

## For Ammonia (R717) and Halocarbon Refrigerants

### Features

- Suitable for ASME Code Vessels
- 1000 PSI Working Pressure Limit
- SA36 Steel Construction Standard
- Available in Stainless Steel
- Suitable for Low Temperature Applications (-60°F)
- 1100A–Canadian Registered (All Provinces)–CRN0F0829.012345678



### Description

The Phillips® Level Eye® is a reliable, industrial-type sight glass. The unique reflex lens indicates the true level of liquid present without requiring a second lens. The lens appears dark in the presence of liquid and clear when liquid is not present. The lens is suitable for refrigerant vessels such as receivers, intercoolers, suction accumulators, oil separators, surge drums, oil pots, columns, and liquid line indicators.

The standard length frost shield allows clear vision with refrigerant temperatures down to -20°F, and a 1" longer frost shield is available for refrigerant temperatures below -20°F.

### Design Function

The Series 1100 Level Eye is machined from SA36 material, as specified in Section VIII, Division I of the ASME Boiler & Pressure Vessel Code. The lens may be welded directly into ASME Code vessels. The welding end is dimensioned to a nominal 1 1/2" IPS schedule 80 pipe. The weld neck or threaded neck is dimensioned to nominal 1 1/2" schedule 80 pipe. Type 304 stainless steel housings and retainers are also available in a 2" length.

The 1101 clear lens is a crystal tempered soda-lime glass. The 1101R reflex lens is a heat resistant intermediate bora-silicate tempered glass. Both are used with a neoprene rubber gasket on the inside and a fiber buffer gasket on the outside (between the glass and the retainer). The maximum temperature differential for all glass is 477°F; the maximum temperature for the gaskets is 250°F. The maximum working pressure is 1000 PSI.

The Series 1100 Level Eye is made of SA36 and can be applied for use below -20°F, per Table UCS-23 of the ASME Code. Rupture of the glass in tests occurred in excess of 14,000 PSI. The Phillips Series 1100A and 1100 Level Eye is in compliance with the intent of paragraphs UG-11(a)(1) & UG-11(a)(3) of the ASME Boiler & Pressure Vessel Code, Section VIII, Division I.

# Level Eye® Assemblies and Parts

## LEVEL EYE ASSEMBLIES

PART NUMBER*	LENGTH	CONNECTION	HOUSING	WEIGHT (LBS.)
1100-R 1100-RN 1100-RNX	2"	WELD	SA36	1-1/2
1100A-R 1100A-RN 1100A-RNX	3"	WELD	SA36	2
1100C-R 1100C-RN 1100C-RNX	2"	WELD	SA36	1-1/2
1100S-R 1100S-RN 1100S-RNX	2"	WELD	SA240/ 304SS	1-1/2
1100V-R 1100V-RN 1100V-RNX	2"	2" MPT	NON-CODE	1-1/2
1100T-R 1100T-RN 1100T-RNX	4"	1-1/2" MPT**	SA36	3
1100L-R 1100L-RN 1100L-RNX	4"	WELD	SA36	3
1100LC-R 1100LC-RN 1100LC-RNX	4"	WELD	SA36	3
1100LS-R 1100LS-RN 1100LS-RNX	4"	WELD	SA240/ 304SS	3

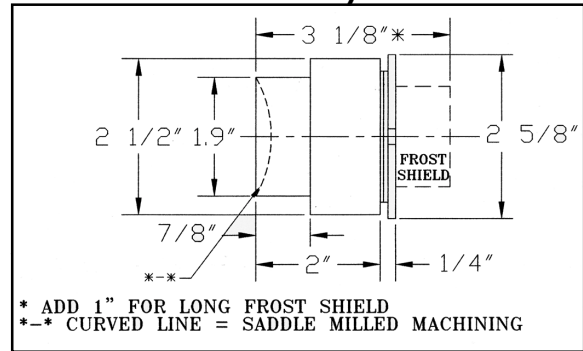
\*R=Reflex Lens, N=Frost Shield, NX=Long Frost Shield; Eliminate 'R' in part number to designate Clear Lens instead of Reflex Lens.

\*\*1100AT Available.

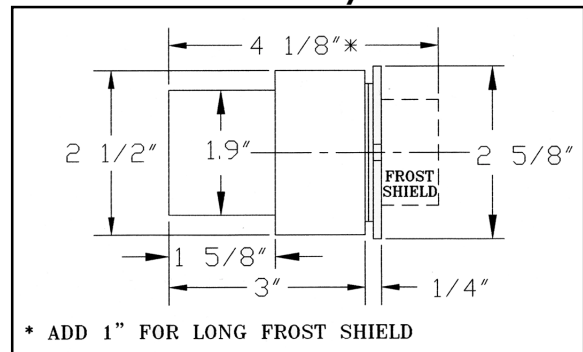
## PARTS

PART NUMBER	DESCRIPTION
1100AH	3" Long Housing, SA36
1100CH	2" Long Housing, Saddle Milled
1100H	2" Long Housing, SA36
1100SH	2" Long Housing, Stainless Steel
1100LCH	4" Long Housing, Saddle Milled
1100LH	4" Long Housing, SA36
1100LSH	4" Long Housing, Stainless Steel
1100TH	4" Long Housing, 1-1/2" MPT, SA36
1100VH	2" Long Housing, 2" MPT, SA36
1101	Clear Lens, Glass
1101R	Reflex Lens, Glass
1102	Retainer, Steel
1102S	Retainer, Stainless Steel
1103	Rubber Gasket, Neoprene
1103T	Teflon Gasket
1104	Fiber Gasket
1105	Frost Shield, Lucite
1105L	Long Frost Shield ('X')
1106	O-Ring, Buna-N

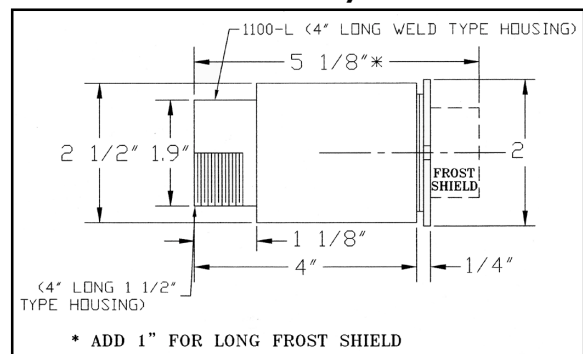
### 2" Level Eye



### 3" Level Eye



### 4" Level Eye



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