

## OPTIONS FOR 900 SAFETY RELIEF VALVE TEST SYSTEMS

**SAFETY INTERLOCK** on hydraulic clamping circuit that will lock test pressure and not allow it to dump if the hydraulic system fails.

**SAFETY SHIELD** between clamp fixture and control console.

**API-527, SEAT LEAKAGE FIXTURE** for Safety Relief Valve outlet flange. Fixtures are aluminum and easily clamped and removed from the SRV outlet flange. Includes a Bubble Jar to ANSI B16.104. The size range is 2" – 150/300# to 12" – 150/300# ANSI pressure class.

### **DATA ACQUISITION AND ANALYSIS SYSTEM (DAAS)**

measures pressure and time with PC based hardware and software. The test data is read from transducers or other sensors and fed back to a CPU for processing by the system. The DAAS is configured to uniquely defined application requirements and will acquire, analyze and present the test data in real time. The test results can be stored by a unique test number assigned by the DAAS system or by the valve serial number. The results can be stored on a Flash Memory Stick, downloaded to the CPU, downloaded to a Laptop or sent to a Server. This DAAS software is LAB VIEW based and user friendly. LAB VIEW is a worldwide trade name and the software and hardware can be serviced by local LAB VIEW representation if necessary. Our screens are custom designed to reflect customer requirements.

### **LINEAR VALVE DISPLACEMENT TRANSDUCER (LVDT)**

To measure SRV stem lift and transmit the results to the DAAS system.

**MUFFLER/SILENCER** Model SV-3000, Silencer assembly for air/gas SRV testing. The system is self contained and is mounted on wheels. The assembly can also raise and lower to reach the outlet of the SRV being tested. There are seven (7) 20" long adapters (2", 3", 4", 5", 6", 8" & 10") to connect from the SRV outlet to the silencer.

**PILOT VALVE CIRCUIT** to actuate air operated pilot safety relief valves.

**VACUUM TEST CIRCUIT** to 28.5 Hg /0.7 psia / -14 psig. The vacuum circuit has a separate seal plate, digital gauge, vacuum pump and transducer.

### **3,000, 5,000 or 6,000 psi AIR COMPRESSOR**

5, 7.5 or 10 HP, 460 volt / 3 phase / 50 or 60 Hz



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# Calder Testers



**Model 900**  
Safety Relief Valve Testing System

# Model 900

## Safety Relief Valve Testing System

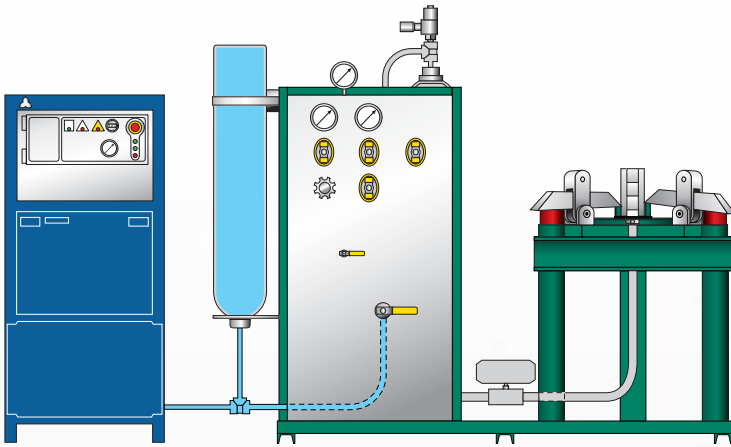
*The Model 900 is the premier Safety Relief Valve (SRV) test system in the world. The unique "J" tube design allows for a free flow of air or water from the source to the SRV being tested, so that back pressure or pressure drop is not noticeable during the setting of the SRV. Flow and ramp rates can easily be calculated using this design. This system was designed to comply with API-576 for flow characteristics and API-527 for seat leak detection.*



