



Smith Meter® Loading Systems

**We put you first.
And keep you ahead.**



LOADING SYSTEMS FOR THE MARKETING OF REFINED PETROLEUM PRODUCTS

FMC Technologies loading system modules are based on the experience and quality of the Smith Meter brand.

The Smith Meter system modules have been designed to fulfill internal and logistical requirements as well as the regulations for the International and the European market:

- » Pressure Equipment Directive 97/23/EC (PED)
- » Directive 94/9/EC for Equipment and Protective Systems (ATEX) intended for use in potentially explosive atmospheres
- » National Weights & Measures directives such as the European Measurement Instrumentation Directive 2004/22/EC (MID)

BENEFITS

- » Skid mounted modular design with minimal footprint
- » Support of up to 6 loading arms per module array
- » Typical operating ranges from 250 L/min to 2,500 L/min
- » Designed for bottom, top and swing arm loading applications
- » Advanced support for additional blending streams
- » Cost savings through factory assembly and easy to install standardized modular design
- » Options for individual configurations
- » Full factory flow and functionality testing providing fault-free start up
- » Comes with all approvals and certificates
- » ISO certified production

One-Stop Solutions from FMC Technologies

Smith Meter is the only supplier worldwide who can provide all the required state-of-the-art technology components from its own product line. The basic system module includes the entire measuring section from the supply line inlet connection to the air purger systems required by Weights & Measures regulations and ends at the control valve exit or, optionally, at the top or bottom loading arm.

ALL LOADING SYSTEMS COMPRISED OF:

A perfect design on the basis of Smith Meter components as well as production processes that are entirely controlled, from the first concept to the on-schedule turnkey delivery to the customer.

- » Complete functional tests on typical operating conditions conducted at our in-house liquid testing facilities where the results can be validated by German Weights & Measures authorities.
- » Consultancy and outstanding customer service through FMC Technologies global network.

The technological spectrum coupled with reliable services makes FMC Technologies the preferred business partner for customers and end-users around the world.



CORE COMPONENTS FROM FMC TECHNOLOGIES

APS-25 Air Purger / Strainer

The air release is equipped with a controlled float valve and a strainer.

PRIME 4 Volume Flow meter

This measurement element is a high-precision positive displacement flowmeter which contains an integrated pulse output.

210 Digital Flow Control Valve

This hydraulic valve is equipped with solenoid valves and is digitally controlled by the load controller, precisely adjusting to every flow rate necessary.

PT100 Temperature Sensor

This precise temperature measurement interfaces with a cost-efficient directly connected 4-wire-resistance technology.

microLoad.net or AccuLoad III.net Preset Controller

These load and blending controllers control, store and document the entire loading procedure. They communicate via various interfaces, e.g. an Ethernet interface. By means of this interface, it is possible to connect to virtually any PC. License-free PC software is also provided.

Card Reader

The hazardous area approved card readers and approved cards are non-contact, proximity devices and permit a secure identification of users, vehicles or customers.

Standard Stainless Steel Standard Frame

Stainless Steel frames are entirely maintenance-free providing long service life. Design construction allows trouble-free transportation with forklifts.

