# Large Chamber Flat Glass Gages

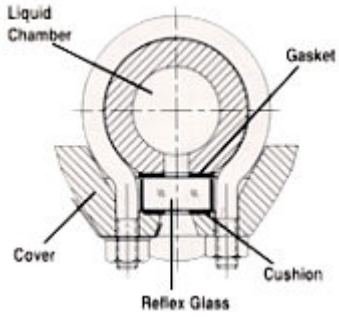
**For turbulent surface or extremely transparent liquids.**

Combining high pressure covers and a large cylindrical chamber, these gages can improve accuracy in determining turbulent vessel liquid levels. In addition to simulating the function of a stilling well and providing a liquid column approximately four times the diameter of standard gages, large chamber gages can provide end connections up to 2" NPTF that can accommodate various instrumentation.

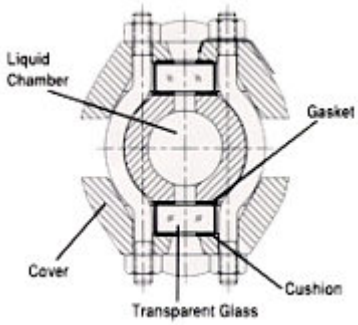
All materials in large chamber gages conform to ASTM specifications.
RLC gages can achieve pressures to 2400 psig [16550 kPa] @ 100°F [38°C] and TLC gages can achieve pressures to 1580 psig [10890 kPa] @ 100° F [38°C] for all glass sizes – see ratings table below.

Penberthy does not recommend large chamber gages for steam/water applications.

**Model RLC - Reflex Large Chamber**




**Model TLC - Transparent Large Chamber**



# Weld Pad Flat Glass Gages

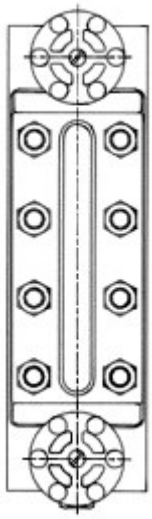
**For direct mounting to vessel wall.**
For application involving high vibration, highly viscous liquids or liquids with considerable amounts of solids, Penberthy offers end users a flat or radius weld pad gage. Because there are no nipples through which the process liquid enters the gage, clogging potential is eliminated.

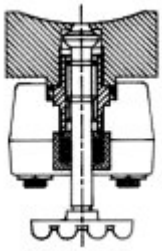
When welding the gage to a vessel, it is extremely important to take proper precautions to prevent warpage of the chamber. Penberthy strongly recommends the use of an optional steel spacer for welding.
After welding, it is important to check the flatness of all glass seating surfaces as described in Penberthy's Installation, Operation, and Maintenance manual.

All materials in weld pad gages conform to ASTM specifications. RMW and TMW gages can achieve pressures to 2000 psig [13790 kPa] @ 100°F [38°C] – when manufactured with size 1 glass – see table below.

Integral gage cocks can be added to Penberthy's weld pad gages. These gage cocks allow the gage to be isolated for maintenance without lowering the liquid level below the gage.

Penberthy does not recommend weld pad gages for steam/water applications.



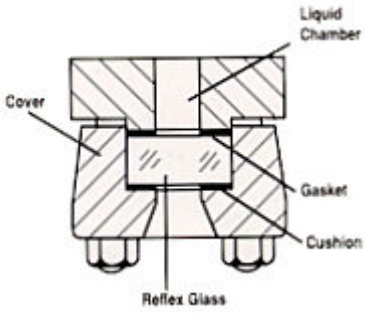


**Isolable Valves - Weld Pad Gage**

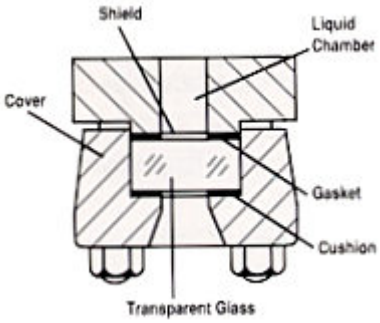
Integral valves can be added to Penberthy's weld pad gages. These valves allow the gage to be isolated for maintenance without lowering the liquid level below the gage.

Penberthy does not recommend weld pad gages for steam/water applications.

## Model RMW - Reflex Medium Weld Pad




## Model TMW - Transparent Medium Weld Pad



# Ultra-High Pressure Flat Glass Gages

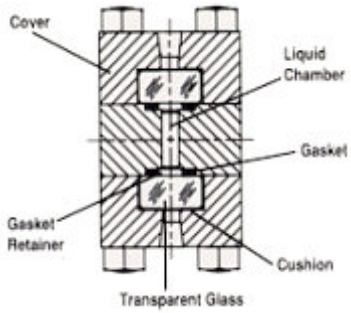
**For extra ordinary pressure and vapor requirements.**
The method of clamping and sealing the glass differs from other gages in that the glass does not experience stress concentrations imposed by bolting. The glass becomes a floating member between two solidly bolted blocks of rigid plate. The pressure activated seal principle provides a self adjusting means of maintaining a tight joint between glass and liquid chamber.

The gasket system compensates for machining variations. Because glass can take a tremendous amount of evenly loaded compression, the gage can withstand extremely demanding pressure requirements. All materials in TU gages conform to ASTM specifications.

TU gages can achieve pressures to 6000 psig [41370 kPa] @ 250°F [121°C]. Pressure rating is not glass size dependent. A higher temperature rating 400°F [204°C] @ 6000 psig [41370 kPa] can be achieved by using Viton®. Teflon® can achieve 500°F [260°C] @ 6000 psig [41370 kPa].

Penberthy does not recommend ultra-high pressure gages for steam/water applications.

**Model TU - Transparent Ultra-High Pressure**




**Standard / Optional Features**

| CONNECTION TYPE | STANDARD | OPTIONAL |
|---|---|---|
| **End Connections** | | |
| *Threaded* | | |
| 1/2´´ [12.7 mm] NPTF | X | |
| 3/4´´ [19.1 mm] NPTF | | X |
| *Socketweld* | | |
| 1/2´´ [12.7 mm] female | | X |
| 3/4´´ [19.1 mm] female | | X |
| *Flanged* | | X |
| **Side or Back (typically reflex only) Connections** | | |
| *Threaded* | | |
| 1/2´´ [12.7 mm] NPTF | | X |
| 3/4´´ [19.1 mm] NPTF | | X |
| *Socketweld* | | |
| 1/2´´ [12.7 mm] female | | X |
| 3/4´´ [19.1 mm] female | | X |
| *Flanged* | | X |