

# MWM 25H2-Kit for TCG 3016

## Natural gas applications with hydrogen admixture of up to 25 vol.%

- TCG 3016 factory fit for hydrogen admixture of up to 25 vol.%\*
- Supports energy transition and greenhouse gas reduction
- Flexible operation for natural gas with hydrogen admixture of up to 25 vol.%

\*TCG 3016 retrofit kit available

The TCG 3016 series now offers the possibility of natural gas operation with hydrogen admixture of up to 25 vol.% for both 50 Hz and 60 Hz. In addition to new engines, retrofit solutions are available for existing units in the field. It should be noted that the natural gas generator set can already be operated with a hydrogen admixture of up to 10 vol.% without any technical modifications.

## TCG 3016 – 25H2-Kit for admixture of 10–25 vol.%

### Controls

Optimized ignition parameters



### Exhaust wastegate

All cylinder configurations



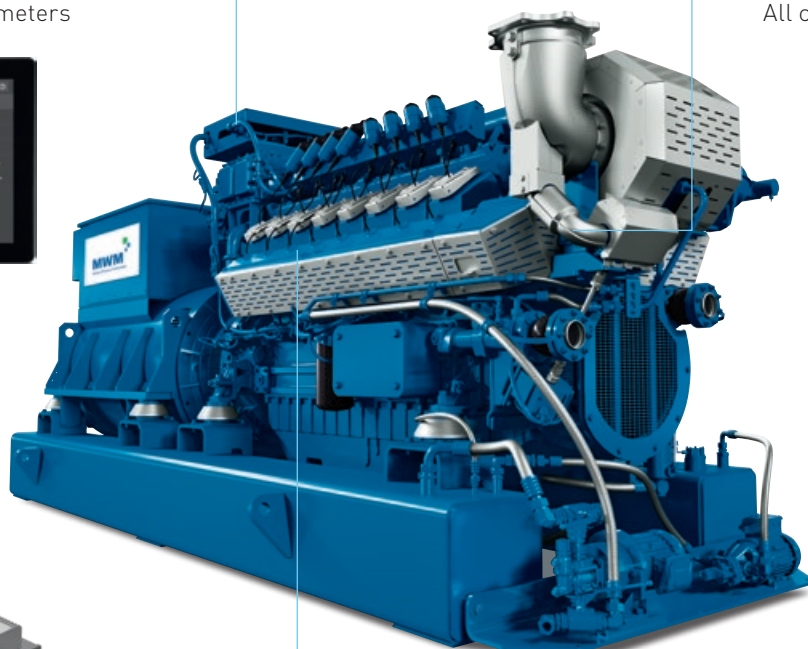
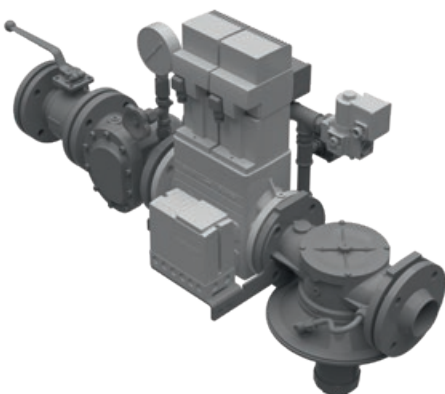
### Intake manifold

Cylinder individual flame arrestor



### Gas trains (zero- and pre-pressure)

H<sub>2</sub>-capable gas trains



# Product improvements and changes

## Controls

- Optimized ignition parameters to achieve best performance with hydrogen admixture

## Gas trains (zero- and pre-pressure)

- Compatible with applicable hydrogen and safety standards to ensure safe operation

## Exhaust wastegate

- For all cylinder configurations

## Intake manifold

- Cylinder individual flame arrestor designed to specifically function with hydrogen admixtures
- Assure safe function with hydrogen admixtures

## Natural gas applications with 25 vol.% H<sub>2</sub>

NO<sub>x</sub> ≤ 500 mg/Nm<sup>3</sup>, 1.0 g/bhp·h<sup>1)</sup>

Engine type	TCG 3016	V08	V08	V12	V12	V16	V16	V16
Configuration		P+ <sup>4)</sup>	P+ <sup>4)</sup>	P+ <sup>4)</sup>	P+ <sup>4)</sup>	P+ <sup>4)</sup>	P+ <sup>4)</sup>	S+ <sup>5)</sup>
Frequency	Hz	50	60	50	60	50	60	50
Electrical power	kW	400	400	600	600	800	800	1,000
Thermal output <sup>2)</sup>	kW	403	423	614	637	816	848	1,092
Electrical efficiency <sup>3)</sup>	%	42.8	41.9	43.0	42.4	43.3	42.2	41.5
Thermal efficiency	%	43.1	44.4	44.1	45.0	44.2	45.1	45.7
Total efficiency	%	85.9	86.3	87.1	87.4	87.5	87.3	87.2

1) 5% O<sub>2</sub> and dry exhaust gases.

2) ± 8%.

3) According to ISO 3046-1 at U = 0.4 kV, cosphi = 1.0 for 50 Hz.

4) P+ = High Efficiency plus 25H2-Kit. Optimized for high electrical efficiency with 25 vol.% hydrogen kit.

5) S+ = High Density plus 25H2-Kit. Increased power density with 25 vol.% hydrogen kit.

## TCG 3016 with 25H2-Kit:

Ready today for tomorrow's natural gas grid introduction of 25 vol.% hydrogen.