



A Division Of The ClarkReliance Corporation

# Trulevel

## Remote Level Indicator Bulletin B

Section: **J100**  
Bulletin: **J100.71**  
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Supersedes: **TL**

**Specialists In Liquid Level Indication**

### Datum Chamber Provides Compensation For Changing Water Densities

The standard datum chamber provides the reference level through condensation of steam from the operating medium to assure accurate readings for pressures to 750 WSP. Temperature compensated datum chambers are provided for pressures over 750 WSP to compensate for density difference that could affect accuracy.

In operation to 750 WSP, natural compensation is normally acceptable as the water density change is relatively slight. With natural compensation the Trulevel is calibrated to give full scale accuracy at operating conditions.

In operation above 750 WSP, the density change is significant enough to require adjustment to insure accuracy. The temperature compensation datum column provides mid-scale accuracy over the complete pressure range and full scale accuracy at operating conditions.

With temperature compensation, the heat of the variable leg is utilized to control the temperature of the reference leg. The density of the two legs is thus adjusted so that accurate indication is insured.

### Typical Trulevel Installations

#### A.

To 750 WSP, Trulevel is installed with natural compensation datum column and two isolating valves. Boiler drums, heaters, and similar equipment falls into this category.

#### B.

Over 750 WSP, Trulevel is installed with the temperature compensated datum column and 3 valve equalizing manifold. Most boiler, heater, marine and other steam/condensate applications can be handled with Trulevel.

#### C.

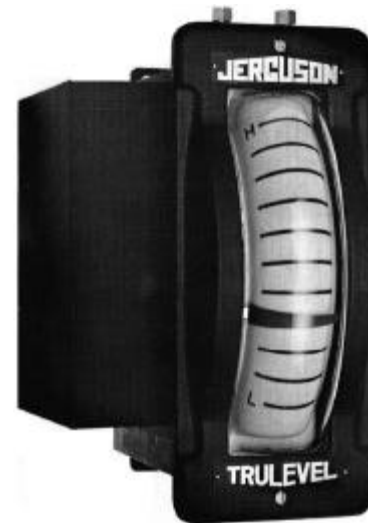
For boilers where all drum safety valves are set over 400 WSP the ASME Boiler Code allows the use of one water gage and two remote level indicators with Temperature compensated datum chambers and 3 valve manifolds. Repeaters can provide additional remote readings.



TRANSMITTER



RECEIVER



VISUAL



AUDIBLE

**Specify Jerguson - All Gages are NOT Created Equal**

**Liquid Level Gages and Valves for the Power and Process Industries**

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MODEL NUMBER	OPERATING PRESSURE	MAXIMUM RANGE	DATUM	ISOLATING MANIFOLD
75	750 PSI 52.7 Kg/cm <sup>2</sup>	275" (6985 mm)	NATURAL	2 VALVE
175	1750 PSI 123 Kg/cm <sup>2</sup>	275" (6985 mm)	TEMPERATURE COMPENSATING	3 VALVE-EQUALIZING

Higher pressure units available on application.

### Standard Design Characteristics

#### Trulevel

Liquid Level Ranges: 5 - 275" (127 - 6985 mm) H<sub>2</sub>O  
 Scale: Double convex, 8" (203 mm) length, 180° visibility  
 Illumination: Two long-life 115 VAC lamps  
 Mounting: Panel or wall

#### Transmitter

Power Input: 115 VAC, 15W  
 Output: 4-20 mA DC  
 Output Load: 1000 ohms maximum  
 Operating Temperature: 40 - 160° F (4 - 71° C)

#### Alarm Unit

Power Unit: 115 VAC, 15W  
 Temperature Range: 40 - 125° F (4 - 52° C)  
 Low Alarm Adjustment: 0-35% full scale  
 High Alarm Adjustment: 65-100% full scale  
 Contact Rating: 1 amp @ 115 VAC or 2 amps @ 26 VDC Resistive

#### Receiver

Scale Curved: 4½" length  
 Adjustment: Zero screw on front  
 Operating Temperature: 0-125° F (4 - 52° C)  
 Mounting: Panel

### To Order Trulevel

Select model number from chart  
 Specify: Type of service (boiler, tank, etc.)  
 Operating pressure  
 Indicating range  
 Electrical characteristics  
 Dimension between low vessel connection and normal water level

### To Order Accessories

Select and add suffix letter  
 R-repeater  
 A-alarm unit  
 L-3 light unit  
 H-audible horn  
 Specify number of switch points on alarm unit (2 standard).  
 Specify electrical characteristics.  
 Specify length of connection cable with repeater (if required).

Jerguson Trulevel Remote Liquid Level Indicating Systems are available throughout the world at more than 100 offices. Contact your local representative for further information.



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