HELIOS
POWER SOLUTIONS

DATACENTRE
E-MEDICAL
INDUSTRY
TRANSPORT
EMERGENCY

Master HP

VFI TYPE
ONLINE

Tower

6 ECO LEVEL

3:3 100-600 kVA

SmartGrid ready

Flywheel compatible

Supercaps UPS

Service 1st start

HIGHLIGHTS

- IGBT-based rectifier technology
- Compact and reliable
- Galvanic isolation
- High overload capacity
- LCD graphic display

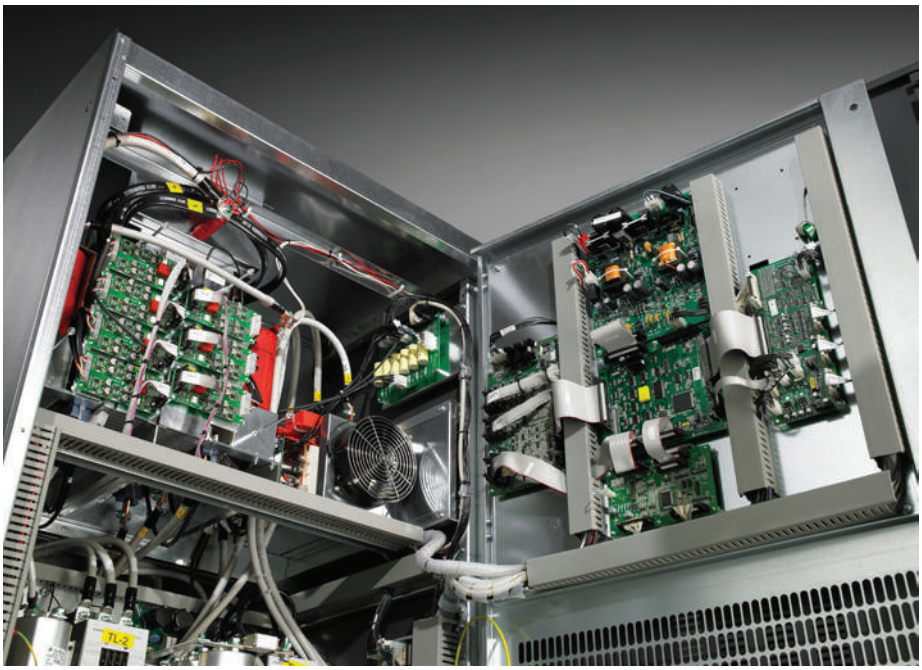
The Master HP series from 100 to 600 kVA is the Riello UPS solution for installations requiring high energy efficiency and maximum power availability.
Master HP Series provides maximum protection and power quality for data centres and industrial loads. The UPS has an IGBT-based rectifier, DSP (Digital Signal Processors) technology and provides true On-line, double conversion power protection, (VFI SS 11 - Voltage and Frequency Independent in accordance with IEC EN 62040-3).

Maximised cost savings

The Master HP has the ability to monitor the mains input quality and to select the best operating mode based on the interference present (Smart Active mode) or circular redundancy (Parallel Energy Saving mode, which allows the UPS to regulate available capacity based on the immediate demands of the load, automatically switching to standby in the event of excess capacity), the Master HP also offers high levels of efficiency for partial loads, resulting in reduced operating costs.

Power continuity

For years, Riello UPS has developed and supplied solutions for dealing with the different requirements and problems that inevitably arise in critical applications. Riello UPS offers flexible, high-availability solutions that are able to adapt to different system structures and critical levels. Riello UPS creates UPS systems that can tolerate a number of component or subsystem failures, while continuing to operate normally, providing power without interruption. This is achieved by careful design, installing redundant elements, eliminating common failure points, scheduling maintenance activities and controlling and supervising the system operating parameters and environment. The TEC service team is ready to provide guidance and advice on projects.



Main features

- High efficiency (up to 98,5%)
- Compact size: e.g.: only 0,85 m ^{2} for the Master HP 250 kVA
- Reduced weight
- Double load protection, both electronic and galvanic, towards the battery.

The entire Master HP 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 etc.
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 Master MPS range.

