



PowerWave 33 60 – 300 kVA

Standalone
Three-phase
UPS system

➤ Unmatched
power
performance.



continuous power
protection availability



PowerWave 33 – the powerhouse.



Newave has always set global standards in uninterruptible-power-supply solutions. The latest generation of PowerWave 33 is the continuation of Newave's renowned tradition of developing state-of-the-art UPS systems, focusing on delivering the best combination of **energy-efficiency** and **overall power performance** in the industry.

Offering maximum power protection, the PowerWave 33 helps you to use less energy and takes up less space, resulting in significant cost savings.

The PowerWave 33's exceptional design meets all modern requirements of building and operating energy-efficient and environmentally friendly data centres. The PowerWave 33 employs transformerless double conversion UPS transformerless topology and is available from 60 to 300 kVA.

The PowerWave 33 boasts features and options that cater to customers' needs, including the flexibility to accommodate an increase in power requirements and to provide n+1 parallel redundancy. Easy installation and maintenance form the basis of the core design for this stand-alone UPS system with front access electrical connections and fully serviceable components.



96%
AC-AC Efficiency
1.0
Output Power Factor

Highlights:

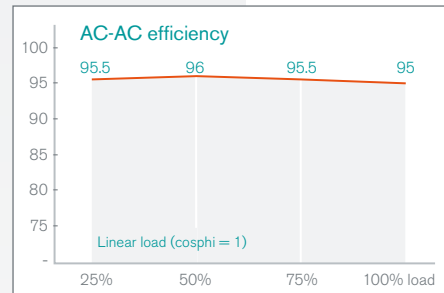
- Up to 96% efficiency in double conversion mode minimises running costs
- Maximised output active power (kVA = kW)
- Excellent input performance minimises installation costs
 - THDi < 3.5%
 - PF > 0.99
- Power density 363 kW/m² minimises space requirements
- Up to 10 units in parallel configuration for maximum scalability
- Full front access maximises system serviceability

High efficiency and lowest total cost of ownership.

Power performance, which is measured by system-efficiency, input THDi and input and output power factor is the foundation of the PowerWave 33. In the normal online double conversion mode, the PowerWave 33 delivers class-leading efficiency of up to 96%.

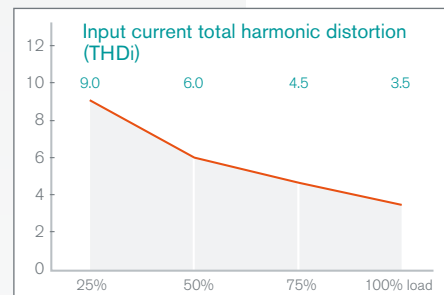
Efficiency

With a transformerless design and Energy Saving Inverter Switching (ESIS) technology, the PowerWave 33 delivers high efficiency at partial and full load (up to 96% in double conversion online mode). This level of efficiency dramatically reduces the total cost of ownership of the UPS system during its life cycle. In addition to lower operating costs, the PowerWave 33 extends the service life of components, thereby greatly increasing overall power performance.



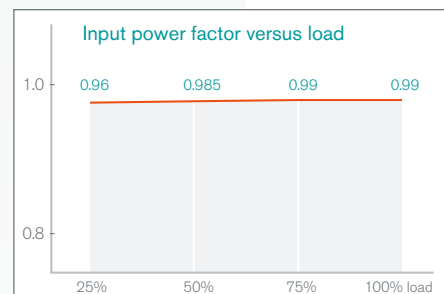
Low input current total harmonic distortion (THDi)

The PowerWave 33 actively manages the input current total harmonic distortion (THDi) at a low level (3.5% at 100% load). Newave's unique technology neutralises the emission of harmonics at the input of the UPS system, providing greater reliability of operations for circuit breakers and extending the overall service life of the equipment. Low harmonic distortion saves unnecessary oversizing of gensets, cabling and circuit breakers, avoids extra heating of input transformers and extends the overall service life of all upstream components.



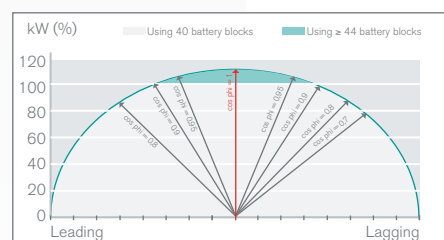
Near-to-unity input power factor

Thanks to the near-to-unity input power factor of 0.99, even with partial loads, the PowerWave 33 reduces the input installation costs by enabling the use of smaller cables. Furthermore it avoids the unnecessary use of additional phase compensating devices, which consequently keeps the overall UPS-efficiency high.



Fully rated output power (blade-friendly)






The PowerWave 33 can supply loads 0.9 leading to 0.9 lagging without derating.

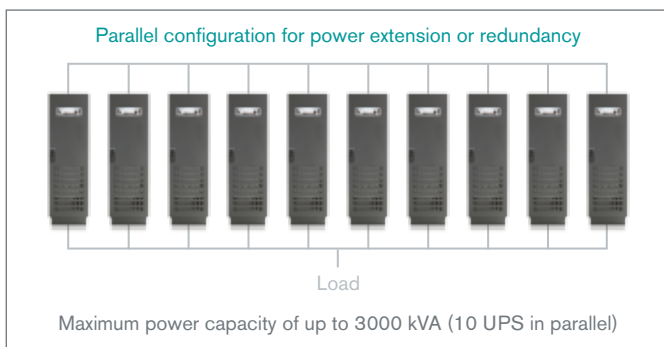


Solution flexibility.

