YARWAY WATER COLUMNS, PROBES AND PROBE FITTINGS

TYPES HP (HIGH PRESSURE) / IP (INTERMEDIATE PRESSURE) / LP (LOW PRESSURE)

A reliable, cost effective means of sensing water level in boiler and various other applications.

FEATURES

- Probes can be mounted directly to the pressure vessel or column.
- HP probes feature brazed welded stainless steel electrode with zirconia insulator for high pressure, high temperature applications.
- LP probes feature threaded stainless steel electrode with PTFE insulator for lower pressure and temperature applications.
- Custom fittings available with probe adapter.
- PED 97/23/EC conformance available.

GENERAL APPLICATION

Based on conductivity probe technology, they are specially designed to meet increasing demand for a reliable, cost effective means of sensing water level in boiler and various other applications.

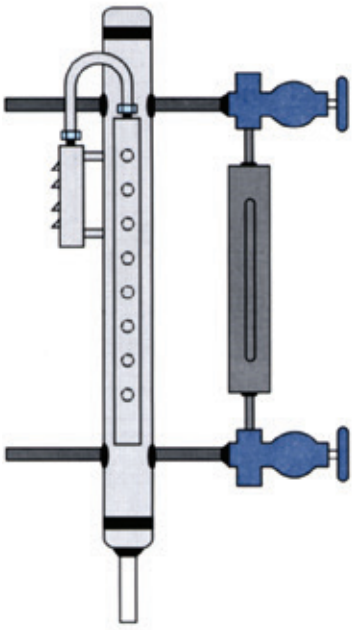
TECHNICAL DATA

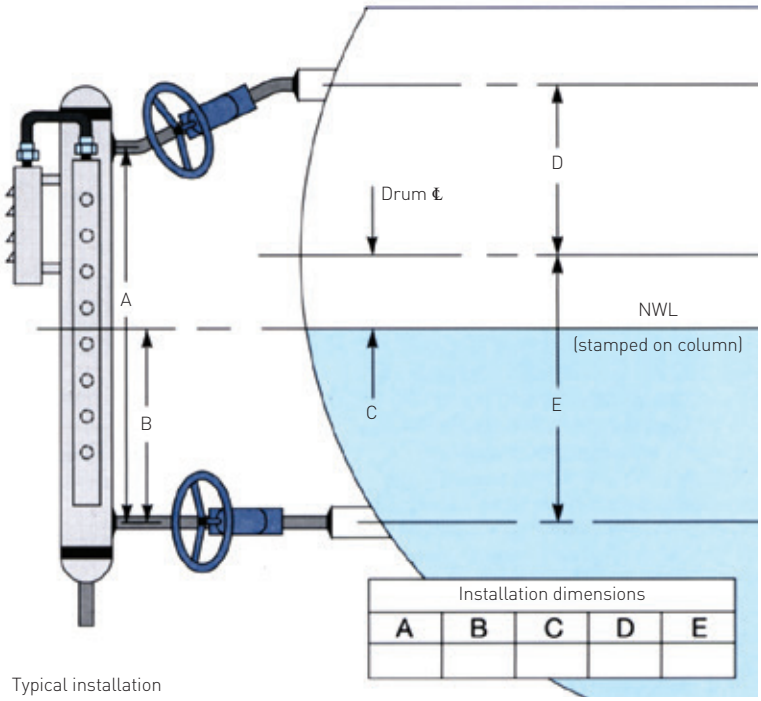
Water Columns
Max. pressures
HP water column: 3000 psig (207 barg) at saturation
IP water column: 1800 psig (124 barg) at saturation
LP water column: 850 psig (58 barg) at saturation

Probes
Max. pressures
HP probe: 3000 psig (207 barg) at saturation
LP probe: 850 psig (58 barg) at saturation
Max. temperatures
HP probe: 1000°F (538°C)
LP probe: 525°F (274°C)

Fittings

HP probe:	NPS 1½" (40 mm) socketweld male adapter
	NPS 1½" (40 mm) tee Type 'A'
LP probe:	NPS 1 (25 mm) socketweld male adapter
	NPS 1½" (40 mm) socketweld male adapter





Typical installation

WATER COLUMNS

Ratings
3000 psig (207 barg) at saturation
1800 psig (124 barg) at saturation
850 psig (58 barg) at saturation

Materials of construction
Seamless pipe and NPS 1½ (40 mm) vessel stub fittings (8" length) and NPS ¾ (20 mm) stub drain connections. Standard water column is NPS 3, 36" (758 mm) length. Pipe schedules: (3000 psig) XXS, (1800 psig) Sch 160 and (850 psig) Sch 160. Probe covers are stainless steel IP32. Each standard 36" (758 mm) comes with 36" HT probe wires extending from the conduit connection.

Optional:

- Remote junction box (Type 4X/IP67)
- Prewired column mounted junction box (Type 3R/IP22)
- Extended length column over 36" (758 mm)
- NPS 2 and NPS 3 vessel fittings
- Redundant probe level indication (requires NPS 4 column)
- Isolation and drain valves
- NPS ¾ vent connection
- Flanged or female socket weld connections
- Insulation heat jacket
- Weldolet/bossets on connections
- Welded support brackets

Manufacturer's standard materials		
SA 106 Gr. B UNS K03006	to T_{max} = 1000°F (538°C)	EN 10210-1, S275J0H
Optional		
SA 335 Gr. P22 UNS K21590	to T_{max} = 1200°F (649°C)	EN 10210-1, S275J0H
SA 312 TP316 UNS S31600	to T_{max} = 1500°F (816°C)	DIN 17175 X5CrNiMo17-12-2/1.4401
Extended delivery time optional materials		
SA 335 Gr. P11 UNS K11597	to T_{max} = 1200°F (649°C)	DIN 17175 13CrMo 4 4 (1.7335)
SA 335 Gr. P91 UNS K90901	to T_{max} = 1200°F (649°C)	DIN 17175 X20CrMoV 12 1 (1.4922)
SA 312 TP304 UNS S30400	to T_{max} = 1500°F (816°C)	DIN 17175 X5CrNi 18-10/1.4301

T_{max} established by ASME B and PV Code Sect IID
EN/DIN material = closest equivalent

Density error correction options

1 Steam heating tube for overall span density error correction.
2. Probe placement offset for single user specified operating point error correction.