

Solar Turbines

A Caterpillar Company

POWERING THE GLOBAL ENERGY DEMAND

Production Compressors



Multi-Stage Centrifugal Gas Compressors

THE RIGHT COMPRESSOR FOR YOUR UPSTREAM AND MIDSTREAM APPLICATIONS

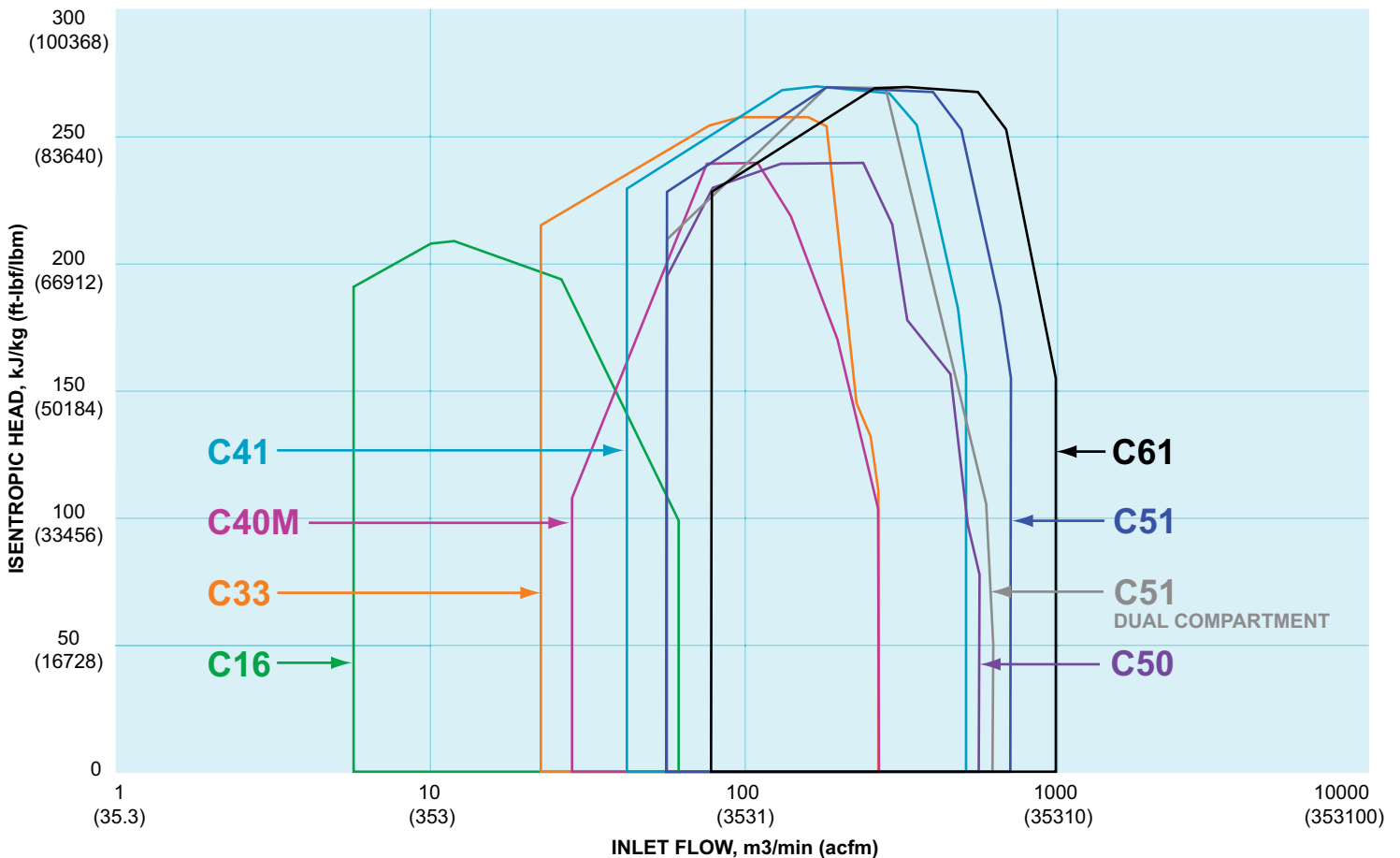
When you're looking for reliability, application versatility and experience in natural gas centrifugal compressors, nobody comes close to Solar. With a reputation for durability and reliability, *Solar*® multi-stage production compressors deliver best-in-class service with high pressure ratios, high efficiencies and wide operating ranges. Solar currently offers seven compressor model lines with design innovations specifically engineered for process applications – C16, C33, C40M, C41, C50, C51 and C61. These compressors have alternate casing configurations and suction, discharge and drive-through capability. Some models include dual-compartment compressors with four nozzles per casing, allowing for intercooling and side streams. In addition to our production compressors, Solar manufactures four pipeline gas compressor model lines. Solar uses cutting edge technologies and processes that maximize simplicity, flexibility and value. We've leveraged 50 years of experience on more than 5,000 compressors to provide our customers with:

