



PENBERTHY MODELS RH AND TH DIRECT READING LIQUID LEVEL GAGES

High pressure flat glass gages in reflex and transparent styles



FEATURES

- Reliable, easy to understand level reference.
- Gives users the ability to inspect liquid characteristics visually (transparent style).
- Non-intrusive.
- Operation is independent of most liquid characteristics. Multiple liquids can be processed through the same vessel without concerns for density, surface turbulence, dielectric conductivity etc.
- No electrical power required. Provide accurate direct liquid level measurement in remote locations where power is not available. Not affected by power failures.
- Suitable for full vacuum applications.
- Provide a near-unlimited length of measure.
- Optional offshore coating 2600 protection; ideal cost-effective solution for corrosive offshore environments.
- NACE materials available for sour gas service, both wetted and environmental.
- Used for verification of other level instrument technology.
- Standard flat gasket seat allows easy removal of gasket residue during rebuild.
- Optional recessed gasket chamber available.
- Optional shields available to prolong glass life in corrosive environments (transparent style only).
- Cross ties between vision slots in transparent style gages provide higher strength chamber due to reduction of unsupported beam length.
- High pressure cover engineered to allow maximum pressure regardless of glass size.
- FM approved.

GENERAL APPLICATION

High pressure gages are designed to be used in direct reading liquid level measurement for high pressure tank applications in the petroleum, chemical, natural gas and general process industries.

TECHNICAL DATA

Materials: Carbon, low-temp carbon or stainless steel cover and chamber; Grafoil/STS gaskets and Nobestos cushions; Tempered Borosilicate glass rated to 600°F

Glass size: 4 through 9

Visible length: 6¾" to 139¾" (171 to 3550 mm)

Connections: End or side; threaded, socketweld or flanged

Pressure ratings (max)

RH: up to 4000 psig (276 barg)

TH: up to 3000 psig (207 barg)

Temperature range: -20° to 600°F (-29° to 316°C)

PENBERTHY MODELS RH AND TH DIRECT READING LIQUID LEVEL GAGES

OVERVIEW

RH and TH gages provide optimum versatility and can be used for most offshore applications and in other corrosive environments. They resist torsional stresses exceptionally well to provide a process gage for the most demanding applications. These gages are designed for high pressure applications but low thermal duty; therefore, they are not recommended for steam/water applications. Process liquid levels are observed through the glass as it rises and falls in the gage chamber.

Optional materials are available for temperature ranges -325°F to 1000°F (-198°C to 538°C).

Models RH/RHR - Reflex style gages

Reflex style gages have a single vision slot through which light can enter the gage chamber to determine liquid level. Above the liquid level, glass prisms reflect the surrounding light back to the observer appearing silvery. Below the liquid level, the liquid fills the prisms causing the glass to become relatively transparent, typically appearing dark to the observer. An opaque liquid such as milk would reflect the light directly at the surface of the prisms, where it appears as a solid column of white.

The interface between the liquid and gas occurs where the silvery and dark/opaque area intersect.

Model RH gages are not recommended for steam/water applications. The RH model gages are designed for high pressure applications but low thermal cycle duty.

Model RHR is a reflex gage with a recessed gasket chamber.

Models TH/THR - Transparent style gages

Transparent style gages have a vision slot on both sides of the chamber. Light enters the gage from the side opposite the observer so that both the level of a liquid and its characteristics can be seen. Illuminators are available for use with transparent gages for easier liquid observation in dark environments and Models TH and THR are available with optional Aluminosilicate glass rated to maximum 800°F (427°C) or quartz rated to maximum 1000°F (538°C).

TH gages may be used for interface applications.

Model TH gages are not recommended for steam/water applications. The TH model gages are designed for high pressure applications but low thermal cycle duty.

Model THR is a transparent gage with a recessed gasket chamber.

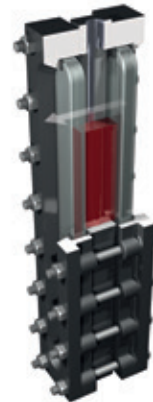
REFLEX

(Model RL shown for illustrative purposes only)