Zero impact source

Master HP has a zero impact on connected power sources - grid networks or generators:

- ≤ 3% input current distortion
- Input power factor 0,99
- power walk-in function - to ensure a progressive rectifier start-up
- start-up delay function - to restart the rectifier when the mains power supply is restored.

Battery care system

Master HP series UPS include a range of features designed to prolong battery life and reduce their usage.

Output isolation transformer

- Better load protection from DC/Battery problems
- The UPS can be supplied from 2 independent lines
- Fault on DC bus will not affect the by-pass availability
- High Short circuit current
- Higher immunity to harmonics or energy backfeed generated by the load.

Advanced supervision

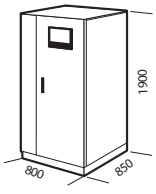
Master HP series UPS have a front panel mounted graphic display providing UPS information, measurements, status updates and alarms in different languages, with wave form displays including voltage/current and providing a kWh reading that can be used to measure IT loads and calculate a datacentre PUE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

Smart Grid Ready

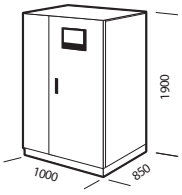
Being smart grid ready, Master HP allows for the implementation of power accumulation solutions, and at the same time ensures extremely high levels of efficiency. It is also able to independently select the most efficient operating method based on the status of the grid. Master HP UPS are also able to electronically interface with the energy manager using the smart grid communication network.

DIMENSIONS

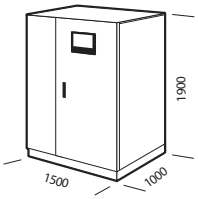
MHT 100
MHT 120



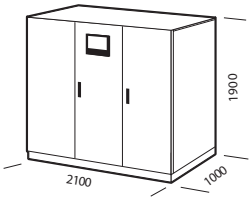
MHT 160 - MHT 200
MHT 250



MHT 300
MHT 400



MHT 500
MHT 600



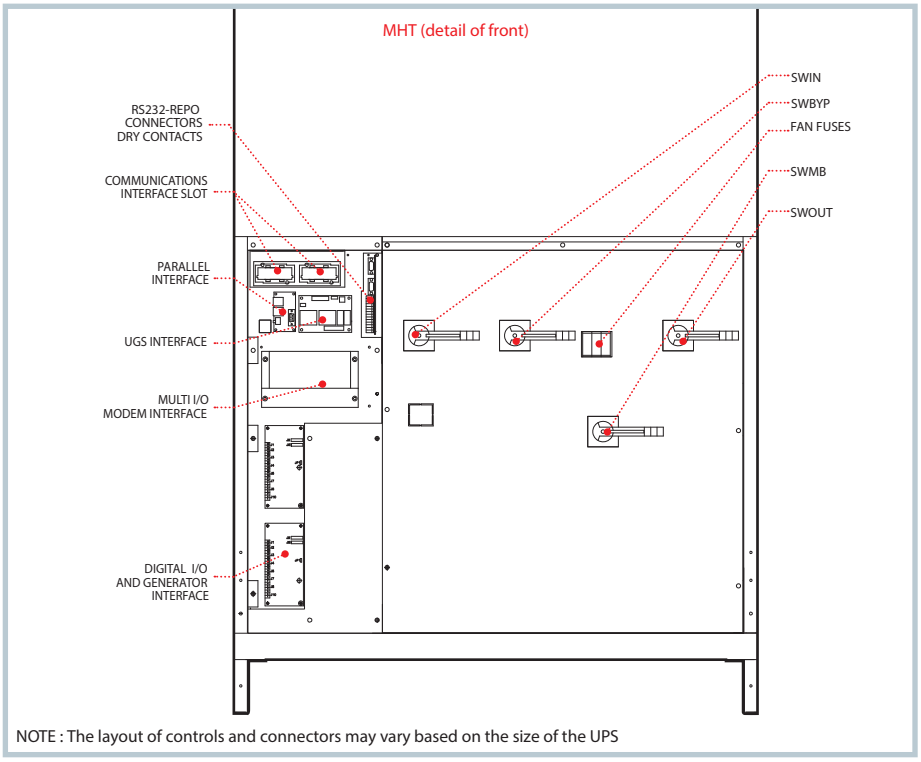
OPTIONS

SOFTWARE
PowerShield [3]
PowerNetGuard

ACCESSORIES
NETMAN 204
MULTICOM 302
MULTICOM 352
MULTICOM 401
MULTI I/O
Interface kit AS400
MULTIPANEL
RTG 100
56K Modem
GSM Modem

