



Safety Valve - Functional Check (PRESSURE RELIEF VALVE)

The UNIV-20-40-XX was designed to overcome the challenges routinely faced when performing the functional test on the safety/pressure relief valves.

If the task calls for applying vacuum to open the valves, in most cases a pitot static test set is used. Depending on field elevation and overall health of the test set, it could pull a valve open to about – 8.7 psi. However, if the test set has any internal leakage, the -8.7 psi is greatly reduced.

The solution is the UNIV-20-40-XX, a standalone digital vacuum pump that senses field elevation. This heavy-duty vacuum pump with simple controls, allow the task to be completed in a fraction of the time and with a higher degree of accuracy. One of the biggest benefits comes from using the UNIV in place of a pitot static test set as this will prevent your pitot static test from becoming contaminated by the safety valves. The safety valve is a large diaphragm, open to ambient air, constantly drawing in and expelling fine contaminants that ultimately end up being drawn into your pitot static test manifold and valves, causing a high internal leak rate. Using the UNIV-20-40-XX in place of a pitot static test will save costly repairs and down time on your test set.

A pitot static test set is limited to its rate of climb so as not to damage instruments during re-cert of the avionics. For example, a pitot static test set on average will take around 40 minutes to open and close a safety/pressure relief valve (if it can do it at all). Formulas will be required if the tech does not know how to change the default setting from feet to PSI. Go to ground is not zero PSI and field elevation must be taken into consideration as the zero PSI starting point. There are a lot of opportunities for error.

After start up, the UNIV-20-40-XX quickly finds field elevation and begins at zero as in the functional check task card. No Formulas. You can raise the PSI as quickly as you like to the opening PSI, slowing as you approach the valve opening. Closing the valve after the test is completed is as simple as opening the vent. Average test time is 8 to 10 minutes to open and close a safety/pressure relief valve as high as -11.2.

For more information on the UNIV-20-40-XX and the list of approved aircraft platforms, please give us a call Doug Jacobson at DFW Instruments, 214-217-7600 or email sales@dfwinstruments.com.