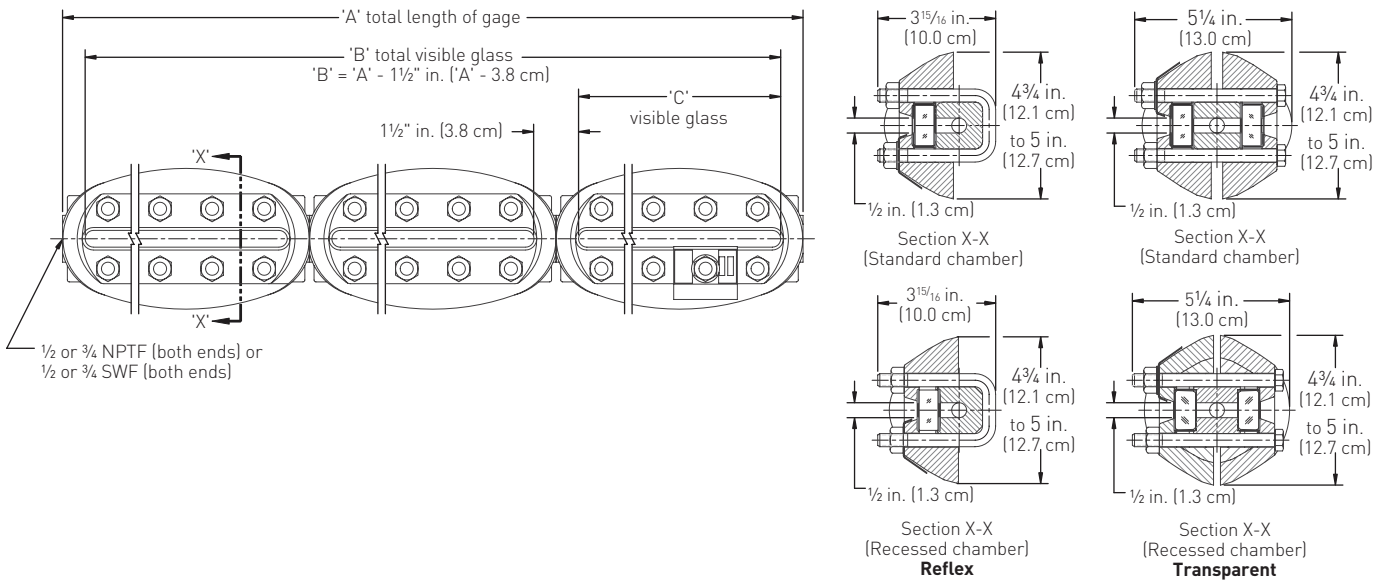
TRANSPARENT

(Model TL shown for illustrative purposes only).



PENBERTHY MODELS RH AND TH DIRECT READING LIQUID LEVEL GAGES

DIMENSIONS - END CONNECTED



DIMENSIONS - END CONNECTED

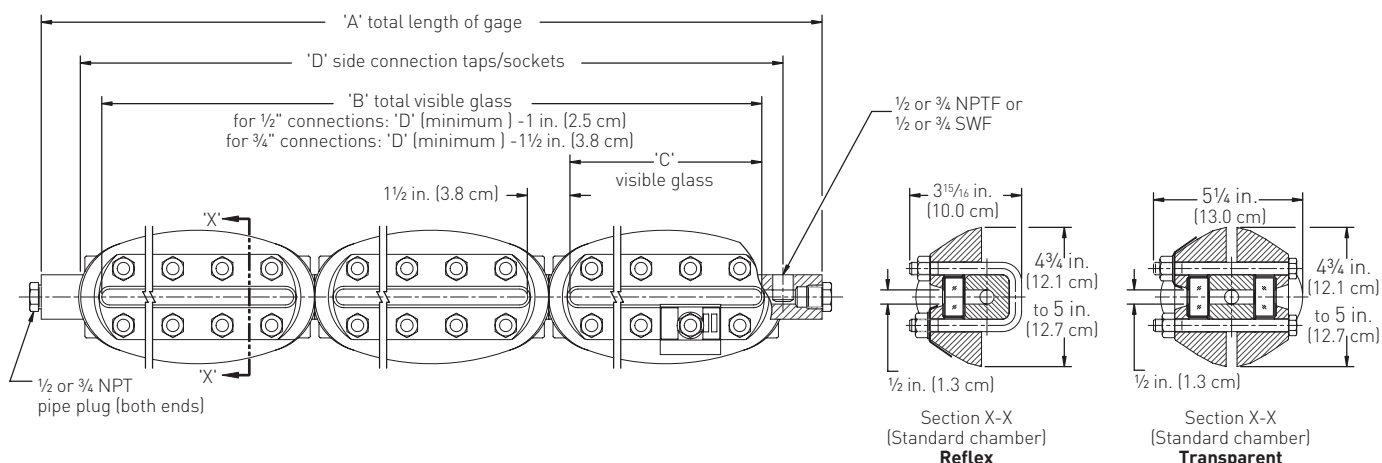
Glass size	Dim 'C' in inches [cm]	Dimension 'A' in inches (cm)										Quantity per section (reflex)		Quantity per section (transparent)	
		Number of sections										Bolt	Nut	Bolt	Nut
		1	2	3	4	5	6	7	8	9	10				
4	6.75 [17.1]	8.25 [21.0]	16.50 [41.9]									4	8	8	8
5	7.87 [20.0]	9.37 [23.8]	18.75 [47.6]									5	10	10	10
6	9.12 [23.2]	10.62 [27.0]	21.25 [54.0]	31.87 [81.0]								6	12	12	12
7	10.25 [26.0]	11.75 [29.8]	23.50 [59.7]	35.25 [89.5]	47.00 [119.4]	58.75 [149.2]						6	12	12	12
8	11.87 [30.2]	13.37 [34.0]	26.75 [67.9]	40.12 [101.9]	53.50 [135.9]	66.87 [169.9]	80.25 [203.8]	93.62 [237.8]	107.00 [271.8]	120.37 [305.8]	133.75 [339.7]	7	14	14	14
9	12.62 [32.1]	14.12 [35.9]	28.25 [71.8]	42.37 [107.6]	56.50 [143.5]	70.62 [179.4]	84.75 [215.3]	98.87 [251.1]	113.00 [287.0]	127.12 [322.9]	141.25 [358.8]	7	14	14	14

