



Transform
your business
with gas-fuelled engines

 **Perkins**[®]

THE HEART OF EVERY GREAT MACHINE

Evolving our engines to deliver you flexible power solutions

Whether it is standard pipeline natural gases or gas produced from alternative methods - you can always count on Perkins to deliver the power you need, when you need it.

We have been working with generator set manufactures for over 80 years to bring you and thousands of others light, warmth, protection and genuine peace of mind. Whether you need your engine to operate under strenuous conditions in the harshest of environments, or only in the case of an emergency, our world-class people have the innovation, efficiency and dependable solutions whatever your application.

Your critical needs are always our number one priority, so we are investing heavily in the flourishing gas sector, building on a 50-year gas heritage and expertise. The results are an evolving range of outstanding gas engines that offer the same high levels of performance, flexibility and design excellence as our world-class diesel models.

Factfile:

Overview:

Our robust, flexible, spark ignited engines offer you long-lasting power and low cost by running on 100 percent natural gas or alternatives such as bio or anaerobic digester (AD) gas.

Power:

Large engines 300-1000 kW
Medium engines 67.7-90.4 kW
Small engines 19 kW

Ideal for:

Power generation and combined heat and power (CHP) sets for leisure centres, hospitals, manufacturing plants and telecoms etc.

Emissions:

Capable of TA Luft* with option to meet more stringent 1/2 TA Luft.

Full specifications:

Available from
www.perkins.com/gas

* 1986 Regulation



* 1986 Regulation

Meeting your need for **clean, low-cost** power

Your requirements for gas-fuelled applications are our number one priority, which is why we have developed a flexible and versatile range of gas engines that meet all of your fundamental demands. Our insight, experience and quality of people means we can tailor our engines to meet your precise needs, so you can always count on Perkins as the demand for cleaner power increases throughout the world.

We've designed our large engines to provide electrical power generation or combined heat/cooling and power, while our medium engines deliver the same clean energy into forklift trucks, telecommunications towers and smaller generator sets.

Whether it is leisure centres, hospitals, manufacturing sites, offices or residential, our large units run on low-cost, cleaner natural gas and possess the durability to handle alternative gas fuels, providing reliable power for electricity and/or heating/cooling systems.

What's more our gas products offer power specifically targeted for baseload power, so your Perkins engine will be ideal for reliable, low cost and continuous power generation.

Global electrical power demand will be **80% higher by 2040**, with gas becoming a key energy source for EP generation.

Source: Exxonmobil '2012 The Outlook for Energy: A view to 2040'

Building you better engines through close collaboration



Choose your perfect power solution

Model	Based on	Cylinders	Power kWm
KVT-E15SI*	Perkins 403	3	13
KVT-E22SI*	Perkins 404	4	18
KVT-E33SI*	Perkins 1103	3	32
KVT-E44SI*	Perkins 1104	4	43
KVT-E70SI*	Perkins 1106	6	66

* Approved gas conversion through distribution network

Model	Cylinders	Power kW _e	Power kW _m
4006-23TRS1	6	307	322
4006-23TRS2	6	375	393
4008-30TRS1	8	425	447
4008-30TRS2	8	500	526
4012 TESI	12	600	632
4016-61TRS1	16	875	912
4016-61TRS2	16	1000	1042

Protect your investment ... invest in an **Extended Service Contract (ESC)** and you can limit repair costs to your Perkins engine for years.

For more details on our ESC programme, please visit www.perkins.com/esc

The benefits of gas engines to your business

- Cleaner fuel
- Provides the power you need, when you need it
- Flexibly designed for easy installation into a range of applications
- Our 4000 Series Gas Centres of Excellence are set up specifically to provide you with the best advice and guidance on the options available to you
- Provides low-cost power and heat
- Long running and reliable - major overhaul after 64,000 hours - running on typical natural gas only
- 400 and 1100 Series gas engines come with 12 months warranty
- 4000 Series warranty:
 - For prime applications:
 - one-year unlimited hours running or for engines which operate less than 6,000 hours in the first year
 - two-year or 6,000 hours which ever expires first
 - For standby applications:
 - up to three years or 1,500 hours maximum for engines which operate less than 500 hours in the first year

Discover more

Full specifications available at: www.perkins.com/gas

To find your nearest 4000 Series Gas Centre of Excellence please visit: www.perkins.com/gascentre



KVT-E15SI*, KVT-E22SI*, KVT-E33SI*, KVT-E44SI*, and KVT-E70SI*

Overview: These 4 and 6 cylinder engines inherit all the reliability and durability of their diesel equivalents, whilst operating quietly and cleanly on gas.

