

TCG 3016 50Hz

PERFORMANCE DATA SHEET



Efficiency Goes Digital

HIGH EFFICIENCY, LOW OPERATING COSTS

The TCG 3016 has the highest efficiency in its output class through unique combination of long maintenance intervals (80,000 operating hours for natural gas) and high efficiency (electrical efficiency up to 43.5%).

REDUCED INSTALLATION AND BUILDING COSTS

The TCG 3016 has a smaller setup area than comparable gensets due to its compact design and integrated tanks for daily refilling. Due to the flanged genset concept, the vibration decoupling takes place directly between the gas engine and the base frame, helping to further reduce setup costs.

OPTIMISED LUBRICANT CONSUMPTION

Greatly reduced oil consumption of less than 0.1 g/kWh - the TCG 3016 gas engine boasts the lowest lubricant consumption in its class.

FULLY DIGITALISED ENERGY SOLUTIONS

TPEM (Total Plant & Energy Management) eliminates the need for additional control systems, as all power plant data for the genset, backup genset, and plant control are combined in one system, resulting in high efficiency through optimum control of the power plant.

NATURAL GAS APPLICATIONS

$\text{NO}_x \leq 500 \text{ mg} / \text{Nm}^{3,2)}$

ENGINE TYPE	V08	V12	V16
Electrical output ³⁾	400kW	600kW	800kW
Mean effective pressure	18.9 bar	18.9 bar	18.8 bar
Thermal output ⁴⁾ ±8 %	404kW	618kW	821kW
Electrical efficiency ³⁾	43.1%	43.3%	43.5%
Thermal efficiency ³⁾	43.6%	44.6%	44.6%
Total efficiency ³⁾	86.7%	87.9%	88.1%

BIOGAS APPLICATIONS

$\text{NO}_x \leq 500 \text{ mg} / \text{Nm}^{3,2)}$

Sewage gas (65% CH₄ / 35% CO₂)

Biogas (60% CH₄ / 32% CO₂, Rest N₂)

Landfill gas (50% CH₄ / 27 % CO₂, Rest N₂)

Minimum heating value H_u = 5,0 kWh / Nm³

ENGINE TYPE	V08	V12	V16
Electrical output ³⁾	400kW	600kW	800kW
Mean effective pressure	18.9 bar	18.9 bar	18.8 bar
Thermal output ⁴⁾ ±8 %	394kW	599kW	791kW
Electrical efficiency ³⁾	42.8%	42.9%	43.1%
Thermal efficiency ³⁾	42.2%	42.8%	42.6%
Total efficiency ³⁾	85.0%	85.7%	85.7%

1) Transport dimensions for gensets, components set up separately must be taken into consideration.

2) $\text{NO}_x \leq 500 \text{ mg} / \text{Nm}^3$; exhaust gas dry at 5% O₂.

3) According to ISO 3046-1 at U = 0,4 kV, cosphi = 1,0 for 50Hz, a minimum methane number of MN 70 for natural gas and MN 134 (sewage gas) for biogas applications.

4) Exhaust gas cooled to 120°C for natural gas and 150°C for biogas.

Data for special gases and dual gas operation on request.

The values given on these datasheets are for information purposes only and not binding. The information given in the offer is decisive.