

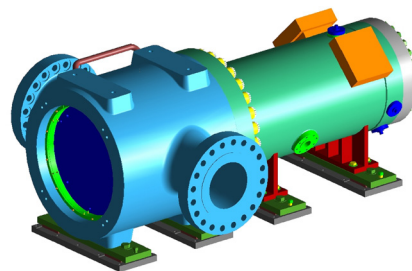
# DATUM<sup>®</sup> C

## Compact Integral Electric Motor Driven Compressor

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*The Dresser-Rand DATUM<sup>®</sup> C centrifugal compressor is an integrated, electric motor-driven compressor designed for natural gas pipeline and process gas applications.*  
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For clients concerned about installation costs, reliable performance, and environmental issues, the following features make the DATUM C compressor an excellent choice for pipeline service:

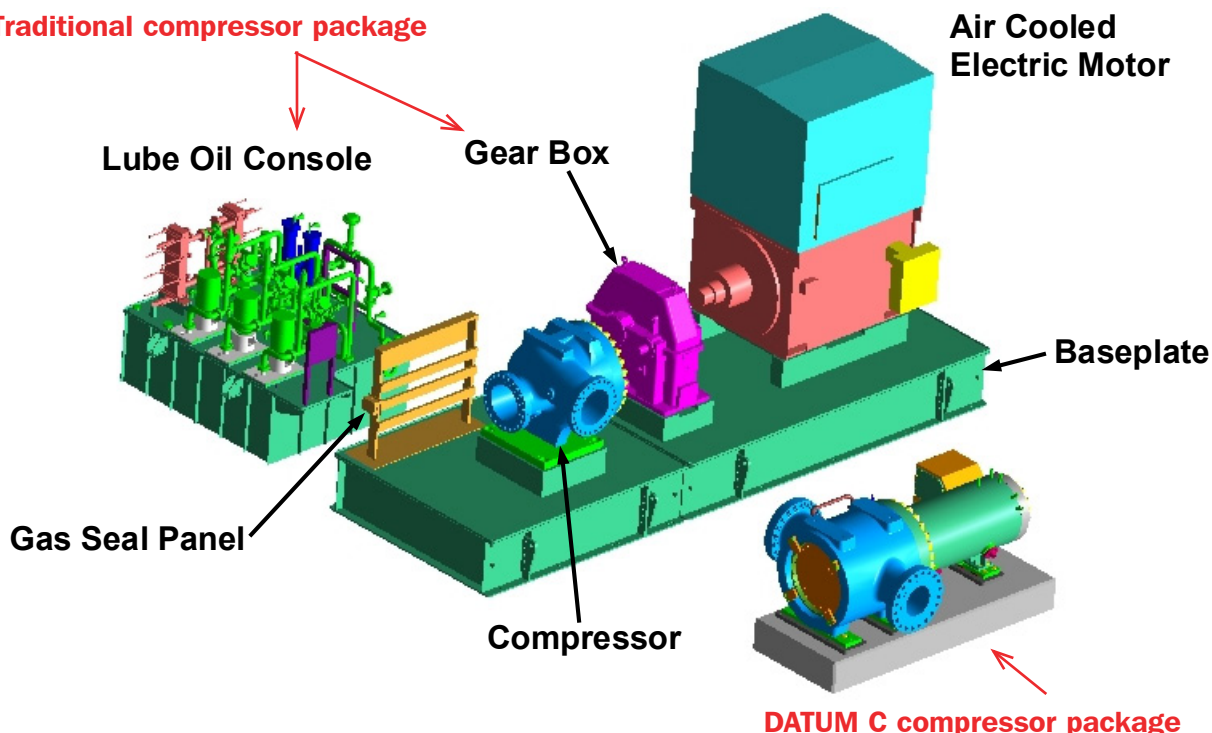
- Integrated, high-speed electric induction motor manufactured by Curtiss Wright EMD
- Available in single-stage overhung and multi-stage beam-style configurations
- Natural gas cooled or hydrogen cooled motor
- In-line piping flanges for single stage compressor configurations
- Variable-speed operation
- Zero hydrocarbon leakage to the atmosphere
- Magnetic bearings for compressor and motor



### DATUM C Compact Compressor = Less Weight, Less Space

	Traditional Compressor	DATUM C Compressor	DATUM C Advantage*
Size	509 sq. ft (47 sq. m)	100 sq. ft (9.3 sq. m)	<b>80 percent less space</b>
Weight	184,200 lb (83,552 kg)	78,050 lb (35,403 kg)	<b>58 percent less weight</b>

#### Traditional compressor package



\*Sized for identical operating conditions (10 MW power, 600 mmscfd flow rate, 1100 psi discharge pressure)

For a complete list of D-R products and services, visit us at [www.dresser-rand.com](http://www.dresser-rand.com) or contact us at the following locations:

