



# Designed for extremes to power your world

HSK78G GAS GENERATOR SERIES





## **FROM PIPELINE GAS TO LANDFILL WASTE, TAKING GAS POWER TO EXTREMES**

Cummins has designed the HSK78G to be the industry's most flexible, robust and reliable natural gas generator set. Whether you're in an urban utility plant or on a remote mountaintop, the HSK78G delivers up to 2 MW of power with continuous uptime and maximum productivity, while reducing operational and maintenance labor and lowering your total cost of ownership.

## **EXTREME EFFICIENCY**

The HSK78G generator set delivers high electrical efficiency on a wide range of pipeline natural gas down to 70 Methane Number (MN) without impacting power and efficiency output. High electrical efficiency is maintained automatically, freeing your team from hands-on engine adjustments.

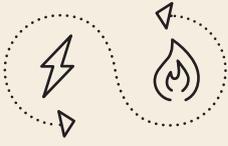
## **EXTREME ENVIRONMENTS**

Cummins delivers the power you need in any environment, including high altitudes or extreme ambient temperatures. You won't have to worry about any impact on engine performance — no matter how hot, cold or humid conditions are.

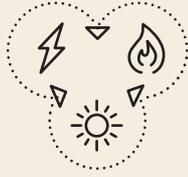
## **EXTREME FLEXIBILITY**

The HSK78G gives you the ability to capitalize on a wider range of low-cost and free fuel sources without sacrificing power density. You'll get robust and reliable power with low thermal energy and aggressive fuels, including flare gas, landfill gas, biogas and coal mine methane with minimal derating.

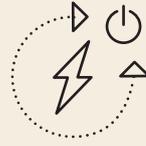
## APPLICATIONS



**COGENERATION**



**TRIGENERATION**

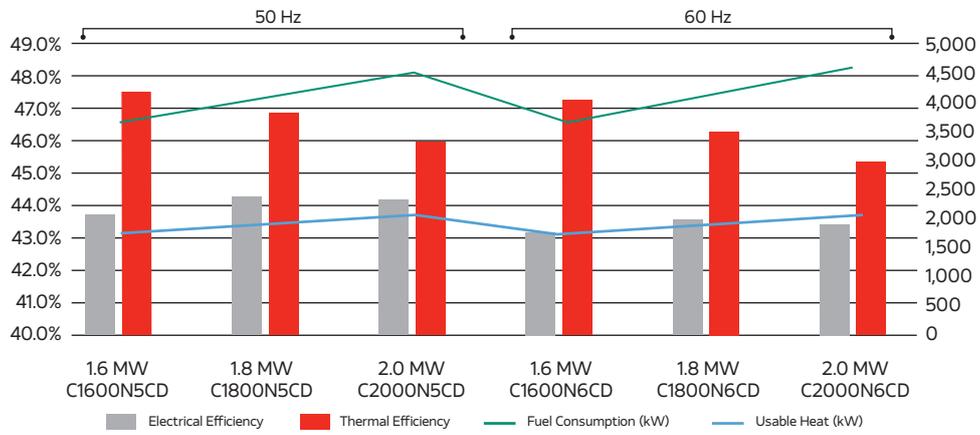


**PRIME/CONTINUOUS  
POWER**



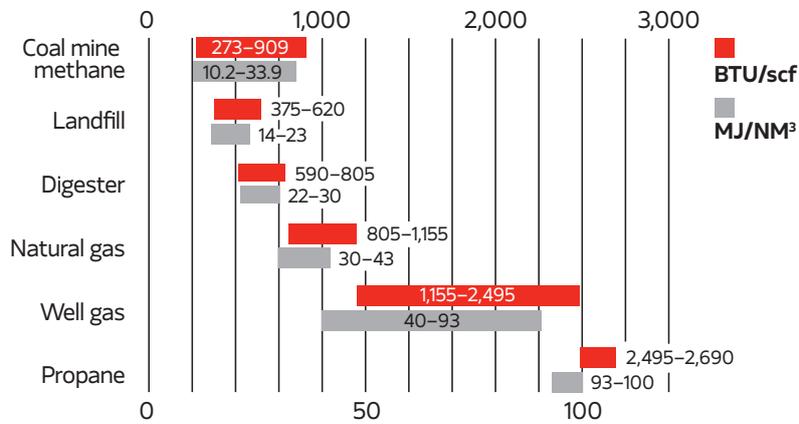
**PEAK POWER**

## EFFICIENCY/KW OUTPUT



Data reflects NOx emissions ratings of 500 mg/Nm<sup>3</sup> with a standard turbo configuration.

