



Wärtsilä 31SG Balancer

More power when you need it

As renewables increasingly replace traditional baseload generation, there's a growing need to shore up the grid's stability with balancing capacity. Power producers need to invest in flexible technologies that provide fast-ramping balancing power and that can be scaled up as the share of renewables in the power system increases.

The Wärtsilä 31SG Balancer is designed to provide flexible grid capacity even in adverse weather conditions – which means that renewables can always perform as the lowest-cost, most resilient power source for grids worldwide.

The Wärtsilä 31SG Balancer gives you the flexible capacity you need with a low initial investment and optimized OpEx for balancing applications. The solution's optimized features respond to the demand of renewable fluctuations without compromising energy reliability and efficiency.

Wärtsilä balancers offer dynamic operational capability with a start-to-full-load time of just two minutes. A multi-unit balancing power plant

can also operate optimally even at minimal loads. Our flexible and scalable balancing solutions are an ideal choice as they offer unlimited starting and shutdown with no additional cost.

Electrical efficiency above 50% not only means lower emissions, but it also helps to secure your investment, even when gas prices are volatile, by reducing consumption. Wärtsilä engines can operate on gas pipeline pressure without a compressor

and with minimal water usage while delivering power in extreme conditions. And when it comes time to fully decarbonize operations, Wärtsilä engines can be converted to run on carbon-neutral future fuels, so you won't be stuck with stranded assets.

The solution is based on three fully integrated key components: the Wärtsilä 31SG Balancer engine, prefabricated modules for cost-efficient plant construction, and Wärtsilä Lifecycle services.

Key benefits of the Wärtsilä 31SG Balancer



LOWER YOUR COST PER KW

Now that the Wärtsilä 31SG is 8% more powerful, it is the most powerful engine in its size category

SPEND LESS ON PLANT CONSTRUCTION

Prefabricated, quality-controlled modules mean faster plant set up so you can start producing power more quickly

GET PREDICTABLE COSTS WITH LIFECYCLE SERVICES

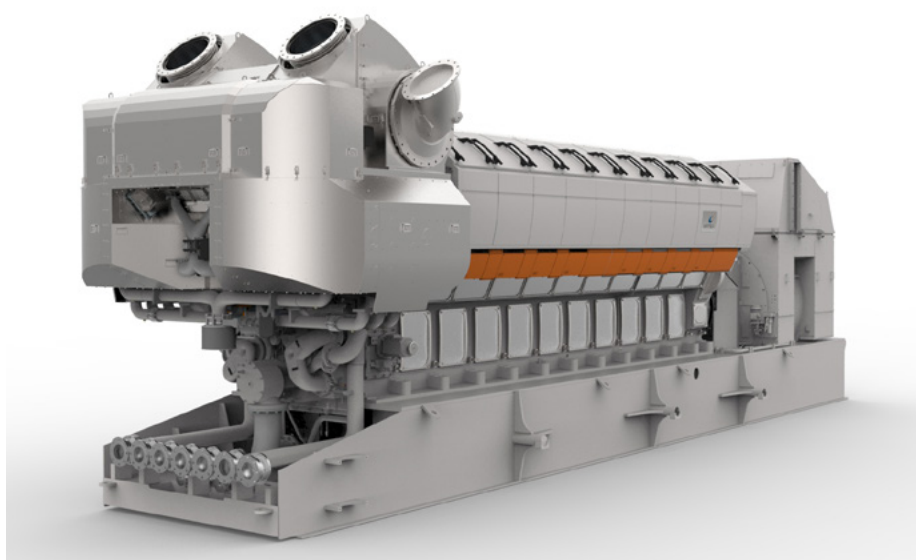
Remote support enables leaner operations and Wärtsilä can guarantee plant performance

BENEFIT FROM A FUTURE-PROOF INVESTMENT

Operate on natural gas, biogas or hydrogen blends already today – and convert to run on future fuels

The Wärtsilä 31SG Balancer engine – more power when you need it

Our next generation balancer is a power-optimized version of the ground-breaking, ultra-efficient Wärtsilä 31SG. Bringing you now even more power while still maintaining high efficiency for the same investment, the Wärtsilä 31G Balancer engine is an ideal solution for balancing renewable power generation. The solution is cost-efficient as you need fewer engines to meet demand and can still benefit from low fuel consumption and reduced emissions.



