

# Master HP UL



ONLINE



Tower



**3:3** 65-250 kVA



DATACENTRE



E-MEDICAL



INDUSTRY



TRANSPORT



EMERGENCY



Service  
1st start



UL certified



SmartGrid  
ready



Flywheel  
compatible



Supercaps  
UPS



## HIGHLIGHTS

- **High efficiency**
- **IGBT-based rectifier technology**
- **Compact and reliable**
- **Galvanic isolation**
- **High overload capacity**
- **North American voltage (480 Vac)**

The incredible levels of quality, reliability and energy savings offered by the Master HP range of UPS have been extended to include a 480 Vac - 60 Hz version, certified as UL, with power ratings from 65 to 250 kVA. IT department managers, facility managers and CTOs are under increasing pressure to achieve zero downtime and to size data centre or industrial installations to be flexible in the face of continuous changes and expansion. As the search for the most reliable and efficient power supply system becomes ever-increasingly critical, Riello UPS has been continuously investing in power solutions to meet the demands of a range of our clients; a commitment that resulted in the Master HP UL range.

More than just an innovative and technologically-advanced UPS, it is a leap into the future of three-phase technology.

Thanks to its double conversion on-line technology based entirely on IGBT and digital signal processors (DSP), the Master HP UL range ensures maximum power supply protection and quality for any type of load, IT or industrial, in particular for mission critical applications, with VFI SS 111 classification (Voltage and Frequency Independent) in accordance with IEC EN 62040-3. This range was designed using a new configuration that includes an IGBT sinusoidal input rectifier instead of the conventional thyristor system.

Differently from other UPS technologies available on the market, double conversion technology with galvanic isolated output guarantees a quality power supply that is completely protected from all electrical anomalies at the input. Even in the event of serious power supply problems, the output power remains stable.

### Zero impact source

Master HP UL 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 in any case anywhere there are compatibility problems with loads that generate current harmonics. Master HP UL has 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.

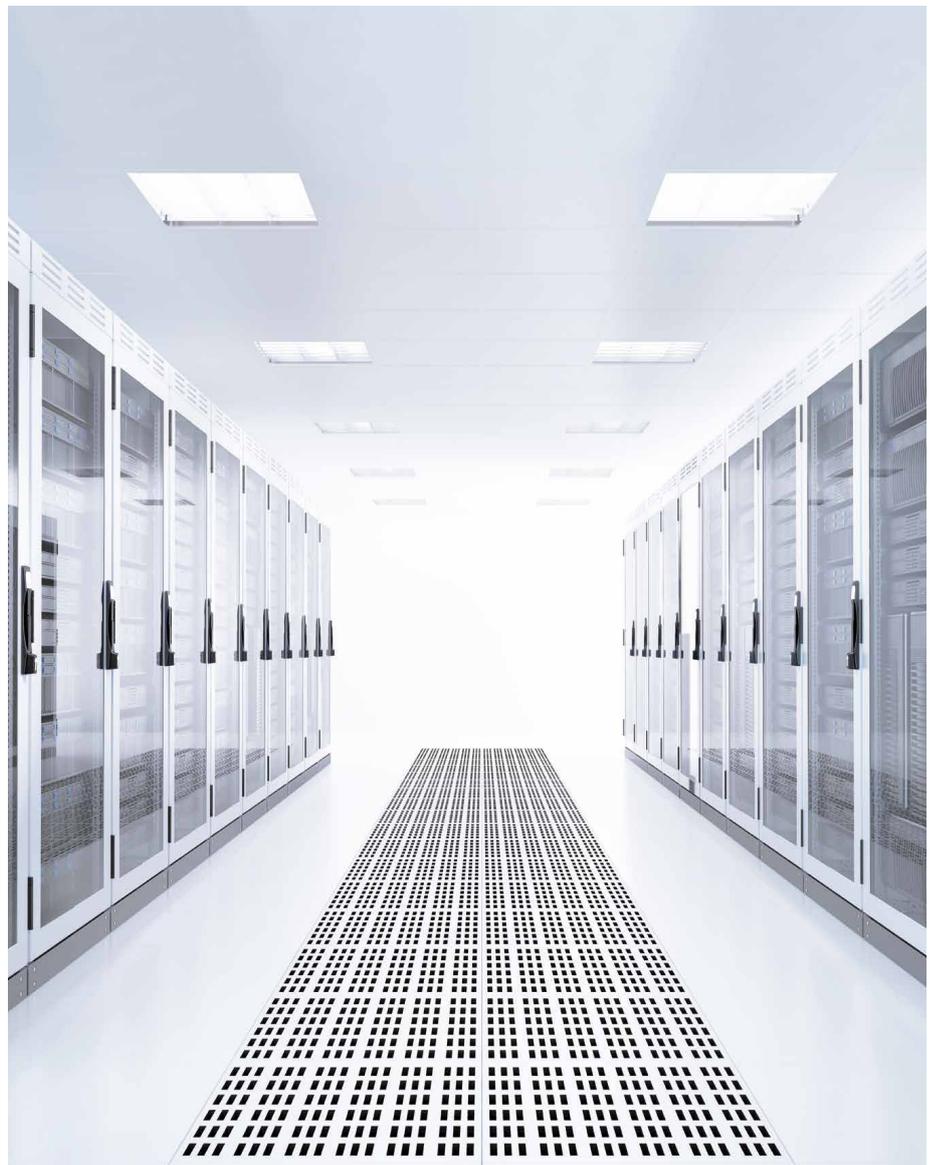
Master HP UL also performs the role of a filter and power factor corrector, protecting the upstream power supply from any harmonics and reactive power generated by the consumers.

