

Franklin Fueling Systems

TS-LS500, TS-LS500E, FMP-LS500, FMP-LS500-U Series with ST and LT SLLD (for Rigid and/or Flexible Pipelines)

CONTINUOUS PRESSURIZED PIPING LEAK DETECTION METHOD

Certification	Leak rate of 0.2 gph at operating pressure with PD = 99.9% and PFA = <0.1%. *Since leak rate varies as a function of pressure, this leak rate and pressure were certified using an equivalent leak rate and pressure, in accordance with an acceptable protocol.
Leak Threshold	0.08 gph for leak rate of 0.2 gph. Although the system reports a quantitative leak rate internally, it only reports a pass or fail to the tank system operator.
Applicability	Gasoline, diesel, aviation fuel, biodiesel B6-B20 meeting ASTM D7467, biodiesel B100 meeting ASTM D6751.
Specification	System tests pressurized rigid, flexible, or combination rigid and flexible pipelines. Tests are conducted at operating pressure by statistically adding increments of stable testing until a test has enough data to be completed.
Pipeline Capacity	Maximum of 312.2 gallons for steel and fiberglass pipelines (examples: 480 feet of 4 inch line; 671 feet of 3 3/8 inch line). Maximum of 95.4 gallons for flexible pipelines (examples: 260 feet of 3 inch line; 1040 feet of 1 1/2 inch line). Maximum of 415.8 gallons for combination rigid and flexible pipelines (the capacity of the flexible component cannot exceed 95.4 gallons). Maximum of 176 gallons for Franklin Fueling Systems UPP semi-rigid pipeline. (example: 513 feet of 3 inch line; 1892 feet of 1 1/2 inch line).
Throughput	Monthly maximum of 391,250 gallons.
Waiting Time	Less than 3 hours to begin data collection.
Test Period	Test data records may cover 10 days for ST (short term) CPPLDS to 30 days for LT (long term) CPPLDS dependent on dispensing, with an average of 16.22 days. The ST array continuously contains 10 days of data, and the LT array continuously contains 30 days of data that are rolled over as additional data is acquired. Precedence is given to the ALLD test, if present. If not present, it defaults to SLLD and prints the ST result. It will only print the LT report if there is no ST test available for the month. Test data are acquired and recorded by a microprocessor.

**System
Features**

Permanent installation of leak detector on pipeline and software upgrade to the monitor.

The SLLD (Statistical Line Leak Detection) is an added capability for the TS-LS500, TS-LS500E, FMP-LS500 and FMP-LS500-U Automatic Line Leak Detector (ALLD). The ALLD still performs the 3.0 gph tests, and with enough quiet time, the 0.2 gph and 0.1 gph tests; the SLLD is only used for 0.2 gph leak detection if the ALLD did not have enough quiet time to perform that test.

Pump shutdown, indicator light and alarm activation if leak is declared for 3.0 gph and 0.2 gph tests.

The TS-LS500E series is an explosion proof version of the original TS-LS500 series.

Calibration

System must be checked annually and, if necessary, calibrated in accordance with manufacturer's instructions.

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04/21/25.