

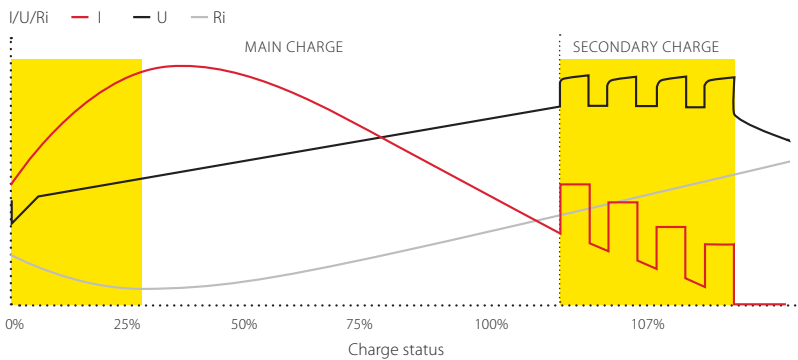


# Banner CHARGER

## Banner chargers - maximum energy efficiency

Banner chargers are highly intelligent devices that not only convince due to their attractive design, but above all their technical innovativeness. Successful, active inverter technology with the revolutionary Ri charging process adjusts to the needs of the battery and during recharging only provides the precise amount of current that is actually required.

### FUNCTION OF THE NEW RI CHARGING PROCESS



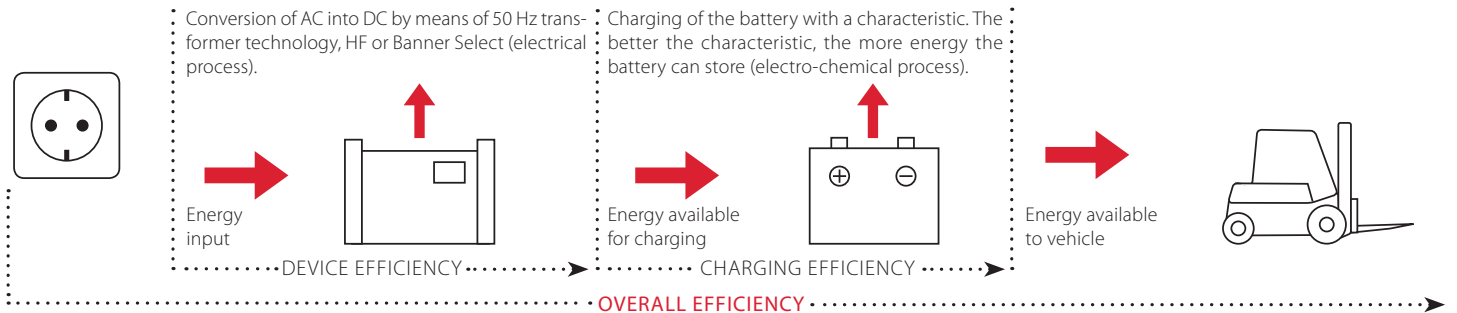
- Determination of battery status via internal resistance
- Characteristic adjustment to the battery's age, temperature and charge status
- Optimum current input during each charging phase
- Need-related characteristic during every individual cycle

The adjustment of the current to the battery means that charging losses are avoided both during the initial and secondary charging phases. The battery only receives the exact amount of power that it actually needs. Accordingly, the new Ri charging process ensures the coolest and most gentle charging available and thus guarantees maximum battery life.

### MAXIMUM ENERGY EFFICIENCY

During battery charging, the energy flow from the mains, via the charger to the battery is shown in the form of the overall degree of efficiency:

#### Overall degree of efficiency diagram



TECHNOLOGY	DEVICE EFFICIENCY	CHARGING EFFICIENCY	OVERALL EFFICIENCY
50 Hz	80%	70%	56%
HF	90%	75%	68%
Banner Select with Ri	93%	90%	84%





# Banner

## CHARGER

URZĄDZENIE	1 kW	2 kW	3 kW	8 kW	16 kW
Output	1 kW	2 kW	3 kW	8 kW	16 kW
Dimensions W/H/D	247 x 162 x 88 mm	341 x 200 x 110 mm	417 x 198 x 110 mm	633 x 344 x 180 mm	647 x 392 x 247 mm
Weight incl. charging and mains cables	2 kg	5,8 kg	8 kg	23 kg	34 kg
Protection class	IP44 / IP40	IP21	IP21	IP20	IP20
Mains cable	2 m	2,5 m	2,5 m	3 m	3 m
Charge cable	2,5 m	3 m	3 m	3 m	3 m
Mains voltage	1 x 230V AC (+/- 10 %)	1 x 230V AC (+/- 15 %)	1 x 230V AC (+/- 10 %)	3 x 400V AC (+/- 10%)	3 x 400V AC (+/- 10%)