Customer benefits

- Reliable power from proven diesel engine technology
- Runs on LPG and CNG to provide low exhaust emissions
- Quiet combustion process reduces operating noise
- Common components with diesel engines
- Easy, low cost maintenance

* Approved gas conversion through distribution network



4006 and 4008

Overview: The 4006 and 4008, spark ignited, 6 and 8 cylinder gas engines overall performance makes them the prime engine choice for today's power generation industry. They are strong, dependable and deliver you high performance whilst meeting increasingly stringent emission requirements.

Customer benefits

- Designed for operation on a wide range of methane based gases
- Individual large valve cylinder heads with matched deep bowl pistons for greater swirl give exceptional mechanical efficiency and power-to-weight ratio
- Reduced whole life cost through commonality of components with diesel engines. This reduces stocking levels and extends component life
- Piston temperatures are controlled by an advanced gallery jet cooling system to give reliable power
- Excellent service access for ease of maintenance
- Specifications for natural gas and biogas are available, ensuring optimal engine performance for specific fuels

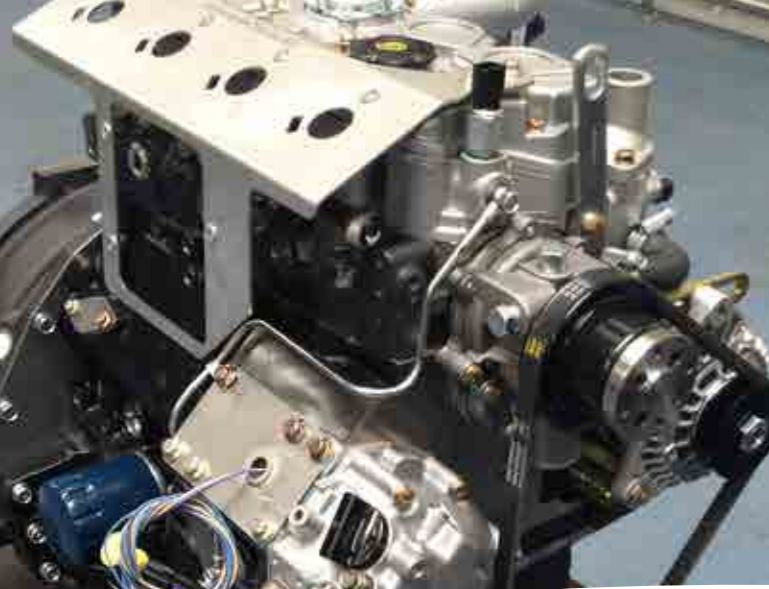


4016

Overview: The 4016-61TRS 16 cylinder is the biggest spark ignited gas engine in our alternative fuel range. Its modern design contains the very latest combustion and engineering technologies to give you economical whole life costs and reliability.

Customer benefits

- Designed for operation on a wide range of methane based gases
- Extensive research in combustion and noise/vibration/harshness gives you one of the quietest engines on the market
- Reduced whole life cost through commonality of components with diesel engines. This reduces stocking levels and extends component life
- Excellent service access for ease of maintenance
- Specifications for natural gas and biogas are available, ensuring optimal engine performance for specific fuels



We're committed to working closely with you to explore advancements in technology and provide you with a competitive advantage – we believe in long-term partnerships.

Investing in a brighter future for you

Whether it is diesel or gas – we are always exploring new ways to help you benefit from the highest quality power solutions and increase productivity.

As more and more of you require fresh and innovative methods of powering your machines, we are matching your expectations with cutting-edge research and development into the flourishing gas sector.

To help you meet your environmental obligations, our world-class teams are constantly looking at ways current and future engines can run on a range of versatile, efficient fuels, such as synthetic and low-energy gases.

In order to offer you a greater choice of power, specifically in the lower power bands, we are also expanding our range of products. You can rely on these smaller engines to supply the same clean, economic power and low cost benefits you enjoy in the larger engines.

Our product range will also expand into the 60 Hz market, offering you new opportunities in new territories. To ensure you receive flexibility and choice that is truly unique, we are also using our vast experience and expertise in diesel to develop common core technologies to run on either diesel or gas.





You can always count on us

Wherever you are in the world, we go the extra distance to bring you unrivalled service. That's why our UK and Singapore parts distribution centres operate around the clock, guaranteeing direct delivery of genuine Perkins parts whatever your region.

You rely on us to deliver the highest standards of quality and innovation, which is why we design and build our engines from close customer collaboration. Our engineers will work closely with you to understand your challenges and requirements, tailoring our technology for your specific applications.

It's an approach we believe can significantly reduce your development time and costs, ensuring a maximum return on investment.

Wherever you are in the world, you are always local to Perkins

To all our customers we make a simple promise: to keep your engines running wherever they are in the world.

You are never far away from expert product knowledge, genuine parts and a range of advanced diagnostic technology for keeping your engine in peak condition.

