

**ENERGY SOLUTIONS FOR THE
OIL AND GAS INDUSTRY**
POWERING THE FUTURE

Solar[®] Turbines
A Caterpillar Company

TAP INTO DECADES OF UNMATCHED EXPERTISE

For over 60 years, Solar Turbines has made products essential to powering the oil and gas industry. Solar focuses exclusively on turbomachinery solutions, and this dedicated mindset frees us at every level of the organization to work toward one goal – producing turbines and motor-driven compression solutions that provide maximum availability, reliability and value throughout your equipment’s life cycle.

Solar holds the industry’s largest installed base with equipment featured in more than 15,000 offshore and onshore applications in more than 100 countries. Customers benefit from repeatable quality with reduced risk, minimized emissions, competitive efficiency ratings and low life-cycle cost.



RUGGED, RELIABLE, RESPONSIVE

Customers know they can rely on turbomachinery made to proven design standards with consistent, high-quality manufacturing and testing that meets the oil and gas industry's exacting demands. Solar Turbines has attained 100 percent on-time delivery performance for new machines, and our customers' expectations are supported throughout the life cycle of equipment with unrivaled technical assistance. Solar's staff of experienced field personnel around the world, backed by knowledgeable design and support engineers, provide unrivaled local service, wherever our customers may be.

SOLAR TURBINES EQUIPMENT IS INSTALLED IN MORE THAN **15,000** OFFSHORE
AND ONSHORE APPLICATIONS IN MORE THAN **100** COUNTRIES.



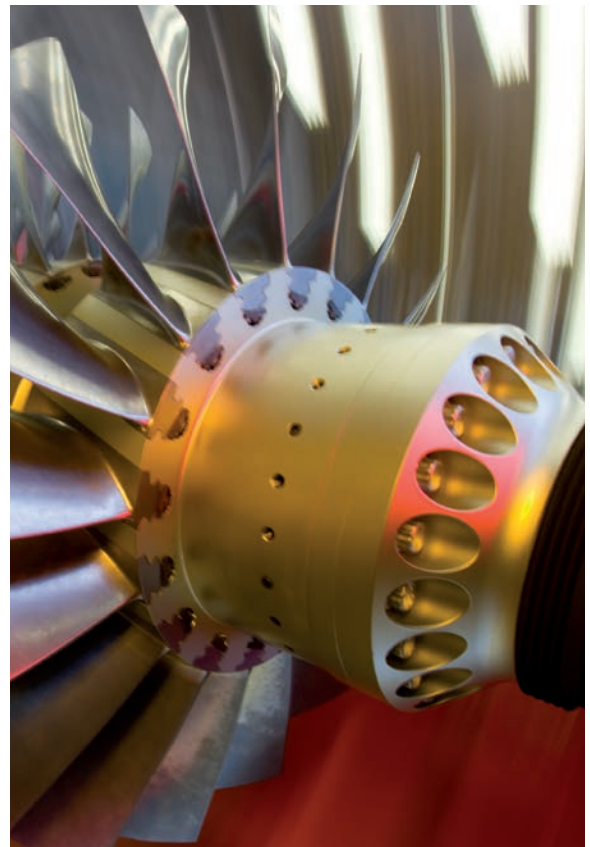
TURBINES

MECHANICAL DRIVE SETS

Solar manufactures gas turbines that deliver rugged performance in compact and lightweight designs. So you benefit from equipment that provides the highest thermal efficiencies in each power class – and that also can operate on a variety of gas, liquid and renewable fuels.

Gas turbine compressor sets featuring Solar’s family of centrifugal gas compressors are designed for natural gas gathering, transmission, lift, export, re-injection and storage/withdrawal. And, our mechanical drive packages are ideally suited for driving other manufacturers’ rotating equipment. These versatile packages also power pumps for waterflood applications and transportation of crude oil and liquids.