NOTE

For 3/4" NPT and 3/4" SWF add 3/4" (19 mm) to dimension 'A' on RHR and THR Series only.

PENBERTHY MODELS RH AND TH DIRECT READING LIQUID LEVEL GAGES

DIMENSIONS - RH/TH SIDE CONNECTED



DIMENSIONS - SIDE CONNECTED

Glass size		Min. and max. dimension 'D' in inches (cm) for 1/2" NPT/socketweld connections									
		Centers available in 1/8" (0.3 cm) increments between min. and max. / Standard side connection is to the right of the gage vision									
		Number of sections									
		1	2	3	4	5	6	7	8	9	10
4	min.	7.75 (19.7)	16.00 (40.6)								
	max.	10.75 (27.3)	20.12 (51.1)								
5	min.	8.87 (22.5)	18.25 (46.4)								
	max.	12.00 (30.5)	22.62 (57.5)								
6	min.	10.12 (25.7)	20.75 (52.7)	31.37 (79.7)							
	max.	13.12 (33.3)	24.87 (63.2)	36.62 (93.0)							
7	min.	11.25 (28.6)	23.00 (58.4)	34.75 (88.3)	46.50 (118.1)	58.25 (148.0)					
	max.	14.75 (37.5)	28.12 (71.4)	41.25 (104.8)	54.87 (139.4)	68.25 (173.4)					
8	min.	12.87 (32.7)	26.25 (66.7)	39.62 (100.6)	53.00 (134.6)	66.37 (168.6)	79.75 (202.6)	93.12 (236.5)	106.50 (270.5)	119.87 (304.5)	133.25 (338.5)
	max.	15.50 (39.4)	29.62 (75.2)	43.75 (111.1)	57.87 (147.0)	72.00 (182.9)	84.12 (213.7)	98.25 (249.6)	112.37 (285.4)	126.50 (321.3)	140.62 (357.2)
9	min.	13.62 (34.6)	27.75 (70.5)	41.87 (106.4)	56.00 (142.2)	70.12 (178.1)	84.25 (214.0)	98.37 (249.9)	112.50 (285.8)	126.62 (321.6)	140.75 (357.5)
	max.	17.87 (45.4)	33.25 (84.5)	48.37 (122.9)	60.12 (152.7)	81.62 (207.3)	93.00 (236.2)	106.37 (270.2)	119.75 (304.2)	133.12 (338.1)	146.50 (372.1)

NOTES

- For minimum 3/4" NPT/socketweld connections - Add 1/2" (1.3 cm) to dimension 'D' shown above.
- For maximum 3/4" NPT/socketweld connections - Subtract 3/4" (1.9 cm) from dimension 'D' shown above.
- Consult factory for minimum front or back connections

