

DATUM<sup>®</sup> P

# Centrifugal Compressor

Dresser-Rand experience in centrifugal products is unmatched, having built more than 10,000 centrifugal compressors since 1914. The DATUM P compressor draws on this vast experience. Over the last several years D-R has enhanced its technology in a variety of areas to strengthen its capabilities in the design and manufacture of its compressor product lines - including pipeline compressors.

# **Unmatched Experience**

For more than 60 years, Dresser-Rand has offered pipeline booster products for the gas transmission industry, continuously offering various technological advancements. To date, the company has designed, manufactured, and installed more than 750 pipeline compressors for the gas transmission industry, with the first installation occurring in 1947.

The DATUM P compressor draws upon the proven technology of the DATUM line of centrifugal compressors. Designed for maximum performance in specified pressure and flow applications, the DATUM compressor's unmatched efficiency, reliability, and ease of maintenance make it the most advanced turbocompressor available for the oil, gas, and process industries.

## **Modular Assembly Design**

The DATUM P compressor utilizes components – impellers, bearings, seals, stationary flow-path components, etc. – from the DATUM multistage compressor product line. As such, it benefits from the proven experience and design flexibility of the DATUM product line, including its many innovative features – such as the modular bundle assembly.

> The DATUM P compressor was developed based on user input and was designed for easy maintenance. The modular bundle assembly allows for rapid change-out of rotating elements – together with bearings, seals, and stationary components – in one cartridge-style assembly. (See photo above).

> > DRESSER RAND.

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### **Product Features**

D-R pipeline compressors are well known for their superior mechanical stability through a wide range of speeds, allowing higher aerodynamic performance and prolonged run times.

### Some key features of the DATUM P compressor include:

- Ability to go from one to five stages
- Pressure capability up to 3,000 psi (207 bars)
- Design and selection flexibility
- Reduced manufacturing cycle time
- Modular case bundle design
- Opposed horizontal nozzles
- Five axis milled impellers
- Fabricated steel diaphragms
- Standardized gas seal cavity
- Revamp capability for changing conditions
- Standardized bearing and seal designs
- Cast case design with integral flanged nozzles



D12P casing with integral cast 24 inch nozzles in horizontal configuration.

Custom-designed impellers for pipeline gas

The table below illustrates some basic characteristics of the DATUM P compressor family.

DATUM P Model	D8P	D10P	D12P	D14P	D16P
Flange size (max. in / mm)	20 /	20 /	24 /	30 /	36 /
	508	508	610	762	914
Case rating (max. psi / bars)	3,000 /	3,000 /	3,000 /	3,000 /	3,000 /
	207	207	207	207	207
Capacity (max. acfm / acmh)	13,000 /	18,000 /	24,000 /	32,000 /	43,000 /
	22,087	30,582	40,776	54,368	73057
Number of impellers (max.)	5	5	5	5	5
Frame speed (max. rpm)	16,000	14,000	12,000	10,000	9,000

## **Dresser-Rand Technology: Redefining Performance Benchmarks**

Technology is an integral part of DATUM P compressors – and all of the company's energy conversion products. As D-R takes advantage of the latest proven technologies, clients can be certain that this equipment will continue to evolve, raising the quality and performance standards at the forefront of the industry.



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