



CHARGERS

Banner

Banner HF charger technology for maximum costefficiency

Banner HF chargers form a highly intelligent and proven series for medium-sized and large drive batteries with outputs of 1, 3, 7 and 14 kw.

At Banner a new era has begun and not only in an optical regard. For in addition to their attractive design, the HF+ inverter devices convince primarily through their internal, technical innovations.

Simple operation through plug & charge, adjustable charging characteristics and robustness speak for themselves.

Areas of application

- Stackers
- Sweeping machines
- Lifting platforms
- Special applications
- Vehicles for handicapped persons
- Wheelchairs

Features

- HF technology
- Efficiency of up to 96%
- Gentle battery charging, therefore low battery heating
- Reduced water consumption
- Reduced energy consumption, therefore significant electricity costs savings
- Freely programmable characteristics
- Robust design
- Reduced servicing frequency
- Longer battery life
- Freely programmable characteristics
- Etc.

Options

- Signal light
- Start-up protection
- Battery filling system activation
- AIR Puls electrolyte circulation
- Etc.



HF charger + = casing type 1

I-pulse set-up (characteristic 1 = I-pulse)

HF charger = casing type 2

Flexible set-up (characteristic 1 = standard wet)

HF charger + = casing type 3-5

Characteristic 1 = standard wet

Characteristic 30 = I-pulse

IP40 protection class in a horizontal position

IP44 protection class when wall-mounted

IP31 protection class

IP21 protection class

Warning! The charger must be adjusted to match the battery (Ah, characteristic,...)

Battery voltage [V]	Charging time 5.5 – 7.0h	Charging time up to 8.5h	Charging time up to 11h	Charging time up to 14h	Closed batteries		Device type	Mains voltage/current	Casing type	Article no.
					12h Ah	14h Ah				
Banner HF Charger										
12V	-	80 - 99	100 - 169	170 - 240	100 - 150		HF 1020 M	E 230V / 2 A	2	0433100900
24V	-	40 - 49	50 - 84	85 - 120	50 - 70		HF 2010 M	E 230V / 2A	2	0433101000
36V	-	80 - 99	100 - 169	170 - 240	100 - 150		HF 3020 M	E 230V / 7A	2	0433101300
48V	-	60 - 74	75 - 119	120 - 200	80 - 110		HF 4015 M	E 230V / 7A	2	0433101400
Banner HF Charger +										
12V	-	160 - 270	200 - 360	Up to 400	160 - 240		HF+ 1030 M	E 230V / 2A	1	0433105000
24V	-	81 - 120	100 - 125	Up to 185	90 - 120		HF + 2015 M	E 230V / 3A	1	0433105100
	-	121 - 160	125 - 220	Up to 250	120 - 160		HF + 2020 M	E 230V / 3A	1	0433105200
	-	161 - 270	220 - 360	Up to 400	180 - 240		HF + 2032 M	E 230V / 4A	1	0433105300
	-	271 - 290	240 - 390	Up to 440	210 - 280		HF + 2040 M	E 230V / 7A	1	0433105400
	211 - 330	Up to 430	Up to 600	Up to 790	250 - 360		HF + 2050 M	E230V / 7A	3	0433101700
	331 - 430	Up to 575	Up to 780	Up to 1030	330 - 460		HF + 2065 M	E230V / 9A	3	0433104300
	431 - 520	Up to 700	Up to 960	Up to 1250	400 - 570		HF + 2080 M	E230V / 11A	3	0433101800
	521 - 660	Up to 850	Up to 1200	Up to 1600	500 - 720		HF + 2100 M	E230V / 14A	3	0433101900
	661 - 800	Up to 1030	Up to 1450	-	600 - 860		HF + 2120 T	D400V / 7A	4	0433102000
	801 - 930	Up to 1250	Up to 1800	-	750 - 1100		HF + 2150 T	D400V / 8A	4	0433102100
931 - 1050	Up to 1450	-	-	850 - 1200		HF + 2170 T	D400V / 9A	4	0433102200	
1051 - 1250	Up to 1720	-	-	1000 - 1400		HF + 2200 T	D400V / 10A	4	0433102300	
36V	130 - 210	Up to 280	Up to 390	Up to 520	180 - 250		HF + 3035 M	E230V / 8A	3	0433102400
	211 - 330	Up to 430	Up to 600	Up to 790	250 - 360		HF + 3050 M	E230V / 11A	3	0433102500
	331 - 430	Up to 575	Up to 780	Up to 1030	330 - 460		HF + 3065 M	D400V / 5A	4	0433102600
	431 - 520	Up to 700	Up to 960	Up to 1250	400 - 570		HF + 3080 T	D400V / 6A	4	0433102700
	521 - 660	Up to 850	Up to 1200	Up to 1600	500 - 720		HF + 3100 T	D400V / 8A	4	0433102800
	661 - 800	Up to 1030	Up to 1450	-	600 - 860		HF + 3120 T	D400V / 9A	4	0433102900
48V	100 - 165	Up to 210	Up to 300	Up to 390	120 - 180		HF + 4025 M	E230V / 7A	3	0433103000
	166 - 210	Up to 280	Up to 390	Up to 520	180 - 250		HF + 4035 M	E230V / 10A	3	0433104400
	211 - 330	Up to 430	Up to 600	Up to 790	250 - 360		HF + 4050 M	E230V / 14A	3	0433103100
	331 - 430	Up to 575	Up to 780	Up to 1030	330 - 460		HF + 4065 T	D400V / 6A	4	0433103200
	431 - 520	Up to 700	Up to 960	Up to 1250	400 - 570		HF + 4080 T	D400V / 7A	4	0433103300
	521 - 660	Up to 850	Up to 1200	Up to 1600	500 - 720		HF + 4100 T	D400V / 10A	4	0433103400
661 - 800	Up to 1030	Up to 1450	-	600 - 860		HF + 4120 T	D400V / 11A	4	0433103500	
80V	120 - 200	Up to 250	Up to 360	Up to 470	150 - 220		HF + 8030 T	D400V / 5A	4	0433103600
	201 - 330	Up to 430	Up to 600	Up to 800	250 - 360		HF + 8050 T	D400V / 8A	4	0433103700
	331 - 460	Up to 600	Up to 840	Up to 1100	350 - 500		HF + 8070 T	D400V / 11A	4	0433103800
	461 - 660	Up to 850	Up to 1200	Up to 1600	500 - 720		HF + 8100 T	D400V / 18A	5	0433104200
	661 - 800	Up to 1030	Up to 1450	-	600 - 860		HF + 8120 T	D400V / 20A	5	0433103900
	801 - 920	Up to 1200	Up to 1700	-	700 - 1000		HF + 8140 T	D400V / 22A	5	0433104100

The following applies for the stated [Ah] values:

An ambient temperature of 27°C, charging time variations of +/- 0.75h, 80% discharging depth.

The charging instructions of the battery manufacturer must be followed.

Dimensions w/h/d	Weight	Casing type
245/155/90	1.9	1
285/71/142	2	2
312/200/110	5	3
630/280/180	18.5	4
625/480/290	40	5

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