

Solar® Turbines

A Caterpillar Company

C41D

Production Gas Compressors

Oil and Gas Applications

The Solar® C41 dual compartment gas compressor is designed for applications with the Mars® 100, Titan™ 130 and Titan 250 gas turbines and EMDs. The C41D offers a wide flow range and high pressure ratio capability.

The C41D shares the robust design and ease of restage features of other Solar gas compressor models. Additionally, within a single casing, the bearing span is adjustable to optimize rotordynamic performance by variable position endcaps.

The compressor is designed in compliance with API 617, a requirement for the severe environments and operating conditions this equipment may encounter.



C41D Gas Compressor

dsc41d_001



Typical C41D Rotor

dsc41d_002

Typical Weights and Dimensions

| | |
|--------|-----------------------|
| Length | 2.2 m (7' 3") |
| Height | 2.0 m (6' 8") |
| Width | 3.1 m (10' 3") |
| Weight | 27,270 kg (60,000 lb) |

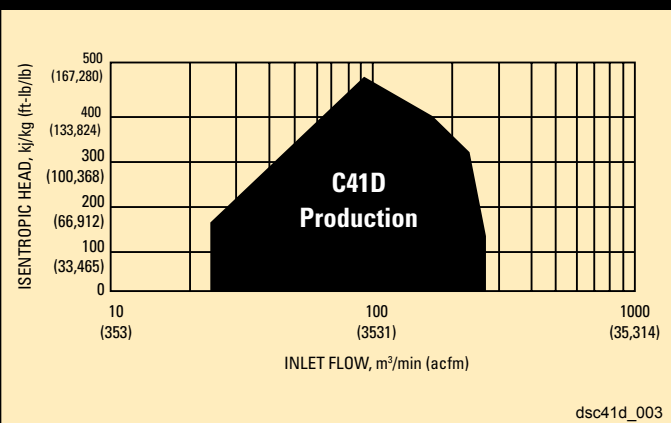
Key Features

| | |
|-------------------------|--|
| Number of Stages | 2 - 12 |
| Bearings | Journal: Tilting-pad Thrust: Self-aligning, tilting-pad |
| Inlet/Discharge Flanges | 1st Compartment: 20/14 in. Class 1500 2nd Compartment: 14/14 in. Class 1500 |
| Efficiency | 72 - 85% polytropic (BEP) |
| Maximum Speed | 14,300 rpm |
| Maximum Flow | 225 m ³ /min (9000 acfm) |
| Maximum Head per Stage | 45 kJ/kg (15,000 ft-lbf/lb _m) |
| Maximum Casing Pressure | 25 860 kPag (3750 psig) |
| Maximum Torque | 20 900 Nm (185,000 lbf-in.) |
| Instrumentation | Fully instrumented with vibration, temperature and pressure monitoring per API 617 |
| Vibration Limits | Within API 617 |

Materials

| | |
|----------------------|----------------------|
| Impellers | 15-5 PH |
| Casing | ASTM A216 GR WCC |
| Diaphragm/Guide Vane | ASTM A516 |
| Rotor Spacer | AISI 410 |
| Stub Shafts | AISI 4140 |
| Labyrinth Seals | Steel-backed Babbitt |

Operation Range (Head vs. Flow)



dsc41d_003

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