



[www.mwm.net](http://www.mwm.net)

**Energy.  
Efficiency.  
Environment.**

**MWM**  
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# 140 years of experience with energy.

## Energy

Ever since 1871, MWM has been developing and building engines and gensets in Mannheim that can supply electricity, heat, and cooling highly efficiently. Our customers enjoy economical cost-to-performance throughout the entire lifecycle of the equipment.

## Efficiency

MWM's efficiency benefits pay off long-term for all of our customers. That's because components configured and tuned to their particular requirements provide the maximum possible efficiency. To this end we offer a comprehensive range of services that guarantee long-term efficiency.

## Ecology

Thanks to its fuel-saving technology, MWM is almost unequalled in the way it deals with natural resources. At MWM, ecology goes hand in hand with economy. Our objectives are responsibility and sustainability, and that pays off for our customers.



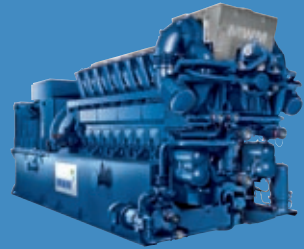
- 1871: Carl Benz, the inventor of the automobile, founds the "mechanical workshops" in Mannheim
- 1880: Production of the first stationary gas engine at MWM
- 1886: Patent no. 37435 is issued for the Patent Motor Car
- 1899: Transformation into Benz & Cie., Rheinische Gasmotorenfabrik AG
- 1910: Start of the manufacture of diesel engines
- 1953: Start of the manufacture of air-cooled small diesel engines
- 2005: DEUTZ Power Systems enters the market as system provider
- 2007: The private equity house 3i takes over DEUTZ Power Systems
- 2008: Return to the historic name MWM
- 2009: Introduction of upgrades for all genset series with more power and efficiency



TCG 2016



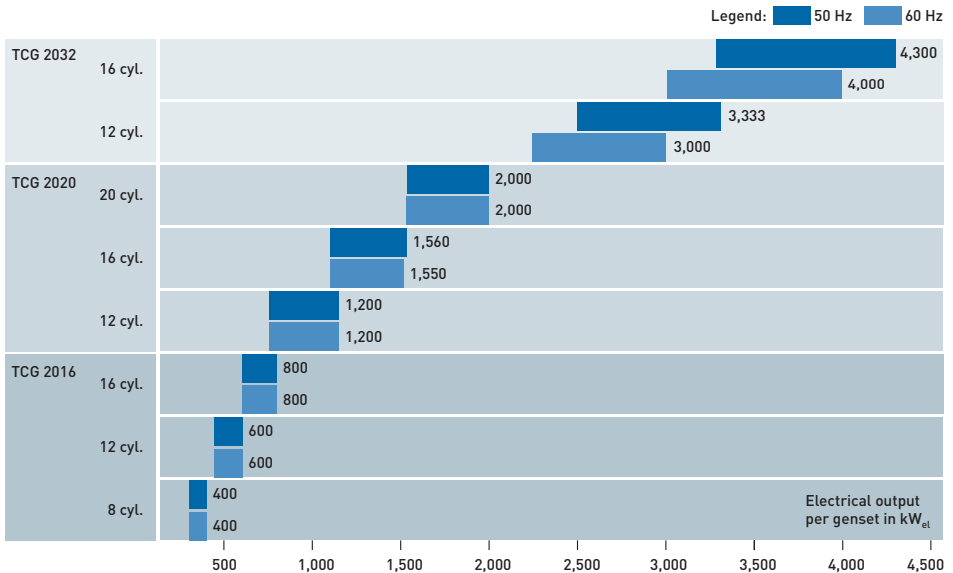
TCG 2020



TCG 2032

## Top performance: MWM gensets.

- Higher profits due to excellent efficiencies
- Low operation costs based on long service intervals and maintenance friendly engines
- Full power range between 400 kW<sub>el</sub> and 4,300 kW<sub>el</sub>
- Gensets can be operated with natural gas, biogas, landfill, sewage, and coalmine gas as well as a wide variety of special gases
- State of the art control system for genset and CHP plant. The monitoring of combustion temperatures ensures efficient operation even with fluctuating gas qualities



With our gensets we can cover a power range from 300 kW<sub>el</sub> to more than 100 MW<sub>el</sub> for decentralized power production.