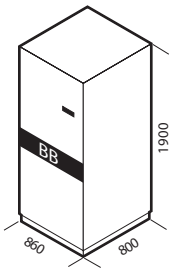
PRODUCT ACCESSORIES
Isolation transformer
Synchronisation device (UGS):
Hot connection device (PSJ)
Digital I/O and Generator interface
Parallel configuration kit (Closed Loop)
Battery cabinets empty or for extended runtimes
Top Cable Entry cabinets
IP rating IP31/IP42

DETAILS

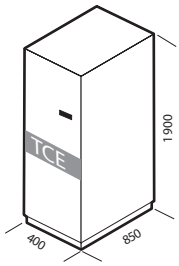
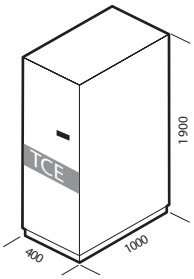


NOTE : The layout of controls and connectors may vary based on the size of the UPS

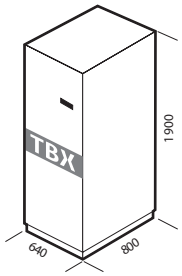
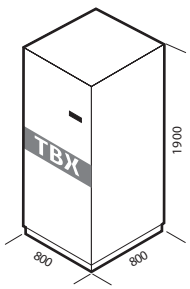
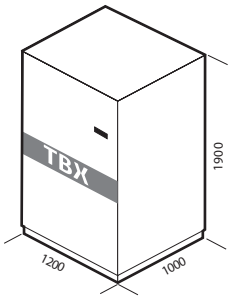
BATTERY BOX

MODELS	BB 1900 480-V6 / BB 1900 480-V7 BB 1900 480-V8 / BB 1900 480-V9
UPS MODELS	MHT 100-600
Dimen - sions (mm)	

CABINETS WITH TOP ACCESS FOR CABLES

MODELS	TCE MHT 100-250	TCE MHT 300-600
UPS MODELS	MHT 100-250	MHT 300-600
Dimensions (mm)		

THREE-PHASE ISOLATION TRANSFORMERS

MODELS	TBX 100 T - TBX 160 T	TBX 200 T - TBX 250 T	TBX 300 T - TBX 600 T
UPS MODELS	MPT 100-160 / MHT 100-160	MPT 200 / MHT 200-250	MHT 300 -600
Dimensions (mm)			

MODELS	MHT 100	MHT 120	MHT 160	MHT 200	MHT 250	MHT 300	MHT 400	MHT 500	MHT 600
INPUT									
Nominal voltage	380 - 400 - 415 Vac three-phase								
Frequency	45 - 65 Hz								
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 provided	Back Feed protection; separable bypass line								
BYPASS									
Nominal voltage	380 - 400 - 415 Vac three-phase + N								
Nominal frequency	50 or 60 Hz (selectable)								
OUTPUT									
Nominal power (kVA)	100	120	160	200	250	300	400	500	600
Active power (kW)	90	108	144	180	225	270	360	450	540
Number of phases	3 + N								
Nominal voltage	380 - 400 - 415 Vac three-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	3:1 Ipeack/Irms								
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								
Recharge voltage compensation	-0,5 Vx°C								
INFO FOR INSTALLATION									
Weight (kg)	656	700	800	910	1000	1400	1700	2100	2400
Dimensions (WxDxH) (mm)	800 x 850 x 1900		1000 x 850 x 1900			1500 x 1000 x 1900		2100 x 1000 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	<90% non-condensing								
Colour	Dark grey RAL 7016								
Noise level at 1 m	63 - 68 dBA					70 - 72 dBA			
IP rating	IP20 (others on request)								
Smart Active efficiency	up to 98,5%								
Standards	Safety: EN 62040-1-1 (Directive 2006/95/EC); EMC: EN 62040-2 (Directive 2004/108/EC)								
Classification in accordance with IEC 62040-3	(Voltage Frequency Independent) VFI - SS - 111								
Moving the UPS	transpallet								

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