

P3ML2H<sup>™</sup> 2-VALVE LIQUID LEVEL MANIFOLD

# LIQUID LEVEL MANIFOLD

## 3/16" Bore Liquid Level Manifold

The P3ML2H manifold is designed to be used with differential pressure ( $\Delta$ P) transmitters on pressurized vessels in liquid level applications. The P3ML2H features 2 isolation valves with no communication between the high pressure leg and the low pressure leg. It is available in both a  $\frac{1}{2}$ " FNPT x Flange design and a Flange x Flange design.



### **Standard Features**

Hydrotested at 150% of rated pressure (shell test). Nitrogen gas tested to 2000 psi.

Seat tightness (zero leakage) verified to 110% of rated pressure. Nitrogen gas tested to 2000 psi.

Packing below stem threads

Metal body-to-bonnet seals are in compression, not tension

Stem threads are rolled, not cut

8 RMS stem finish

V-Style Teflon™ packing

Pressure component materials sourced from the US, Canada or Europe



Benefits

Complies with ASME B31.1 & B31.3 shell testing procedures as standard. Ensures structural integrity of valve.

Complies with ASME B31.1 & B31.3 seat testing procedures as standard. Ensures zero leakage at seats for proper calibration.



Prevents corrosion of critical stem threads



Mitigates risk of stress cracking



Higher quality stem for longer service life



Extended packing life



packing adjustments than traditional Teflon™ packed valves

30-40% less operational torque and less frequent

Reliable material traceability. MTR's provided with every order for pressure containing components.

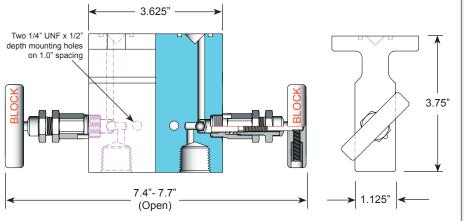
Solutions for Oil & Gas and Petrochemical Processing www.phoenixprecisionvalves.com





## P3ML2H<sup>™</sup> 2-Valve Liquid Level Manifold **Technical Specifications**

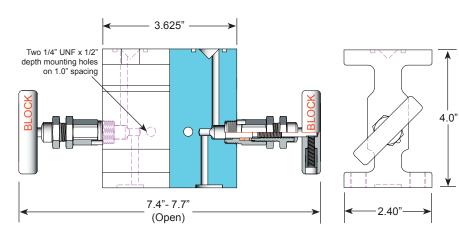
## Pipe x Flange Configuration

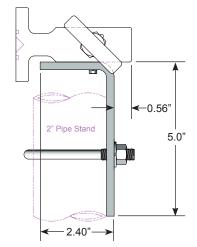


#### Specifications:

Type: P3ML2H 2-valve Liquid Level Manifold, **Globe Pattern** Rating: Up to 6000 psi @ 100°F (41370 kPa @ 38°C) Stem: Needle tip or Ball tip Packing: Teflon<sup>™</sup> or Grafoil<sup>™</sup> Seat: Integral Handle: Removable Bore Size: 3/16" Inlet Connections: FNPT Outlet Connections: Flange Bonnet Lock: Pin or Plate Body Stock: 3.750" x 3.625" x 2.4" x 1.125" Weight: 4.7 lbs Special Service: O2 or CL cleaning available\* \*Other specifications or services may be

### Flange x Flange Configuration



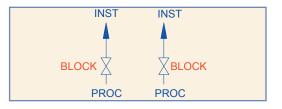


#### Specifications:

available.

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Type: P3ML2H 2-valve Liquid Level Manifold, **Globe Pattern** Rating: Up to 6000 psi @ 100°F (41370 kPa @ 38°C) Stem: Needle tip or Ball tip Packing: Teflon™ or Grafoil™ Seat: Integral Handle: Removable Bore Size: 3/16" Inlet Connections: Flange **Outlet Connections: Flange** Bonnet Lock: Pin or Plate Body Stock: 4.0" x 3.625" x 2.4" x 1.125" Weight: 5.1 lbs Special Service: O2 or CL cleaning available\* \*Other specifications or services may be available.

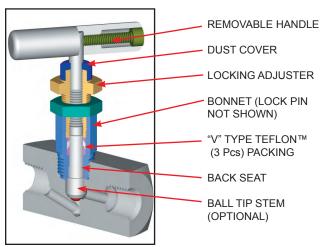




## **P3ML2H<sup>™</sup> 2-Valve Liquid Level Manifold** Bonnet, Stem and Seat Characteristics

### Teflon<sup>™</sup> Bonnet Assembly

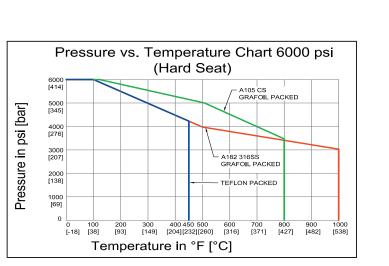
Standard	Standard Materials						
Valve	Body	Bonnet	Stem	Ball	Packing		
CS	ASTM A108CS	ASTM A108CS	ASTM A582 303SS	SEE OPTION CODES	Teflon™		
SC	ASTM A105CS	ASTM A182 316SS	ASTM A182 316SS	ON PAGE 4			
316SS	ASTM A182 316SS	ASTM A182 316SS	ASTM A182 316SS				



