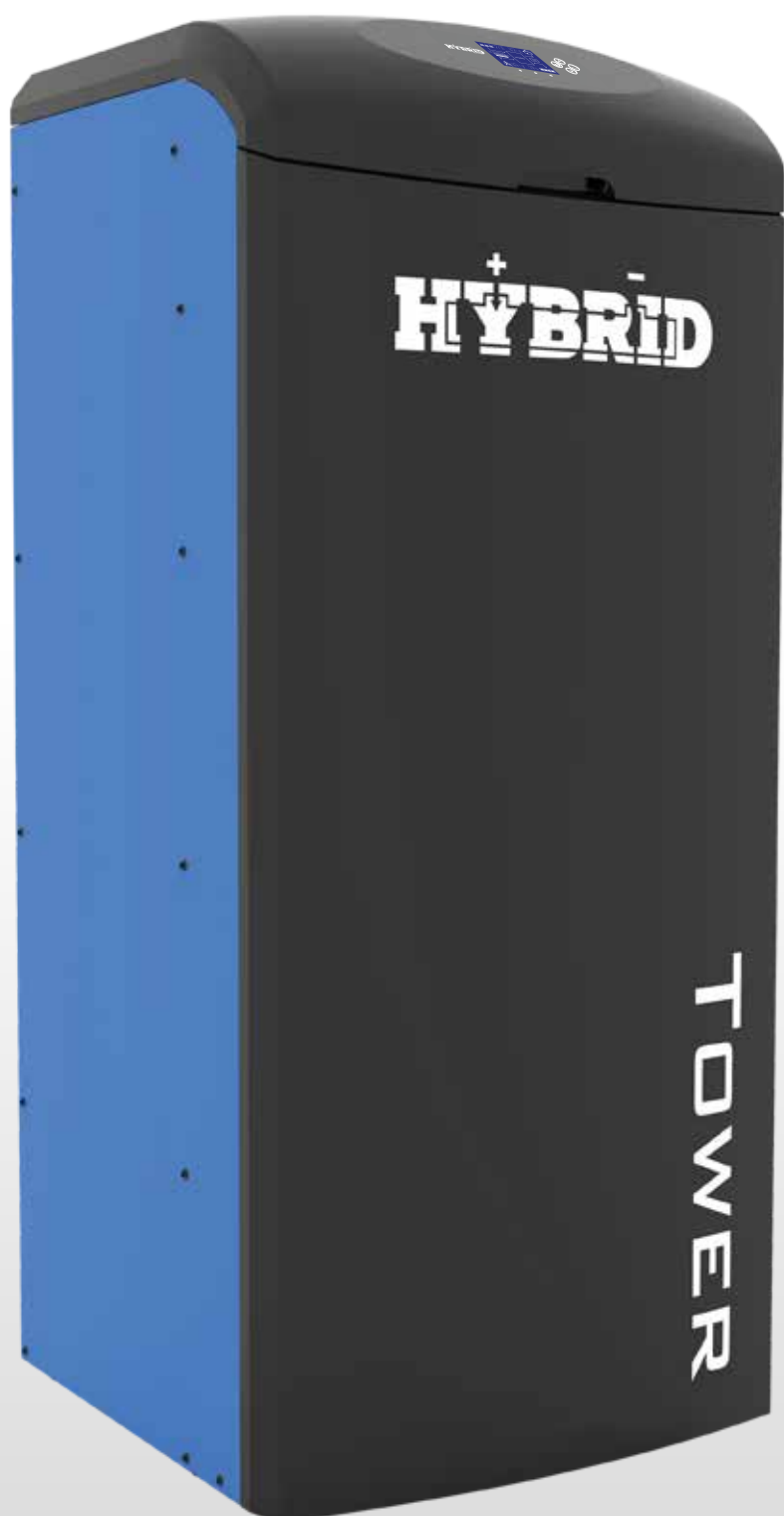


YOUR POWER STORAGE SOLUTION!