## FUEL ENERGY VARIATIONS



# Engineered to work, no matter the conditions you face

## MULTIPLE AIR INTAKE OPTIONS

- Accommodate a variety of applications optimized for power house and containerized installations
- Low height for easier shipping, installation and maintenance

## ELECTRICAL FLEXIBILITY

- AC/DC electrical distribution panels for simpler installation
- CE, UL and CSA compliant designs

## TURBOCHARGER

- Turbo trims for high altitude and ambient temperature capabilities
- Multi-turbo design for superior transient response, achieving G1 recovery times with four steps to full load and a 30% first step

## HIGH EFFICIENCY WITH VARIABLE FUEL QUALITY

- Pipeline natural gas down to 70 MN
- Automatic engine adjustments to respond to fuel quality changes — with no operator intervention or recalibration

## MARKET-LEADING COGENERATION

- Saves on fuel and electricity by turning waste heat into productive energy
- Generate heat with market-leading thermal efficiency: 47.1% at 250 mg/Nm<sup>3</sup> NO<sub>x</sub> on pipeline natural gas
- Shield your site from future electricity cost increases
- Significant environmental benefits by recovering CO<sub>2</sub>
- Superior heat exchange takes up less space, offering greater design flexibility

## HIGH AMBIENT PERFORMANCE

- Full power capability at high temperatures without derating: 50°C (122°F) and 500 m (1,640 ft)

## LOWER TOTAL COST OF OWNERSHIP

- Low investment costs
- Low operation costs
- Designed from the outset for ease of service, reducing maintenance costs over the life of the product
- Market-leading low oil consumption

## OPTIMIZED BORE AND STROKE

- Maximizes fuel efficiency

## LONGER MAINTENANCE INTERVALS

- 2,000-hour minimum interval reduces maintenance shutdowns
- 40,000-hour mid-life overhaul
- 80,000-hour full overhaul, providing a high return on capital expenditure investment
- Faster return on investment, keeping operation and maintenance costs low

## STANDARD ONBOARD DIAGNOSTICS

- The most sophisticated predictive diagnostics in the industry
- NO<sub>x</sub> sensor embedded in the control algorithm directly measures and controls NO<sub>x</sub>, ensuring emissions compliance
- Innovative onboard spark plug life indicator
- Data life logging and trending on the Human Machine Interface (HMI)
- Remote monitoring facilitates maintenance in isolated locations

# Fueling the next generation of power

## ROBUST POWER

The HSK78G provides an exceptional power density of 1.6 to 2 MW from a 78L engine. The generator set also features high electrical efficiency, delivering up to 44.2% (50 Hz) or 43.5% (60 Hz) on a wide range of pipeline natural gas down to 70 MN, meeting ISO standards.