DIMENSIONS - SIDE CONNECTED

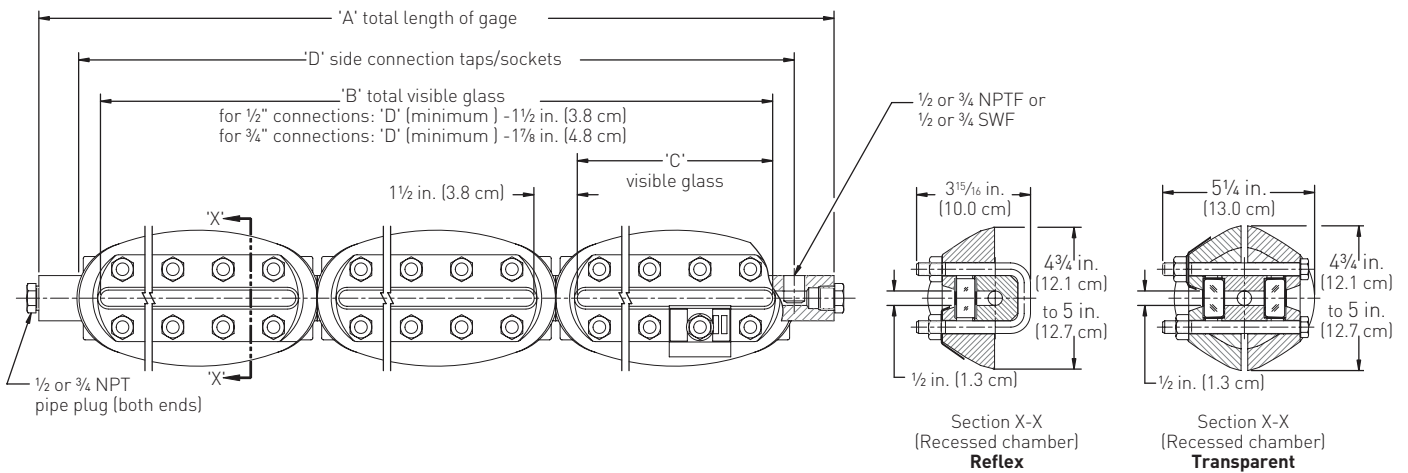
Glass size	Dim 'C' in inches (cm)	Dimension 'A' in inches (cm) 1/2" and 3/4" NPT/socketweld connections										Quantity per section (reflex)		Quantity per section (transparent)	
		Number of sections										Bolt	Nut	Bolt	Nut
		1	2	3	4	5	6	7	8	9	10				
4	6.75 (17.1)	13.50 (34.3)	22.87 (58.1)									4	8	8	8
5	7.87 (20.0)	14.75 (37.5)	25.37 (64.5)									5	10	10	10
6	9.12 (23.2)	15.87 (40.3)	27.62 (70.2)	39.37 (100.0)								6	12	12	12
7	10.25 (26.0)	17.50 (44.5)	30.87 (78.4)	44.25 (112.4)	57.62 (146.4)	71.00 (180.3)						6	12	12	12
8	11.87 (30.2)	18.25 (46.4)	32.37 (82.2)	46.50 (118.1)	60.62 (154.0)	74.75 (189.9)	***	***	***	***	***	7	14	14	14
9	12.62 (32.1)	20.62 (52.4)	36.00 (91.5)	51.12 (129.9)	62.87 (159.7)	84.37 (214.3)	***	***	***	***	***	7	14	14	14

NOTES

- *** For 1/2" NPT or socketweld connections: Dimension 'D' + 2 3/4" (7.0 cm)
- *** For 3/4" NPT or socketweld connections: Dimension 'D' + 3 1/2" (8.9 cm)

PENBERTHY MODELS RH AND TH DIRECT READING LIQUID LEVEL GAGES

DIMENSIONS - RHR/THR SIDE CONNECTED



DIMENSIONS - SIDE CONNECTED

Max. and min. dimension 'D' in inches (cm) for 1/2" NPT/socketweld connections															
Centers available in 1/8" (0.3 cm) increments between max. and min. / Standard side connection is to the right of the gage vision															
Glass size		Number of sections													
		1	2	3	4	5	6	7	8	9	10				
4	min.	8.25 (21.0)	16.50 (41.9)												
	max.	10.75 (27.3)	20.12 (51.1)												
5	min.	9.37 (23.8)	18.75 (47.6)												
	max.	12.00 (30.5)	22.62 (57.5)												
6	min.	10.62 (27.0)	21.25 (54.0)	31.87 (81.0)											
	max.	13.12 (33.3)	24.87 (63.2)	36.62 (93.0)											
7	min.	11.75 (29.8)	23.50 (59.7)	35.25 (89.5)	47.00 (119.4)	58.75 (149.2)									
	max.	14.75 (37.5)	28.12 (71.4)	41.25 (104.8)	54.87 (139.4)	68.25 (173.4)									
8	min.	13.37 (34.0)	26.75 (67.9)	40.12 (101.9)	53.50 (135.9)	66.87 (169.9)	80.25 (203.8)	93.62 (237.8)	107.00 (271.8)	120.37 (305.7)	133.75 (339.7)				
	max.	15.50 (39.4)	29.62 (75.2)	43.75 (111.1)	57.87 (147.0)	72.00 (182.9)	84.62 (214.9)	98.75 (250.8)	112.87 (286.7)	127.00 (322.6)	141.12 (358.5)				
9	min.	14.12 (35.9)	28.25 (71.8)	42.37 (107.6)	56.50 (143.5)	70.62 (179.4)	84.75 (215.3)	98.87 (251.1)	113.00 (287.0)	127.12 (322.9)	141.25 (358.8)				
	max.	17.87 (45.4)	33.25 (84.5)	48.37 (122.9)	60.12 (152.7)	74.25 (189.0)	88.37 (225.3)	102.50 (261.5)	116.62 (296.2)	130.75 (332.6)	144.87 (368.3)				

