



# HTUB

## THREE PHASE 480/600 Vac



### MAIN APPLICATIONS



### SUITABLE BATTERIES

Wet lead acid - PzS

GEL – AGM – VRLA – PzV

Lithium (on demand)

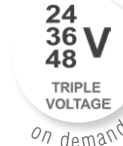
### MODELS AVAILABLE

V	A	VAC	CODE	VAC	CODE	Lead acid (Ah)		Gel (Ah)	lac
						7-8h	10-11-14h	12-14h	Current draw
24	140	3x480	HTUB 24/140*	3x600	HTUB 24/140-V*	769-889	1066-1185-1429	950-1185	5,70
24	160	3x480	HTUB 24/160*	3x600	HTUB 24/160-V*	879-1016	1219-1354-1633	1086-1354	6,50
24	180	3x480	HTUB 24/180*	3x600	HTUB 24/180-V*	989-1143	1371-1523-1837	1222-1523	7,30
24	200	3x480	HTUB 24/200*	3x600	HTUB 24/200-V*	1099-1270	1523-1692-2041	1357-1692	8,10
36	140	3x480	HTUB 36/140*	3x600	HTUB 36/140-V*	769-889	1066-1185-1429	950-1185	8,40
36	160	3x480	HTUB 36/160*	3x600	HTUB 36/160-V*	879-1016	1219-1354-1633	1086-1354	9,60
36	180	3x480	HTUB 36/180*	3x600	HTUB 36/180-V*	989-1143	1371-1523-1837	1222-1523	10,80
36	200	3x480	HTUB 36/200*	3x600	HTUB 36/200-V*	1099-1270	1523-1692-2041	1357-1692	12,00
48	140	3x480	HTUB 48/140*	3x600	HTUB 48/140-V*	769-889	1066-1185-1429	950-1185	11,20
48	160	3x480	HTUB 48/160*	3x600	HTUB 48/160-V*	879-1016	1219-1354-1633	1086-1354	12,80
48	180	3x480	HTUB 48/180*	3x600	HTUB 48/180-V*	989-1143	1371-1523-1837	1222-1523	14,40
48	200	3x480	HTUB 48/200*	3x600	HTUB 48/200-V*	1099-1270	1523-1692-2041	1357-1692	16,00
80	100	3x480	HTUB 80/100	3x600	HTUB 80/100-V	549-635	762-846-1020	679-846	13,20
80	120	3x480	HTUB 80/120	3x600	HTUB 80/120-V	659-762	914-1015-1224	814-1015	15,90

\*Multivoltage version 24-36-48V available

## PRODUCT INTRO

HTUB is the top level HF charger aimed to reach the highest performances. This range gathers all top features of HF ranges in terms of efficiency, power factor, ventilation, internal structure (dedicated 3 compartments) and general flexibility. An integrated digital interface with OLED/LCD display and integrated USB enables the best and easiest overview/setting of charge parameters, diagnostic and data reports.



## GENERAL CHARACTERISTICS

<b>Mains</b>	480 Vac (3ph) 50-60Hz / 600 Vac (3ph) 50-60Hz
<b>Visual signalling</b>	OLED display, 4 LEDs and 4 operational keys
<b>Charger setting</b>	By OLED display: current, capacity and 7 pre-set charging profiles By laptop/USB port: enhanced programming
<b>Data memory</b>	Charger gives a report of the last 50 cycles and key technical data by integrated USB door
<b>Cool-down system</b>	Dedicated air cooling direct to heatsink only. Temperature-regulated fan speed. Fan idle within +104° F (+40° C) internal components temperature
<b>Efficiency</b>	94%
<b>Operating temperature</b>	+32° to +104° F (0° to +40° C)
<b>Certifications</b>	CSA

## SAFETY FEATURES

<b>Input protection</b>	3 fast fuses
<b>Output protection</b>	By fuse (reverse polarity protection)
<b>Thermal Protection</b>	Probes on IGBT, diodes and power transformer + derating
<b>Protection during battery disconnection</b>	Safety cut off by undervoltage

## OPTIONALS

<b>Stand alone</b>	Charger iron stand
<b>Stand alone/wall mounted</b>	Cable holder
<b>On board/stand alone/wall</b>	Additional extra coating, dV/dt profiles