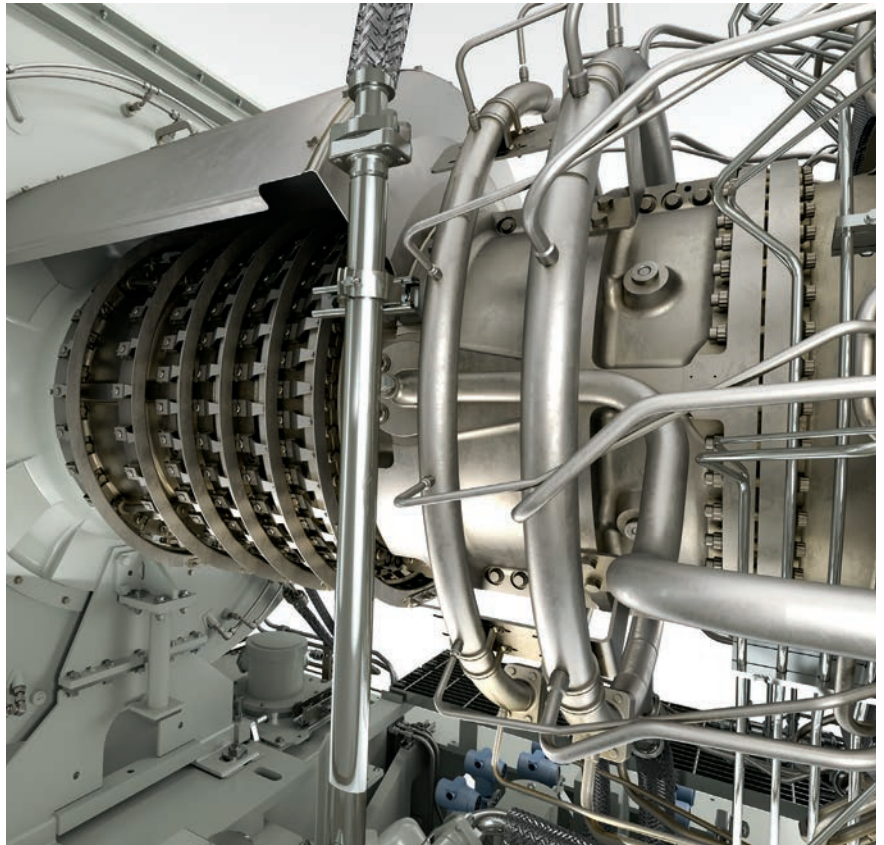
MODEL	HORSEPOWER (hp)	KILOWATTS (kW)
Saturn® 20	1590	1185
Centaur® 40	4700	3500
Centaur® 50	6130	4570
Taurus™ 60	7700	5740
Taurus™ 70	11,110	8290
Mars® 90	13,220	9860
Mars® 100	15,900	11 860
Titan™ 130	23,470	17 500
Titan™ 250	31,900	23 790



GENERATOR SETS

Solar's gas turbine generator sets are specifically designed for use in power generation for offshore platforms, FPSOs, gas production and process facilities. Combined heat and power (CHP) with Solar gas turbines turns clean-burning natural gas into cost-effective, reliable electricity and captures heat that would otherwise be wasted. This heat then provides steam that can be used for heating, cooling and industrial processes such as direct drying.

MODEL	KILOWATTS ELECTRIC (kWe)
Saturn® 20	1210
Centaur® 40	3515
Centaur® 50	4600
Taurus™ 60	5670
Taurus™ 70	8180
Mars® 90	9450
Mars® 100	11 350
Titan™ 130	16 530
Titan™ 250	23 100



COMPRESSORS

Solar provides reliable and versatile natural gas centrifugal compressors that deliver best-in-class performance. Each compressor is precisely matched with a Solar gas turbine or an electric motor drive, depending on your needs, for a one-stop solution. With an installed base of more than 6,000 compressors, you can be assured that we know how to design, manufacture and service reliable, durable compressors that will keep your operation running.

Solar compressors also feature the latest aerodynamic technology to bring efficiencies across a broad operating range to your application. It's equipment that serves production and pipeline applications with flexible and stable performance that maximizes value for our customers.

CENTRIFUGAL COMPRESSORS

PRODUCTION	PIPELINE
C16	C40
C31	C45
C33	C65
C40	C75
C41	C85
C50	
C51	
C61	



SPARTAN ELECTRIC MOTOR DRIVE COMPRESSOR SET

Solar Turbines offers the Spartan™ EMD, a standardized electric-motor-driven compression solution, for those looking to pair a Solar compressor with other products. The Spartan EMD serves the onshore market and provides the same customer experience offered with our other products — exceptional support throughout the equipment's entire life cycle.

