

# Techflow TV - Series Vacuum Jacketed Cryogenic Valves

**Manufactured by Technifab to Provide Minimal Cryogen Losses**

## Benefits

- Twenty times less cryogen loss versus non-vacuum jacketed cryogenic valves equates to lower operation costs.
- Bubble tight closure means tighter seal at cryogenic temperatures preventing possible equipment problems.
- Vacuum jacketed insures safe to touch usage.
- Low torque for easy on/off operation.
- Quick and easy seal replacement reduces downtime.

## Features

- Self-aligning, PCTFE seat designed for flexibility and solid closure at cryogenic temperatures.
- Port on bonnet for relief valve, purge valve, or pressure gauge installation.
- Pneumatic or electric actuators available for automated operation.
- ASME B16.34 code compliant available.
- One year warranty if sold separately.

## Applications

- Bulk Tank Shut-offs.
- System Branches for Pipe and Equipment Isolation.
- Point-of-Use Valves.
- System Expansion / Re-Routing Connections.
- Cold Boxes.

*Linear flow plug option available  
for Model 840*



## TV Pipe Series Valve Specifications

### All Valves:

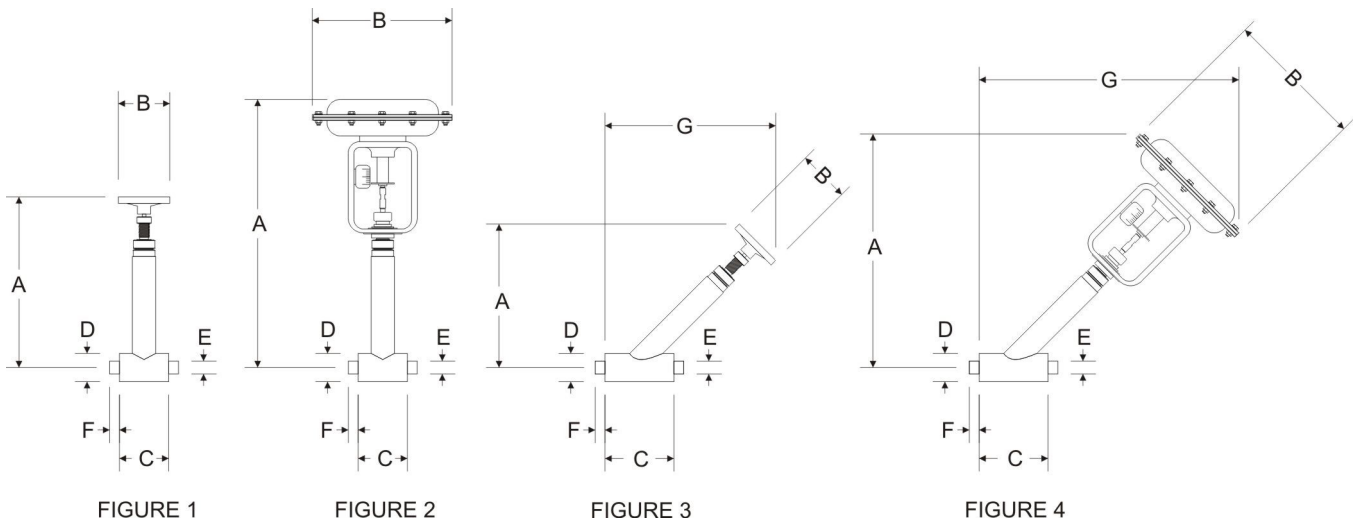
Temperature Range -450° to 150°F (4 to 340K)  
 Operating Pressure:  
     'Bubble Tight' 150 psig (10.3 Bar)  
     Proof Pressure 300 psig (20 Bar)  
 Class 300 (ASME B16.34)

