



Slipstream Density Measurement System

Add-On, Direct Density Measurement System

General Information

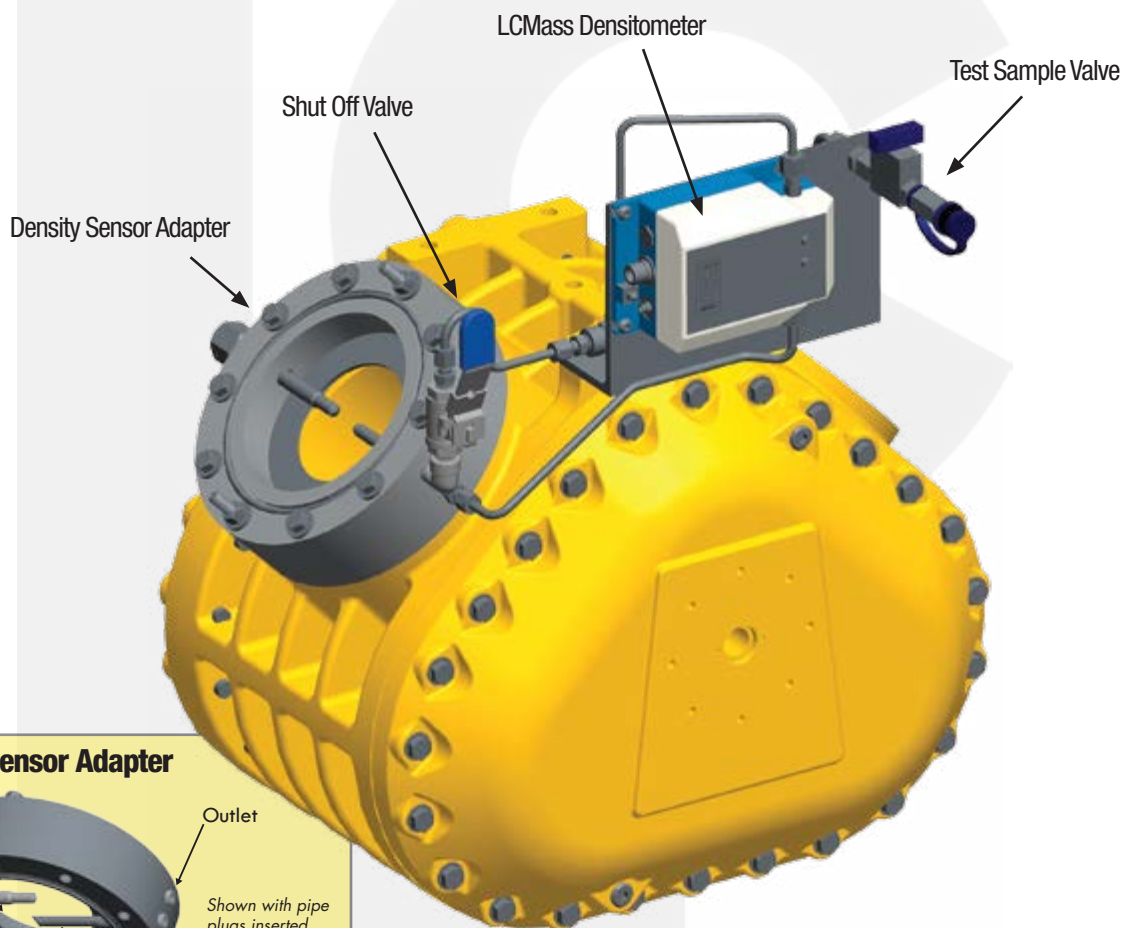
The Slipstream Density Measurement System (SDMS) is an add-on density measurement system for the Liquid Controls M-80 flowmeter. The SDMS reroutes fuel from the outlet side of the M-80 through the Densitometer, the SDMS's measuring device, and back into the outlet side of the M-80. The Densitometer measures the density of the fuel throughout the duration of a fueling. The densitometer sends the density measurements to the LectroCount® LCR 600 electronic register. The LCR 600 displays the current density during the fueling. The average density and the total weight of fueling are printed on the fueling ticket.