MODULAR SOLUTIONS

OFFSHORE MODULAR

Single-lift modules integrate the entire compression, pumping or power-generation system. Ranging in size from 250 to 900 tons for single trains and up to 2,500 tons for multiple trains, these specialized modules minimize deck space and integration scope. For weight-sensitive applications, pre-integration is achieved by selective skidding of equipment-intensive process systems.



ONSHORE MODULAR

Onshore solutions enable greater cost and schedule predictability. Building, utility and process systems are provided as configurable blocks and packages, helping your team bring together a highly functional station with minimal time spent at site. Our modular solutions reduce project risk, help control capital cost and create a highly standardized execution platform to offer predictability for your project, operations and maintenance personnel.



SERVING EVERY APPLICATION IN THE OIL AND GAS INDUSTRY

Turbomachinery from Solar Turbines performs with reliable and rugged efficiency in a variety of applications and markets around the world. Those applications and markets include:



GAS TRANSMISSION/COMPRESSION

Performing the essential functions of natural gas compression.



STORAGE/WITHDRAWAL

Making possible the storage and delivery of natural gas.



POWER GENERATION

Providing power both onshore and offshore.



OFFSHORE PLATFORMS/FPSO

Extraction, processing and storage of oil and natural gas until it can be brought to shore for refining and extracting.



LNG

Turbomachinery using liquefied natural gas produces fewer emissions.



MOBILE POWER

Complete, proven units that are easy to relocate and connect.

DESIGNED FOR SUSTAINABLE, SAFE PERFORMANCE

Environmental compliance and sustainability are strong drivers of Solar's product design and development programs. Our advanced technologies help you meet your sustainability goals by saving fuel and minimizing emissions. Lowering fuel consumption reduces pollutants and greenhouse gases.

EXCLUSIVE TECHNOLOGIES MINIMIZE EMISSIONS

All Solar equipment is designed to minimize emissions and meet the toughest environmental standards. The exclusive SoLoNO_x™ dry lean-premix combustion system significantly limits pollutant formation without costly post-combustion treatment – and without sacrificing power or heat rate. It cuts turbine NO_x emissions by up to 90 percent and CO by up to 30 percent.