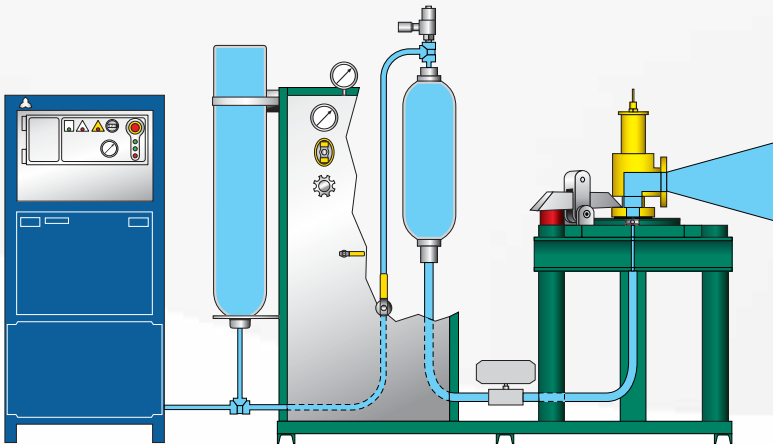
Calder Testers

## Model 900-6 Safety Relief Valve Test System

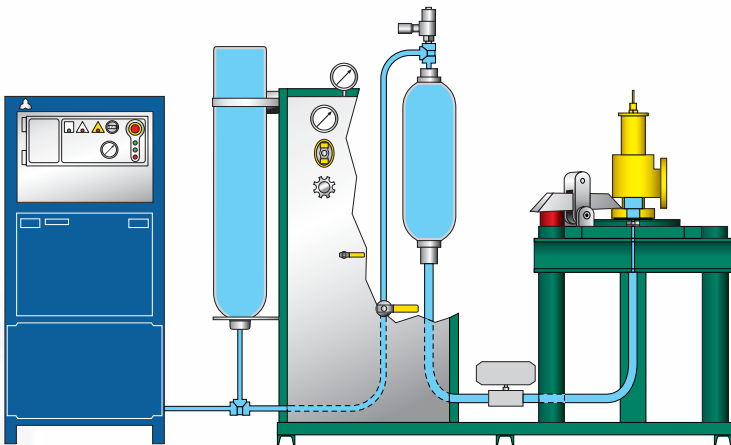
This system performs Safety Relief Valve set pressure tests per **API-RP-576 Paragraph 6.2**. This test system allows the operator to perform air and/or water test on the same clamping system.



Our 900 Safety Relief Valve Testing System is a multi-vessel design. The design utilizes the laws of physics to produce a simulated volume of test fluid.



Source pressure is reduced through a series of vessels and orifices over a given time period of time.



This patented design provides a cushion of air under the reseating disc to prevent seat damage during reclosure.

### Standard Features

- Air operated pump with 10,000 psi hydraulic clamp circuit.
- One (1) stainless steel, "O" ring seal plate for 2" through 12" flanged Safety Relief Valves.
- One (1) stainless steel, "O" ring seal plate for 1" and 1 1/2" flanged Safety Relief Valves.
- Six (6) carbon steel, nickel plated, Male NPT, adapters for 1/2", 3/4", 1", 1 1/2", 2" and 3".
- Three (3) arm, ninety (90) ton hydraulic clamping force.
- Clamp arms nickel plated.
- Skid frame to be carbon steel powder coated.
- One skid mounted clamp fixture and control console for fork lift movement.
- Standard air and water test system on one clamping fixture rated for 3,000 or 6,000 psi; other pressures available upon request.
- Aluminum or Stainless Steel panel face.
- One (1) five (5) gallon ASME Phenolic coated test vessel with an ASME Safety Relief Valve. (10 and 15 gallon vessels, Phenolic coated, Nickel plated or Stainless Steel).
- 3/4", 1 1/2" or 2", "J" tube, stainless steel line from the test vessel to the test table.
- 3/4", 1 1/2" or 2", stainless steel full port isolation ball valve with air actuator.
- 3/4", 1 1/2" or 2", stainless steel full port by pass valve from source to the test table.
- One (1) Precision Digital Test Gauge. The gauge stores minimum and maximum values when displayed. Has 0.05% full scale total error band and allows for the effects of linearity, hysteresis, repeatability and temperatures from 0 to 150 degrees F. Intrinsically safe, CSA, FM approved, Class 1, Div. 1, CE approved EN 50082-1. Meets ASME B40-7 safety requirements for digital test gauges.
- Gauge Calibration Port installed as an alternate pressure port.