

# 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)

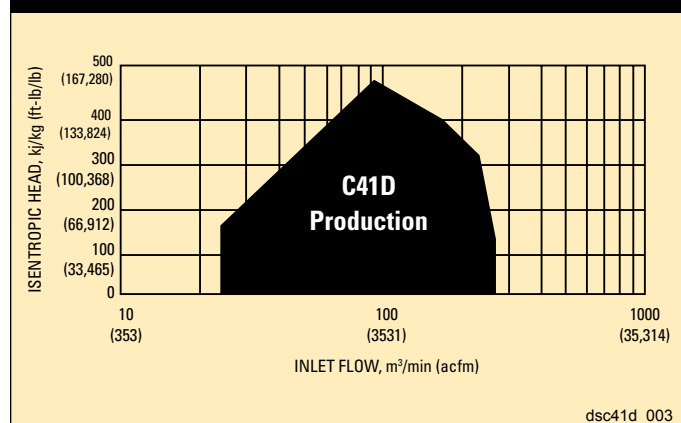
#### Key Features

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 <sup>3</sup> /min (9000 acfm)
Maximum Head per Stage	45 kJ/kg (15,000 ft-lbf/lb <sub>m</sub> )
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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