LNG-Dispenser Type
Dynaflo 3000-DIS
Fast and Accurate LNG Fueling

FLOW’s Dynaflow 3000 LNG Dispenser is specifically designed and proven for fast, accurate and reliable fueling of trucks and city buses.

The System includes a mass flow meter, which has an European type approval based on MID (Measuring Instrument Directive).

Dynaflow 3000 provides operators with accurate, real-time dynamic density measurement, which assures a very precise mass flow calculation. Every dispenser is equipped with a quick-connect LNG nozzle and compressed air cleaning connection.

Metering components are electronically and mechanically pre-tested and factory calibrated. On site performance tests validate that the process performances of the refueling stations are met.

Dynaflow 3000 complies fully with ATEX safety requirements.

Each device can be tailored technologically according to customer requirements and branded accordingly.

Integrated connectors to our Mastermeter (Prover) device ensure simple, fast and accurate calibration.

**Fields of application:** LNG-Dispenser, Truck-Filling, Ship-Filling, IMC-Station, Transport

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**Key facts**

- Average fueling time: only 3 min/450 l
- Measurement accuracy better than 0.25 %
- Can be supplied as part of a mobile or stationary LNG fueling station
- MID approved
- Digital display showing price, amount of gas in kg and price per kg
### Features

**Real-time dynamic density measurement**
- Automatically corrects for LNG-composition change
- No manual setting needed, eliminates chance for fraud
- Consistant accuracy over a wide range of conditions
- As accurate as the Coriolis meters on the market

**No moving parts**
- No need to replace metering section during the whole lifetime of the equipment
- Reduce lifetime cost
- Long term stability

**Permanently submerged metering section**
- No pre cooling needed
- Allows immediate delivery and measurement
- Dramatically reduces recirculation time
  - Shorter start-up time
  - Starts in less than a minute
- Shorter overall delivery time
- Allowed minimum measured quantity is reduced

**No diversion of metered flow**
- No bypass after the flow meter
- No problems with W&M (Weights and measures)
- No inaccuracy caused by a leaking valve etc.
- 100 % compliant to all codes (OIML, MID, NTEP, …)

**Soft start and stop of metering**
- Improves the system accuracy dramatically
- Accurate metering from the beginning till the end
- Lower allowed minimum delivery quantity
- Minimizes inconvenient restarts caused by unstable conditions at the start of delivery
- Eliminates "ghost flows" at the end of the delivery, caused by pressure spikes
### Specifications LNG Dispenser type Dynaflow 3000-DIS

LNG Dispenser based on Flowcom 3000 flow processor with dynamic density measuring type Dynaflow 3000 and flow meter element based on differential pressure flow measuring.

#### Measuring system

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>dp-metering system</td>
<td>Flowcom 3000</td>
</tr>
<tr>
<td>Metering section</td>
<td>SWM 33.7 x 2.6 -12-1773</td>
</tr>
<tr>
<td>Flow range</td>
<td>16 - 80 kg/min (standard LNG)</td>
</tr>
<tr>
<td>Density range</td>
<td>300 - 900 kg/m³</td>
</tr>
<tr>
<td>Calculator system</td>
<td>Betacontrol ADP 1/2T</td>
</tr>
<tr>
<td>Communication to POS</td>
<td>Betacontrol Protocol converter EasyCall and DART – Option: IFSF</td>
</tr>
</tbody>
</table>

#### Operating conditions

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>-20 / + 50 °C (-40 / + 50 °C only as option)</td>
</tr>
<tr>
<td>Humidity</td>
<td>5 % - 95 % (non condensing)</td>
</tr>
<tr>
<td>Vessels and Installation code</td>
<td>PED</td>
</tr>
<tr>
<td>Ex-Proof according to</td>
<td>ATEX 2014/34/EU</td>
</tr>
<tr>
<td></td>
<td>Ex-zone in dispenser “pneumatic/piping” enclosure Ex-zone 2 electronic box Ex-p.</td>
</tr>
<tr>
<td>CDA hose/nozzle</td>
<td>for purging/cleaning of the gas and liquid nozzles</td>
</tr>
<tr>
<td>Safety gas return hose</td>
<td>½” stainless steel hose, 3,65 m length with gas nozzle</td>
</tr>
<tr>
<td>Dispense hose</td>
<td>1” stainless steel hose, 3,65 m length with liquid nozzle</td>
</tr>
</tbody>
</table>

#### General information

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enclosure Material</td>
<td>Stainless steel, white powder coated</td>
</tr>
<tr>
<td>Water / Dust protection</td>
<td>Electronic section: IP54 / Flow meter section: IP44</td>
</tr>
<tr>
<td>Dispenser dimensions</td>
<td>Footprint: 1,235 x 500 mm / height: 2,500 mm / basis height: 60 mm</td>
</tr>
<tr>
<td>Power supply</td>
<td>230 V AC</td>
</tr>
</tbody>
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#### Contact

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