## MECHANICAL CHARACTERISTICS

<b>Dimensions</b>	17.95 (w) 7.68 (h) 22.44 (l) inches (456 x 195 x 570 mm)
<b>Protection degree</b>	IP 21 (vertical) - (dedicated air cooling direct to heatsink) - Additional filter protection on demand
<b>Weight</b>	57.32 lb (26 kg)
<b>Input cable</b>	not supplied
<b>Output cables</b>	2.7 yd (2,5 m) +/- 10% (length) - DC plug on demand



# HTUB MULTI & HRC3

Multivoltage



V	A
2	30
6	30
8	30
10	30
12	120
24	120
36	120
48	120
60	120
72	120
80	120

## MAIN APPLICATIONS



## MODELS AVAILABLE

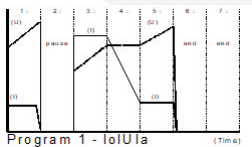
VAC	CODE	DESCRIPTION
3x400	<b>HTUM 80/120-8</b>	Multivoltage 2-80 V up to 120A
3x400	<b>HRC3 80/120-8</b>	

## SUITABLE BATTERIES

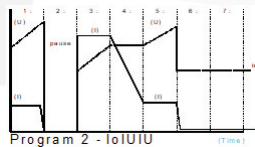
All types

Voltage selection made in single step (x2V each)

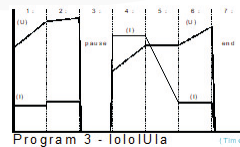
## HRC3 Desulphation programs



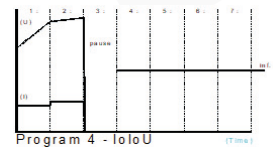
Program 1 - Light



Program 2 - Soft



Program 3 - Medium



Program 4 - Deep

## PRODUCT INTRO

**HTUB MULTI** is aimed for workshop operations requiring charge and desulphation of batteries from 2 to 80V; this item is ideal in fact for the recharge and refresh of any battery type without the stress of looking for the dedicated charge. The device enables an intuitive parameters setting by an integrated OLED display. Supplied with iron stand and cables holder on request.

**HRC3** version, by the means of 4 dedicated programs (programmable by PC), is ideal for the recharge and refresh of all your battery portfolio.



## GENERAL CHARACTERISTICS

	HTUB MULTI	HRC3
<b>Mains</b>	480Vac (3ph) 50-60Hz / 600Vac (3ph) 50-60Hz	
<b>Visual signalling</b>	OLED display, 4 LEDs and 4 operational keys	
<b>Charger setting</b>	By OLED display: current, capacity and 7 pre-set charging PROFILES + desulphation mode By laptop/USB port: enhanced programming	By OLED display: nom. Voltage, capacity and 4 pre-set PROGRAMS By laptop/USB port: modification of pre-set programs
<b>Data memory</b>	Charger gives a report of the last 50 cycles and key technical data by integrated USB door	
<b>Cool-down system</b>	Dedicated air cooling direct to heatsink only. Temperature-regulated fan speed. Fan idle within +104° F (+40° C) internal components temperature	
<b>Efficiency</b>	94%	
<b>Operating temperature</b>	+32° to +104° F (0° to +40° C)	
<b>Certifications</b>	CSA	

## SAFETY FEATURES

<b>Input protection</b>	3 fast fuses
<b>Output protection</b>	By fuse (reverse polarity protection)
<b>Thermal Protection</b>	Probes on IGBT, diodes and power transformer + derating
<b>Protection during battery disconnection</b>	Safety cut off by undervoltage

## OPTIONALS

<b>Stand alone</b>	Charger iron stand
<b>Stand alone/wall mounted</b>	Cable holder

## MECHANICAL CHARACTERISTICS

<b>Dimensions</b>	17.95 (w) 7.68 (h) 22.44 (l) inches (456 x 195 x 570 mm)
<b>Protection degree</b>	IP 21 (vertical) - (dedicated air cooling direct to heatsink)
<b>Weight</b>	57.32 lb (26 kg)
<b>Input cable</b>	not supplied
<b>Output cables</b>	2.7 yd (2,5m) +/- 10% (length) - DC plug on demand



