WÄRTSILÄ 31SG
THE MOST EFFICIENT GAS ENGINE GENERATING SET

The Wärtsilä 31SG gas engine generating set offers both the highest available open-cycle efficiency as well as unparalleled dynamic capabilities. The engine's outstanding efficiency enables a reduced environmental footprint and a lower total cost of ownership.

The generating set is specifically designed for flexible power generation, providing a tool for the integration of high levels of energy from renewable sources. It creates a balancing link between power generation and consumption, thus providing effective system level resilience. The Wärtsilä 31SG engine generating set is typically installed in medium sized de-centralised power plants having multi-engine configurations to provide a net plant load of from 20 to 200 MW.

Wärtsilä helps customers unlock the value of the energy transition by optimising their energy systems and future-proofing their assets. We offer flexible power plants, energy management systems, and storage, as well as engineering, procurement and construction (EPC) deliveries and full lifecycle support that ensure guaranteed performance.

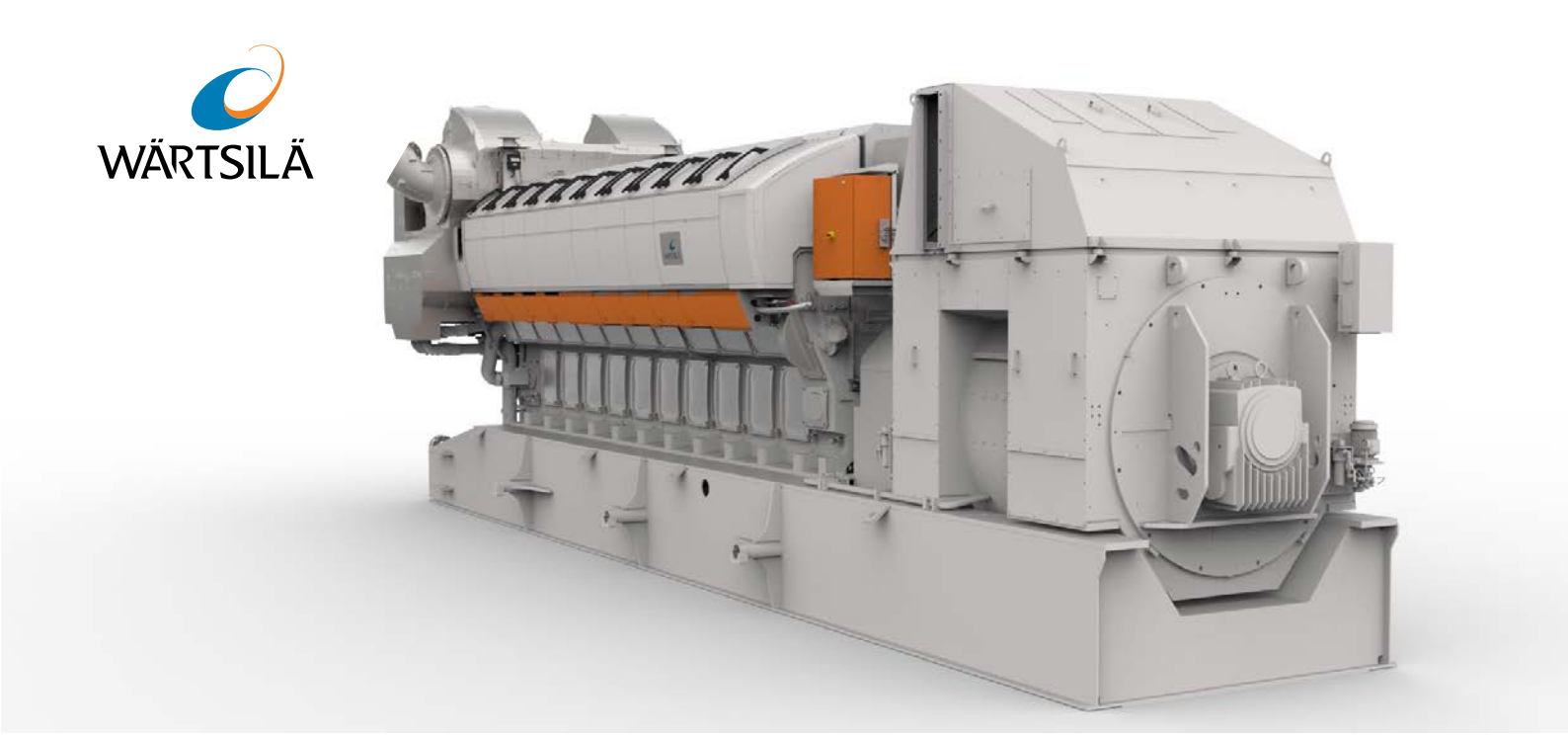
Key features

- World-class open-cycle efficiency of more than 50%
- Time to synchronisation is just 30 seconds from start-up command
- Time to full load is just 2 minutes from start-up command
- High partial load efficiency
- Rigid construction exclusively designed to accommodate a high firing pressure and two stage turbocharging
- Adaptability for various gas qualities
- Excellent load following capabilities
- Optimised performance and efficiency supported by Wärtsilä Lifecycle solutions

FLEXIBLE SOLUTION FOR TRANSITION BASELOAD BALANCING RENEWABLES

CAN OPERATE ON VARIOUS GAS QUALITIES

GETS THE MOST OUT OF NATURAL GAS - THE CLEANEST FOSSIL FUEL AVAILABLE



MAIN TECHNICAL DATA

Wärtsilä 31SG	
Cylinder configurations	12V, 16V, 20V
Cylinder bore	310 mm
Piston stroke	430 mm
Engine speed	750 rpm (50 Hz) / 720 rpm (60 Hz)
Mean piston speed	10.8 m / s (50 Hz) / 10.3 m / s (60 Hz)

Wärtsilä 31SG – base rating

Rated electrical power (kW)

Genset type	50 Hz	60 Hz
12V31SG	7 034	6 779
16V31SG	9 403	9 075
20V31SG	11 779	11 377

Wärtsilä 31SG – efficiency optimised

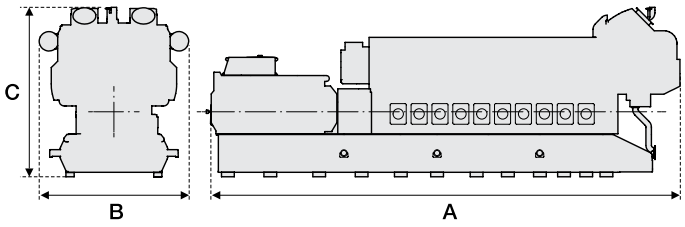
Rated electrical power (kW)

Genset type	50 Hz	60 Hz
12V31SG	6 448	6 195
16V31SG	8 620	8 293
20V31SG	10 798	10 396

Maximum transportation dimensions (mm) and weights (tonnes)[1]

Genset type	Length (A)	Width (B)	Height (C)	Dry weight
12V31SG	11 126	3 785	4 985	127
16V31SG	12 706	3 893	5 034	150
20V31SG	14 412	3 893	5 090	182

1 There are a number of dismantling options available for transportation of the generator set. These include different options for reduced weight and height. Please contact Wärtsilä for further information.



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