Aunilec®
Onduleurs • Redresseurs • Batteries

Power solutions

VEGA HE

VT-HE 100-800kVA 3/3

High efficiency & reliable power protection for:

- Datacenter and IT Systems
- Industrial Applications
- Medical, diagnostic and test devices
- Bank and Finance applications
- Emergency lighting EN50171 - NFC71815

ECO Mode

Maximised cost savings

The build specifications offered by the VEGA HE range and the exceptional level of efficiency help to absorb the TCO, from the installation stage to daily operation, reducing power costs for the UPS, air conditioning system and installation area costs thanks to its reduced size and weight.

HE - High Efficiency

VEGA HE series is available from 100 to 800 kVA. The UPS features a new on-line double-conversion technology utilising IGBT and DSP (Digital Signal Processor) control to provide maximum protection, power quality and green energy for any type of application including datacentres, disaster recover sites, telecoms rooms, industrial processes and security applications.

High efficiency stands for higher active power available if compared with legacy UPS thanks to output unitary power factor (up to +25% if compared unity with same UPS at p.f. 0,8).

Nominal power is granted with no downgrading independently from operating temperature in the range 10÷40°C. Furthermore, control circuits and specifically designed firmware grant outstanding online double conversion efficiency up to 95,5%, comparable with the best transformeless UPS available on the market.

Flexibility

VEGA HE is suitable for a wide range of applications including IT and the most demanding industrial environments and processes. With several operational configurations including On-Line, Eco, Smart Active, Stand By, Frequency Converter and Voltage Stabiliser.

A broad range of accessories and options, complex configurations and system architectures can be achieved to guarantee maximum power availability and the option to add new UPS without interruption to existing users.

Using the Aunilec UPS Group Synchroniser (UGS) and Parallel Systems Joiner (PSJ), sophisticated inter group parallel and redundant systems can be achieved to provide the highest possible levels of resilience and availability.

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Complete galvanic separation

VEGA HE UPS feature an output isolation transformer (delta zig/zag type) on the inverter as part of the inverter circuit inside the UPS cabinet, providing galvanic isolation between the load and the battery with improved versatility in system configuration, allowing:

• Complete UPS output galvanic isolation for critical infrastructures from the battery DC power source;

• two truly separated supply inputs (main and bypass), which can be taken from two different power sources (with different neutrals); this is particularly well suited to parallel systems in order to ensure selectivity between the two sources, thus improving the reliability of the entire installation;

• No neutral input connection is required at the UPS rectifier input stage; this method is particularly favourable in order to prevent the transmission of common neutral disturbances via the neutral conductor;

• No effects to the UPS output performance or reduced impact of the inverter power components whilst supplying specific loads; in addition the inverter transformer minimizes the impact of third harmonic disturbances, prevents the effects of energy back-feed into the inverter when supplying industrial load applications and can supply unbalanced loads.

• High inverter short circuit current to clear faults which occur between phase and neutral on load side (up to three times nominal current).

Output transformer housed within the cabinet which allows for a significant reduction in the footprint and provides space savings.

Advanced supervision

VEGA HE series UPS have a front panel graphic display providing UPS information, measurements, status updates and alarms in different languages, with wave form displays including voltage/current and provide a kWh reading that can be used to measure IT loads and calculate a datacenter PUE (power usage effectiveness) ratio.

Specific solutions

The UPS can be adapted to meet your requirements. Contact our team to discuss specific solutions and options not listed in this catalogue.

Zero impact source

The VEGA HE series features the added advantages of the Zero Impact Source formula offered by an IGBT-based rectifier assembly. This eliminates problems connected with installation in networks with limited power capacity, where the UPS is supplied by a generator set or anywhere there are compatibility problems with loads that generate current harmonics.

VEGA HE series UPS have zero impact on the power supply source, whether it is a mains grid or generator set:

- input current distortion < 3%
- input power factor 0,99
- power walk-in function that ensures progressive rectifier start up
- start-up delay function, to restart the rectifiers when mains power is restored if there are several UPS in the system.

This provides savings in installation costs via: a smaller electrical infrastructure, smaller circuit protection devices and less wiring.

VEGA HE also performs the role of a filter and power factor corrector, protecting the upstream power supply from any harmonics and reactive power generated by the critical load.

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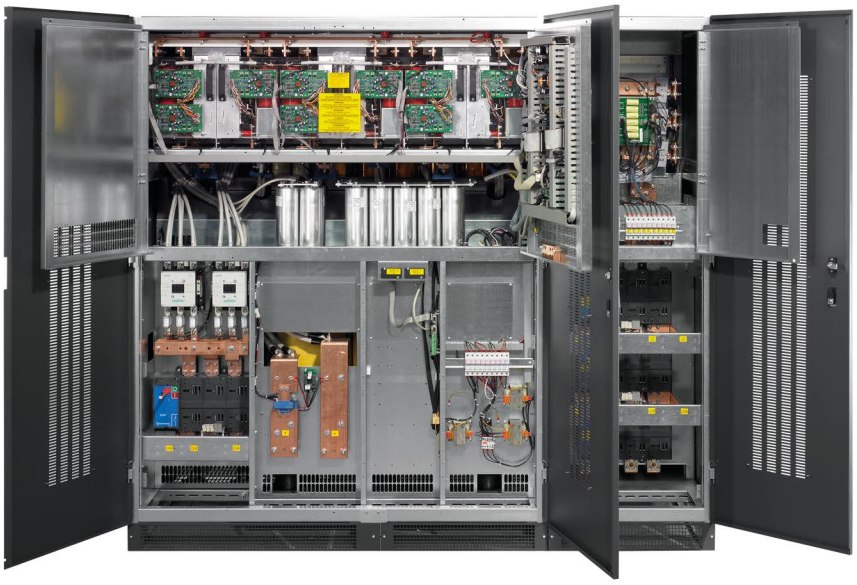
Main features

The entire VEGA HE range is suitable for use in a wide range of applications. Thanks to the flexibility of configuration, available options and accessories, it is suitable for supplying any type of load, e.g. capacitive loads such as blade servers, rather then motor drivers or any other critical vertical application.

