

## STP-MLD: MECHANICAL LINE LEAK DETECTOR

Mechanical Line Leak Detectors (MLDs) are not new to the industry; however, FE Petro's approach to them is quite different. With the introduction of three different versions of our MLD, you will see a more streamlined design and individual qualities identifiable by the following characteristics:

- **STP-MLD or STP-MLD-HC gas version (blue)** – The STP-MLD is suitable for use with a wide variety of motor fuels including: gasoline, diesel fuels, kerosene, and gasoline-alcohol blends with concentrations of 0% - 100% ethanol or methanol, 20% MTBE with 80% gasoline, or 17% TAME with 83% gasoline. If the STP-MLD is used with diesel fuels or kerosene, it will be more sensitive to leaks and result in longer opening times. The STP-MLD is designed to be used in systems with rigid piping and most types of flexible piping.
- **STP-MLD-D or STP-MLD-HCD diesel version (beige)** – This MLD is only suitable for use with diesel fuels and kerosene. DO NOT use in any other motor fuels as it will NOT detect leak rates that comply with U.S. EPA requirements.
- **STP-MLD-E flexible pipe version (gray)** – The flexible pipe version of the STP-MLD is also suitable for use in wide range of motor fuels including gasoline, diesel fuels, kerosene, and gasoline-alcohol blends with concentrations of 0% - 100% ethanol or methanol, 20% MTBE with 80% gasoline, or 17% TAME with 83% gasoline. This unit is intended for use in systems with flexible piping of low bulk modules only. At this time most flexible piping does not require this unit, but Total Containment's Enviroflex pipe is one that may require this model.

**Note:** If you are unsure which MLD version to use in systems with flexible piping, check your local and state requirements for flexible piping systems. If no local or state requirements exist, a rigid pipe MLD may be installed, but be sure to check whether it will indeed comply with U.S. EPA requirements on leak detection rates. If a rigid pipe version MLD will not comply with your leak detection rate requirements, a flexible pipe version MLD must be used.

All versions, when used in their described categories as listed above, are engineered and built to operate as follows: they will automatically indicate faults which leak 3 gallons per hour (gph) or more at 10 psi line pressure. They will indicate such a leak by restricting system delivery to 3 gallons per minute (gpm) or less at pump pressure of up to 30 psi in compliance with U.S. EPA requirements. They will detect leaks in systems with operating pressures between 20-50 psi with less than 12 feet of static fluid head. They will test the delivery system from the point of installation up to the solenoid valve within approximately 3 seconds (a STP-MLD-E within 40 seconds) in a system with no leaks. A system leak smaller than 3 gph detection, vapor or air trapped in the system, thermal contraction taking place, or systems with pressure below 26 psi, will lengthen the time to test. They will test more often in a system that allows pressure to relieve below 20 psi before resetting because pressure decay will force it into the tripped position sooner. A MLD will not reset to the tripped position during pumping unless the system pressure falls below 1 psi.

Due to the additives in gasoline, STP-MLDs (all non-high capacity versions) must be installed using thread sealant that is UL classified for the product being pumped and torqued to a minimum of 138 lb.-ft. STP-MLD-HCs however, seal using O-rings inside of a "T"-shaped adapter housing. This seal design makes for simple installation and removal of MLD-HCs without the need to use large wrenches in the tight working environment of the containment sump. Please refer to the STP-MLD-HC *Installation and Owner's Manual* for further details.

Even though each MLD has gone through testing at the factory, all mechanical leak detectors must be tested upon startup, and routinely thereafter (at least once annually) under NFPA / EPA standards. These standards and other industry testing practices must be followed by the installer and end user. A precision line test must be conducted to assure line integrity before and after replacing a defective leak detector. For installation and testing procedures, please refer to the corresponding MLD *Installation and Owner's Manual*. Product Information, Installation Instructions, and Warranty Registration Forms for Model STP-MLD Leak Detectors are packaged with each unit and must be left with, and retained by, the end user for future reference. Additional copies of these documents can be obtained from FE Petro.

Please contact Technical Support if we may be of any assistance.