NOTES

- For minimum 3/4" NPT/socketweld connections - Add 1/4" (0.6 cm) to dimension 'D' shown above.
- For maximum 3/4" NPT/socketweld connections - Subtract 3/4" (1.9 cm) from dimension 'D' shown above.
- Consult factory for minimum front or back connections

DIMENSIONS - SIDE CONNECTED

Glass size	Dim 'C' in inches (cm)	Dimension 'A' in inches (cm) 1/2" and 3/4" NPT/socketweld connections	Quantity per section (reflex)		Quantity per section (transparent)	
			Bolt	Nut	Bolt	Nut
4	6.75 (17.1)	***	4	8	8	8
5	7.87 (20.0)	***	5	10	10	10
6	9.12 (23.2)	***	6	12	12	12
7	10.25 (26.0)	***	6	12	12	12
8	11.87 (30.2)	***	7	14	14	14
9	12.62 (32.1)	***	7	14	14	14

NOTES

- *** For 1/2" NPT or socketweld connections: Dimension 'D' + 2 3/4" (7.0 cm)
- *** For 3/4" NPT or socketweld connections: Dimension 'D' + 3 1/2" (8.9 cm)

PENBERTHY MODELS RH AND TH DIRECT READING LIQUID LEVEL GAGES

PRESSURE/TEMPERATURE RATINGS - MODELS RH/RHR

PRESSURE/TEMPERATURE RATINGS using standard gasket material^[1]

Glass size	Max. working pressure psig (kPa) at temperatures up to:						
	100°F (38°C)	200°F (93°C)	250°F (121°C)	300°F (149°C)	400°F (204°C)	500°F (260°C)	600°F (316°C)
4 - 9	4000 (27580)	3890 (26820)	3840 (26480)	3790 (26130)	3700 (25510)	3470 (23920)	3080 (21240)

PRESSURE/TEMPERATURE RATINGS using standard gasket material^[1] and steel MR0175/MR0103 NACE bolting

Glass size	Max. working pressure psig (kPa) at temperatures up to:						
	100°F (38°C)	200°F (93°C)	250°F (121°C)	300°F (149°C)	400°F (204°C)	500°F (260°C)	600°F (316°C)
4 - 9	3600 (24820)	3500 (24130)	3455 (23820)	3410 (23510)	3330 (22960)	3125 (21550)	2770 (19100)

PRESSURE/TEMPERATURE RATINGS using standard gasket material^[1] and stainless steel MR0175/MR0103 NACE bolting

Glass size	Max. working pressure psig (kPa) at temp. up to:	
	100°F (38°C)	
4	1620 (11170)	
5	1750 (12070)	
6	1825 (12580)	
7	1635 (11270)	
8	1655 (11410)	
9	1560 (10760)	

NOTE

1. Optional gasket material may result in a derated maximum pressure for the gage.

PENBERTHY MODELS RH AND TH DIRECT READING LIQUID LEVEL GAGES

PRESSURE/TEMPERATURE RATINGS - MODELS TH/THR

PRESSURE/TEMPERATURE RATINGS using standard gasket material^[1]

Materials	Glass size	Max. working pressure psig (kPa) at temperatures up to:						
		100°F (38°C)	200°F (93°C)	250°F (121°C)	300°F (149°C)	400°F (204°C)	500°F (260°C)	600°F (316°C)
*	4 - 9	3000 (20680)	2920 (20130)	2885 (19890)	2850 (19650)	2780 (19170)	2600 (17930)	2310 (15930)
**	4 - 9	1610 (11100)	1610 (11100)	1550 (10690)	1490 (10270)	1240 (8550)	1130 (7790)	1040 (7170)

PRESSURE/TEMPERATURE RATINGS using standard gasket material^[1] and steel MR0175/MR0103 NACE bolting

Materials	Glass size	Max. working pressure psig (kPa) at temperatures up to:						
		100°F (38°C)	200°F (93°C)	250°F (121°C)	300°F (149°C)	400°F (204°C)	500°F (260°C)	600°F (316°C)
*	4 - 9	2700 (18620)	2630 (18130)	2595 (17890)	2565 (17680)	2500 (17240)	2340 (16130)	2080 (14340)
**	4 - 9	1450 (10000)	1450 (10000)	1395 (9620)	1340 (9240)	1115 (7690)	1015 (7000)	935 (6450)

