



DAMEN DENSITY MEASUREMENT SYSTEMS

GENERAL

The Density Gauge is a Non-contacting On-line Density Measurement System. The Density Gauge Head includes a radioactive source, a detector and mounting hardware.

The Density Measurement System uses the technique of energy attenuation. A radioactive source (Cs137) contained in a lead-filled steel-encased housing is mounted on one side of a pipe. The detector is mounted on the opposite side of the pipe. The mounting hardware consists of a pipe saddle construction. Gamma energy emitted by the source passes through the pipe walls and the process material. As the density of the process material changes, so does the amount of energy reaching the detector. The detector electronics convert this energy reading to a density measurement.

FEATURES AND BENEFITS

- The **PRO Density Gauge** is comprised of a radioactive source and a detector. The detector is an integrated microprocessor based transmitter design, no separate electronics. The set-up and communication (RS 485) with the detector is carried out with a hand held terminal. The Density PRO Gauge has one current output 4 –20 mA for density signal, which can be connected together with the velocity to a yield indicator (cross-needle indicator) or production calculation unit for production calculation and displaying. The calculation unit displays the total and day production on counters.
- Clamp-on mounting means no special piping arrangement necessary.
- Easy to Standardise
- Scintillation detector design means short initialisation time, reliable, accuracy, reproducible.
- Self-diagnostics reduce trouble-shooting time.
- Approved for hazardous area use.

TECHNICAL SPECIFICATIONS:

PRO DENSITY GAUGE:

- Source 5203/5204 : Cs₁₃₇ standard with 2-position shutter
Co₆₀ optional
Source sizes 50 mCi and up, depending upon application
- Detector PRO : PRO Density gauge uses an integrated transmitter/detector design
in one steel enclosure, no separate electronics required
Resistant against shock and moisture damage
Power supply 115/230 Vac, 24 Vdc
Output: density: 4 to 20 mA
Operation temperature -30°C to +60°C
Field housing IP-65, Nema-4
Detector requires 2 cables:
- 2/3-wire for power supply(230 Vac/ 24 Vdc)
- 6-wire for signal output/communication
- current output 4 to 20 mA

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DAMEN

DAMEN DREDGING EQUIPMENT

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