

Turn Key
Density Solutions

BOPP & REUTHER
MESSTECHNIK



Density metering Skids: Let's get the upmost performance out of your process

Our customers first

Precise density measurement in process applications as well as for fiscal metering requires a lot of skill and of experience. It is often by far more than the optional and roughly calibrated density output of a Coriolis Mass Flowmeter. Small savings on details can sometimes generate decisive losses in accuracy and reliability of your density measuring point and this is just your money that then flows down the pipe. Bopp & Reuther Messtechnik ist very aware of some customer's need for complete turn key solutions for density measurement avoiding such surprises. We therefore developed and optimized a few simple but proven technical solutions preserving you from needless additional expenses in engineering, purchasing, commissioning and optimization of measurements.

Density total: solutions from Bopp & Reuther

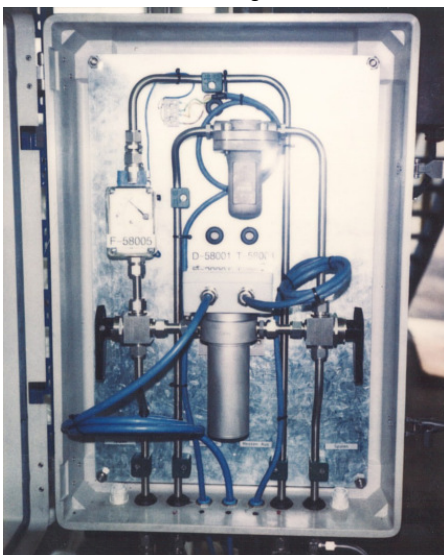
Density skid for precise concentration measurement in a chemical plant:

- Density meter Type DIMF 2.0 fitted with an HART-Transmitter Type TR better than 0,2 kg/m³
- Accuracy wall mounted housing
- Skid type flanged
- Process connect.



Density skid for the fiscal metering of hydrocarbons:

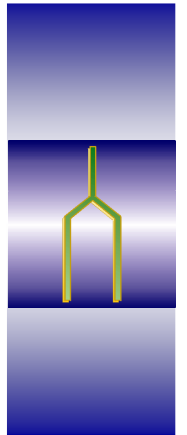
- Density meter Type DIMF 1.3 fitted with a PV24 preamplifier
- Accuracy better than 0,1 kg/m³
- Skid type wall mounted housing
- Process connect. flanged



Technical Data: nothing is impossible

The following components may be part of our delivery:

- Density meter Type DIMF 2.0 (process) or type DIMF 1.3 (fiscal metering)
- Accessories Strainer, variable area flowmeter (with flow contact), 3-way valves (measuring / flushing), manometer etc...
- Application Density or concentration measurement
- Process connections Swagelok (internal) or flanges (external)
- Material 1.4571 (other if required)
- Measured liquid corrosive (DIMF 2.0) or non-corrosive liquids (DIMF 1.3)
- Accuracy up to +/- 0,1 kg/m³
- Oper. temperature ambient or process temp. up to 150°C
- Oper. pressure up to 100 bar
- Options Orifice plates to be integrated in the main line and dimensioned to ensure flow in the density meter (recommended for low viscosities).
A gear pump can be integrated to ensure steady renewal of the liquid probe in the density meter (recommended for middle and high viscosities).



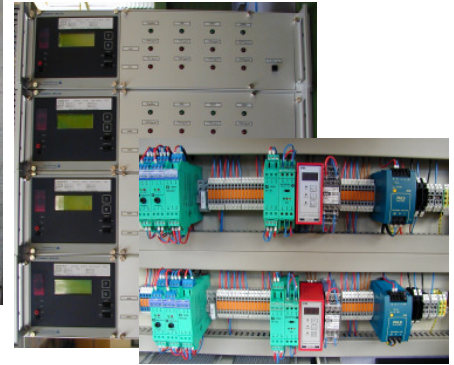
Our specialities: high tech sensors fitted with latest electronic control

Density metering skids for precise product identification in hydrocarbon pipelines:

- Density meter Type DIMF 1.3 fitted with a PV24 preamplifier better than 0,1 kg/m³
- Accuracy PN100
- Design pressure 1" ANSI 600
- Process connection ensured by orifice plate in main line
- Probe renewal



DIMF 1.3 (left) on a pedestal mounted density skid (right)



Density metering skid for reliable measurement of high viscosity hydrocarbons:

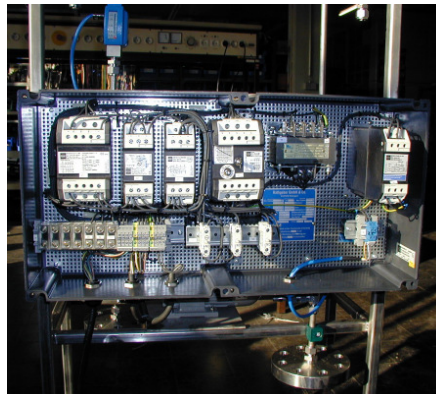
- Density meter Type DIMF 1.3 fitted with a PV24 preamplifier
- Associated electronics supply / pump protection against overload and dry run better than 0,1 kg/m³
- Accuracy PN100
- Design pressure 1" ANSI 600
- Process connection ensured by gear pump mounted on the skid
- Probe renewal

Density computer Type CSM2 and associated electronics for supply and density gradient detection



Frontside showing...

3-way valves, manometer, variable area flowmeter, control and Ex-protection electronics (see also photo in the middle)



Backside showing...

density meter (left), strainer (right), gear pump mounted on a welded stainless steel construction.

Your advantages

- We offer you a proven turn key solution, adapted to your needs and to your budget
- You can rely on our skill and experience and don't need to care for details
- Our realizations are just characterised by the usual top quality of Bopp & Reuther
- Our flexibility and willingness to find out the best solution will surely convince you

Subjected to changes without notice