SoLoNO_x TECHNOLOGY

3,000+

GAS TURBINES EQUIPPED

220 million+

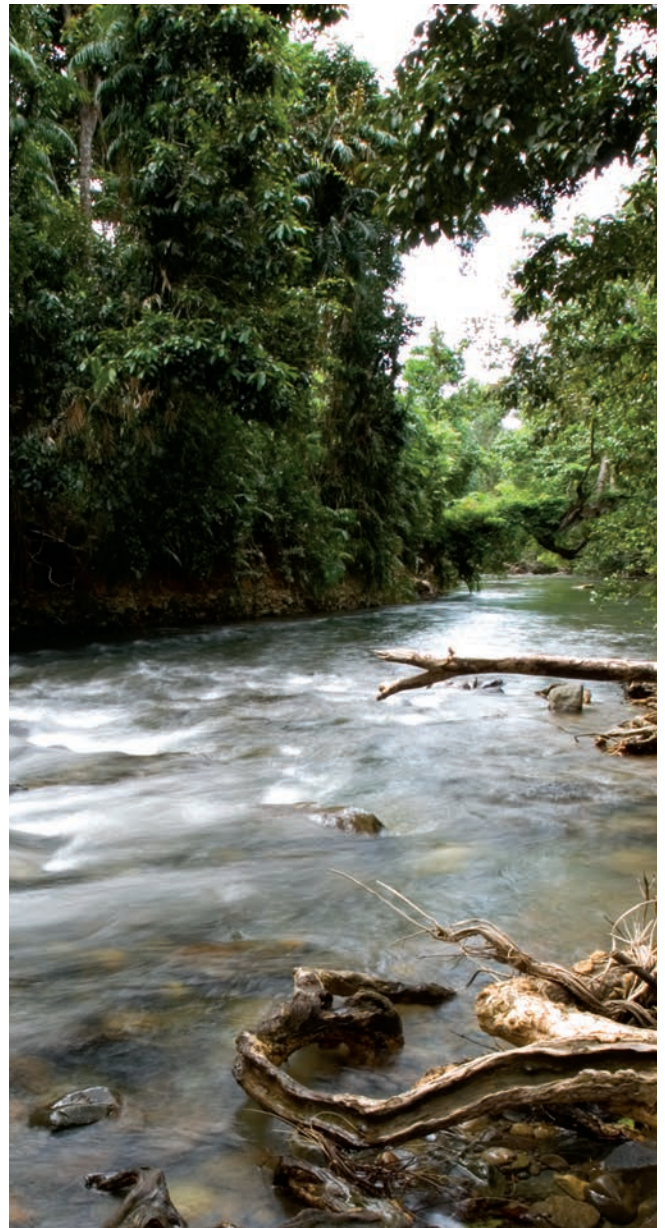
OPERATING HOURS

Over 4 million

TONS OF NO_x EMISSIONS AVOIDED

PROTECTING EVERY ASPECT OF POWER PRODUCTION

Solar's Quality, Health, Safety and Environmental (QHSE) management system helps our customers protect the people who operate the equipment, those who live nearby, our customers' assets and the environment. Safety is a priority for Solar, and the QHSE system helps us comply with your safety system requirements every day on the job.



EQUIPMENT HEALTH MANAGEMENT

MAXIMIZE UPTIME, LOWER LIFE-CYCLE COST

Today's challenging markets demand the most from your turbomachinery. Solar's full line of equipment for the oil and gas industry promises more productive hours, less repair and shorter service intervals with Equipment Health Management powered by state-of-the-art InSight Platform™ technology.

INSIGHT PLATFORM

InSight Platform is the technology platform designed to deliver advanced remote capabilities and decision support tools, complementary to your existing internal systems, capabilities and infrastructure.

- Fleet manager
- Measurable performance
- Real-time data predictive analytics
- Condition-based maintenance and overhaul
- Commercial incentives

INTELLIGENCE ANYWHERE

Once you own Solar turbomachinery with InSight Platform, you can monitor your equipment anytime, anywhere on your computer, smartphone or tablet.



GLOBAL TECHNICAL SUPPORT NETWORK

Empower your team with access to diagnostics, analytics, fleet statistics, data visualization and our global technical experts to deliver measurable performance.



EXPERIENCE OUR CULTURE OF CUSTOMER CARE

The worldwide Solar Turbines organization is committed to your success, providing the highest-quality experience from your initial inquiry throughout your equipment's life.

TOTAL LIFE-CYCLE SUPPORT – GUARANTEED

Only Solar serves the oil and gas industry by designing, manufacturing and servicing all the turbines and compressors we offer. This commitment to each product lasts for decades. In fact, there is Solar equipment purchased 50 years ago that remains in use and continues to receive service by our field personnel.

READY TO SERVE YOU EVERYWHERE

Support is just a call or click away. Our customer support personnel make up the world's largest, best-trained and most experienced turbomachinery service team. We offer support from 65 strategic locations:

- Overhaul centers
- Parts depots
- Field service offices
- Training facilities

Service personnel speak the language and understand the culture, customs and business practices where they work. Our engineers and technicians respond swiftly to provide definitive solutions for any issues, and they are supported with access to knowledgeable design and support engineers at Solar facilities worldwide. Strategically located parts warehouses and sophisticated logistics enable timely delivery of Solar Certified Service Parts and tools to minimize downtime.

MORE THAN MAINTENANCE

Customer support extends beyond maintenance and repairs to include broad offerings that help enhance performance and safety, extend equipment life and prevent obsolescence:

- Overhauls
- Upgrades and uprates
- Refurbishment
- Low-emission conversions
- Technical training courses

POWERING THE FUTURE

The worldwide sales and service organization at Solar Turbines is dedicated to your success. Our culture of customer care is the foundation for our commitment to the highest-quality customer experience – from your initial inquiry throughout the life of your equipment. Turbines, compressors and all solutions we offer for the oil and gas industry will deliver reliable, efficient performance that precisely fits your project requirements.

POWERING THE FUTURE THROUGH SUSTAINABLE, INNOVATIVE ENERGY SOLUTIONS

Solar Turbines - Sales and Service Locations



CONTACT US

For more information and to locate the office nearest you,
visit solarturbines.com, call +1-619-544-5352
or email infocorp@solarturbines.com

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