Key benefits of the engine

- Upgraded for lower cost per kW
- 8% more power meaning fewer engines needed to meet demand
- Electrical efficiency above 50% means lower fuel consumption and CO2 emissions

Cost-efficient and fast plant construction

With our cost-efficient plant construction based on prefabricated, high-quality power plant modules, you can start generating power faster.

The design allows you to pick and choose the desired functionality and equipment based on your project need. The heart of the plant is the Power unit that consists of the engine and the essential equipment. This can be installed on location in days instead of weeks to start generating power more quickly for lower costs and faster ROI.

The Power unit can be complemented with process modules that enable easy integration of auxiliary equipment,

process media, and filtration. We also provide Electrical modules that enable integration of the low voltage and medium voltage systems.

All module interfaces are streamlined and simplified for quick installation and easy integration to your systems and facilities. Modularity also ensures that the plant can be quickly scaled up as needed, allowing you to integrate more renewables in the future.

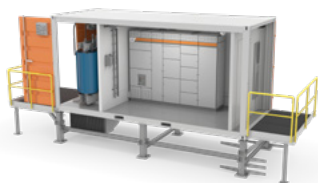
The Power unit can be installed into your own facility, or you can utilize our pre-engineered Enclosure and supporting modules that are ready for outdoor installation.



Power unit



Process modules



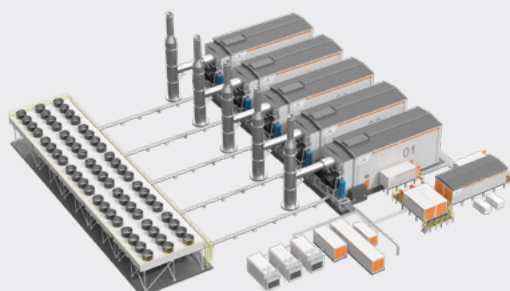
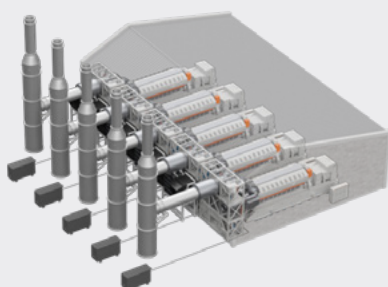
Electrical modules



Enclosure

Key benefits of the plant construction

- Simplified plant construction for cost-efficiency
- Install engine equipment in days thanks to our prefabricated modules
- Reduce time-to-electricity with 30% less site work
- Integrate a growing number of renewables with scalable and intelligent plug and play modules



Future-proof technology ensures peace of mind

With Wärtsilä, you won't be stuck with stranded assets. It's understandably difficult to commit to new technology as there is no crystal-clear visibility into what the dominant future fuel will be. The good news is that our engines are flexible. This means that whatever fuels become dominant in the future, Wärtsilä engines will be capable of adapting efficiently to any single or combination of fuels. Indeed, today, the Wärtsilä 31SG Balancer can already be run on natural gas, biogas, and hydrogen blends to help keep emissions to a minimum.

Key benefits

- Run today on natural gas, biogas, and hydrogen blends
- In the future, the engine has the capability to run on carbon-neutral sustainable fuels either with tuning alone or through conversions





WÄRTSILÄ

Lifecycle services for better performance

The economic lifespan of power plants can be two to three decades. Wärtsilä Lifecycle Services support you in de-risking your investment with customised operations and maintenance plans to help you meet your specific needs during the lifecycle of the power plant. We can tailor both performance guarantees as well the included products and services in order to deliver the expected lifecycle value.

Both remote and on-site support is available through data connectivity and digital technologies. Wärtsilä's Expertise Centers feature advanced technology and highly developed security. Our customers can receive 24/7 support, along with unmatched guidance, real-time data analytics, and quick response to plant issues.

We offer several solutions depending on your needs:



Wärtsilä Optimized Maintenance

we take full responsibility for maintaining your power plant to ensure safe and reliable operations.



Wärtsilä Guaranteed Asset Performance

we take full responsibility for maintaining your power plant and guarantee its performance.



Wärtsilä Operation and Maintenance

we take full responsibility for operating and maintaining your power plant and guarantee its performance.

Key benefits

- Guaranteed performance of Wärtsilä-operated power plants, with over 99% annual engine reliability
- Get predictable costs and a 20% lower fixed onsite operation costs
- Leverage real-time data and remote support with 96% of support cases solved remotely

Interested to learn more about the Wärtsilä 31SG Balancer?

Contact us:

www.wartsila.com/31balancer



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