

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 design offers a wide flow range and high pressure ratio capability while maintaining a reduced package footprint.

The C51 dual compartment shares the robust design and ease of restage as other Solar gas compressor models. Additionally, the compressor incorporates a variable position endcap design to optimize the bearing span for each required aero span within a single casing.

The compressor is designed in accordance with API617, a requirement for the severe environments and operating conditions this equipment may encounter.

C51 Dual Compartment Gas Compressor



C51 Dual Compartment Rotor



Typical Weight 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)

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-lbf/lbm)
Maximum Casing Pressure	20 685 kPag (3000 psig)
Maximum Torque	31 071 Nm (275,000 lbf-in.)
Instrumentation	Fully instrumented with vibration, temperature and pressure monitoring per API 617
Vibration Limits	Within API 617

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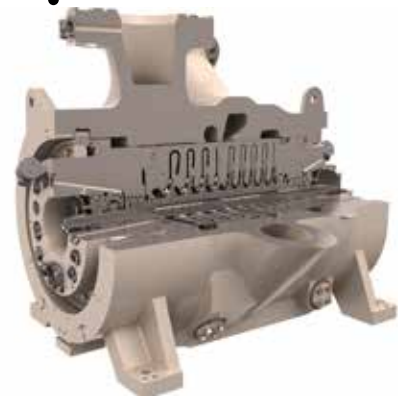
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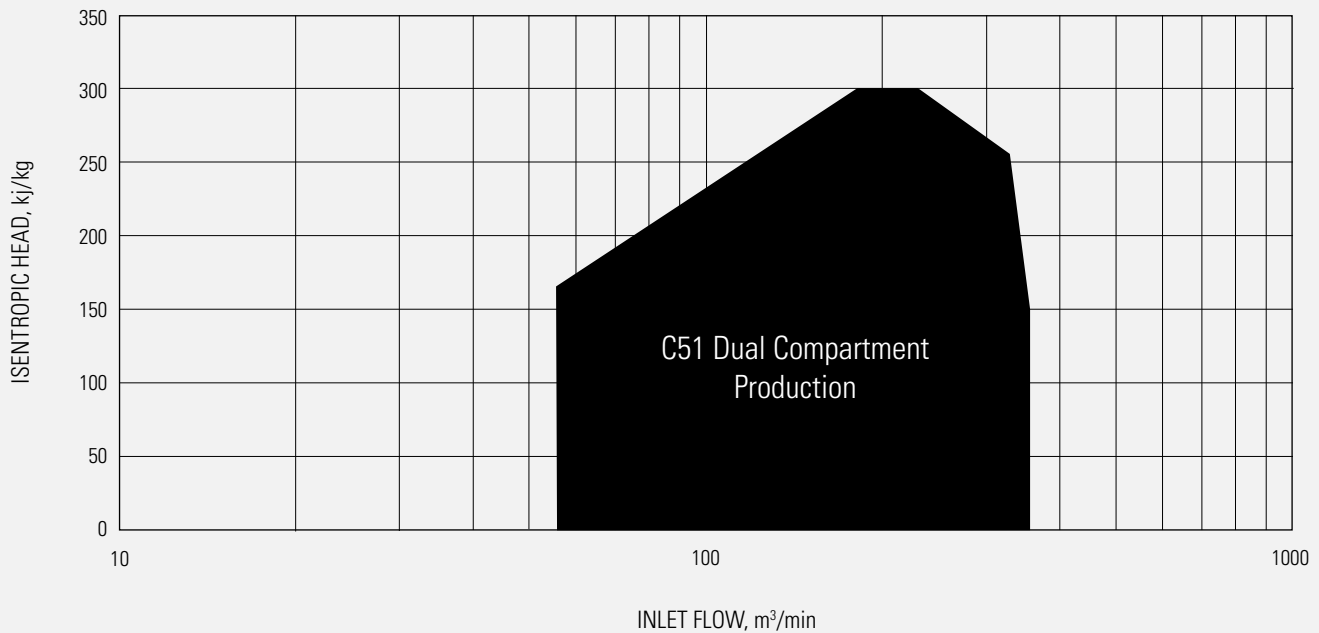
Materials

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

C51 Dual Compartment Sectional View



Operation Range (Head vs. Flow)



Additional Information:

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