

Product Bulletin

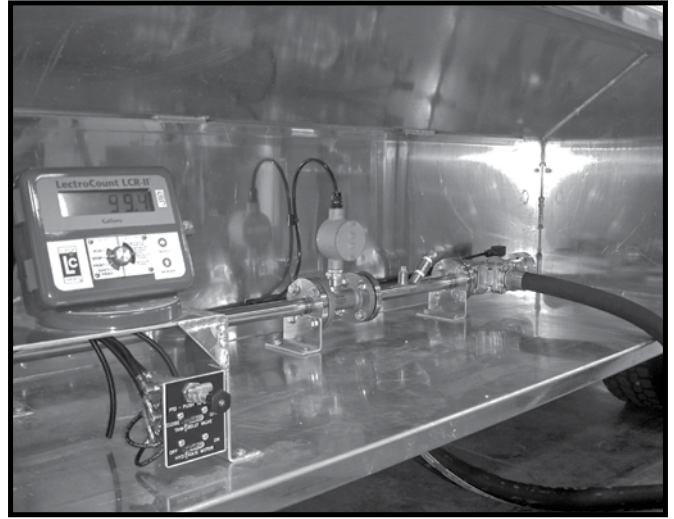
Sponsler Turbine Meters - Diesel Exhaust Fluid NTEP Approval



In order to meet the market demand emerging from the creation of a nationwide Diesel Exhaust Fluid (DEF) distribution and dispensing network, Liquid Controls has obtained NTEP approval (CC 04-97) for Sponsler turbine meters to meter the custody transfer of DEF. Six sizes of turbine meter sizes were tested and approved. As a result, Liquid Controls can provide meters for low and high flow rates DEF metering on truck-mounted systems or at stationary dispensers.

DEF Usage Will Continue to Grow

In 2010, in an effort to reduce harmful pollutants caused by the engine exhaust of heavy-duty highway vehicles, the EPA On-Highway Emission Regulations went into effect. To comply to these standards, most major diesel engine manufacturers have developed Selective Catalytic Reduction (SCR) exhaust systems that significantly reduce nitrogen oxide (NOx) emissions. An integral phase of the SCR system includes an injection of (DEF) into the exhaust. Vehicles with a SCR system will require a constant supply of DEF to operate.



Sponsler turbine meter, LCR-II electronic register, SP 714 transmitter

Experts estimate DEF usage will equal 2% of the vehicle's fuel consumption. Nearly all heavy-duty highway vehicles assembled after 2009 will include a SCR system. As older model vehicles are phased out, the percentage of DEF vehicles on the road will continue to grow. Soon, DEF will be dispensed at filling stations across the country. To supply these DEF dispensing stations, a nationwide distribution network is developing at a surprising pace.

DEF and the Sponsler Turbine Meter

DEF is a slightly yellow liquid comprised of 32.5% high purity urea and 67.5% deionized water. Urea, a nitrogen compound, breaks down into ammonia (NH_3) when exposed to heat. Inside the SCR system, the ammonia converts the nitrogen oxide of the exhaust into harmless nitrogen and water particles.

Because of DEF's low viscosity and high corrosive potential, Sponsler's bladed-rotor design with a DSL (duplex stainless steel) rotor, a flourosint sleeve bearing, and a 300 series stainless steel body is an ideal DEF metering solution. Sponsler turbine meters are available with a variety of end fittings and accessories, including air eliminators, strainers, valves, transmitters, and electronic registration devices. See the following page for specifics and ordering information. For additional information, please contact a Liquid Controls representative.

DEF TURBINE METER DATA



DEF Approved Meter Sizes

Nominal* Flow Rates (gpm)	Meter Size
2 - 10	1/2"
3 - 15	5/8"
4 - 25	3/4"
6 - 60	1"
8 - 75	1 1/4"
10 - 150	1 1/2"
20 - 250	2"

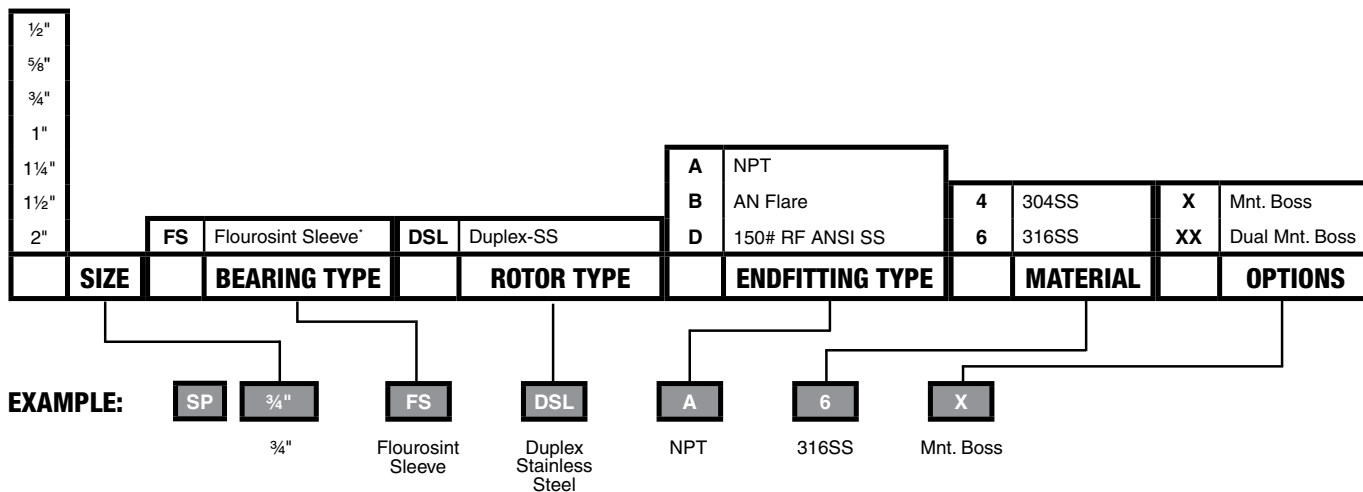
*Extended flow rates available at an additional charge

DEF Meter System Options

- Stainless Steel Air Eliminators
- Stainless Steel Strainers
- Flow Straighteners
- Stainless Steel Valves w/ pneumatic actuators
- SP714 Transmitter
- LectroCount LCR-II
- IT400

Fittings & Flanges
• NPT
• AN Flare
• 150# RF ANSI SS

DEF Meter Model Selection Guide



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