

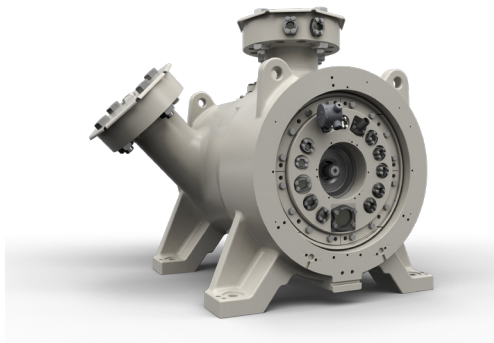
C31 PRODUCTION GAS COMPRESSORS

The Solar® C31 family of gas compressors are designed for applications in the upstream production market and are ideally suited to be driven by Solar's turbines or by electric motor drives.

This compressor combines wide flow range and high pressure capability with the robust design and ease of restage features of other Solar gas compressor models. The C31 also incorporates our movable endcap design to optimize the rotor length for each required aero span. Additionally, anti-swirl vanes (ASVs) are available to bolster the C31's range of reliable operation up to 5000 psi.

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

C31 Gas Compressor



C31 Rotor



Typical Weight and Dimensions

Length	1.6 m (5 ft. 3 in.)
Width	2.1 m (6 ft. 5 in.)
Height	1.8 m (5 ft. 11 in.)
Weight	15 150 kg (33,400 lb)

Key Features

Number of Stages	4-9
Bearings	Journal: Tilting pad Thrust: Self-aligning, tilting pad
Inlet/Discharge Flanges	10 in. Class 2500 (Class 1500 available)
Efficiency	60-85% polytropic
Maximum Speed	16,000 rpm
Maximum Flow	113 m ³ /min (4000 acfm)
Maximum Head per Stage	27 kJ/kg (9000 ft-lbf/lbm)
Maximum Casing Pressure	34 475 kPag (5000 psig)
Maximum Torque	12 900 Nm (114,000 lbf-in.)
Instrumentation	Fully instrumented with vibration temperature and pressure monitoring per API 617
Vibration Limits	Within API 617

Solar® Turbines

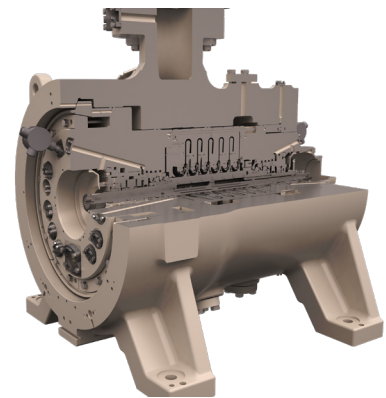
A Caterpillar Company

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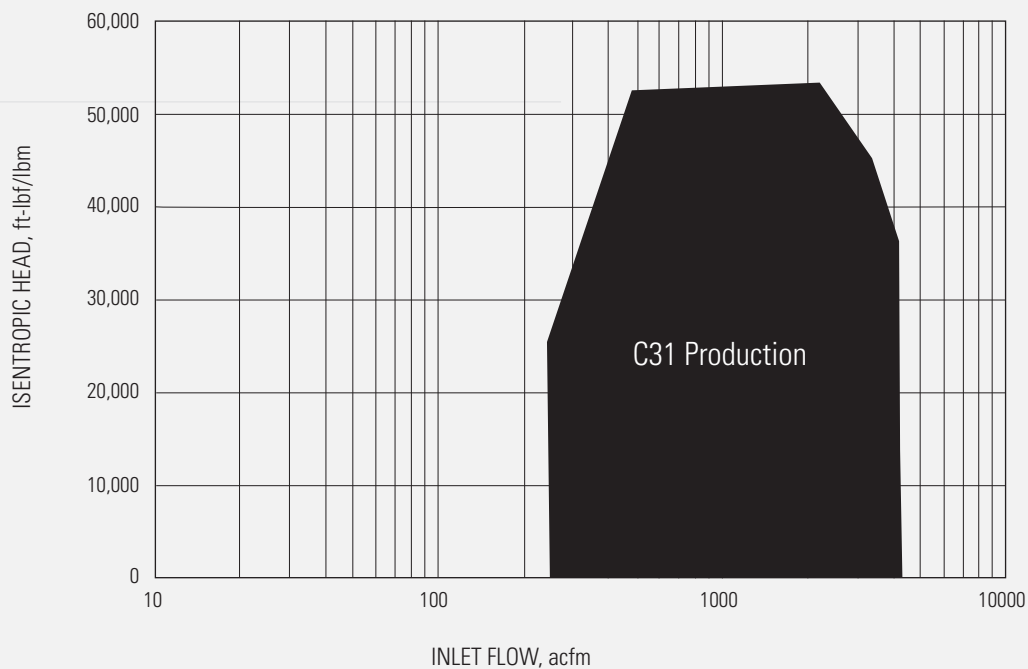
Materials

Impellers	15-5 PH
Casing	ASTM A216, Grade WCC (CA6NM option available)
Diaphragm/Guide Vane	ASTM A537 or A516
Rotor Spacer	AISI 410
Stub Shafts	AISI 4140
Labyrinth Seals	Steel-backed Babbitt (high temperature options available)

C31 Sectional View



Operation Range (Head vs. Flow)



Additional Information:

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