PowerWave 33 – product range.

The PowerWave 33 is available in various configurations. The smaller units (60, 80 and 100 kVA) are available with integrated enclosures to accommodate batteries. Front access facilitates installation and servicing of the batteries. To accommodate the batteries for PowerWave 33 units ranging from 120 to 300 kVA, external battery enclosures are required.

Product types	60–100 kVA	60–100 kVA	60–100 kVA	120–200 kVA	250–300 kVA
					
Included battery enclosure	No	Yes, battery enclosure type A	Yes, battery enclosure type B	No	No
Dimensions W x H x D (mm)	550 x 1820 x 750	970 x 1820 x 750	1180 x 1820 x 750	850 x 1820 x 750	1100 x 1920 x 750



Advanced scalable architecture.

If additional capacity or redundancy is needed, up to 10 independent UPS units can operate in parallel configuration, achieving a total power capacity of up to 3000 kVA. In all parallel configurations, each PowerWave 33 unit operates independently but is securely synchronised with the others using the Newave DPA (Decentralised Parallel Architecture). This scalable architecture keeps the purchasing and operating costs of your power protection solutions exceptionally low. As your power requirements grow, the UPS system grows with them – thanks to its flexible scalability – even in the most confined spaces.

Technical specifications.

GENERAL DATA	60 kVA	80 kVA	100 kVA	120 kVA	160 kVA	200 kVA	250 kVA	300 kVA
Output power max.	60 kW	80 kW	100 kW	120 kW	160 kW	200 kW	250 kW	300 kW
Output power factor	1.0 ⁽¹⁾							
Topology	True online double conversion							
Parallel configuration	Up to 10 units							
UPS type	Standalone							
Cable entry	Front access							
Inbuilt batteries	Optional			-				
INPUT								
Nominal input voltage	3 x 380/220 V + N, 3 x 400/230 V + N, 3 x 415/240 V + N							
Voltage tolerance (Ref. to 3 x 400/230 V)	For loads <100% (-23%, +15%), <80% (-30%, +15%), <60% (-40%, +15%)							
Input distortion THDi	<3.5% at 100%							
Frequency	35–70 Hz							
Power factor	0.99 at 100% load							
OUTPUT								
Rated output voltage	3 x 380/220 V + N, 3 x 400/230 V + N, 3 x 415/240 V + N							
Voltage distortion	<2%							
Frequency	50 or 60 Hz							
Overload capability	10 min.: up to 125% or 1 min.: up to 150%							
Unbalanced load	100% possible							
Crest factor	3 : 1							
EFFICIENCY								
Overall efficiency	Up to 96%							
In eco-mode configuration	98%							
ENVIRONMENT								
Storage temperature	–25–70°C							
Operating temperature	0–40°C							
Altitude configuration	1000 m without derating							
BATTERY								
Battery type	Sealed, lead-acid, maintenance-free or NiCd							
COMMUNICATIONS								
LCD display	Yes							
LEDs	LED for notification and alarm							
Communication ports	USB, RS-232, potential-free contacts							
STANDARDS								
Safety	IEC/EN 62040-1-1, IEC/EN 60950-1							
Electromagnetic compatibility (EMC)	IEC/EN 62040-2, IEC/EN 61000-3-2 IEC/EN 61000-3-3, IEC/EN 61000-6-2							
Performance	IEC/EN 62040-3							
Product certification	CE							
Protection rating	IP 20							
Manufacturing	ISO 9001:2008, ISO 14001:2004							
WEIGHT, DIMENSIONS								
Weight (without batteries)	230 kg	240 kg	245 kg	280 kg	290 kg	310 kg	390 kg	410 kg
Dimensions W x H x D (mm)	550 x 1820 x 750			850 x 1820 x 750			1100 x 1920 x 750	
Dimensions with battery enclosures W x H x D (mm)	970 (or 1180) x 1820 x 750			-			-	



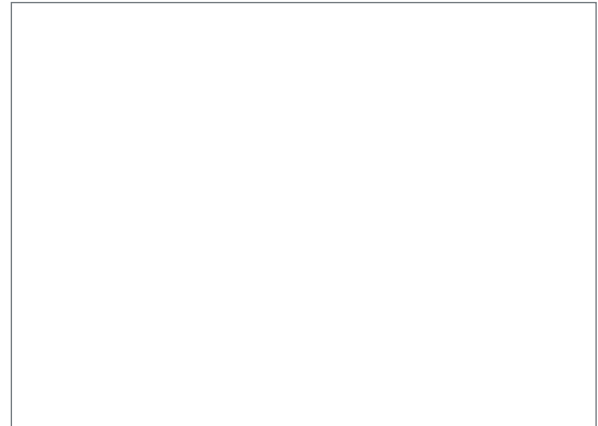
(1) For number of batteries/string ≥ 44

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