The Automatic Bi-Directional Station Bypass Control module is designed to keep gas flowing in the event there are major compressor problems in a bi-directional flowing pipeline. In instances where a single station bypass valve is used, the typical automatic station bypass control system must be manually reconfigured to change the pressure sensing lines from suction to discharge and vice-versa. This manual reconfiguration presents an opportunity for operational error.

The Automatic Bi-Directional Station Bypass Control is self-configuring to provide protection regardless of flow direction. Based on the Automatic Station Bypass Control module, the bi-directional system provides ultimate reliability of control action. To achieve this objective, the proven hi-pressure poppet valve is combined with a reliable, differential pilot valve to form a stand-alone control module. Opposing sets of pressure-activated check valves route the appropriate suction and discharge signal, depending on flow direction to the sensing inputs of the differential pilot valve.
When the differential drops below the adjustable setpoint, pilot gas is passed to the pilot of the poppet valve and control action is initiated.

Utilizing the pipeline gas itself, for both the pilot gas and power media, makes the Automatic Bi-Directional Station Bypass Control system independent of regulator and other power media failure. The simple design, which utilizes minimal components, ensures the bypass valve opens only when required. The rate-of-drop calibration kit provides an accurate calibration of the trip point as well as the simulation of various operational failure scenarios for testing control action.

**ADVANTAGES**

- Hi-pressure construction – no regulator, relief valve, or mechanical switching valve
- Differential pilot valve utilizes a stainless steel diaphragm for accuracy and repeatability
- Marine grade, hard anodized aluminum body for both poppet and differential pilot valves
- Easily adjustable differential trip set point (1.0 psi to 14.5 psi)
- No mechanical linkages, which are subject to environmental failure
- Limit valve ensures complete opening of bypass valve