BATTERY VOLTAGE [V]	WET BATTERIES (PzS)									VRLA BATTERIES			DEVICES	MAINS VOLTAGE/CURRENT	Art. No.
	6 h	7 h	8 h	9 h	10 h	11 h	12 h	13 h	14 h	10 h	12 h	14 h			
	Capacity [Ah]									Capacity [Ah]					
24V	80	100	125	150	170	185	210	225		80	105	120	HF + 2015 1kW	E230V / 3A	0433105100
	110	135	165	195	225	250	280	300		120	140	160	HF + 2020 1kW	E230V / 4A	0433105200
	180	210	260	320	360	400	450	480		190	205	220	HF + 2032 1kW	E230V / 8A	0433105300
	200	230	290	345	395	440	490	525		220	250	280	HF + 2040 1kW	E230V / 8A	0433105400
	225	290	355	415	480	535	600	660	720	225	265	335	Select 2040 2kW	E230V / 8A	0433106200
	280	365	440	520	595	675	750	825	900	280	330	420	Select 2050 2kW	E230V / 10A	0433106300
	340	440	530	630	725	800	900	990	1080	340	400	505	Select 2060 2kW	E230V / 12A	0433106400
	395	510	630	725	840	940	1060	1155	1260	390	460	585	Select 2070 2kW	E230V / 12A	0433106600
	450	580	710	830	950	1075	1200	1320	1440	440	530	670	Select 2080 3kW	E230V / 15A	0433106700
	560	730	880	1020	1190	1350	1500	1650	1800	560	670	830	Select 2100 3kW	E230V / 16A	0433106800
	620	805	970	1145	1310	1485	1650	1815	1980	620	740	920	Select 2120 3kW	E230V / 16A	0433106900
	670	870	1060	1250	1430	1600	1800	1980	2160	670	800	1000	Select 2120 8kW	400V / 8A	0433107000
800	1000	1240	1450	1680	1880	2100	2310	2520	780	930	1170	Select 2140 8kW	400V / 9A	0433107100	
930	1150	1420	1650	1920	2140	2400	2640	2880	900	1170	1350	Select 2160 8kW	400V / 10A	0433107200	
1010	1305	1595	1875	2150	2407	2700	2970	3240				Select 2180 8kW	400V / 11A	0433107300	
48V / 36V	110	135	165	195	225	250	280	300	320	120	140	160	Select 4020 2kW	E230V / 8A	0433107600
	185	240	290	345	395	445	495	545	595	220	250	280	Select 4035 2kW	E230V / 12A	0433107800
	250	325	400	465	535	600	670	740	810	250	300	375	Select 4045 3kW	E230V / 15 A	0433107900
	310	405	485	575	655	745	825	910	990	310	365	465	Select 4060 3kW	E230V / 16A	0433108600
	340	440	530	630	725	800	900	990	1080	340	400	505	Select 4060 8kW	400V / 8A	0433108000
	420	545	660	780	890	1015	1125	1240	1350	420	490	620	Select 4075 8kW	400V / 10A	0433108100
	505	655	795	935	1075	1200	1350	1485	1620	505	600	750	Select 4090 8kW	400V / 11A	0433108200
	670	870	1060	1250	1430	1600	1800	1980	2160	670	800	1000	Select 4120 8kW	400V / 14A	0433108300
	800	1000	1240	1450	1680	1880	2100	2310	2520	780	930	1170	Select 4140 8kW	400V / 15A	0433108400
870	1085	1345	1575	1825	2040	2280	2508	2740	850	1010	1270	Select 4160 8kW	400V / 16A	0433108500	
80V / 72V	225	290	355	415	480	535	600	660	720	225	265	335	Select 8040 8kW	400V / 9A	0433109000
	340	440	530	620	720	800	900	990	1080	340	400	505	Select 8060 8kW	400V / 12A	0433109100
	420	545	660	780	890	1015	1125	1240	1350	420	490	620	Select 8075 8kW	400V / 15A	0433109200
	495	635	770	910	1040	1170	1300	1430	1570	480	580	720	Select 8090 8kW	400V / 15A	0433109300
	670	870	1060	1250	1430	1600	1800	1980	2160	670	800	1000	Select 8120 16kW	400V / 25A	0433109400
	800	1000	1240	1450	1680	1880	2100	2310	2520	780	930	1170	Select 8140 16kW	400V / 28A	0433109500
	930	1150	1420	1650	1920	2140	2400	2640	2880	900	1170	1350	Select 8160 16kW	400V / 30A	0433109600
	1000	1250	1550	1790	2090	2327	2610	2870	3130	970	1260	1460	Select 8180 16kW	400V / 30A	0433109700

### Applications

- Intra-logistics
- Stacker technology
- Sweeping machines
- Lifting platforms
- Special applications
- Vehicles for the disabled

