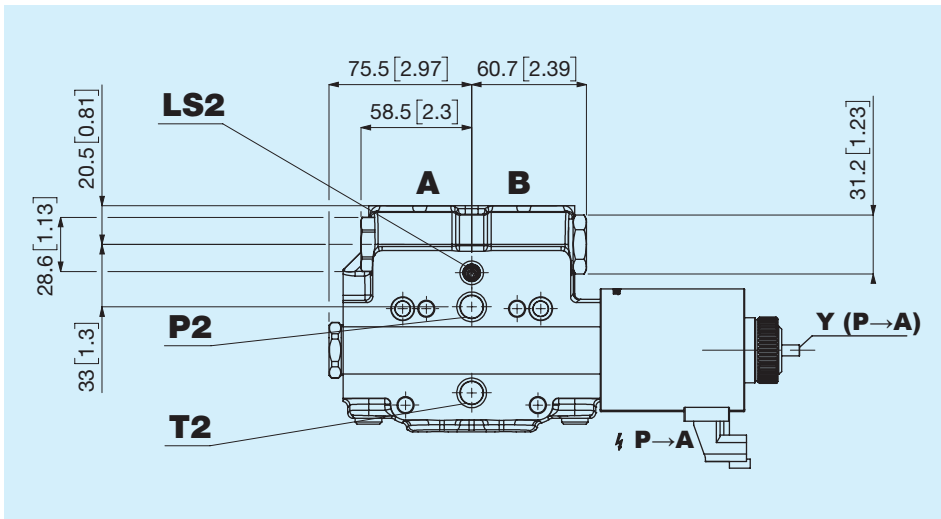
**VB** Pilot operated check valve A port



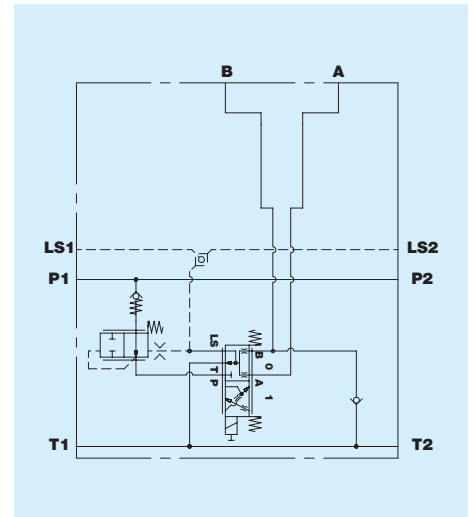
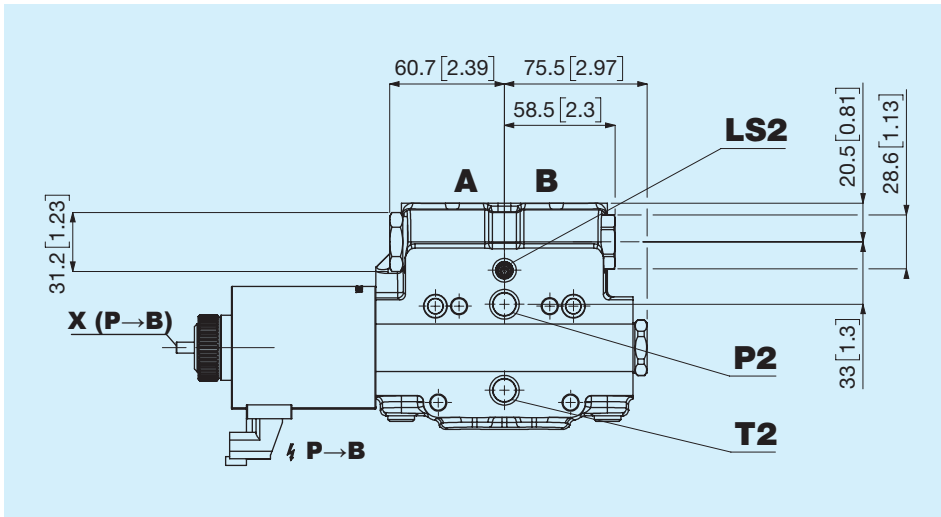
**VB** Pilot operated check valve B port