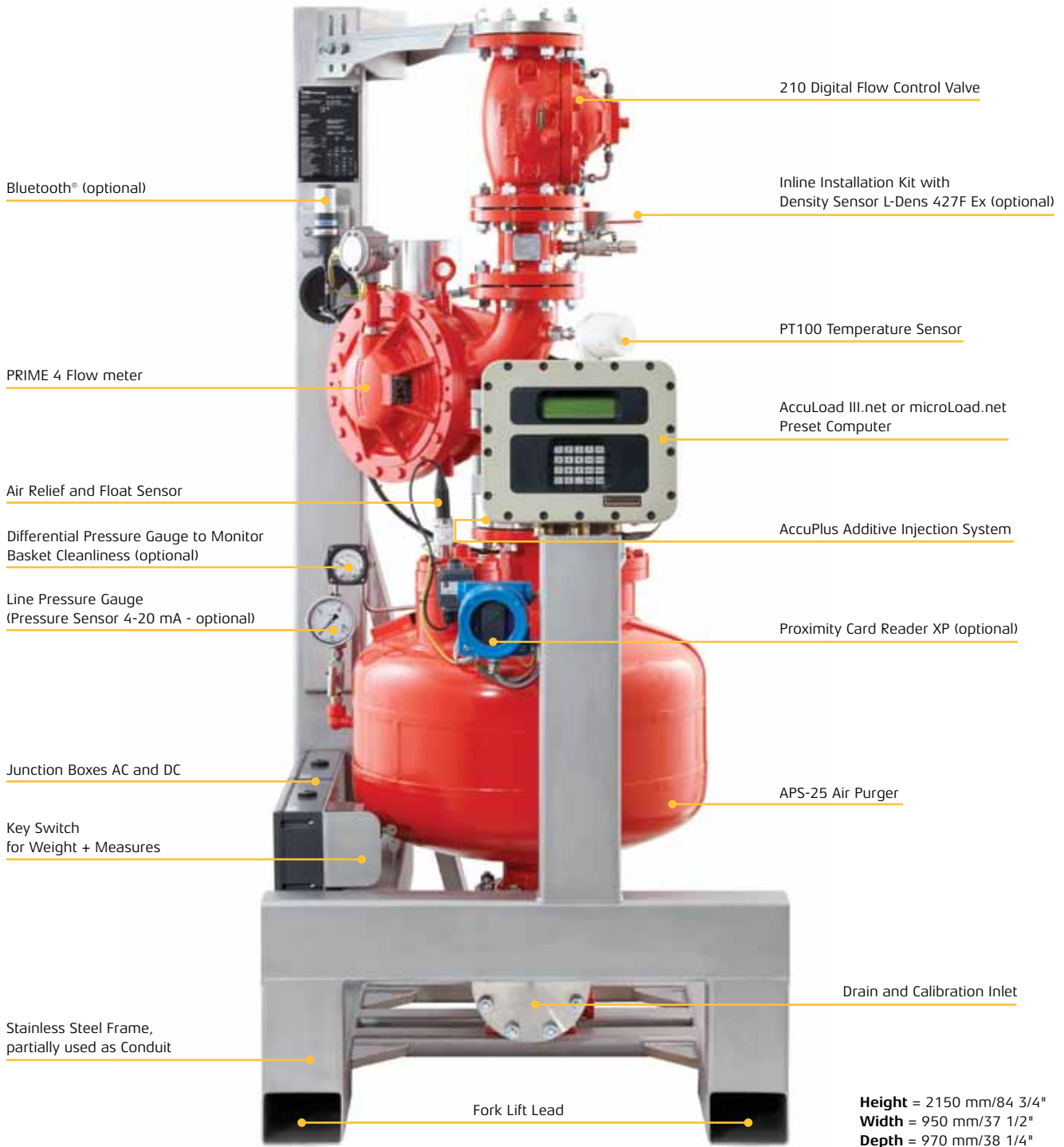
L-Dens 427F Ex Density Sensor

The L-Dens 427F Ex Density Sensor combines high accuracy in a compact design. Continuous measurement of density, concentration and API gravity optimizes production processes and ensures a consistently high quality product.

AccuPlus Additive Injection System Density Sensor

AccuPlus provides inherent accuracy and precision associated with refined product marking and petroleum enhancements. With its flexible options and modular construction, initial installation costs and the overall footprint are reduced.

The Components of a Loading/Unloading Skid



To provide cost savings, the systems are pre-assembled, functionality tested and ready for installation. After consultation it is possible to enhance our optimal configured base system modules with individual options without any problems. Additional systems, such as AccuPlus additive and marker injection system, prover take-off ports or special blending operation are available upon request.

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Example of a combination of 4 modules for one loading bay (see P&ID schematic below).

LOADING SKID – P&ID SCHEMATIC EXAMPLE

