Flow Instruments
& Engineering GmbH

A Chart Industries Company

FLOWCOM 2000

Flow Metering System For Cryogenics And Other Liquids With Pump Protection

FLOWCOM 2000

Flow Instruments has been successfully producing flow measuring systems for media such as CO_2 or air gases since 1981, and also in the area of propane/butane since 2001. The latest generation of the successful Flowcom series incorporates both modern achievements in microprocessor technology, as well as expertise from over 25 years of service to customers.
The optimum functionality, flexible modular design and intuitive operation testify to the longstanding experience of the development team. Special attention has been paid to user-friendly operation when developing the system. The large, illuminated display enables the configuration of each parameter to be set in the dialog without further tools. The context-specific effect after pressing the four soft keys is shown in the display. Thus, for example, only functions such as those for interrupting or continuing the outflow or calling up status information are available for a particular delivery, while editing functions are provided for the system configuration. Thanks to this design, the chance of application errors has been minimized, while offering multi-functionality without irritating the user by too many operating elements.

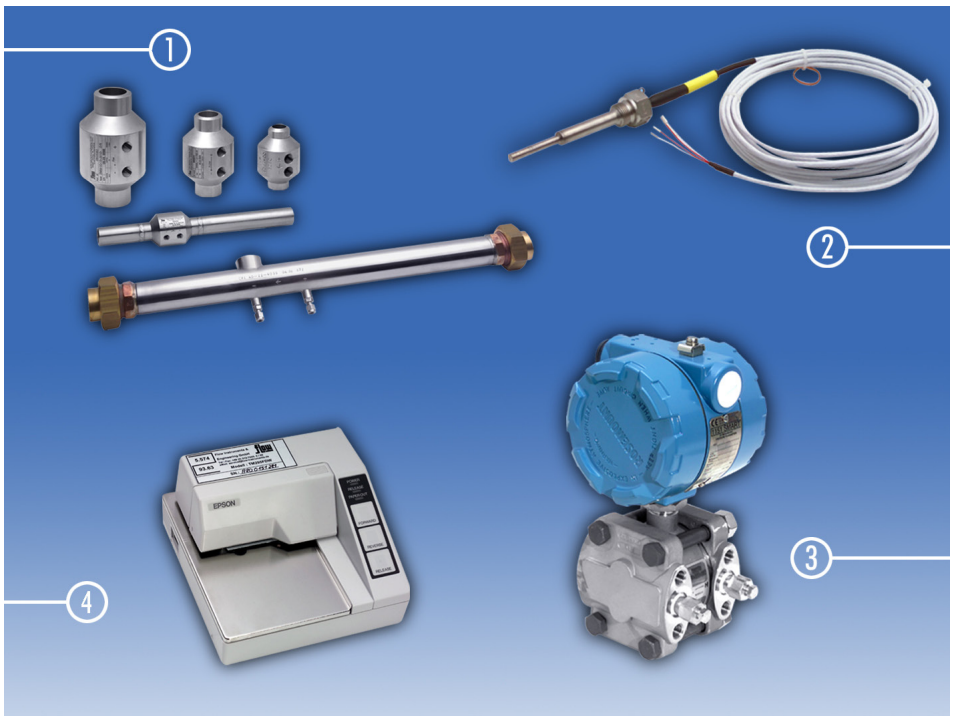
FLOWCOM 2000

Option: Large stainless steel housing for LNG and LPG applications.

Ticket printer in IP65 stainless steel housing.

More than 6500 systems of the Flowcom series are in use throughout the world, their components having proven their reliability over many years while offering inexpensive upgrade options.

The flow measuring section **(see Fig. 1)** forms the core of the system. This works according to the principle of differential pressure measurement, i.e. the flow rate is calculated via the pressure drop at an orifice restrictor in the line. The measuring section does not have any moving parts and is therefore maintenance free. It can be installed in the pipe system by welding it in, using flanges or with brass screw connections.
In order to achieve the high accuracy and calibration capacity of the Flowcom 2000 systems, the density of the medium must also be included in the flow measurement. To calculate the density, a temperature sensor **(see Fig. 2)** is installed just before the measuring section. The temperature sensor used, type PT100, is a platinum element working according to the four-conductor principle.
To measure the differential pressure, the proven ROSEMOUNT 1151



DP5 SMART **(see Fig. 3)** is connected to the measuring section. The transmitter generates a 4...20 mA output signal which the electronics use to calculate the instantaneous flow rate. A special version is provided for oxygen applications.
To provide a delivery note, you can use the world's smallest record-printer **(see Fig. 4)**. It prints 42 characters per line on paper formates varying from 80x80 mm up to 182x257 mm. The TM-295 produces duplicates along with the original and its graphics capability is unmatched in this class. The printer can work with various fonts in 3 sizes. For rough everyday-handling the printer is optionally available with a IP65 stainless steel enclosure.

PumpSmart™

- Pump operation lock-out if not properly cool down
- Pump operation shut-down if tank runs dry
- Hour counter with service warning (temporarily locks out pump if ignored)

Use PumpSmart™ to protect your cryogenic pump! (Available at no extra cost)

Features

- Calibration-capable measuring system for tankers or stationary systems
- 4 short-circuit-proof outputs and 1 input
- Measuring products (liquid): LIN, LOX, LAR, CO_2, N_2O, LNG, LPG, hydrogen, ethylene, air (further products on request).
- Temperature compensation
- Intuitive operation
- Quantity preselection
- Printout of a daily report
- In conjunction with hand terminal data transmission via GSM network
- Lifetime warranty on metering section, because of no moving parts
- Large, illuminated display (240 x 64 pixels)
- Aluminum die-cast housing IP65
- Service interface (RS232, MIL connector)
- Software updates can be read in via the service interface
- Printer interface (RS232)
- Large input voltage range (9 ... 36 VDC)

Options

- Ticket printer
- Remote deactivation of the measurement
- Vapour Return Set for two hose deliveries (used in CO_2 and N_2O applications)

Approvals

- European type approval based on MID
- National type approvals in: China, Australia, ...

Technical data

Dimensions of flow processor, HxWxD:	200 x 230 x 175 mm
Supply voltage:	9 ... 36 V DC
Power consumption (without options):	max. 30 VA
Operating temperature:	-20 ... 55°C
Storage temperature:	-30 ... 65°C
Weight:	5.1 kg

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