

Clark-Reliance

Water Gage Glass Model Selection Guidelines

Water Gage Glass Type vs. Boiler Design Pressure

<u>Type</u>	<u>Design Pressure PSI</u>						
	<u>250</u>	<u>350</u>	<u>450</u>	<u>900</u>	<u>1500</u>	<u>2000</u>	<u>3000</u>
Tubular	(*)	•	•	•	•	•	•
Prismatic	C (**)	S (**)	•	•	•	•	•
Flat Glass	FG400	FG400	FG400	FG900	FG1500	FG2000	•
Bi-Color	P3000	P3000	P3000	P3000	P3000	P3100	P3100

• Not available for this design pressure

Specification Comments

- (*) Tubular Glass (HP or Redline) water gages can be used for boiler design pressures up to 250 PSI. While this is an economical option, we recommend a Prismatic type water gage, as a minimum for steam service up to 250 PSI. The use of an armored gage design will provide maximum service life, and added safety for plant personnel.

However, Tubular Glass (HP type) water gages are recommended by Clark-Reliance for temporary use (Boil-Out) applications.

- (**) Before selecting a prismatic type water gage, please review the boiler water pH, and follow the guidelines on the graph in the Prismatic Water Gage literature. Refer to Figure 8, located in catalog no. 500; section no. AB7.1A for more detail.

For water gages with traditional nipple (end stem) connections, with design pressures up to 1500 PSI, the following specifications are required for proper installation and service:

1. Nipple connected water gages used with Clark-Reliance bronze water gage valves must have an overall length (from nipple end to nipple end) of 2-3/4 inches less than the water gage valve centers.
2. Nipple connected water gages used with Clark-Reliance steel water gage valves applications must have an overall length (from nipple end to nipple end) of 3-1/4 inches less than the water gage valve centers.
3. All Clark-Reliance water gage valve sets with stuffing box connections for gage nipples must be installed properly to vessels or water columns. Vessel connections to the valve set must not be extended without contacting the factory for confirmation.
4. Flanged connections between the water gage and isolation valves are recommended for design pressures of 900 to 1500 PSI. The Clark-Reliance standard for flange connected water gages is a 1/2" 2500# RTJ ring joint flange. Flange connections on Flat Glass or Bi-Color water gages can be specified by adding an "F" to the end of the water gage model number. Flanged connections will provide added reliability and reduce maintenance. Optional expansion loop designs are available, when necessary.