

# GCM34

Cat® Engines for Gas Compression



**CATERPILLAR®**

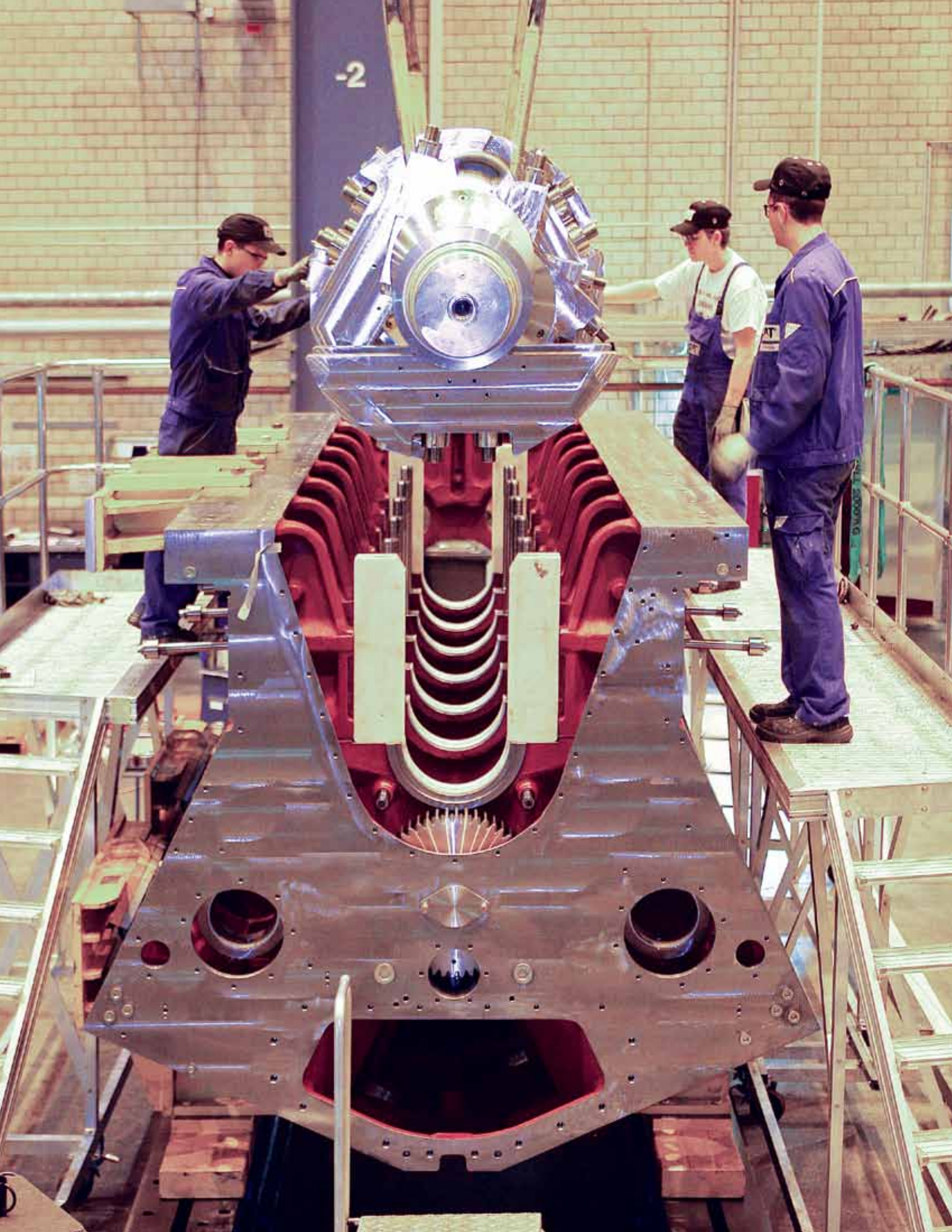
The relentless nature of the petroleum industry doesn't allow for downtime. And in the gas compression world, the pressure is always on — literally. Your equipment must constantly maintain optimal productivity because anything less means a constant loss of profit.

# HIGH PRESSURE, LOW STRESS.



Because it drives your application, your engine drives your bottom line. That's why Caterpillar has been pioneering advances in gas engine design to suit the unique needs of the petroleum industry for more than 60 years. In gas compression applications alone, more than 19 million Caterpillar horsepower are at work around the world.

One of the reasons for this success is Cat® GCM34 engines. They offer the economical, clean, and reliable mid-speed service you need in the 6,000 to 8,000 horsepower range. Whether you're powering pipeline transmission, processing, or gas storage and withdrawal, these 12- and 16-cylinder, long-stroke units deliver peak performance under most any ambient and loading conditions.