#### Dresser-Rand Corporate Headquarters

West8 Tower Suite 1000  
10205 Westheimer Road  
Houston, TX 77042 USA  
Tel: (Int'l +1) 713-354-6100  
Fax: (Int'l +1) 713-354-6110  
email: [info@dresser-rand.com](mailto:info@dresser-rand.com)

112, Avenue Kleber  
75784 – Paris Cedex 16  
Tel: (Int'l +33) 156 26 71 71  
Fax: (Int'l +33) 156 26 71 72  
email: [info@dresser-rand.com](mailto:info@dresser-rand.com)

#### Regional Headquarters

##### The Americas

Dresser-Rand  
West8 Tower Suite 1000  
10205 Westheimer Road  
Houston, TX 77042 USA  
Tel: (Int'l +1) 713-354-6100  
Fax: (Int'l +1) 713-354-6110

##### EMEA

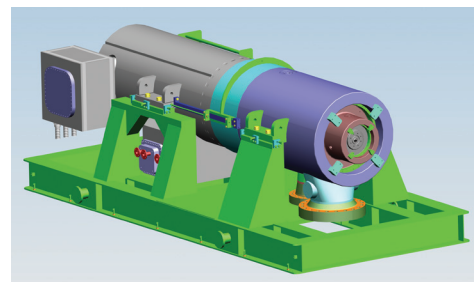
(Europe, Middle East, Eurasia, Africa)  
Dresser-Rand S.A.  
31 Boulevard Winston Churchill  
Cedex 7013  
Le Havre 76080 France  
Tel: (Int'l +33) 2-35-25-5225  
Fax: (Int'l +33) 2-35-25-5366 / 5367

##### Asia-Pacific

Dresser-Rand Asia Pacific Sdn Bhd  
Unit 8-1, 8th Floor  
Bangunan Malaysian Re  
17 Lorong Dungun  
Damansara Heights  
50490 Kuala Lumpur, Malaysia  
Tel: (Int'l +60) 3-2093-6633  
Fax: (Int'l +60) 3-2093-2622

## Easy To Install And Maintain

The DATUM C compressor is acceptable for onshore or offshore installation. Its small footprint and modular compressor bundle make installation and maintenance easier than conventional units, while minimizing the requirements for auxiliary systems and buildings.



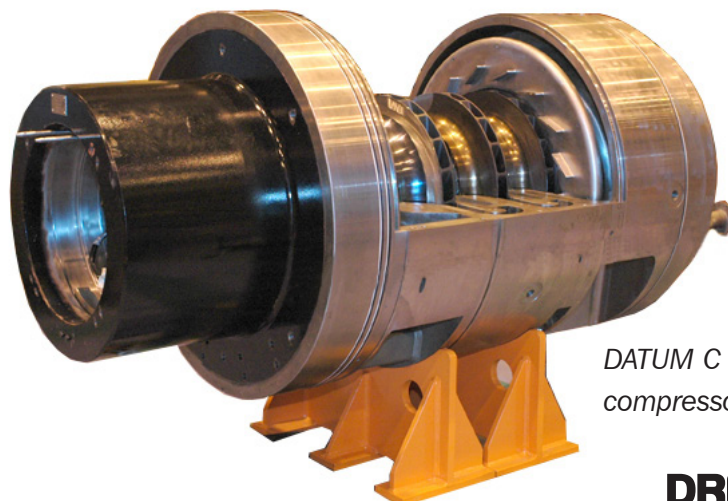
## Environmentally Friendly

Because of its integrated and totally enclosed configuration, the DATUM C compressor offers significant environmental benefits. One of the most significant design features of the DATUM C compressor is the use of magnetic bearings. The unique application of magnetic bearings in the DATUM C compressor uses digital—instead of analog—controls, computer-based algorithms make tuning and adjusting the bearings very simple and efficient. Because of the magnetic bearings there is no need for an oil lubrication system. Some significant environmental benefits include the following:

- Emission-free design
- Quiet operation
- Reduced footprint
- No on-site leakage from shaft seals
- Magnetic bearings that eliminate need for oil lubrication
- Unit can remain pressurized during shutdowns, reducing start-up time

## Capabilities Chart

	D8C	D10C	D12C	D14C	D16C
Flange size (max) - in (mm)	20 (508)	20 (508)	24 (610)	30 (762)	36 (914)
Case rating (max) - psi (bar)	5000 (350)	5000 (350)	5000 (350)	5000 (350)	3000 (200)
Capacity (max) - acfm (cmh)	13000 (22087)	18000 (30582)	24000 (40776)	32000 (54368)	43000 (73057)
Number of impellers (max)	6	6	6	6	6
Efficiency (est. f-f poly)	83	84	84	85	86
Frame speed (max rpm)	16000	14000	12000	10000	9000



*DATUM C multi-stage  
compressor bundle*

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