



Leslie Controls



## Specialty Products

### **P-Trim Multi-Stage Plug Throttling**

To prevent cavitation and subsequent damage in ultra high pressure letdown service, P-Trim valves employ three techniques:

- A unique plug/chamber design sharply reduces and controls, velocity and pressure drops at any point in the valve interior.
- Material selection is limited to proven alloys that have demonstrated high erosion resistance and good wear characteristics after years in service.
- The industry's highest standards of precision machining, finish quality and overall quality assurance are met or exceeded.

The multi-keyed plug and throttling orifice chamber in Mark P Trim valves uses two to seven stages to reduce the pressure gradually instead of handling an ultra-high pressure drop in a single stage. By accurately controlling the pressure drop in each stage to 700 psi or less, velocities are reduced and cavitation noise and vibration are prevented.

The slightest casting imperfections can lead to premature valve failure, so Leslie precision machines all internal throttling surfaces assuring actual trim conforms to theoretical design values.

P-Trim valves are available in 2" to 6" sizes for throttling drops to 5000 psi and body ratings to ANSI Class 3500.

### **Synflow Sweep Angle Valves for Synfuel Service**



The Leslie Synflow Valve has been especially designed for the most difficult applications in synthetic fuel, refining, petrochemical and oil & gas industries. This type of sweep angle design has been applied successfully in:

- Slurry letdown
- Visbreaker
- Hot separator letdown
- Well choke production
- H-Oil letdown

Slurry letdown service is the most critical of these applications, involving three-phase flow of solids, liquids and gases at extremely high temperatures and pressure drops that can destroy a conventional valve in a matter of hours.

The Synflow Valve has been used successfully in a number of synfuel pilot plant situations where its actual service life has exceeded that of other valves by several orders of magnitude.

Critical body passages of the Synflow are designed to keep wear to a minimum. Plugs and seats are a special tungsten-carbide alloy for corrosion and abrasion resistance. To facilitate maintenance and inspection, all internal parts (except the seat ring) are easily removable from the top of the valve. In the bonnet closure, all boltings and gaskets are designed to eliminate problems inherent in thermal transients.

### **Noise Reduction Devices for Systematic Noise Control**

An economical way to reduce control valve or reducing valve noise by 6 to 12 dBA is to install the Les-Sonic Silencing Orifice downstream from the valve between two flanges. A Leslie Noise Suppressor installed at the valve outlet, will reduce pipeline carried noise by 10 to 20 dBA. For maximum reduction of pipeline transmitted noise, the combined installation of a Les-Sonic Silencing Orifice and a Noise Suppressor will reduce the sound pressure level by 16 to 32 dBA.

