

## crystaltower®

your power storage solution



### HYBRID crystaltower®

Tested. Improved. Tested again. More improvements! Until it matched our standards and your requirements. Uncompromising reliability as you would expect from a German product. Reduced to the essentials. No fancy features. In short: a compact power plant that makes economic sense for your energy demands from day one!

POWERED BY **Betta Batteries**

An energy storage unit for storing energy should allow itself very little. Low internal energy consumption. Efficient energy storage saves you money from day one! With the right choice of economic, sustainable, green and safe battery technology, you have made the right decision to play your part in a rapid changing world, which has to make the change to sustainable solutions for the next generation. The dry crystalbattery technology gives you not only the performance you want for this investment but all the safety you would want in your house.

For more information please contact local dealer or our Headoffice.



Storage size capacity  
from  
**5.3 kW**  
up to  
**28.8 kW**



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[www.hybrid.energy](http://www.hybrid.energy)



Data Sheet Hybrid Storage	Hybrid Home	Hybrid Home	Hybrid Home	Hybrid Home	Hybrid Home	Hybrid Tower	Hybrid Tower
	<b>4.8/1 kWh</b>	<b>7,2/1 kWh</b>	<b>9,6 /1 kWh</b>	<b>14.4 /1 kWh</b>	<b>14.4 /3 kWh</b>	<b>19.2 /3 kWh</b>	<b>28.8/3 kWh</b>
Hybrid Inverter	Hybrid +3 kW	Hybrid S 4 kW	Hybrid E 5,5 kW	Hybrid 5 kW	Hybrid 10 kW	Hybrid 10 kW	Hybrid 10 kW
Storage size capacity nett (kWh)	3,8 kWh	5,8 kWh	7,7 kWh	11,5 kWh	11,5 kWh	15,4 kWh	23,0 kWh
Max. PV Input Power	4.500 W	5.000 W	6.500 W	10.000 W	14.850 W	14.850 W	14.850 W
Rated Output Power	3.000 W	4.000 W	5.500 W	5.000 W	10.000 W	10.000 W	10.000 W
Maximum Charging Power	1.200 W	4.000 W	2.880 W	4.800 W	9.600 W	9.600 W	9.600 W
Battery Technology	Lead Crystal®	Lead Crystal®	Lead Crystal®	Lead Crystal®	Lead Crystal®	Lead Crystal®	Lead Crystal®
Number of Batteries	4 x 100 A	4 x 150 A	8 x 100 A	8 x 150 A	8 x 150 A	16 x 100 A	16 x 150 A
Dimensions(W X H X D)	600x500x600	600x720x600	600x1005x600	600x1575x600	600x1575x600	600x1575x600	1200x1200x600
Total Weight (Kg)	260 kg	330 kg	440 kg	700 kg	700 kg	960 kg	2 x 700 kg
<b>PV Input (DC)</b>							
Nom. DC /Max. DC Voltage	360VDC/580 VDC	360VDC/580VDC	720VDC/900VDC	720VDC/900 VDC	720VDC/900VDC	720VDC/900VDC	720VDC/900VDC
Start-up /Initial Feeding Voltage	116VDC/150VDC	116VDC/150VDC	225VDC/250VDC	225VDC/250 VDC	320VDC/350VDC	320VDC/350VDC	320VDC/350VDC
MPP Voltage Range	250VDC~450 VDC	280VDC~500VDC	250VDC~850VDC	250VDC~850 VDC	400VDC~800VDC	400VDC~800VDC	400VDC~800VDC
MPP Trackers/Max. Input Current	1/1 x 18 A	1/1x 18 A	2/2 x 13 A	2/2 x 10 A	2/2 x 18.6 A	2/2 x 18.6 A	2/2 x 18.6 A
<b>Grid Output</b>							
Nominal Output Voltage	208/220/230/ 240 VAC	202/208/220/230/ 240 VAC	202/208/220/230/ 240 VAC	208/220/230/ 240 VAC	230VAC (P-N) /400VAC (P-P)	230VAC (P-N) /400VAC (P-P)	230VAC (P-N) /400VAC (P-P)
Output Voltage Range	184–265 VAC*	184–265 VAC	184–265 VAC*	184–265 VAC*	184–265 VAC* per Phase	184–265 VAC* per Phase	184–265 VAC* per Phase
Nominal Output Current	13A	17,5A	23,9A*	21 A	14,5 A per phase	14,5 A per phase	14,5 A per phase
Power factor	> 0.99						
<b>Efficiency</b>							
Max. Conversion Efficiency DC/AC	96%						
European Efficiency@Vnominal	95%						
<b>AC Input</b>							
AC Start-up /Auto Restart Voltage	120-140- VAC / 180 VAC				120 –140 VAC / 180 VAC per phase		
Acceptable Input Voltage Range	170–280 VAC				170–280 VAC per phase		
Max. Input Current	30 A						40 A
<b>PV Input (DC)</b>							
Max. DC Voltage	500 VDC			900 VDC			
MPP Voltage Range	250V DC~250VDC	280 ~ 500 VDC	120 ~ 450 VDC	250 ~ 850 VDC	400 ~ 800 VDC		
<b>Battery Mode Output (AC)</b>							
Nom. Output Voltage	202/208/220/230/240 VAC				230 VAC ( P-N) /400 VAC (P-P)		
Output Waveform	Pure Sinewave						
Efficiency ( DC to AC)	93%				91%		
<b>Battery &amp; Charger</b>							
Nominal DC Voltage	48 VDC						
Max. Charging Current	5-25 A adjustable	80 A	60 A	5-100 A adjustable	10–200 A adjustable		
<b>Physical</b>							
Dimensions D x W x H (mm)	107x438x480	117x438x535	110x450x445	204x460x600	167,5 x 500 x622		
Nett weight	15,5 kg	16,2 kg	16 kg	29 kg	45 kg		
<b>Interface</b>							
Communication Port	RS-232/USB	USB	RS-232/USB	RS-232/USB and CAN Interface			
Intelligent Slot	Optional SNMP, Modbus ans AS – 400 cards available						
<b>Environment</b>							
Humidity	0~90% RH ( Non- condensing)						
Operating temperatures	0 tot 40 C°			-10 C°- 55 °C			
Altitude	0 –1000 mtr **						
* These figures may vary depending on different AC Voltage and Country requirements							
** Power derating 1% every 100 m when altitude is over 1000 m							