

# Control Systems

## Process, High-Speed and Integral Reciprocating Compressors

For more than 40 years, Dresser-Rand has designed and manufactured advanced control systems for turbomachinery and provides plant, station and platform control systems. Now the company's total solutions approach provides equipment operators with the same high quality Dresser-Rand control systems products and services for reciprocating compressors and integral engines.

### Cost-effective Solutions

Dresser-Rand provides standard and custom control solutions for plant, station and platforms, unit control systems, complete instrumentation, integration with supervisory control and data acquisition (SCADA) systems, condition monitoring fire and gas monitoring, and extended scope requirements for all brands of equipment.

Further expanding its cost-effective solutions, Dresser-Rand has developed a control panel that covers a wide range of reciprocating compressors and integral engines. As an OEM, Dresser-Rand has extensive experience in reciprocating gas engine design, operation and instrumentation knowledge that can't be matched by smaller control panel suppliers. The reciprocating control panel is based on programmable logic controller (PLC) technology and innovative packaging techniques and offers the following features:

- Indoor, outdoor, and hazardous area installations
- Purged or non-purged enclosure
- NEMA 4/4X, 304 SS, international certifications
- Wall, stand, or skid mounting

### Functionality (Integrated in PLC)

Using PLC technology, this versatile reciprocating control panel solution makes possible a truly integrated control systems package with all the benefits of the latest technology. The PLC, coupled with a standard graphic interface, minimizes entry costs and provides clients with a lower total cost of ownership throughout the lifecycle of the control panel.

Features integrated into the PLC include:

- Local, remote, manual or automatic start/stop sequencing
- Block valve and lube oil/cooling water pump monitoring and control
- Manual or automatic compressor capacity load control
- Compressor lead/lag load sharing control
- Compressor recycle or bypass valve control
- Compressor pulsation and knock-out drum level monitoring and control
- Unit pressure, temperature, vibration, alarm/shutdown monitoring
- Instrument shutdown bypass
- Condition monitoring



For more information on **Control Systems for Process, High-Speed and Integral Reciprocating Units**, contact:

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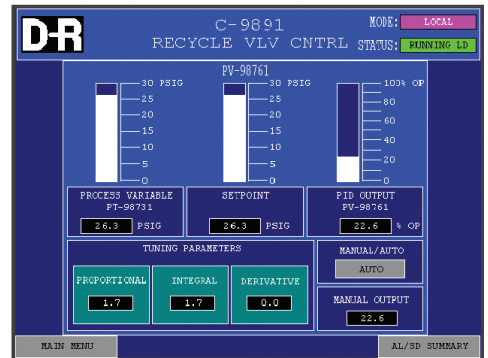
For integral engine applications, additional functions can be added to the same base control features listed above. This allows for process and high-speed reciprocating units and integral engines to have a standard, cost-effective control panel design. Applications for integral engines include:

- Engine fuel control
- Engine air/fuel ratio control
- Engine ignition timing control

**Standard PLC and HMI Platforms**

All standard Dresser-Rand control systems use GE Fanuc, Allen Bradley PLC and other off-the-shelf components, and comply with area classifications and NEMA ratings, as well as UL 508 certified manufacturing facility ratings. The standard reciprocating control panel is based on the GE Fanuc product line. Other typical offerings include VersaMax, the 90-30 series or Allen-Bradley MicroLogix 1500 or SLC500.

Other manufacturers of PLCs and dedicated control hardware also can be accommodated.



Typically, the manufacturer has a graphical interface or HMI that can be used in conjunction with the PLC hardware. Dresser-Rand can match the HMI hardware and PLC, or offer another alternative at the client's request.

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