PRESSURE/TEMPERATURE RATINGS using standard gasket material^[1] and stainless steel MR0175/MR0103 NACE bolting

Materials	Glass size	Max. working pressure psig (kPa) at temp. up to:
		100°F (38°C)
*	4	1475 (10170)
*	5	1595 (11000)
*	6	1665 (11480)
*	7	1490 (10270)
*	8	1505 (10380)
*	9	1420 (9790)
**	4	795 (5480)
**	5	855 (5890)
**	6	895 (6170)
**	7	800 (5520)
**	8	810 (5580)
**	9	760 (5240)

PRESSURE/TEMPERATURE RATINGS using standard gasket material^[1] and Aluminosilicate glass

Materials	Glass size	Max. working pressure psig (kPa) at temperatures up to:		
		600°F (316°C)	750°F (399°C)	800°F (427°C)
*	4 - 9	2310 (15930)	1875 (12930)	1730 (11930)
**	4 - 9	1040 (7170)	905 (6240)	860 (5930)

NOTES

* All cover materials except STS

** STS covers

1. Optional gasket material may result in a derated maximum pressure for the gage.

PENBERTHY MODELS RH AND TH DIRECT READING LIQUID LEVEL GAGES

MATERIAL SPECIFICATIONS - MODELS RH/RHR/TH/THR

MATERIALS

Ref. No.	Description	Standard materials					Optional materials	
		Carbon steel to -20°F	STS wetted to -20°F	STS Construction to -325°F	Sour gas service to -20°F	Low-temp steel to -50°F		
1	Cover	size 4 - 6	ASTM A216 Carbon steel (cast) Gr. WCB	ASTM A351 Gr. CF3m (cast) 316/316L STS	ASTM A216 Carbon Steel (cast) Gr. WCB	ASTM A352 Carbon steel (cast) GR. LCB	ASTM A351 304/304L STS Gr. CF3 ASTM A182 Gr. F51 Duplex 2205 STS ASTM A494 Hastelloy B® Gr. N-12MV ASTM A352 Carbon Steel Gr. LCB ASTM A743 Alloy 20 Gr. CN7M ASTM B564 Monel® 400 N04400 ASTM A494 Hastelloy C® Gr. CW12MW ASTM A123 Galvanized Steel	
		size 7 - 9	ASTM A105 (forged) Carbon steel					ASTM A105 (forged) Carbon steel
2	Chamber	ASTM A105 (forged) Carbon steel	ASTM A276 316/316L STS		ASTM A105 (forged) Carbon steel per NACE MR0175 and/OR MR0103	ASTM A516 Gr. 70/S5 -50°F Carbon steel		
4	Nut	ASTM A194 Carbon steel Gr. 2 or 2H		ASTM A194 316 STS Gr. 8M	ASTM A194 Carbon steel Gr. 2 or 2H	ASTM A194 316 STS Gr. 8M		
7	Gasket	Grafoil® Gr. GHR w/316 STS insert						Nobestos® D7301 Garlock® 3000,3100,3200,3300,5500 PCTFE (replaces Kel-F®) Gylon® 3500, 3504, 3510 PTFE (25% glass filled, virgin) Buna-N NBR Neoprene® Viton® consult factory for others
8	Cushion	Nobestos® D7301						Nobestos® D7301 Garlock® 3000,3100,3200,3300,5500 PCTFE (replaces Kel-F®) Gylon® 3500, 3504, 3510 PTFE (25% glass filled, virgin) Buna-N NBR Neoprene® Viton® consult factory for others
9	Shield¹	None						ASTM D351 Mica Gr. V-4 PCTFE (replaces Kel-F®)
48	Glass	Reflex or transparent style tempered Borosilicate						Aluminosilicate (Transparent only) Quartz (Transparent only)
100	Cap screw or U-bolt	AISI 4140 or 4142 Alloy steel per ASTM A193 Gr. B7	ASTM A193 316 STS Gr. B8M Cl. 2	AISI 4140 or 4142 Alloy steel per ASTM A193 Gr. B7	ASTM A320 Alloy steel Gr. L7	ASTM A153 galvanized steel ASTM A193 Gr. B7M ASTM A320 Gr. L7M		
125	Washer	ASTM B633 Zinc plated carbon steel	18-8 STS (302-304 STS)	ASTM B633 Zinc plated carbon steel	18-8 STS (302-304 STS)	None		
331	Band	Rubber					None	

NOTE

- Under no circumstances should shields be used in reflex style gages, as they will keep the fluid from coming into contact with the reflective prisms, thereby prohibiting visibility of the liquid level in the gage.

