

**Specifications and Compatible Fluids Requirements**

The table below lists Veeder-Root Line Leak Detector specifications.



| SPECIFICATION   | TLS-4XX w/ RPLLD   | TLS-350 w/ PLLD  | TLS-350 w/ WPLLD   |
|---|--|--|--|
| <b>OPERATING TEMP:</b>  | -25 TO +130°F  | -25 TO +130°F  | -25 TO +130°F  |
| <b>COMPATIBLE FLUIDS:</b>   | UNLEADED GASOLINE<br>LEADED GASOLINE<br>5% METHANOL / 95% UNLEADED<br>0 - 100% ETHANOL<br>10% ETHANOL / 90% UNLEADED<br>15% MTBE / 85% UNLEADED<br>DIESEL<br>BIO-DIESEL (UP TO B100) <sup>1,2</sup><br>KEROSENE<br>JET FUEL<br>AVIATION GASOLINE | UNLEADED GASOLINE<br>LEADED GASOLINE<br>5% METHANOL / 95% UNLEADED<br>0 - 100% ETHANOL<br>10% ETHANOL / 90% UNLEADED<br>15% MTBE / 85% UNLEADED<br>DIESEL<br>BIO-DIESEL (UP TO B100) <sup>1,2</sup><br>KEROSENE<br>JET FUEL<br>AVIATION GASOLINE | UNLEADED GASOLINE<br>LEADED GASOLINE<br>5% METHANOL / 95% UNLEADED<br>10% ETHANOL / 90% UNLEADED<br>15% MTBE / 85% UNLEADED<br>DIESEL<br>BIO-DIESEL (UP TO B100) <sup>1,2</sup><br>KEROSENE<br>JET FUEL<br>AVIATION GASOLINE |
| <b>LINE FLOW RATE:</b>  | 120 GPM MAX. W/SWIFTCHECK VALVE  | 120 GPM MAX. W/SWIFTCHECK VALVE  | 120 GPM MAX. W/SWIFTCHECK VALVE  |
| <b>OPERATING RANGE:</b>   | 0 - 70 PSI   | 0 - 70 PSI   | 0 - 70 PSI   |
| <b>PROOF PRESSURE:</b>  | 200 PSI  | 200 PSI  | 200 PSI  |
| <b>MAX. VERTICAL PIPELINE HEIGHT ABOVE TRANSDUCER<sup>3</sup></b> | 11 FEET  | 11 FEET  | 11 FEET  |
| <b>MINIMUM PUMP OUTPUT PRESSURE<sup>4</sup></b>                   | 23 psi   | 23 psi   | 23 psi   |

<sup>1</sup>Biodiesel compliant with ASTM D7467 (up to B20) or ASTM D6751.

<sup>2</sup>Consult pump manufacturer for compatibility ratings on fuel blends greater than B20.

<sup>3</sup>Applications that exceed these max. vertical pipeline heights will require further consultation. Please contact Veeder-Root at 800-323-1799 (request a Veeder-Root/Red Jacket Application Engineer).

<sup>4</sup>Pump output pressure should be a minimum of 4 psi above the check valve's relief pressure.

Veeder-Root recommends that system software for the console be upgraded to the latest version when installing any new hardware. For TLS-350 Consoles, when installing latest software, PLLD or WPLLD must be specified and customer must upgrade to ECPU2 if not already installed. See Accessories/Upgrades section of price book or your local Veeder-Root authorized distributor for details.

**Check Valve Requirements**

DPLLD, PLLD and WPLLD require certain check valves or Pressurstat assemblies to be installed on the pump. Use of non-compatible check valves can result in loss of leak detection performance.