## FUEL FLEXIBILITY

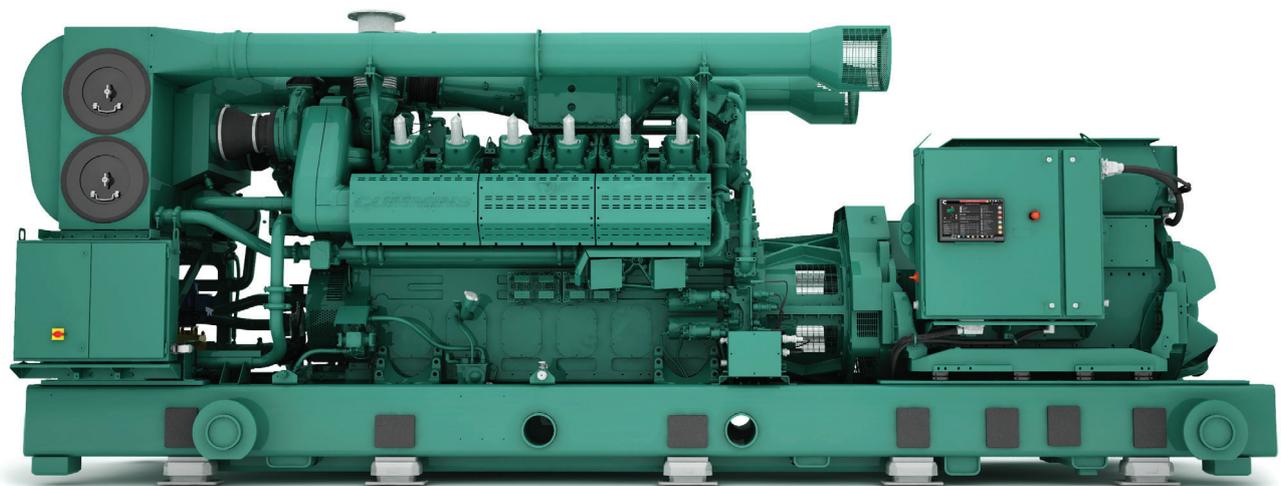
Cummins delivers stable, reliable power, whether you're using pipeline natural gas, flare gas down to 40 MN, biogas or ultra-low BTU fuels down to 273 BTU/scf without derate. You'll get more power options and contaminant level capability on very aggressive fuels, without the need for fuel blending or other special adjustments. In addition, the HSK78G's self-adjusting engine delivers a higher tolerance for fuel variation, allowing you to manage or switch fuel sources without the need to calibrate or shut down the engine.

## EXTREME ENVIRONMENTS

Get the full power you need — regardless of temperature or environmental changes — without the need to burn more fuel or derate the engine. The HSK78G delivers 2 MW in ambient temperatures of 50°C at 500 meters and 25°C at 1,500 meters.

## BUILT-IN COMPLIANCE

Cummins gives you clean, efficient power without compromises. With NOx emissions as low as 250 mg/Nm<sup>3</sup> (0.5 g/hp-hr) without aftertreatment, the HSK78G meets or exceeds the most stringent emissions standards in the world, including the 2019 EU Medium Combustion Plant directive (MCP) and the U.S. New Source Performance Standards (NSPS) for Stationary Compression Ignition (CI) Internal Combustion Engines. Compliance standards can be met, even in high ambient conditions, while minimizing the need for costly Selective Catalytic Reduction (SCR) systems. With NOx management sensors as a standard feature on every generator set, you can be assured that emissions requirements will be met consistently.





## **Taking service and support to extremes**

With the largest global and local support footprint in the industry, Cummins owns, trains and controls its entire distributor network. You'll always have a direct connection to the people who know the HSK78G best, with factory-level expertise available at every level.

# Supporting you every step of the way

In addition to the superior reliability and dependability Cummins is known for, you'll enjoy faster setup and superior uptime, thanks to our pre-installation support and rapid response. Local account managers and expert application specialists are on hand to assist you at every stage of the process, from site review to generator set specification to installation, testing and commissioning.

## Designed for quick, efficient service

Every component of the HSK78G is designed for fast and easy service in real-world applications. Here are just a few examples of the significant time- and labor-saving features you'll find throughout the entire generator set:

- Easy overhead engine access for quick spark plug changes
- Coils secured with just two bolts, which can be released with a quarter-turn
- Patented split adaptor allows for easy servicing of drive coupling without alternator rollback on the 50 Hz configuration; coupling can be changed in just two hours
- Long life re-gapable spark plugs, 6,000-hour life with 2,000 hours re-gap on pipeline natural gas
- Front-mounted air filters allow for easier filter maintenance and packaging
- External oil cooler and pump
- Top-end service improvements, including open access to left-hand hole covers with new optimized connecting rod bolt design; top-end overhaul can be completed without removing right bank accessories, reducing maintenance downtime
- Airbox location on engine end provides easy access to turbos, mixers, fuel control valve, lube oil pump and other engine components