## VC Anticavitation valve port A



## VC Anticavitation valve port B



## Possible valve combinations port A and B

Port A	Port B				
	NN	VL	NE	VB	VC
NN	•	•	•	•	•
VL	•	•			•
NE	•		•		
VB	•			•	
VC	•	•			•

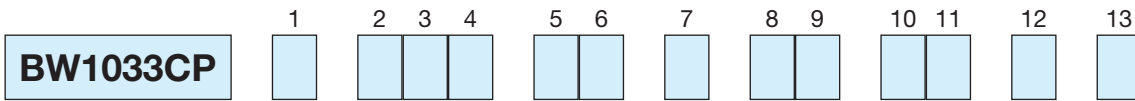
**NN** - None

**VL** - Pressure limiting valve

**NE** - Solenoid operated valve 2/2

**VB** - Pilot operated check valve

**VC** - Anticavitation valve



1	<b>Configurations</b>			
1	<b>A</b> Two coils, A and B port side	<b>E</b> One coil, A port side	<b>F</b> One coil, B port side	
2 3 4	<b>Spool types</b>			
2 3 4	<b>001</b> Spool type	<b>003</b> Spool type		
5 6	<b>Flow rate <math>\Delta P = 10</math> bar</b>			
5 6	<b>0A</b> 50 l/min - 13.21 US gpm	<b>0C</b> 70 l/min - 18.49 US gpm	<b>0E</b> 90 l/min - 23.77 US gpm	
	<b>0B</b> 60 l/min - 15.85 US gpm	<b>0D</b> 80 l/min - 21.13 US gpm		
7	<b>Thread Port A and B</b>			
7	<b>B</b> 1/2" GAS ISO 1179	<b>N</b> M22x1.5 ISO 9974	<b>J</b> M22x1.5 ISO 6149	<b>R</b> 7/8" - 14 SAE ISO 11926
8 9	<b>Port A valve type</b>			
8 9	<b>NN</b> None	<b>09</b> VL 90 bar	<b>15</b> VL 150 bar	<b>21</b> VL 210 bar
	<b>NE</b> Solenoid operated valve 2/2	<b>10</b> VL 100 bar	<b>16</b> VL 160 bar	<b>22</b> VL 220 bar
	<b>VB</b> Pilot operated check valve	<b>11</b> VL 110 bar	<b>17</b> VL 170 bar	<b>23</b> VL 230 bar
	<b>VC</b> Anticavitation valve	<b>12</b> VL 120 bar	<b>18</b> VL 180 bar	<b>24</b> VL 240 bar
	<b>07</b> VL 70 bar	<b>13</b> VL 130 bar	<b>19</b> VL 190 bar	<b>25</b> VL 250 bar
	<b>08</b> VL 80 bar	<b>14</b> VL 140 bar	<b>20</b> VL 200 bar	
10 11	<b>Valve type port B</b>			
10 11	<b>NN</b> None	<b>09</b> VL 90 bar	<b>15</b> VL 150 bar	<b>21</b> VL 210 bar
	<b>NE</b> Solenoid operated valve 2/2	<b>10</b> VL 100 bar	<b>16</b> VL 160 bar	<b>22</b> VL 220 bar
	<b>VB</b> Pilot operated check valve	<b>11</b> VL 110 bar	<b>17</b> VL 170 bar	<b>23</b> VL 230 bar
	<b>VC</b> Anticavitation valve	<b>12</b> VL 120 bar	<b>18</b> VL 180 bar	<b>24</b> VL 240 bar
	<b>07</b> VL 70 bar	<b>13</b> VL 130 bar	<b>19</b> VL 190 bar	<b>25</b> VL 250 bar
	<b>08</b> VL 80 bar	<b>14</b> VL 140 bar	<b>20</b> VL 200 bar	
12	<b>Voltage and connector</b>			
12	<b>A</b> 12V DIN 43650	<b>B</b> 24V DIN 43650	<b>G</b> 12V Deutsch	<b>H</b> 24V Deutsch
13	<b>External treatment</b>			
13	<b>A</b> External treatment	<b>N</b> None		