# SERIE 5

Advanced line - Wa



## MAIN APPLICATIONS



## SUITABLE BATTERIES

PzS wet lead acid

## STANDARD AVAILABLE SIZES

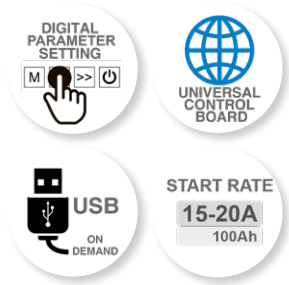
Ph	Vac	Output Voltage					A
		24	36	48	72	80	
1Ph	120	from 40 to 60 A	from 25 to 40 A	from 20 to 30 A	//	//	
	208-240	from 80 to 160 A	from 50 to 140 A	from 50 to 120 A	//	//	
3Ph	208-240-440-480	from 80 to 200 A	from 80 to 200 A	from 80 to 160 A	from 80 to 140 A	from 80 to 120 A	
	600	from 80 to 200 A	from 80 to 200 A	from 80 to 160 A	from 80 to 140 A	from 80 to 120 A	

## AH RECHARGE TABLE

A	>>>	20A	25A	30A	40A	50A	60A	80A
Ah (C6)	8-9h	103	128	154	206	257	308	411
	12-14h	132-147	165-184	198-220	265-294	331-367	397-441	529-588
A	>>>	100A	120A	140A	160A	180A	200A	
Ah (C6)	8-9h	514	617	719	822	925	1028	
	12-14h	661-735	794-882	926-1029	1058-1176	1190-1322	1323-1469	

## PRODUCT INTRO

Serie 5 represents the “Advanced” conventional Wa ranges, aimed for specific markets demanding structured or dedicated characteristics. This series features programmable board with internal memory, enhanced algorithms and USB (setting/troubleshooting/data-report). The integrated digital display permits the complete controlling, programming and diagnostic in real time. Security features involves both mechanical and software solutions.



## GENERAL CHARACTERISTICS

<b>Mains</b>	1phase 120Vac ± 5%; 208-240Vac ± 5% 60Hz 3phase 208-240-440-480Vac ± 5% 60Hz
<b>Visual signalling</b>	5 LED advanced visualization + integrated DISPLAY for programming, diagnostic, and consulting data storage
<b>Main features</b>	<ul style="list-style-type: none"> <li>• Automatic start, charging process and shutoff</li> <li>• Universal Electronic Board with advanced digital setting by display: profile thresholds / termination mode / equalization mode / delay start / cable compensation</li> <li>• Final charging stage (adjustable in respect of battery usage): temporal, capacitive (CF% and AH accumulated), derivative dv/dt</li> <li>• Flux disperse power transformer: taper charger</li> <li>• Wa charging profile (DIN 41774)</li> </ul>
<b>Operating temperature</b>	+32° to +104° F (0° to +40° C) no derating (heavy climate version available)
<b>Efficiency</b>	82/88% depending on power involved
<b>Certifications</b>	CSA

## SAFETY FEATURES

<b>Output protection</b>	Reverse polarity protection: fuse
<b>Thermal protection</b>	Flux dispersion power transformer (class F) provided with thermal probes
<b>General protection</b>	Double security timer: gassing point / max charging duration Additional thermal protection based on algorithm managed by electronic board Battery detection with safety powering

## MECHANICAL CHARACTERISTICS

<b>Protection degree</b>	IP 21
<b>Weight</b>	Depend on model size
<b>Input cable</b>	Not available
<b>Output cables</b>	2.5 yd (2,3m) +/- 10% (length) DC plug on demand
<b>Dimensions</b>	I2C: 17.91 (w) 35.43 (h) 21.85 (l) inches (455 x 900 x 555 mm)
	P6C: 11.02 (w) 2.20 (h) 19.29 (l) inches (280 x 310 x 490 mm)



## STD FEATURES/OPTIONALS

ADVANCED LINE	SERIE 5
<b>Integrated display</b>	✓
<b>Multiple input selection</b>	✓
<b>Cable holder</b>	✓
<b>USB port</b>	⊕
<b>Protection cage</b>	⊕

X= not available

✓= standard feature

⊕= on demand