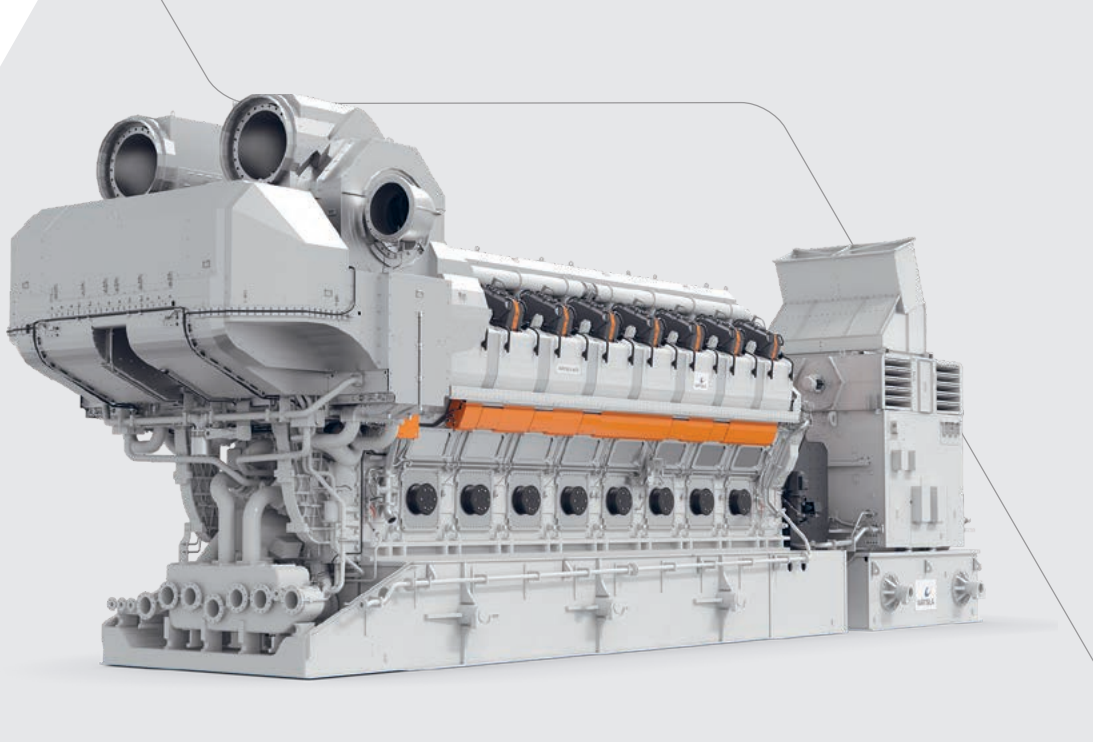


WÄRTSILÄ 46TS-SG

Gas engine generating set

The Wärtsilä 46TS-SG is a four-stroke, spark-ignited, lean-burn gas engine generating set offering exceptional output, efficiency, and flexibility. Evolved from a long line of proven and reliable Wärtsilä engines with millions of running hours, this large-bore engine has a 2-stage turbocharging system that enables superior performance, even in challenging environmental conditions.

Wärtsilä 46TS is designed for balancing renewables and to operate cost-efficiently on baseload. The engine's improved output and efficiency save fuel and costs while keeping emissions to a minimum. Its flexibility features, such as fast starting capability with unlimited starts and shut-downs maximise your revenue streams. Wärtsilä 46TS is based on future-proof technology that can run on sustainable fuels in the future.

We help our customers in decarbonisation by developing market-leading technologies such as flexible power plants that can be delivered as engineered equipment (EEQ) or as engineering, procurement, and construction (EPC). With our full lifecycle support, we ensure the guaranteed performance of the plant.

Key benefits

- High power output (23.4 MW) ensures a small footprint and lowers costs
- World-class efficiency (51.3%) saves fuel and reduces emissions
- Industry-leading flexibility with 2-minute ramp-up time and no minimum up- or downtime requirements
- Futureproof platform that can run on sustainable fuels in the future

2 min.
from start to full load

51.3
% electrical efficiency

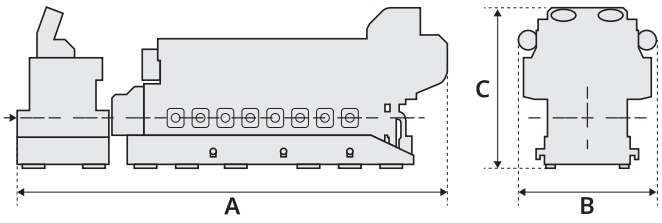
23.4
MW mechanical output

Main technical data

Engine generating set		
Cylinder configurations	16V	18V
Cylinder bore	460 mm	
Piston stroke	580 mm	
Engine speed	600 rpm	
Performance [1]		
Rated electrical power	20.38 MW 50/60 Hz	22.93 MV 50/60 Hz
Electrical efficiency (%)	51.3%	
Heat rate (kJ/kWh)	7 020 kJ/kWh 50/60 Hz	7 060 kJ/kWh 50/60 Hz
Loading and unloading		
Fast connection to grid and full load	120 seconds	
Normal connection to grid and full load	5 minutes	
Regular start time	30 seconds	
Shut-down time	120 seconds	
Ramp rate (hot, load / sec)	1% / second	
Minimum load		
Unit level	10%	
Plant level	Equal to minimum load of one unit	
Minimum up- & down times		
Minimum up-time	No limitation	
Minimum down-time	No limitation	

Maximum transportation dimensions (mm) and weight (tonnes)[2] (16V / 18V)				
Genset type	**Length (A)**	**Width (B)**	**Height (C)**	**Dry weight**
Wärtsilä 46TS-SG	18 902 / 19 952 mm	5 891 / 5 891 mm	6 688 / 6 688 mm	359 / 381 tons

1 Rated electrical power and electrical efficiencies are given at generator terminals at 100kPa ambient pressure, 25°C suction air temperature, and 30% relative humidity, and without engine-driven pumps. Power factor 1.0 (site). NOx emission level 90ppm @15% O2 dry. Electrical efficiency and heat rate with 5% tolerance according to ISO 3046-1. Gas LHV >28MJ/Nm3. Gas methane number >80. Ambient conditions, fuel, and local emission limits are impacting on generating set's performance. Please contact Wärtsilä for project-specifically calculated performance data.
2 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. Loading and unloading values are indicated in engine hot conditions. Please contact Wärtsilä for project-specific loading and unloading performance.



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