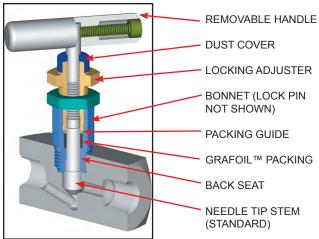
### Grafoil<sup>™</sup> Bonnet Assembly

Standard Materials						
Valve	Body	Bonnet	Stem	Ball	Packing	
CS	ASTM A108CS	ASTM A108CS	ASTM A582 303SS	SEE OPTION CODES	Grafoil™	
SC	ASTM A105CS	ASTM A182 316SS	ASTM A182 316SS	ON PAGE 4		
316SS	ASTM A182 316SS	ASTM A182 316SS	ASTM A182 316SS			

NOTE: Optional low torque Grafoil™ available (G4 Packing Code)



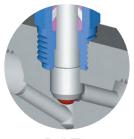
Note: Body material specifications based on ASME B16.34 - 2009. Packing material ratings based on manufacturer's specifications. Approximations only. Phoenix does not represent these values as finite. They are provided only as representative values.



### Stem and Seat Configurations



Needle Tip (Standard)



Ball Tip (Optional)



## **P3ML2H<sup>™</sup> 2-Valve Liquid Level Manifold** Model Numbering System

Phoenix	Orifice Size	Туре	Inlet Size	Inlet Type	Outlet Size	Outlet Type	Material	Packing	Seat	Stem Tip	Option Codes	Description
Р	3=3/16"	ML2H	8=1/2"	F=FNPT		FL=Flange	SS=ASTM	T=Teflon™	Integral	Needle Tip	LB	Bonnet Lock
							A182 316/316L	(PTFE)	(leave blank)	Standard (leave blank)	СС	Chlorine Clean
				FL=Flange			SC=ASTM	l G=Grafoil™		B=316SS	oc	Oxygen Clean
							A105 CS*			Ball Tip	TG	SS Tag
				FT=Female Tube Fitting			CS=ASTM A108 CS*	G4= Low Torque		BC=Ceramic Ball Tip	SGI	Sour Gas ISO NACE Latest Rev.
				Tube Fitting			A100 C3	Grafoil™			N4	Monel <sup>™</sup> 400 Sten
				1			C5=ASTM	İ		BM=Monel™	N5	Monel <sup>™</sup> 500 Sterr
							A350 LF2			Ball Tip	N6	Inconel <sup>™</sup> 625 Ster
							N4=Monel™				N8	Inconel <sup>™</sup> 825 Ster
							400 N6=Inconel™				N2	Hastelloy <sup>™</sup> C276 Stem
							625				H(V)MB	Horizontal (Vertica Mounting Bracket
							N8=Inconel™ 825				H(V)MBS	SS Horizontal
							N2=Hastelloy™ C276					(Vertical) Mounting Bracket
							Id, 1/2" FNPT Inlet	L Flange Outlet	216 66 0	l adv. Taflan M	S6	316 SS Bolts
EAAIVIPL	E. POIVILZ	HOFFL3		cking, Integral S				, Flange Outlei	, 310 33 0		225CS	2.25" CS Bolts
Р	3	ML2H	8	F		FL	ss	т		в	225S4	2.25" 304 SS Bolts
-	÷		-	1 -			le bolts must be sp	1 -	l o opplicatio	1-	225S6	2.25" 316 SS Bolts
							SS - stainless ste				ТВ	1/4" FNPT Test Ports Bottom
											РВ	1/4" FNPT Purge Ports Bottom

### Use with Confidence, Phoenix Precision Products Meet the Following Specifications:

- ASME B31.1 Power Piping
- ASME B31.3 Process Piping
- ASME B16.34 Valves Flanged, Thread, and Welding End
- API 598 Valve Inspection and Testing
- MSS SP-25 Standard Marking Systems for Valves, Fittings and Flange Unions
- MSS SP-99 Instrument Valves
- MSS SP-105 Instrument Valves for Code Applications
- NACE MR0175/ISO15156 for all 316SS valves and A105cs body/316SS bonnet (SC-Material Code) when in service with less than 50 PPM of chlorides

#### For further information please contact:



Phoenix Precision Ltd. 2620 21st Street N.E. Calgary, Alberta T2E 7L3 Phone:(403) 291-3154 Fax: (403) 291-3292 email: phoenix@phoenixprecision.ca www.phoenixprecisionvalves.com

Code Bolting Information
1. B7, B8C1, B8MC1, B8C2, B8MC2 are code grades to ASTM A193;
<ol> <li>To specify code grade bolting, example: 225B7, indicates 2.25" bolt length; B7 grade, alloy steel, AISI 4140/4142</li> </ol>

- 3. QT-Quenched & Tempered; ST-Carbide Solution Treated;
- SH-Strain Hardened

#### Seal and Seat Material Temperature Rating

Code	Description	MIN. TEMP	MAX. TEMP			
Т	Teflon™	-65°F (-54°C)	450°F (232°C)			
G	Grafoil <sup>™</sup> (SS Body) -70°F (-56°C) 1000°F (537°C (CS Body) -70°F (-56°C) 800°F (427°C					
Note: Grafoil™ is suitable for services in excess of 1000°F in a non-oxidizing environment.						

B7

B8C1

B8MC1

B8C2

B8MC2

AISI 4140/4142 QT

Class 1 304SS\_ST

Class 1, 316SS, ST

Class 2, 304SS, ST, SH

Class 2, 316SS,

ST, SH

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