# GAS — AND PROFIT — ON

## Economical

Cat GCM34 engines provide a remarkably low cost solution per million cubic feet of gas transmitted. Electronic ignition and combustion enhance fuel economy, while electronic monitoring protects critical systems, reducing maintenance and repair costs. The GCM34 also offers low oil consumption and streamlined maintenance needs.

- Less than 5759 Btu/bhp-hr fuel consumption\*
- Gas admission valve on each cylinder ensures precise fuel delivery
- Improved air management system now accepts higher coolant temperatures, which enables smaller cooler sizing and lower installed cost

- 44% mechanical efficiency\*
- Greater than 98.5% uptime
- Enhanced cooling for key components extends service intervals
- Service-friendly design and fewer components reduces downtime

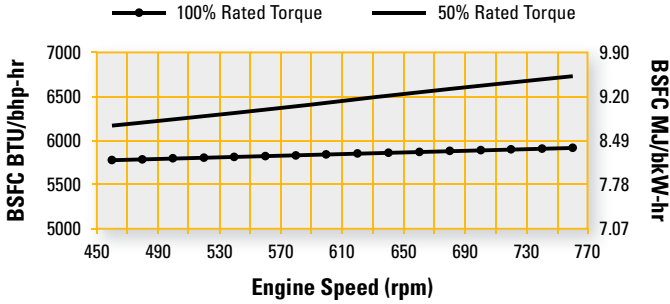
\* Heat rate and efficiency based on ISO3046/1 standard reference condition of 25° C (77° F) and 100 kPa (29.61 in. Hg) and no reduction in power output up to 38° C (100° F) ambient inlet air temperature and 1500 m (4921 ft) altitude.



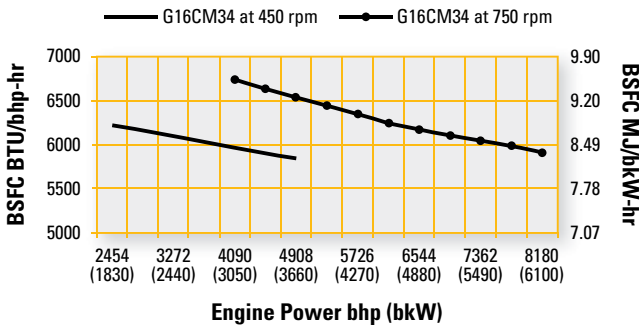
# THE MOVE.



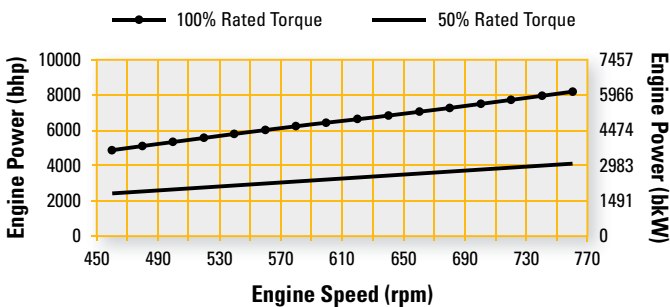
## GCM34 BSFC VS. SPEED



## G16CM34 BSFC VS. POWER



## G16CM34 POWER VS. SPEED



## Sustainable

As you would expect from Caterpillar, there is no sacrifice in emission control to achieve outstanding performance and efficiency. And emissions remain constant throughout the entire operating range.

- Meets EPA NSPS emissions requirements
- 0.5 – 0.7 g/bhp-hr NOx not to exceed

## Reliable

Diesel-strength components deliver long wear and stand up to the high pressures of gas compression work. Advanced electronic engine monitoring minimizes downtime and helps prevent failures.

- Built on industry standard G3600 technology, including the ADEM™ A3 engine management system.
- Up to 90,000 hours before major overhaul, up to 45,000 hours before first minor overhaul.

## Flexible

The GCM34 has wide speed and torque ranges, and enables you to optimize fuel efficiency and emission control through a broad range of altitudes and ambient conditions.

- 750 – 450 rpm (40% constant torque speed turndown capability)
- 100 – 50% of rated torque range
- 100% power up to 100° F and 3000 ft.