| Supported Pumps                            | Check/Relief Valve Type  | 3.0 GPH Only Testing (Req'd. Kit)            | 3.0, 0.2, 0.1 GPH Testing (Req'd. Kit)       | Additional Req'd. Parts for Manifolded Lines (Single Tank w/ 2 STPs, or 2 or More Tanks w/ STP in Each)   |
|--|--|--|--|---|
| <b>DPLLD/PLLD Applications</b>             |  |  |  |   |
| The Red Jacket                             | None Required  | 848480-001 (TLS-350)<br>859080-001 (TLS-400) | 848480-001 (TLS-350)<br>859080-001 (TLS-400) | Check Valve for Each Slave Pump P/N 410153-002 (See Illustration in Note 1 below)   |
| Quantum (All Models)<br>(See Note 2 below) | Red Jacket SpikeCheck Valve (Factory Installed)  | 848480-001 (TLS-350)<br>859080-001 (TLS-400) | 848480-001 (TLS-350)<br>859080-001 (TLS-400) | Red Jacket Quantum SpikeCheck Valve, Non-PSI Relief Valve, Required for Each Slave Pump, P/N 388-001-5 (Field Installed Only)                       |
|  | Red Jacket SpikeCheck Valve (Field Only Installed) P/N 388-080-5                               | 848480-001 (TLS-350)<br>859080-001 (TLS-400) | 848480-001 (TLS-350)<br>859080-001 (TLS-400) |   |
|  | Red Jacket Pressurstat Assembly  | 848480-001 (TLS-350)<br>859080-001 (TLS-400) | — Not supported —                            | Non-Vented SwiftCheck Valve for Each Slave Pump kit, P/N 330020-416   |
|  | SwiftCheck   | 848480-003 (TLS-350)<br>859080-002 (TLS-400) | 848480-003 (TLS-350)<br>859080-002 (TLS-400) |   |
| Standard (All Models)                      | SwiftCheck   | 848480-003 (TLS-350)<br>859080-002 (TLS-400) | 848480-003 (TLS-350)<br>859080-002 (TLS-400) | Non-Vented SwiftCheck Valve for Each Slave Pump kit, P/N 330020-416   |
|  | Red Jacket Functional Element Assembly   | 848480-001 (TLS-350)<br>859080-001 (TLS-400) | — Not supported —                            |   |
|  | Red Jacket SpikeCheck Valve (Field Installed Only) P/N 410557-001                              | 848480-001 (TLS-350)<br>859080-001 (TLS-400) | 848480-001 (TLS-350)<br>859080-001 (TLS-400) | Red Jacket Standard SpikeCheck Valve, Non-PSI Relief Valve, Required for Each Slave Pump, P/N 410557-002 (Field Installed Only)                     |
| Maxum                                      | None Required  | 848480-001 (TLS-350)<br>859080-001 (TLS-400) | 848480-001 (TLS-350)<br>859080-001 (TLS-400) | See Note 4 below.   |
| Big-Flo                                    | Pressurstat Kit P/N 144-314-5  |  | (See Note 3 below)                           |   |
| FE Petro                                   | FE Petro Model R P/N 400988932 and Replacement O-ring for the Valve Housing (See Note 4 below) | 848480-001 (TLS-350)<br>859080-001 (TLS-400) | 848480-001 (TLS-350)<br>859080-001 (TLS-400) | Non-Vented SwiftCheck Valve for Each Slave Pump kit, P/N 330020-416 — OR — FE Petro 65 psi Relief Check Valve (FE P/N 402459931) (See Note 5 below) |
|  | FE Petro Model R Relief Valve P/N 401330902  |  |  |   |
| Tokheim & Bennett                          | SwiftCheck   | 848480-003 (TLS-350)<br>859080-002 (TLS-400) | 848480-003 (TLS-350)<br>859080-002 (TLS-400) | Non-Vented SwiftCheck Valve for Each Slave Pump kit, P/N 330020-416   |
| <b>WPLLD Applications</b>                  |  |  |  |   |
| The Red Jacket                             | None Required  | 849490-006                                   | 849490-006                                   | High Pressure Check Valve for Each Slave Pump, P/N 410153-002 (See Illustration in Note 1 below)  |
| Quantum (All Models)<br>(See Note 2 below) | Red Jacket SpikeCheck Valve (Factory Installed)  | 849490-005 (Except CPT)                      | 849490-005 (Except CPT)                      | Non-Vented SwiftCheck Valve for Each Slave Pump kit, P/N 330020-416   |
|  | Red Jacket Pressurstat Assembly  | 849490-005 (Except CPT)                      | — Not supported —                            |   |
| Standard (All Models)                      | SwiftCheck   | 849490-002 (Except CPT)                      | 849490-002 (Except CPT)                      |   |
|  | Red Jacket Functional Element Assembly   | 849490-003 (Except CPT)                      | — Not supported —                            |   |
| FE Petro                                   | FE Petro Model R P/N 400988932 and Replacement O-ring for the Valve Housing (See Note 5 below) | 849490-001                                   | 849490-001                                   | Non-Vented SwiftCheck Valve for Each Slave Pump kit, P/N 330020-416 — OR — FE Petro 65 psi Relief Check Valve (FE P/N 402459931) (See Note 5 below) |

**NOTES:**

1. The Veeder-Root High Pressure Check Valve (P/N 410153-002) is shown below:



- For Red Jacket Quantum pumps, the SpikeCheck is the preferred check valve type.
- 0.2/0.1 gph testing is supported for the Maxum pump, but you must select 'User Defined' as the pipe type during DPLLD or PLLD setup.
- If maximum pump pressure is NOT a minimum of 5 psi below the pressurstat relief setting, then a check valve must be installed in the discharge line of the slave pump (see "Manifolded Line Applications" on page 12).
- Veeder-Root does not warrant the performance of FE Petro's Model 'R' check valve or 65 psi relief check valve.