### Battery Care System: maximum battery care

Master HP UL uses the Battery Care System, which optimises battery performance in order to extend the battery life for as long as possible.

### Flexibility

The output isolation transformer ensures the galvanic isolation of the load towards the battery and improved versatility in system configuration: it allows for two truly separate network inputs (main and emergency), coming from two different power sources; this is particularly suited to parallel systems in order to ensure selectivity between the two sources, thus improving the reliability of the entire installation.



## OPTIONS

### SOFTWARE

PowerShield<sup>3</sup>  
PowerNetGuard

### ACCESSORIES

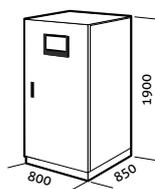
NETMAN 204

### PRODUCT ACCESSORIES

Generator interface  
Parallel configuration kit (Closed Loop)  
Battery cabinets empty or for extended runtimes

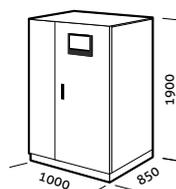
## DIMENSIONS

**MHT UL 65 - MHT UL 80**  
**MHT UL 100 - MHT UL 125**



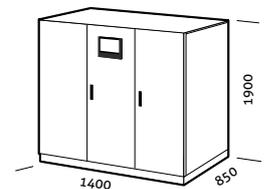
including manual bypass

**MHT UL 160 - MHT UL 200**  
**MHT UL 250**



excluding manual bypass

**MHT UL 160 - MHT UL 200**  
**MHT UL 250**



including manual bypass  
Top Cable Entry cabinets

MODELS	MHT UL 65	MHT UL 80	MHT UL 100	MHT UL 125	MHT UL 160	MHT UL 200	MHT UL 250
<b>INPUT</b>							
Nominal voltage	480 Vac three-phase + N						
Frequency	45 - 65 Hz						
Power factor	> 0.99						
Harmonic current distortion	<3% THDi						
Soft start	0 - 100% in 30" (selectable)						
Frequency tolerance	± 2% (selectable from ± 1% to ± 5% from front panel)						
Standard equipment provided	Back Feed protection; separable bypass line						
<b>BATTERIES</b>							
Type	VRLA AGM / GEL; NiCd; Li-ion; Supercaps and Flywheel						
Ripple current	Zero						
Recharge voltage compensation	-0.5 Vx°C						
<b>OUTPUT</b>							
Nominal power (kVA)	65	80	100	125	160	200	250
Active power (kW)	58.5	72	90	112.5	144	180	225
Number of phases	3 + N						
Nominal voltage	480 Vac three-phase + N						
Static stability	± 1%						
Dynamic stability	from ± 5% to ± 1% in 20 ms						
Voltage distortion	< 1% with linear load / < 3% with non-linear load						
Crest factor	3:1 Ipeak/Irms						
Frequency stability on battery	0.05%						
Frequency	60 Hz						
Overload	110% for 60'; 125% for 10'; 150% for 1'						
<b>INFO FOR INSTALLATION</b>							
Weight (lbs [kg])	1500 [680]	1610 [730]	1742 [720]	1851 [840] *	2138 [970] *	2247 [1110] *	
Weight without manual bypass (lbs [kg])	-	-	-	1984 [900]	2534 [1145]	2799 [1270]	
Dimensions (WxDxH) (inches [mm])	31.5 x 33.5 x 75 [800 x 850 x 1900]			55 x 33.5 x 75 [1400 x 850 x 1900] *			
Dimensions without manual bypass (WxDxH) (inches [mm])	-			39 x 33.5 x 75 [1000 x 850 x 1900]			
Remote signals	dry contacts (configurable)						
Remote controls	ESD and bypass (configurable)						
Communications	Double RS232 + dry contacts + 2 slots for communications interface						
Operating temperature	0 °C / +40 °C						
Relative humidity	<95% non-condensing						
Colour	Dark grey RAL 7016						
Noise level at 1 m (ECO Mode)	65 dBA			68 dBA			
IP rating	IP20						
Smart Active efficiency	up to 98.5%						
Standards	UL Standard 1778: 2nd edition from 65 to 125 kVA, 4th edition from 160 to 250 kVA; National Electrical Code (NFPA-70); NEMA PE-1; CUL - CSA C22.2; ASME; ASA-C-39.1-1984; FCC section 15 subsection J class A; NEC; OSHA; IEEE 587; ANSI C 62.41-1980; ISO 9000 Lighting and Power Equipment, Auxiliary (OUST)						
Classification in accordance with IEC 62040-3	(Voltage Frequency Independent) VFI - SS - 111						
Moving the UPS	transpallet						

\* with Top Cable Entry