# Everything under one roof: The MWM Container.

## Complete turnkey systems

- Planning, configuration, installation, service – everything from a single source and tailored precisely to your needs
- Can be used for natural gas, biogas, landfill gas, sewage gas, mine gas, and other special gases
- Comprehensive concepts, such as systems that include gas preprocessing
- Easy to transport, quick to erect

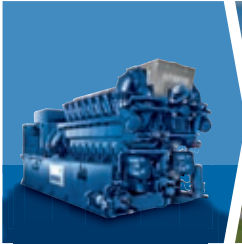
## Reliable efficiency

- Quality – made in Germany
- Worldwide references
- 140 years of experience
- Leading cogeneration expertise
- Customized designs for use under all kinds of conditions
- Long service intervals

## Includes top-level service

- TEM enables direct online access to current engine readings during operation. This means faults can be diagnosed instantly
- Complete service directly from the manufacturer of the genset
- Service-friendly design
- Worldwide service network and logistics
- Time-saving maintenance concept

# Full value chain from MWM. Engine. System. Service.



Engine/Genset



Container



Turnkey



Service

## Our business: Ready-to-go technology.

### Cogeneration

Natural gas is an important market segment that MWM covers in the best way possible with its gas engine plants for various areas of application.

### Special Gas

This fast-growing segment comprises the field of biogas as well as combustible gas emitted by the industry, raw material production and mining.

### Diesel

Diesel gensets represent a supplement to the gas engine plants.

### Greenhouse

Systems for powering and heating greenhouses and fertilizing the plant with cleaned waste gas.

### Products and services

#### Gensets

- Gas and diesel engines
- Generation of electrical energy from 400 to 4,300 kW<sub>e</sub> per unit

#### Combine heat and power generation plants

- Project-specific component scaling
- Modular concepts for maximum efficiency
- Use of waste heat

#### One-stop solutions

- Consulting, design, engineering
- Complete setup and commissioning of a plant

#### Service

- Worldwide customer service, maintenance and servicing of plants, training centers

## Delta Energy B.V. Greenhouse Complex, Netherlands

The Dutch branch of MWM built one of Europe's biggest gas engine plants. Seventeen TCG 2020 V16 engines, generating a total of 27 MW<sub>el</sub>, produce the heat and electricity required to run a 51 hectare greenhouse complex. This complex produces around 4,000 tons of tomatoes each year, enough to satisfy the fresh tomato demand of more than half a million people.



## Atlas Copco, Germany

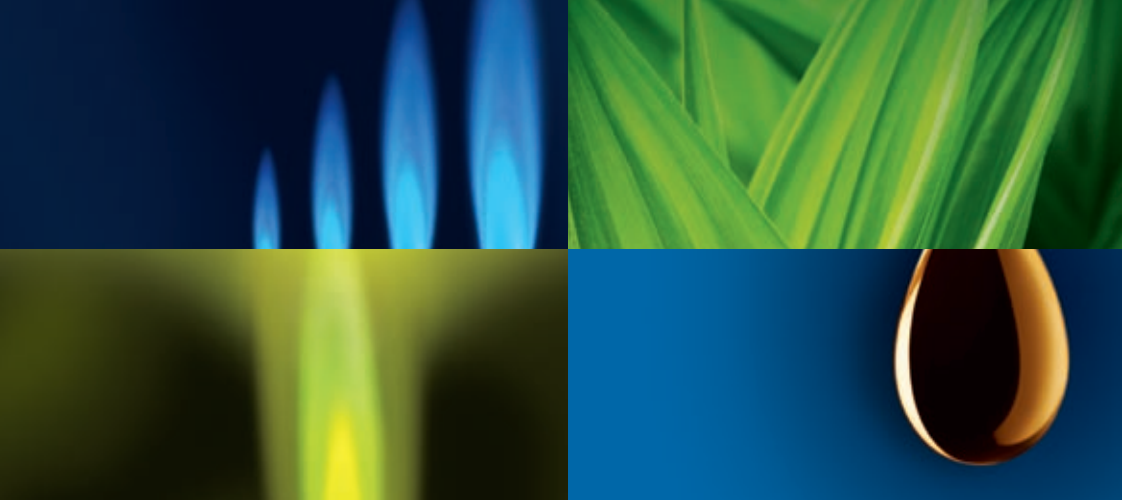
Atlas Copco, a leading manufacturer of generators, makes use of MWM engines (TCD 2016, 50/60 Hz) due to their extraordinary performance. The global availability and the excellent aftersales service guarantee a long useful life and smooth operation.