- Unmatched High Efficiency and Wide Flow Range
- Low Life-Cycle Costs
- High Reliability and Availability

UNMATCHED HIGH HEAD, HIGH EFFICIENCY AND WIDE FLOW RANGE

Solar compressors are API 617 compliant and designed with the latest aerodynamic technology to deliver high head per stage and high efficiencies (in excess of 85% polytropic efficiencies) over a wide operating range. We know that you demand efficiency – not only at an ideal design point but over a broad operational range. These production compressors offer flexibility, versatility and coverage over diverse operating conditions encountered in gas gathering, boosting, processing, injection, lift, storage and withdrawal applications. They can be used for single-body, geared or direct drive applications or in a multi-body tandem configuration. ASME PTC 10 Type I and Type II compressor tests can be accomplished at Solar's expanded test facilities when required. At Solar, each compressor model has a family of pre-engineered impellers that can be selected for optimal efficiency for specific customer applications. Each *Solar* compressor has a precisely matched *Solar* gas turbine. If an electric motor drive (EMD) is required, we will match the optimum motor to your *Solar* compressor. Both approaches provide an ideal solution for efficiency and wide flow ranges to improve your results.

Compressors Optimized for Production Usage



LOW LIFE-CYCLE COSTS

Solar compressors provide energy saving efficiency over wide operational ranges. Our compressors are designed for rapid and easy restaging so you can quickly adapt to changing operating conditions and maintain peak efficiency. Our modular rotor construction allows you to leverage spare parts, from single impellers to full bundle replacements, for quick response to foreign-object damage or to optimize performance which will save you time and money.

HIGH RELIABILITY AND AVAILABILITY

All Solar facilities are certified to the Quality Standard ISO 9001:2008. Certified design and manufacturing processes, complying with API 617, result in durable, precise components. Components are tested to meet or exceed leading edge industry requirements, ensuring safe and reliable compressors. Each compressor is rigorously tested so it arrives at site ready to exceed customer expectations.

MODULAR ROTOR ASSEMBLY



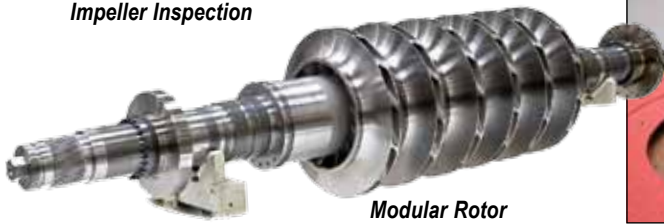
Impeller Inspection



Rotor Assembly



Bundle Installation



Modular Rotor



Optimizing Equipment Value with Solar Support

Your success depends on uptime and throughput, and Solar's comprehensive service offerings ensure that when you need support, Solar is available around the clock and only a phone call or click away. With support centers and knowledgeable personnel located around the world, Solar's Customer Services organization brings an uncompromising commitment to customer satisfaction by providing comprehensive maintenance programs, field service, overhaul, refurbishment and *Solar* Certified Parts. This commitment ensures maximum productivity, extending equipment life-cycle while reducing operating costs.



As your single-solution provider, Solar can restage your gas compressor to increase aerodynamic efficiency of the compressor, extend equipment life, and improve gas turbine fuel efficiency. Overhaul and restaging of *Solar* gas



compressors is part of our core expertise, so you can be sure that your equipment will be updated to the highest standards to perform at optimum levels. Depending on the compressor and installation requirements, Solar will restage your equipment at your site or at one of our worldwide facilities.

For more information about *Solar* gas compressors for upstream and midstream applications, contact one of our representatives. For a complete listing of our worldwide locations, see our web site at www.solarturbines.com.



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