Model	840	1315	2375	4500
Inner Pipe Size	1/2" NPS	1" NPS	2" NPS	4" NPS
Pipe Inner Diameter	.710 in (18.0 mm)	1.185 in (30.1 mm)	2.209 in (57.0 mm)	4.125 in (104.8 mm)
C <sub>v</sub> (K <sub>v</sub> ) - Globe	2.4 (4.02)	14 (14.8)	20 (17.2)	191 (165.2)
C <sub>v</sub> (K <sub>v</sub> ) - "Y" pattern	3.0 (4.28)	15.6 (5.17)	N/A	N/A
Heat Leak in BTU/Hr (Watts)	4.8 (1.0) <sup>1</sup>	7 (1.86) <sup>1</sup>	7.9 (1.89) <sup>1</sup>	21 (4.5) <sup>1</sup>

<sup>1</sup>At 400°F (220°C) ΔT using Liquid Nitrogen.

*Additional dimensions on the back of this sheet.*

**0840/1315/2375/4500 Series Valve Installation Dimensions**



All Dimensions in Inches (mm)

Model		A	B	C	D	E	F	G
TV-0840-GM	Figure 1	14.1 (358) <sup>1</sup>	2.6 (66)	3.0 (76)	2.375 (60.3)	.840 (21.3)	0.5 (13)	N/A
TV-0840-GP	Figure 2	19.6 (498)	9 (229)	3.0 (76)	2.375 (60.3)	.840 (21.3)	0.5 (13)	N/A
TV-0840-YM	Figure 3	11.2 (284) <sup>1</sup>	2.6 (66)	4.0 (102)	2.375 (60.3)	.840 (21.3)	0.5 (13)	12.4 (315) <sup>1</sup>
TV-0840-YP	Figure 4	16.6 (422)	9 (230)	4.0 (102)	2.375 (60.3)	.840 (21.3)	0.5 (13)	17.8 (452)
TV-1315-GM	Figure 1	18.7 (476) <sup>1</sup>	6 (150)	5.0 (127)	2.875 (73)	1.315 (33.4)	1.0 (25)	N/A
TV-1315-GP	Figure 2	24.6 (625)	11 (279)	5.0 (127)	2.875 (73)	1.315 (33.4)	1.0 (25)	N/A
TV-1315-YM	Figure 3	15.8 (402) <sup>1</sup>	6 (152)	7.0 (178)	2.875 (73)	1.315 (33.4)	1.0 (25)	19.6 (498) <sup>1</sup>
TV-1315-YP	Figure 4	20.2 (513)	11 (279)	7.0 (178)	2.875 (73)	1.315 (33.4)	1.0 (25)	24.0 (610)
TV-2375-GM	Figure 1	23.8 (605) <sup>1</sup>	6 (152)	7.0 (178)	4.50 (115)	2.375 (60.3)	1.5 (38)	N/A
TV-2375-GP	Figure 2	31.3 (795)	13.1 (333)	7.0 (178)	4.50 (115)	2.375 (60.3)	1.5 (38)	N/A
TV-4500-GM	Figure 1	36.2 (920)	10 (254)	14.0 (356)	6.625 (169)	4.5 (114)	1.5 (38)	N/A
TV-4500-GP	Figure 2	59.3 (1506)	16 (406)	14.0 (356)	6.625 (169)	4.5 (114)	1.5 (38)	N/A

<sup>1</sup> Fully Open

**VALVE NOMENCLATURE**

**T V**     **0840**                     **Y**                     **M**                     **P**                     **1**     -     -

0840 = 1/2"  
1315 = 1"  
2375 = 2"  
4500 = 4"

G = Globe  
Y = Pattern  
(1/2" - 1" only)

M = Manual  
O = Actuated  
Normally Open  
P = Actuated  
Normally closed

P = Pipe end  
T = Female NPT

1 = ASME  
2 = Non jacketed  
3 = Cold Box Cuff  
5 = LOX Cleaning  
6 = SRV  
7 = 120VAC Kit\*  
8 = 240VAC Kit\*  
9 = 24VDC Kit\*

\*Kit includes solenoid, coil connector, regulator and pressure gauge.