

MWM 25H2-Kit for TCG 3020

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

- TCG 3020 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 3020 retrofit kit available

The TCG 3020 series now offers the possibility of natural gas operation with hydrogen admixture of up to 25 vol.%. 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 3020 – 25H2-Kit for admixture of 10–25 vol.%

Controls

Optimized ignition parameters



Explosion relief valve

Safe operation with hydrogen



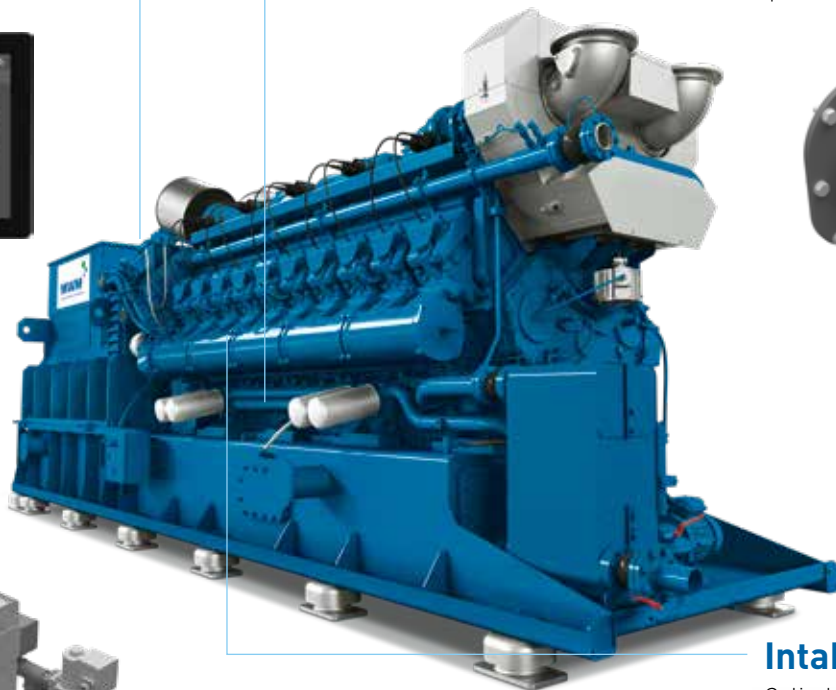
Intake manifold

Cylinder individual flame arrestor



Gas trains (zero- and pre-pressure)

H₂-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

Explosion relief valve

- Safe operation with hydrogen

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.% H₂

NO_x ≤ 500 mg/Nm³, 1.0 g/bhp·h¹⁾

Engine type	TCG 3020	V12	V12	V16	V16	V20	V20	V20	V20
Configuration		P+ ⁴⁾	R+ ⁵⁾	P+ ⁴⁾	R+ ⁵⁾	P+ ⁴⁾	R+ ⁵⁾	PV+ ⁶⁾	RV+ ⁷⁾
Electrical power ²⁾	kW	1,380	1,380	1,840	1,840	2,300	2,300	2,000	2,000
Electrical efficiency	%	44.6	43.9	44.6	43.6	44.6	43.6	44.0	43.3
Thermal efficiency ³⁾	%	42.5	43.6	42.6	43.9	42.6	43.9	43.6	44.6
Major overhaul	Oh	Up to 80,000							
Total efficiency	%	87.1	87.5	87.2	87.5	87.2	87.5	87.6	87.9

1) 5% O₂ and dry exhaust gases.

2) According to ISO 8528-1.

3) ± 8 %.

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

5) R+ = High Response plus 25H2-Kit. Optimized for high total efficiency with 25 vol.% hydrogen kit.

6) PV+ = High Efficiency for Requested Power plus 25H2-Kit. Optimized for high electrical efficiency at requested power with 25 vol.% hydrogen kit.

7) RV+ = High Response for Requested Power plus 25H2-Kit. Optimized for high total efficiency at requested power with 25 vol.% hydrogen kit.

TCG 3020 with 25H2-Kit:

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