## Intelligent

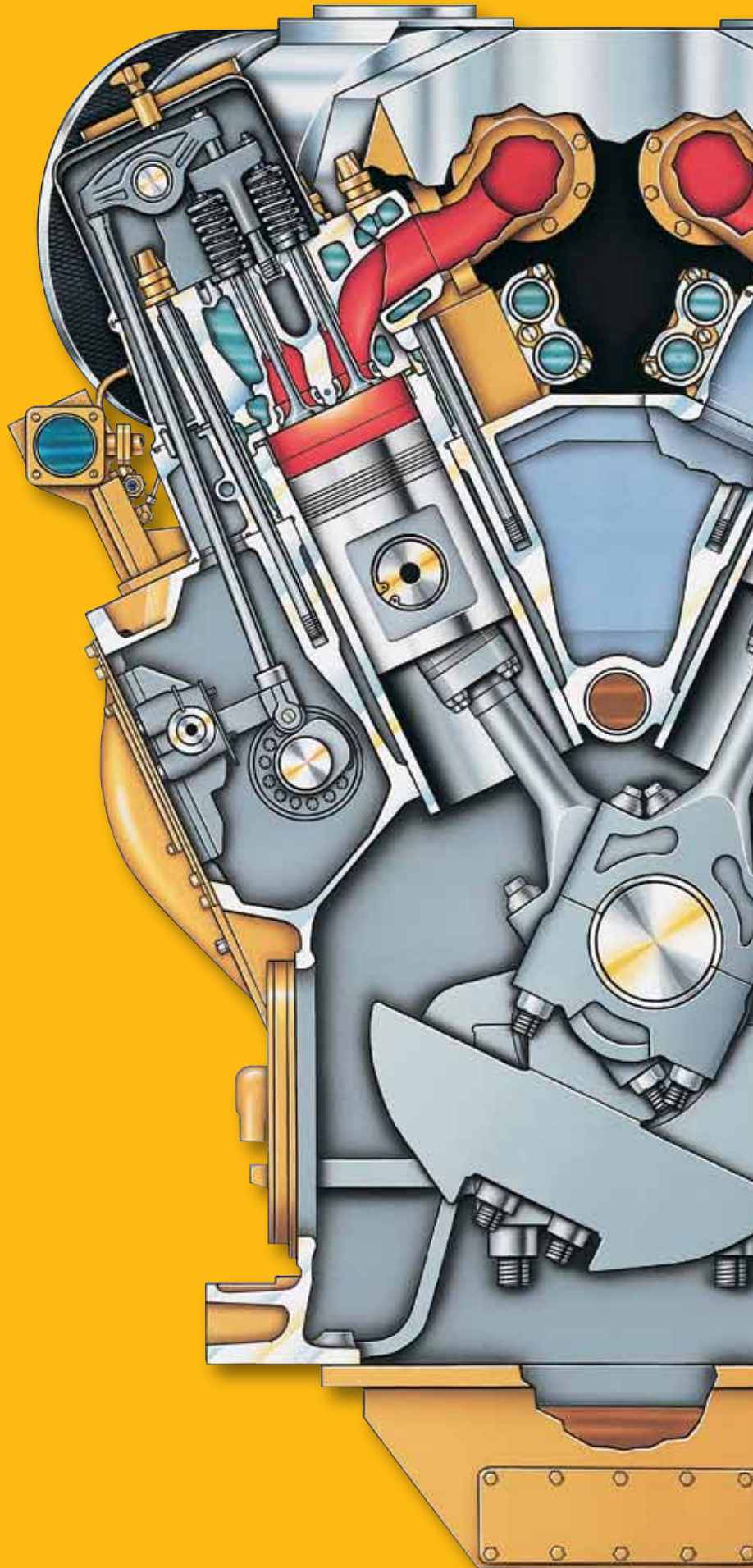
The ADEM A3 electronic control system is the intelligence behind many of the performance and efficiency benefits of the GCM34, providing:

- Electronic ignition
- Cylinder by cylinder regulation of combustion
- Cylinder and prechamber fuel delivery control
- Precise engine response to load variations
- Individual cylinder detonation sensing
- Critical system monitoring and protection

## User friendly

With advanced on-site or remote monitoring and control, it is easy to stay in command of the GCM34. The PLC-based control panel is shipped loose and requires minimal wiring for networking. Engine, compressor, and auxiliaries may be managed from a single system.

- Operator interface includes exhaustive operating parameter statuses, alarms, shutdowns, and diagnostics
- Customer configurable



## GCM SPECIFICATIONS

	<b>G16CM34</b>	<b>G12CM34</b>
Power (bhp/bkW)	8180/6100	6135/4575
Max. Engine Speed (rpm)	750	750
Speed Turndown (%)	40	40
Height (ft/cm)	12.7/387	12.7/387
Width (ft/cm)	9.8/299	9.8/299
Length (ft/cm)	27.5/841	23.1/705
Weight (U.S. tons/metric tonne)	90.4/82	71/64.4





## Support that goes the distance

Investing in a Cat GCM34 engine is a powerful decision. Standing behind the industry's most reliable and efficient mid-speed gas engines is the world's largest and most responsive support network. You'll have a partner in maintaining peak productivity no matter where your application or what your needs. Every continent, every day, every detail — for the life of the engine. We're with you for the long haul.

In gas compression, the work is high-pressure, but the choice is easy — the Cat GCM34.

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**To learn more about the GCM34 or any other Cat engine for the petroleum industry, call your local Cat dealer or visit [www.catoilandgas.cat.com](http://www.catoilandgas.cat.com).**

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