M-80 flowmeters with the SDMS typically include a POD pulser, a LectroCount LCR 600 electronic register, and an ETVC (electronic temperature volume compensation).

A density sensor adapter kit is available separately. The adapter kit allows SDMS installation at a later date without removing any piping from the system.

There are four major components in the Slipstream Density Measurement System: the Densitometer, the Density Sensor Adapter, the Fuel Sample Valve, and the Shut Off Valve.

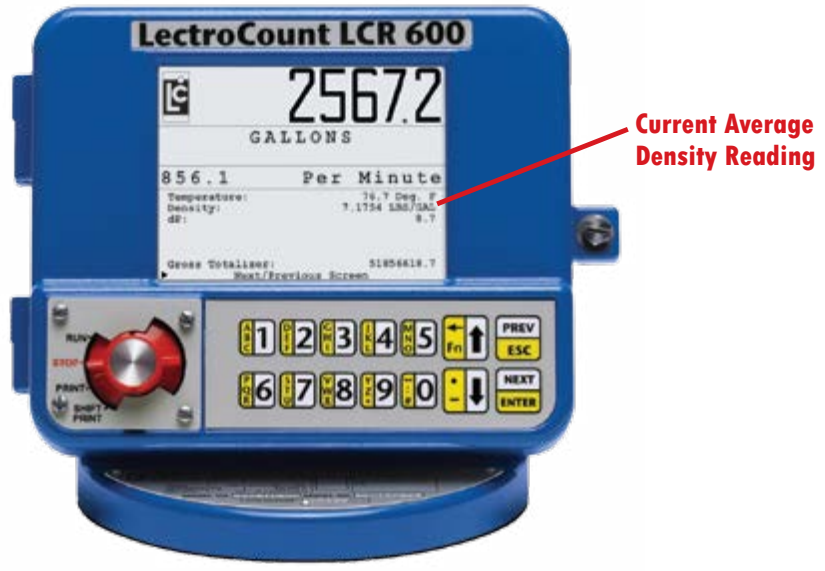
Components





Slipstream Density Measurement System

Average Density Monitoring



Sample Ticket

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LC O'HARE FUEL
105 ALBRECHT DR.
LAKE BLUFF, IL 60044
TEL: 847-295-1050

AIRCRAFT SERVICE RECORD

TICKET NUMBER          0827361380

United Emirates
FLIGHT NUMBER          3164
AIRCRAFT TYPE          B737
TAIL NUMBER            9M-MBD

ORIGIN                  JFK
DESTINATION             LAX

TRANSACTION             Fuel
FUEL TYPE               Jet A-1
TRUCK NUMBER            TA1
FUELING LOCATION        Gate 2
FUELER                  Frank Montalvo
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METER NUMBER           A Aviation 81
SALE NUMBER             259
TIME START              12/07/15 12:25:51
TIME END                12/07/15 12:33:46
START COUNT             0. Gallons
END GROSS COUNT         2200 Gallons
GROSS DELIVERY          2200 Gallons
START TOTALIZER         90300 Gallons
END TOTALIZER           92500 Gallons
DP 6.8 PSI @           300 GPM
CORRECTED DP            9.8 PSI
-----
TOTAL FUELING           2200 Gallons

AVERAGE FLOWRATE       275 GPM
AVERAGE TEMPERATURE    72.8 F
AVERAGE DENSITY        6.7500 LB/G
TOTAL WEIGHT             14850 LBS
    
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Average Density

Fuel Weight

Densitometer Specs

- Accuracy**
 Digital Density: 0.0001 g/cc
 Analog Density: +/- 0.1% of full scale
 Temperature: 0.6 °F (0.3 °C)
 Repeatability: 0.00003 max g/cc
- Max Pressure**
 300 psig (21.7 bar) standard
- Operating Temperature**
 -4 to 140 F (-20 to 60 C)
- Sample Rate**
 100 mS
- Power Supply**
 5 VDC, 500 mW USB or 8-30 VDC
- Consumption**
 400 mW
- Outputs**
 (2) 4-20mA analog, optional
- Communication**
 USB, standard RS-232, optional RS-485, optional
- Approvals**
 EX IIC, AEx, CUL, UL (Class 1 Div 1, Group ABCD)

