

Application

Pressure reducing valves are used to provide lower pressures without change to the main pressure output source. In high pressure systems certain hydraulic components, such as actuating cylinders or servo valves, may have to be operated by a considerably lower pressure than that being generated by the output pump, in which case a pressure reducer is the most practical component for maintaining a lower secondary circuit.

Since undesirable pressure build-ups in the lower circuit are possible, pressure reducers usually incorporate an integral pressure relief valve as a safety measure.

Design Characteristics:

Arkwin pressure reducers incorporate a unique design feature for the integral relief valve so that it functions independently of the pressure reducer internal components, thus being unaffected by a stuck spool or similar failure.

A carefully matched and lapped sleeve and plunger assembly ensures low internal leakage and smooth regulation. Quiet and stable operations are also attained by the use of an efficient hydraulic damping feature and pressure balanced type design.



Who Is Arkwin?

Arkwin Industries is the technical expert in all things hydraulic for aerospace and defense. We design, test, manufacture, and support precision hydraulic and fuel system components for civil and military fixed-wing aircraft, helicopters, spacecraft, turbine engines, and other special applications.

Our reputation for quality and reliability, as well as our location, allow us to attract some of the best engineering, technical, and manufacturing talent available.

Design Characteristics

Originally designed to meet all requirements of MIL-H-8775, Type II Systems with MIL-H-5606 fluid, it can be readily modified for even higher temperatures and different fluids by a simple change of the seal compounds.

In-line applications are very compact, weigh only half a pound each and allow all adjustments to be made externally. Pressure reducers can be incorporated in modules with other valves or as part of larger assemblies.

Performance Data

Arkwin's pressure reducers are fully qualified to MIL-V-7909 and various other special vibration and environmental requirements, as required by the most stringent applications.

All operate in temperatures as low as -65°F and as high as +275°F. Although point-set to meet customer's particular needs, each valve can be readily changed to suit various pressure-flow requirements by simple re-adjustment or change of spring. Units are available for a wide range of pressures, with as much reduction as from 3000 PSI to 50 PSI in one stage. Arkwin has produced reducers for system up to 4,000 psi.

Extremely high reliability has been achieved and proven by completely trouble free field service of many thousands of units. Usage spans from the F-84 to the CH-53K and many aircraft in between including C-130, CH-47, and more.