## Taiyuan City Coal Mine, China

MWM equipped Taiyuan's state coal mine with a total of three Type TCG 2020 V20 units. The system utilizes gases from the mine in order to generate electricity. This process obtained CDM certification and generates additional revenues from the sale of CO<sub>2</sub> certificates. The MWM Container made a good impression – and the operator has since ordered another four of the TCG 2020 V20.





## MWM – successful worldwide.

### Precision Energy, Bangladesh

In 2010, MWM shipped 15 TCG 2032 V16s to Precision Energy Bangladesh within just three months. The gas engines produce a constant overall output of 60 MW<sub>el</sub>. All of the electric energy that has been generated is fed into the public grid. More information about this project can be found in our MWM movie “60 MW Around the World” at [www.mwm.net](http://www.mwm.net).



### BGA Anderlingen-Ohrel, Germany

The company Burfeindt-Tomforde Energieerzeugung relies on MWM. A TCG 2016 V08 C producing 400 kW<sub>el</sub> generates 3,200 MWh of electricity and 2,552 MWh of heat each year. It is used to operate a biogas plant and to supply a district heating network. An integrated biogas processing system from MWM secures the emission reduction bonus provided by Germany’s Renewable Energy Law.



MWM GmbH  
Carl-Benz-Straße 1  
DE-68167 Mannheim  
T +49 621 384-0  
F +49 621 384-8800  
info@mwm.net

MWM Benelux B.V.  
Soerweg 13  
NL-3088 GR Rotterdam  
T +31 10 2992-666  
F +31 10 2992-677  
info-benelux@mwm.net

MWM Asia-Pacific Pte. Ltd.  
11 Kian Teck Road  
SG-628768 Singapore  
T +65 6268 5311  
F +65 6266 3039  
info-asia-pacific@mwm.net

MWM Canada Inc.  
210 Willmott St., Unit 4B  
P.O. Box 1120  
CA-K9A 4W5 Cobourg, Ontario  
T +1 905 377 1273  
F +1 905 248 3168  
info-canada@mwm.net

MWM Latin America Soluções  
Energéticas Ltda.  
Av. Dr. José Bonifácio C. Nogueira  
214 sala 418  
BR-CEP 13091-611 Campinas/SP  
T +55 19 3396-5777  
info-latin-america@mwm.net

MWM (Beijing) Co. Ltd.  
CITIC Building  
Unit 2-02  
Jianguomenwai Road 19,  
CN-100004 Beijing, P.R. China  
T +86 10 6528 5116  
F +86 10 6528 9316  
info-mwm-beijing@mwm.net

MWM Energy España S. A.  
Avda de los Artesanos, 50  
ES-28950 Tres Cantos/Madrid  
T +34 91 80745-00  
F +34 91 80745-47  
info-energy-espana@mwm.net

MWM Energy Hungaria Kft.  
Ezred u.1-3  
HU-1044 Budapest  
T +43 5242 21300  
F +43 5242 21300-600  
info-hungaria@mwm.net

MWM Austria GmbH  
Münchner Straße 22  
AT-6130 Schwaz  
T +43 5242 21300  
F +43 5242 21300-600  
info-austria@mwm.net

MWM France SAS  
Péripark Gennevilliers  
99/101 Avenue Louis Roche Bât E5  
FR-92230 Gennevilliers  
T +33 14790 7780  
F +33 14790 7781  
info-france@mwm.net

MWM of America, Inc.  
1750 Breckinridge Parkway  
Suite 500  
US-Duluth, GA 30096  
T +1 770 279 6720  
F +1 770 279 6719  
info-america@mwm.net

MWM Energy Australia Pty. Ltd.  
21 McDonalds Lane  
AU-3170 Mulgrave, Victoria  
T +61 3 9262-3000  
F +61 3 9262-3033  
info-energy-australia@mwm.net