Solar® Turbines

A Caterpillar Company

Powering the Future Through Sustainable, Innovative Energy Solutions

C51 DUAL COMPARTMENT PRODUCTION GAS COMPRESSORS

The Solar® C51 dual compartment gas compressor is designed for applications in the upstream production market and is ideally suited to be driven by one of Solar's gas turbines or electric motor drives.

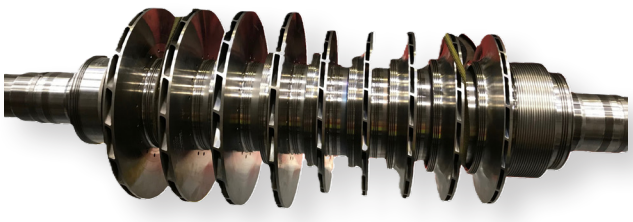
With the dual compartment design, the process gas can be cooled, and a side stream may be added prior to the gas entering the second compartment. The variable position endcap design optimizes the bearing span for each required aero span within a single casing.

Solar Turbines has built, installed and serviced more than 7,000 gas compressors worldwide, delivering proven reliability and decades of field-tested expertise.

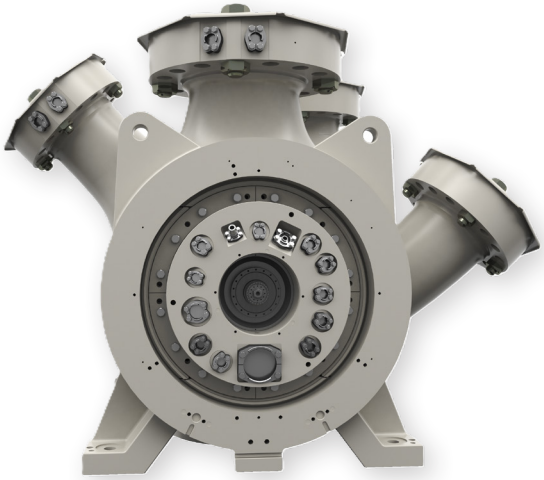
BENEFITS

- Dual compartment design
- Variable position endcap
- High pressure ratio and wide flow range
- Robust design and ease of restaging
- State-of-the-art technology
- Proven reliability
- Designed durability in compliance with API 617

C51 Dual Compartment Rotor



C51 Dual Compartment Gas Compressor



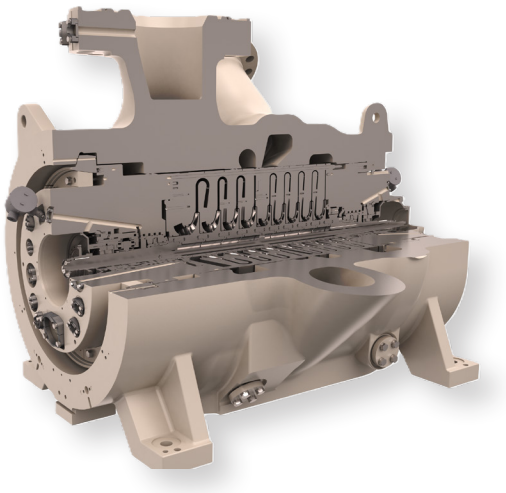
Key Features	
Number of Stages	2 - 12
Bearings	Journal: Tilting-pad Thrust: Self-equalizing, tilting-pad
Inlet/Discharge Flanges	1st compartment: 20/16 in. Class 1500 2nd compartment 16/16 in. Class 1500
Efficiency	> 72 - 85% polytropic
Maximum Speed	12,000 rpm
Maximum Flow	339 m^3/min (12,000 acfm)
Maximum Head per Stage	> 39 kJ/kg (13,000 ft-lb_f/lb_m)
Maximum Casing Pressure	20 685 kPag (3000 psig)
Maximum Torque	31 071 Nm (275,000 lb_f-in.)
Instrumentation	Fully instrumented with vibration, temperature, and pressure monitoring per API 617
Vibration Limits	Within API 617

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C51 Dual Compartment Sectional View



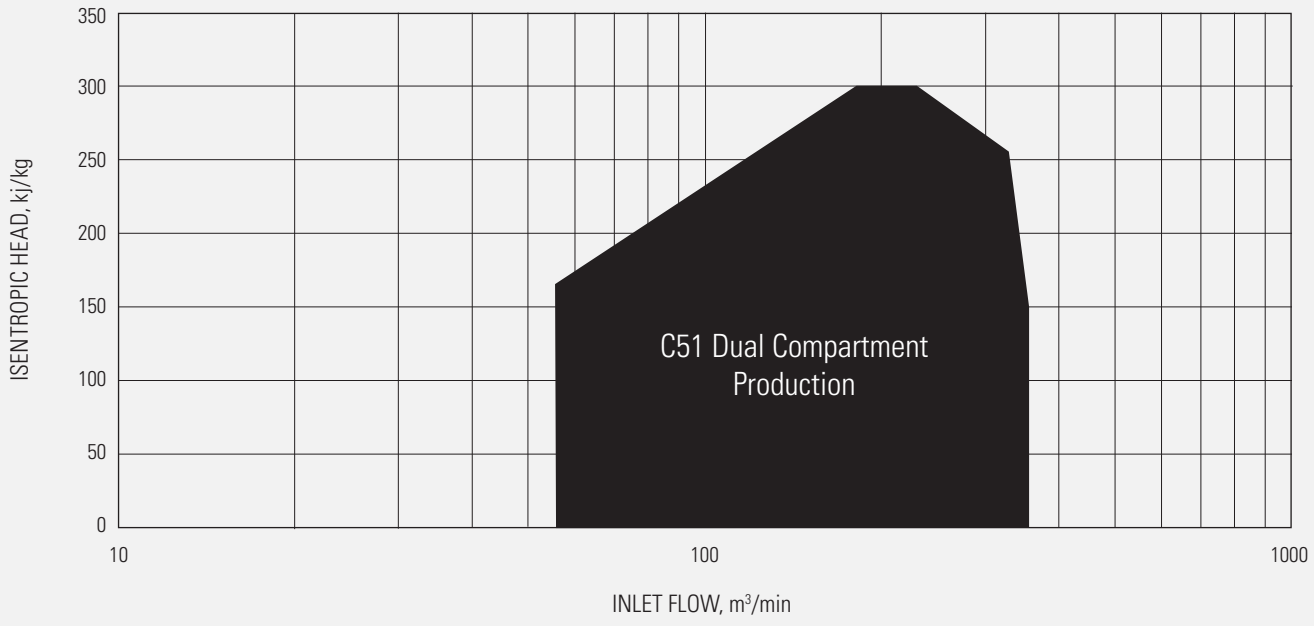
Typical Weights and Dimensions

Length	2.8 m (9 ft.1 in.)
Height	2.4 m (7 ft. 10 in.)
Width	3.3 m (10 ft. 11 in.)
Weight	43 540 kg (96,000 lb)

Standard Materials

Impellers	15-5 PH
Casing	ASTM A216 GR WCC
Diaphragm/Guide Vane	ASTM 516/A36
Rotor Spacer	Type 410
Stub Shafts	AISI 4140
Labyrinth Seals	Steel-backed Babbitt

Operation Range (Head vs. Flow)



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