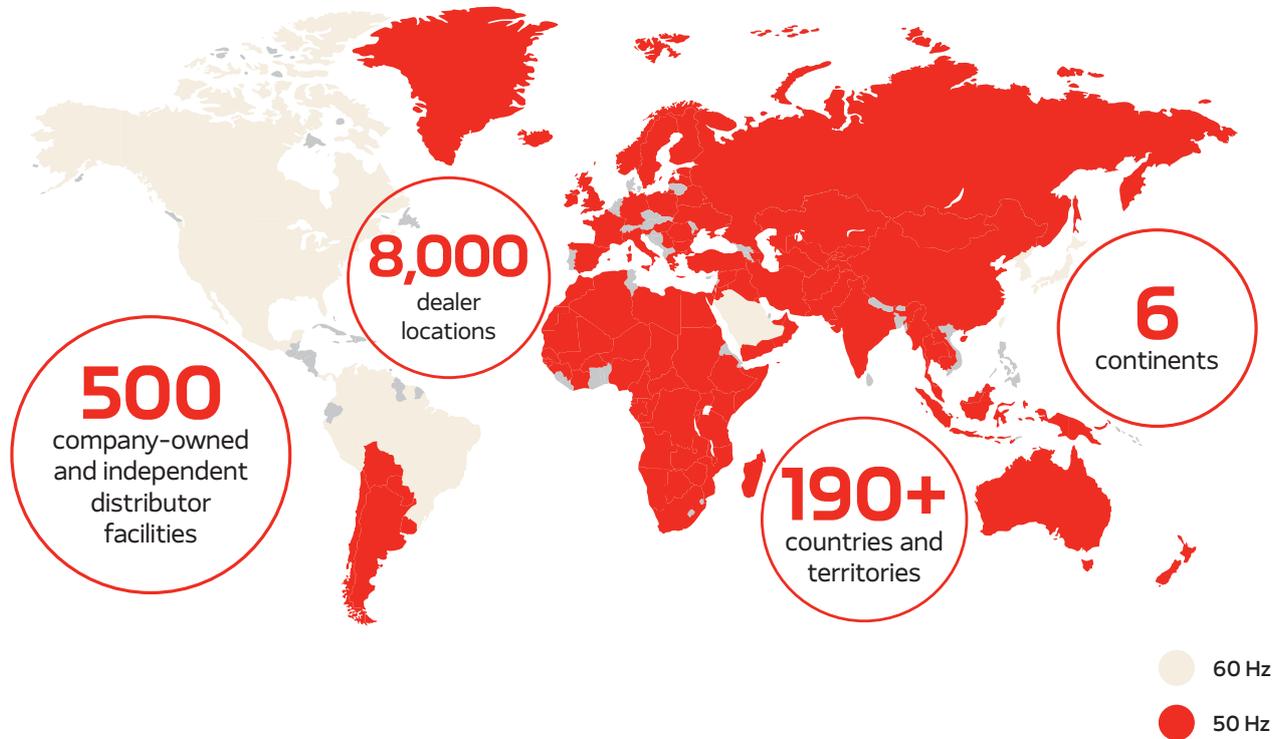
- Auto-lubrication system is standard on every alternator
- Onboard NOx sensor ensures emissions requirements are met without the need for a service engineer
- Easy engine air filter inspection and replacement with electronic sensors integrated into the control system
- Simplify startup adjustment for commissioning with this self-adjusting engine, which has a higher tolerance to fuel variation without methane feed-forward feature

These enhancements and many more dramatically reduce your maintenance time. In addition, robust local networks ensure key resources — including parts, technicians and your dedicated factory-direct representative — are close to you at any moment.

## A dedicated factory representative keeps you up and running

All Cummins service and support resources are managed through a single point of contact: your factory-direct account manager. Assigned specifically to you, your account manager gives you a direct line to the factory with no middlemen, ensuring rapid response from the entire service system. Your knowledgeable, single-source contact is dedicated to saving you time and hassles, while ensuring fast, reliable service every time.

# Global support capability



## The world's largest global support network

Best-in-class aftermarket capabilities are provided through a dedicated local contact, who is supported by a global system of service technicians, engineers and parts distribution centers, experienced in offering and servicing gas solutions to fit any power need. Technical support representatives always have the most up-to-date skills and equipment, with additional resources available on an as-needed basis. All Cummins parts distribution centers are linked by a fully integrated database, enabling you to search for parts anywhere in the world.

For more information about the HSK78G gas generator set, contact your local distributor or visit [cummins.tech/designedforextremes](https://cummins.tech/designedforextremes).



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