

WÄRTSILÄ 34SG BALANCER GAS ENGINE GENERATING SET

The Wärtsilä 34SG Balancer is a four-stroke, spark-ignited, lean-burn gas engine generating set. It is optimised for balancing renewable power generation and provides flexible yet affordable peak demand generation and firming for energy systems with a high and growing share of renewables. It also offers unique fast-starting capability, which enables rapid response to fluctuations inherent to renewable generation.

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

Key benefits

- High power density for balancing and peaking applications
- No start cost, limitations nor degradation in number of starts
- Minimal water consumption
- Unmanned standby and remote control capable
- Runs on natural gas, biogas, synthetic methanol and is capable of hydrogen blending
- Fast reaction to changing dispatch conditions
- Optimised performance and reliability supported by Wärtsilä Lifecycle solutions

2

Minutes to full load

10.8

MW Electrical power

47.6

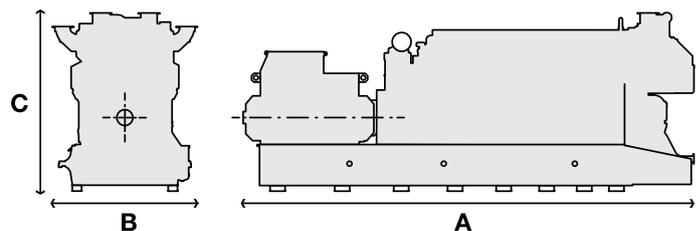
% Electrical efficiency

Engine generating set		
Cylinder configurations	20 V	
Cylinder bore	340 mm	
Piston stroke	400 mm	
Engine speed	750 rpm (50 Hz), 720 rpm (60 Hz)	
Performance ¹		
Rated electrical power (kW)	10 777 (50 Hz) 10 368 (60 Hz)	
Electrical efficiency (%)	47.6 (50 Hz) 47.5 (60 Hz)	
Heat rate kJ/kWh	7560 (50 Hz) 7586 (60 Hz)	
Loading and unloading		
	Connected to grid	Full load
Regular start time (min)	< 2	< 5
Fast start time (min:sec)	00:30	< 2:00
Stop time (min)	1	
Ramp rate (hot, load/min)	> 100%	

Maximum transportation dimensions (mm) and weights (tonnes) ²				
Genset type	Length (A)	Length (B)	Height (C)	Dry weight
20V34SG	13 142	3 350	4 573	136

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 with 5% tolerance. Gas LHV >28MJ/Nm3. Gas methane number >80. Site conditions, fuel and applicable emission limits may have an impact on performance figures. Please contact Wärtsilä for project-specific performance data.

² There are different dismantling options available to reduce weight and height for transporting. Please contact Wärtsilä for further information.



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