

Loading metering skids LMS 080/100/150

Certified and standardized
solution for custody transfer
applications

Your benefits at a glance

- LMS unit with MID approval guarantees custody transfer standard
- Easy installation and commissioning due to complete engineered and assembled skid
- Fully compatible and upgradeable with the Endress+Hauser Terminal Management Solution
- Lowest billing losses because of highest Coriolis accuracy
- Lowest maintenance cost based on wear free measurement
- Lowest recalibration cost as a result of long-term stability of Coriolis meters
- Lower pressure loss than PD (positive displacement) meters



It can't be easier

When considering truck or railcar loading custody transfer certified metering skids are often the best option. Endress+Hauser have the experience of hundreds of truck loading applications around the world based on our world-renowned Promass mass flow meter.

In comparison to mechanical PD meters our Promass offers a direct mass output. Furthermore due to simultaneous density and temperature output we are able to give a volume

output at the same time. What means the solution is open for the future as the trend clearly will go from volume to mass billing for light hydrocarbons (e.g. as already in place for LPG).

Due to much lower pressure loss the Promass could operate with higher flow rates which results in faster loading times or lower pump energy consumption with same flow rate.

Endress+Hauser has designed standardized Loading Metering

Skids (LMS) for truck and railcar loading applications including batch controller, start/stop valves and grounding system. You have the choice for horizontal or vertical installation (incl. loading arm) and the use of optional air eliminator. The solution will come automatically with the European MID approval (no on-site verification required). The open and standardized interfaces allow smooth integration to the Endress+Hauser or other vendors Terminal Management System.

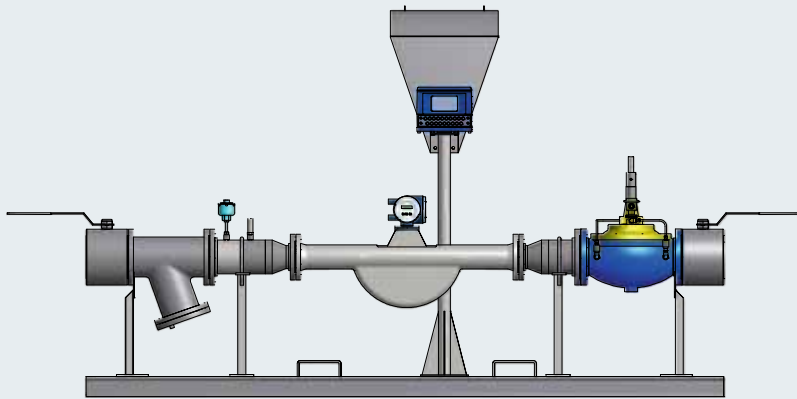


Horizontal loading metering skid

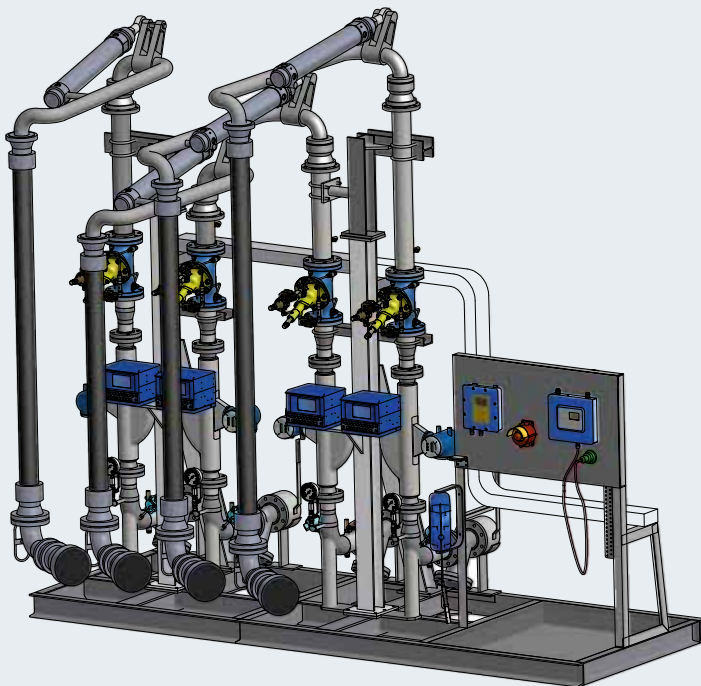
Loading Metering Skid (LMS) specification

Model	Application	Line Size	Custody transfer flow rate according to PTB approval	Max. Flow @ DP 0.5 bar	Max. Flow @ DP 1.0 bar	Fast loading version
LMS080	Truck loading	3"	50...1000 kg/min	540 kg/min	730 kg/min	1500 kg/min
LMS100	Railcar loading	4"	150...3000 kg/min	1500 kg/min	2000 kg/min	2500 kg/min
LMS150	Ship loading	6"	250...12000 kg/min	4600 kg/min	6200 kg/min	not applicable

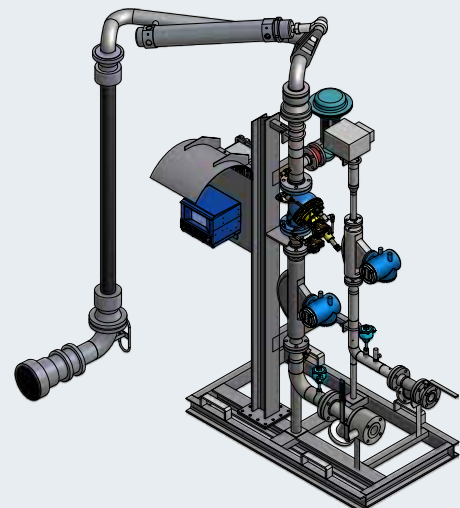
Examples of different options



Horizontal skid



Vertical skid with 4 loading arms



Vertical skid with blending line

General specification

Liquids	For all light hydrocarbons, e.g. gasoline, diesel, jet fuel, marine gasoil etc. For liquids having viscosity lower than 65 cSt.
Versions	Horizontal or vertical (incl. loading arm)
Pressure rating	ANSI Cl. 150, others on request
Material	Carbon steel, others on request
Ex concept	ATEX Ex d, armored cabled
Custody Transfer	MID Directive 2004/22/EC, Class 0.5
Equipment	Promass mass flow meter, batch controller, grounding system, temperature sensor, digital start-stop valve, Y-strainer, isolation valves, frame and piping, Ex d junction box
Optional	Air eliminator, prover connections, pressure sensor, grounding system, a 2" blending line (horizontal or vertical installed) can be connected to each loading metering skid above and will be controlled by the batch controller, max 3 different recipes



Interested in more information? Please contact your local Endress+Hauser partner:

www.endress.com/locations.

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