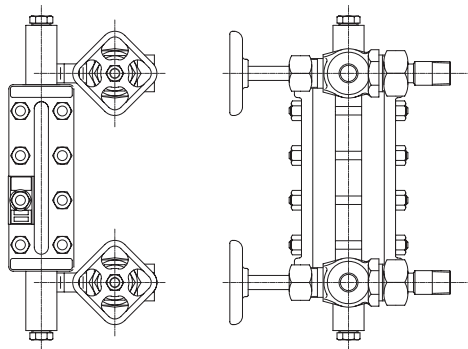
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ACCESSORIES

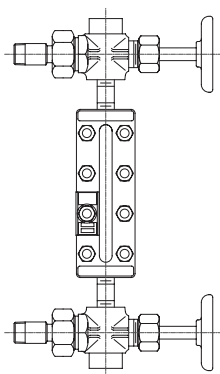
Gagecocks

Penberthy Series 100 through 700 offset and straight pattern gagecocks isolate the gage chamber from the liquid contents of the vessel. Gagecocks can be factory assembled in a variety of configurations.

SIDE CONNECTED GAGE W/GAGECOCKS



END CONNECTED GAGE W/GAGECOCKS



Illuminators

Complementary illuminators are designed to improve liquid level observation by providing proper light distribution over the entire visible length of the transparent gage when ambient light is insufficient. The illuminator is designed to be mounted readily on virtually any transparent gage.

Single and double incandescent units are available for one or two section gage models. Models are offered with 25 watt or 60 watt ratings, are explosion proof and dust tight and meet Class 1, Division II, Groups B, C and D service.

Continuous LED illuminators are available in sections up to 74" long. Multiple illumination sections can be stacked to accommodate virtually any visible length.

Flexible fiberglass insulation blanket

Lightweight, silicone coated fiberglass cover and liner, with or without PTFE window. Can be used with frost proof extensions and illuminator.

External heating/cooling chamber

Only available on reflex style gages, does not contact liquid inside chamber.

Internal heating/cooling chamber

Heating/cooling tube passes through the inside of the gage and is in direct contact with liquid.

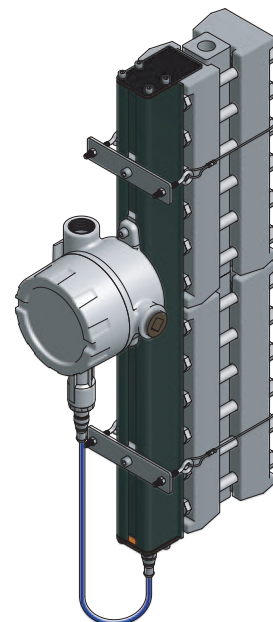
Frost-proof extensions

Clear plastic windows that fit over the visible part of the glass in flat glass gages. In low temperature applications, they inhibit build-up of frost over the visible part of the gage, preventing obstruction of the liquid level view.

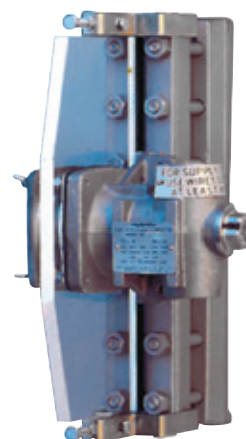
Gage scales

Attach to gage cover to provide a graduated read out of liquid level. Available in a variety of units, feet/inch and meter/centimeter are standard.

LED ILLUMINATOR



INCANDESCENT ILLUMINATOR



PENBERTHY MODELS RH AND TH DIRECT READING LIQUID LEVEL GAGES

ORDERING INFORMATION - PART 1

SELECTION GUIDE

Example:	4	RH	7	C	C	C	X
No. of sections							
1	1 Section						
2	2 Section						
3	3 Section						
4	4 Section						
5	5 Section						
6	6 Section						
7	7 Section						
8	8 Section						
9	9 Section						
10	10 Section						
Gage type							
RH	HP Reflex gage						
TH	HP Transparent gage						
RHR	HP Reflex gage with recessed gasket chamber						
THR	HP Transparent gage with recessed gasket chamber						
Glass size							
4	Size 4						
5	Size 5						
6	Size 6						
7	Size 7						
8	Size 8						
9	Size 9						
Wetted parts material (chamber)							
C	Carbon steel (standard)						
S	316/316L Stainless steel						
M	Monel						
A	Alloy 20						
H	Hastelloy C						
F	304/304L Stainless steel						
D	Duplex 2205						
L	Low temp. CS to -50°F						
N	Normalized A105						
Cover material							
C	Carbon steel (standard)						
S	316/316L stainless steel						
F	304/304L stainless steel						
D	Duplex 2205						
L	Low temp. CS to -50° F						
N	Normalized A105						
E	Galvanized carbon steel						
Bolting material							
C	STL A193 B7/A194 2H (standard)						
S	SST A193 B8M/A194 8M						
L	LT A320 L7/A194 8M						
N	STL NACE A193 B7M/A194 2HM						
A	LT NACE A320 L7M/A194 7M						
E	SST NACE A193 B8MA/A194 8MA						
NACE MR-01-75 and/or MR-0103							
X	None						
W	NACE wetted						
E	Environmental						