We ensure:

- World-class design and manufacturing
- Collaboration with engine experts
- Sustainable, clean engines meeting applicable emissions standards
- Competitive offering
- Distributor network that provides full product support

Enjoy peace of mind with warranties and service contracts

You can be assured that your engine is always well cared for, as every Perkins engine comes complete with a comprehensive warranty, offering you genuine peace of mind. The warranty covers the following areas:

- Labour
- Materials
- Reasonable travel
- Processed claims within a two-week period

Our warranties are also supported by multilevel Extended Service Contracts that can be bought additionally, offering extra reassurance that your engine is well cared for. After all, a reputation is built on trust and reliability.

4000 Series Gas Centres of Excellence at your service

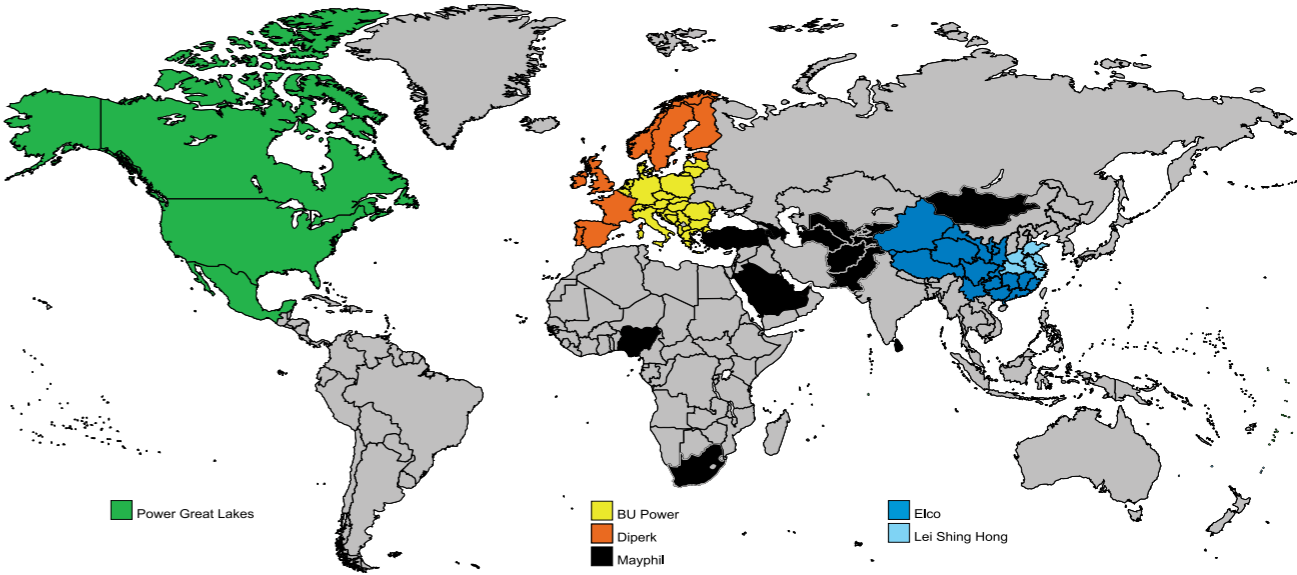
To offer you unrivalled support with your gas engine, we have launched a number of gas-specialist 4000 Series Centres of Excellence in key territories across the world.

These Centres have been appointed because they share a commitment to provide you with a complete support programme for your specific gas engine requirements.

They have the expertise and knowledge to carry out the complex gas conversions for large engines. They also oversee the installation and ensure the right product support is available in the territory where your engines are operating.

The map below shows the regions that are already covered by the 4000 Series Gas Centres of Excellence.

Find out more
To discover more about the benefits of a Perkins gas engine for your business, visit www.perkins.com/gas



Asia

Singapore

Perkins Engines (Asia Pacific) Pte Ltd
14 Tractor Road
Singapore 627973
Tel: +65 6828 7469
Fax: +65 6828 7414

China

Perkins Industrial Power Systems-Shanghai
20/F, Lei Shing International Plaza,
1319 West Yan'an Road,
Shanghai 200050
China
Tel: +86-21-22160774
Fax: +86-21-52136624

Americas

North America

Perkins Engines Inc
N4 AC 6160
PO Box 610
Mossville, IL 61552-0610, USA
1-888-PERK-ENG
Tel: +1 309 578 7364
Fax: +1 309 578 7329

South America

Perkins Motores do Brasil Ltda
Rua Alexandre Dumas
1711 Edificio Birmann 11 4 Andar
CEP 04717-004 São Paulo - SP
Brasil
Tel: +55 11 2109 2038
Fax: +55 11 2109 2089



THE HEART OF EVERY GREAT MACHINE

Europe, Middle East and Africa

Perkins Engines Company Limited
Peterborough PE1 5FQ
United Kingdom
Telephone +44 (0)1733 583000
Fax +44 (0)1733 582240

www.perkins.com