Power supply reliability and availability are ensured for critical applications by distributed or centralised parallel configurations of up to 8 units, for redundant (N+1) or power parallel configurations and all the different configurations offered by the Aunilec range.

- High efficiency up to 99,4% (stand by on mode)
- Compact size: e.g.:
  only 0,85 m2 for the VEGA HE 250 kVA
- Reduced weight for tranformer based UPS
- Double load protection, both electronic and galvanic, towards the battery.



Battery care system : maximum battery care

VEGA HE series UPS include a range of features designed to prolong battery life and reduce their usage such as different recharging methods, deep discharge protection, current limitation and voltage compensation according with battery room temperature.

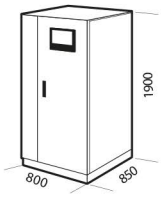
Thanks to the STEP-UP/STEP-DOWN converter, that provides to recharge and discharge the battery, the current ripple in the battery is extremely reduced; this arrangement enhance the battery reliability since it is no longer connected to UPS DC bus.

Smart Grid Ready

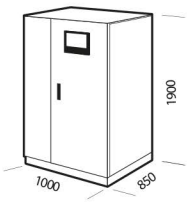
Being smart grid ready, VEGA HE allows for the implementation of power accumulation solutions, and at the same time ensures extremely high levels of efficiency.

It is also able to independently select the most efficient operating method based on the status of the grid. VEGA HE UPS are also able to electronically interface with the energy manager using the smart grid communication network.

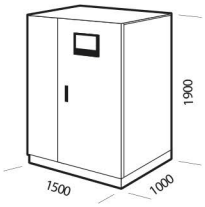
VT100HE
VT120HE



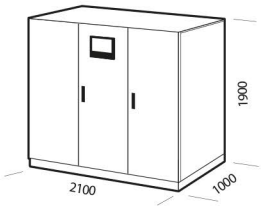
VT160HE-VT200HE
VT250HE



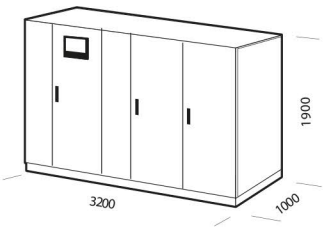
VT300HE
VT400HE



VT500HE
VT600HE



VT800HE



	VT100HE	VT120HE	VT160HE	VT200HE	VT250HE	VT300HE	VT400HE	VT500HE	VT600HE	VT800HE
Nominal power (kVA)	100	120	160	200	250	300	400	500	600	800
Active power (kw)	100	120	160	200	250	300	400	500	600	800
Input										
Nominal voltage	380 - 400 - 415 Vac 3-phase									
Frequency	45 + 65Hz									
Power factor	> 0,99									
Harmonic current distortion	< 3% THDi									
Soft start	0 ÷ 100% in 120'' (selectable)									
Frequency tolerance	± 2 % (selectable from ± 1 % to ± 5 % from front panel)									
Standard equipment	Back Feed protection; separable bypass line									
Bypass										
Nominal voltage	380-400-415 Vca 3-phase + N									
Nominal frequency	50 or 60 Hz selectable									
Output										
Number of phases	3 + N									
Nominal voltage	380 - 400 - 415 Vac 3-phase + N (selectable)									
Static stability	± 1%									
Dynamic stability	± 5% in 10 ms									
Voltage distortion	< 1% with linear load / < 3% with non-linear load									
Crest factor (Ipeak/Irms)	3 : 1									
Frequency stability on battery	0,05%									
Frequency	50 or 60 Hz (selectable)									
Overload	110% for 60'; 125% for 10'; 150% for 1'									
Batteries										
Type	VRLA AGM / GEL; NiCd; Supercaps; Li-ion; Flywheels									
Ripple current	Zero									
Charge voltage compensation	-0,5 Vx°C									
Specifications										
Weight (kg)	730	785	865	990	1090	1520	1670	2500	2830	3950
Dimensions (WxDxH) (mm)	800x850x1900		1000x850x1900			1500x1000x1900		2100x1000x1900		3200x1000 x1900
Remote signals	volt-free contacts (configurable)									
Remote controls	ESD and bypass (configurable)									
Communication	Double RS232 + remote contacts + 2 slots for communications interface									
Ambient temperature	0 °C / +40 °C									
Relative humidity	< 90% non-condensing									
Color	Dark grey RAL 7016									
Noise level (at 1m)	63 + 68 dBA					70 + 72 dBA				
Protection level	IP20 (others upon request)									
Smart Active efficiency	> 99%									
Double conversion efficiency	up to 95,5%									
Regulations	Safety: EN 62040-1 (directive 2006/95/EC); EMC: EN 62040-2 (directive 2004/108/EC)									
Classification according to IEC 62040-3	(Voltage Frequency Independent) VFI - SS - 111									