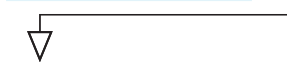
PART 2 - PAGE 11

C B X



PART 3 - PAGE 12

X X X X X



PART 4 - PAGE 13

S B S B X X X X

PENBERTHY MODELS RH AND TH DIRECT READING LIQUID LEVEL GAGES

ORDERING INFORMATION - PART 2

PART 1 - PAGE 10

4 RH 7 C C C X

SELECTION GUIDE - PART 2

Example:

C B X

PART 3 - PAGE 12

X X X X X

End connection size

C 1/2" (Standard)

E 3/4"

F 1" (flange only)

G 1 1/4" (flange only)

H 1 1/2" (flange only)

J 2" (flange only)

End connection type

B NPT female (standard)

D Socketweld female

N Raised face SO

P Flat face SO

R RTJ SO

S Raised face SW

T Flat face SW

U RTJ SW

V Raised face WN

W Flat face WN

Y RTJ WN

F Vent and drain plugged

G Drain plugged

H Vent plugged

J Socketweld male

End connection pressure class

X None

1 P CL 150

3 P CL 300

6 P CL 600

9 P CL 900

F P CL 1500

T P CL 2500



PART 4 - PAGE 13

S B S B X X X X

PENBERTHY MODELS RH AND TH DIRECT READING LIQUID LEVEL GAGES

ORDERING INFORMATION - PART 3

PART 1 - PAGE 10

4 RH 7 C C C X

SELECTION GUIDE - PART 3

Example: X X X X X

PART 4 - PAGE 13

S B S B X X X X

PART 2 - PAGE 11

C B X

Side connection size

- X None
- C 1/2" (standard)
- E 3/4"
- F 1" (flange only)
- G 1 1/4" (flange only)
- H 1 1/2" (flange only)
- J 2" (flange only)

Side connection type

- X None
- B NPT female (standard)
- D Socketweld female
- M NPT male
- N Raised face SO
- P Flat face SO
- R RTJ SO
- S Raised face SW
- T Flat face SW
- U RTJ SW
- V Raised face WN
- W Flat face WN
- Y RTJ WN
- L Lap joint

Side connection pressure class

- X None
- 1 P CL 150
- 3 P CL 300
- 6 P CL 600
- 9 P CL 900
- F P CL 1500
- T P CL 2500

Side connection location

- X None
- S Right side connected (standard)
- L Left side connected
- B Back connected
- F Front connected
- G One bottom right
- H One bottom left
- J One top right
- K One top left
- M One bottom back

Connection dimension

- X None
- 00000 Inches (first 3 digits = number of whole inches, last 2 digits = fraction of an inch in hundredths)

PENBERTHY MODELS RH AND TH DIRECT READING LIQUID LEVEL GAGES

ORDERING INFORMATION - PART 4

PART 1 - PAGE 10

4 RH 7 C C C X

PART 2 - PAGE 11

C B X

PART 3 - PAGE 12

X X X X X

SELECTION GUIDE - PART 4

Example:		S	B	S	B	X	X	X	X
Gasket material									
S	Grafoil/SS insert (standard)								
B	Nobestos D7301								
T	PTFE								
K	Garlock 3300								
L	Gylon 3510								
Y	Gylon 3504								
A	Garlock 5500								
U	Buna-N NBR								
V	Viton®								
D	25% glass filled PTFE								
P	PCTFE (KEL-F)								
C	TopChem 2000								
Cushion material									
B	Nobestos D7301 (standard)								
S	Grafoil/SS insert								
T	PTFE								
K	Garlock 3300								
L	Gylon 3510								
Y	Gylon 3504								
A	Garlock 5500								
U	Buna-N NBR								
V	Viton®								
D	25% glass filled PTFE								
P	PCTFE (KEL-F)								
C	TopChem 2000								
Paint specification									
X	None								
S	Standard								
O	Offshore spec 2600								
A	Offshore spec 2600 paint ONLY								
Option 1									
X	None								
A	1 External htg/clg chbr.								
B	1 Welded support bracket								
C	2 Welded support brackets								
D	3 Welded support brackets								
K	Belleville washers								
N	Per UOP spec 6-20								
Option 2									
X	None								
Option 3									
X	None								
B	Mica shields V-4								
C	PCTFE shields (KEL-F)								
Option 4									
X	None								
N	Aluminosilicate glass								
Option 5									
X	None								
E	Quartz								

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