

Axial Inlet Centrifugal Compressor

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Dresser-Rand experience in pipeline centrifugal compressors is unmatched, having built more than 800 pipeline compressors during the last 70 years. Over the past 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.
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The D-R Pipeline Direct Inlet (PDI) centrifugal compressor is a single-stage, axial inlet compressor commonly used in natural gas pipeline service. These compressors use a direct inlet, overhung impeller and demonstrate flange-to-flange efficiencies to 90%. The PDI accommodates many drive configurations in standard package designs.

Features

Standard cast case

- Family of standard case sizes covers a wide range of flows and horsepowers
- 1,500 PSIG standard case pressure rating
- Case accommodates either left-hand or right-hand discharge orientation
- Can exceed piping load requirements of API 617, 6th and 7th Editions

Standard components

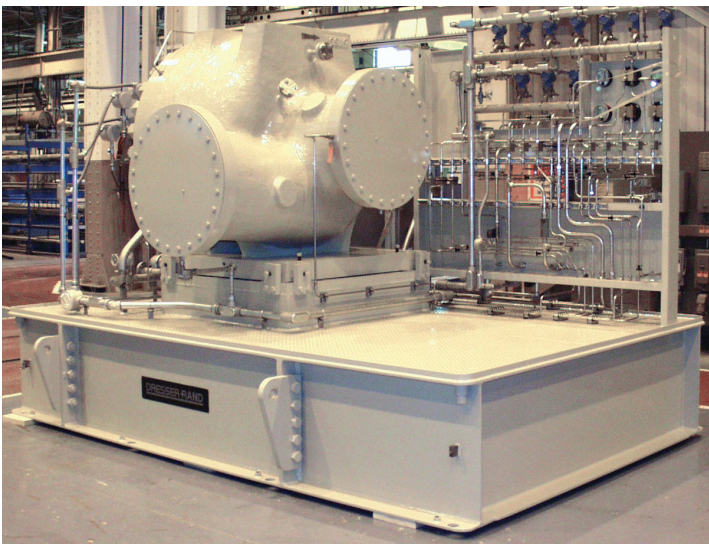
- Bearings, seal, shaft, head and instrumentation are standard for each frame size
- Contributes to shorter manufacturing cycle times

Rotor

- No rotor assembly balance required for impeller change-out (component balanced)
- High rotor stability basis "stiff shaft" design which runs well below first critical

Aerodynamic assembly

- Impeller allows custom flow cuts for specified operating conditions
 - Uses Dresser-Rand's advanced noise attenuation technology (DR Array)
 - Proven by extensive testing using highly accurate PTC 10 Type 2 closed loop testing
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For a complete list of D-R products and services, visit us at 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

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

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

Life Cycle Cost Savings

Minimal spares inventory

- Requires one tandem gas seal
- Fewer wearing parts

Minimal capital expenditures for turn-arounds and revamps

- Mono head simplifies disassembly and re-assembly
- Aero revamp replaces five major components: inlet ring; impeller nut; impeller; impeller labyrinths; and diffuser assembly
- Full tear-down unnecessary for revamps
- Above features result in maximum availability

Energy cost savings

- Flange-to-flange efficiencies to 90%
- Minimal inlet losses

PDI Design Parameters

PDI Line	38 PDI	43 PDI	50 PDI-HS	50 PDI	60 PDI-HS	60 PDI	60 PDI-HQ	70 PDI
MCOS (RPM)	14,500	12,000	12,000	10,000	10,000	8,900	8,900	6,500
Max Power (BHP)	9,800	11,000	11,000	17,000	17,000	25,000	25,000	47,500
Max Power (kW)	7,311	8,206	8,206	12,682	12,682	18,650	18,650	35,435
Max Torque (ft-lbs)	3,579	7,112	7,112	9,822	9,822	20,874	20,874	40,291
Max Torque (Nm)	4,832	9,601	9,601	13,260	13,260	28,180	28,180	54,393
Max Pressure (psig)	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Max Pressure (MPag)	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3
Max Case Temp (°F)	200	200	200	200	200	200	200	200
Max Case Temp (°C)	93	93	93	93	93	93	93	93
Max Capacity (acfm)	14,500	16,600	20,750	20,750	33,600	33,600	50,000	50,000
Max Capacity (Nm ³ /min)	410	470	590	590	955	955	1,420	1,420
Flanges Size-Rating	16"-600#	20"-600#	24"-600#	24"-600#	30"-600#	30"-600#	36"-600#	36"-600#

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Form 2047