HYBRID
POWERED BY **Betta Batteries**

TECHNICAL DATA

MODEL	HYBRID TOWER 5 KW (single phase)	HYBRID TOWER 10 KW (three phase)
Rated power	5000 W	10000 W
Maximum charging power	4800 W	9600 W
PV INPUT (DC)		
Maximum DC input power	10000 W	14850 W
Nominal DC voltage	720 VDC	720 VDC
Maximum DC voltage	900 VDC	900 VDC
Start-up voltage / initial feeding voltage	225 VDC / 250 VDC	320 VDC / 350 VDC
MPP voltage range	250 VDC ~ 850 VDC	350 VDC ~ 850 VDC
Number of MPP trackers	2	2
Maximum input current	2 x 10.0 A	2 x 18.6 A
Isc PV (absolute maximum)	2 x 15 A	2 x 25 A
PV circuit protection	2 x 2 pole 1000 volt 15 Amp	2 x 2 pole 1000 volt 25 Amp
PV circuit surge protection (optional)	2 x PRD40r 1000DC	2 x PRD40r 1000DC
Max. inverter backfeed current to the array	0 Amp	0 Amp
GRID AND LOAD OUTPUT (AC)		
Nominal output voltage	208/220/230/240 VAC	230 VAC (L to N) / 400 VAC (L to L)
Output voltage range	184 - 265 VAC	184 - 265 VAC per phase
Output frequency range	47.5 ~ 51.5 Hz or 59.3 ~ 60.5 Hz	47.5 ~ 51.5 Hz or 59.3 ~ 60.5 Hz
Nominal output current	21 A	15 A per phase
Inrush current	60 A	17 A per phase / 20ms
Maximum output fault current	80 A	51 A per phase / 1ms
Maximum output overcurrent protection	80 A	51 A per phase
Power factor range	0.9 lead - 0.9 lag	0.9 lead - 0.9 lag
Load circuit protection	2 pole 240 volt 32 Amp (circuit breaker)	4 pole 400 volt 50 Amp (circuit breaker)
AC INPUT		
AC start-up voltage	120-140 VAC	120-140 VAC per phase
Auto restart voltage	180 VAC	180 VAC per phase
Acceptable input voltage range	170 - 280 VAC	171 - 280 VAC per phase
Nominal frequency	50 Hz / 60 Hz	50 Hz / 60 Hz
AC input power	4800VA/5100W	10000VA / 10000W
Maximum AC input current	40 A	40 A
Inrush input current	40 A / 1ms	40 A / 1ms
Grid circuit protection	2 pole 240 volt 60 Amp (isolator)	4 pole 400 volt 60 Amp (isolator)
BATTERY MODE OUTPUT (AC)		
Nominal output voltage	208/220/230/240 VAC	230 VAC (L to N) / 400 VAC (L to L)
Output frequency	50 Hz / 60 Hz (auto sensing)	50 Hz / 60 Hz (auto sensing)
Output waveform	Pure sine wave	Pure sine wave
Output power	4800VA / 5100W	10000VA / 10000W
Output current	23 A	25 A per phase
Efficiency (DC to AC)	92%	91%
BATTERY & CHARGER		
Nominal DC voltage	40 to 60 VDC	40 to 60 VDC
Maximum battery discharging current	200 A	275 A
Maximum charging current	100 A	200 A
BATTERY CAPACITY		
Battery capacity in Ah (100% DOD)	* 200 Ah (Lead Crystal®)	* 200 Ah / 300 Ah (Lead Crystal®)
Battery capacity in kWh (100% DOD)	9.6 kWh	9.6 kWh / 14.4 kWh
Battery DC circuit protection	2 pole 60 volt 200 Amp (isolator)	2 pole 60 volt 300 Amp (isolator)
GENERAL CHARACTERISTICS		
Dimensions H x W x D (mm)	1550 x 650 x 650 mm	1550 x 650 x 650 mm
Net weight (kg)	345 kg	375 / 480 kg
Chassis construction material	Laser cut galvanized steel	Laser cut galvanized steel
Enclosure construction material	UL94 V0 thermo molded ABS	UL94 V0 thermo molded ABS
INTERFACE		
Communication port	RS-232/USB (wifi optional)	RS-232/USB (wifi optional)
Intelligent slot	Optional SNMP, Modbus and AS-400 cards available	Optional SNMP, Modbus and AS-400 cards available
ENVIRONMENT		
Protective class	I	I
Ingress protection rating	IP55	IP55
Cooling	Internal electrical fan	Internal electrical fan
Humidity	0 ~ 90% RH (non condensing)	0 ~ 90% RH (non condensing)
Operating temperature	neg 10°C to plus 55°C	neg 10°C to plus 55°C
Altitude	1 ~ 2000 m	1 ~ 2000 m

* Up to three Towers can be connected with total of 28.8 kWh / 43.2 kWh for 1 Hybrid Wall.

Hybrid Europe



Rijnzathe 4



3454 PV Utrecht



The Netherlands

+31 (0)88 01 86 220



info@hybrid.energy



www.hybrid.energy

YOUR POWER STORAGE SOLUTION!



HYBRID
POWERED BY **Betta Batteries**

TECHNICAL DATA

MODEL	HYBRID HOME 3 KW	HYBRID HOME 3 KW PLUS
Rated power	3000 W	3000 W
Maximum charging power	3000 W	3000 W
PV INPUT (DC)		
Maximum DC power	3200 W	4500 W
Nominal DC voltage	360 VDC	360 VDC
Maximum DC voltage	500 VDC	500 VDC
Start-up voltage / initial feeding voltage	116 VDC / 150 VDC	116 VDC / 150 VDC
MPP voltage range	250 VDC ~ 450 VDC	250 VDC ~ 450 VDC
Number of MPP trackers	1	1
Maximum input current	13 A	18 A
Isc PV (absolute maximum)	13 A	18 A
PV circuit protection	2 Pole 500 volt 15 Amp	2 pole 500 volt 20 Amp
PV circuit surge protection (optional)	PRD40r 600DC	PRD40r 600DC
Max. inverter backfeed current to the array	0 Amp	0 Amp
GRID AND LOAD OUTPUT (AC)		
Nominal output voltage	208/220/230/240 VAC	208/220/230/240 VAC
Output voltage range	184 - 265 VAC	184 - 265 VAC
Output frequency range	47.5 ~ 51.5 Hz or 59.3 ~ 60.5 Hz	47.5 ~ 51.5 Hz or 59.3 ~ 60.5 Hz
Nominal output current	13 A	13 A
Inrush current	17 A	17 A
Maximum output fault current	51 A	51 A
Maximum output overcurrent protection	51 A	51 A
Power factor range	0.9 lead - 0.9 lag	0.9 lead - 0.9 lag
Load circuit protection	2 pole 240 volt 20 Amp (circuit breaker)	2 pole 240 volt 20 Amp (circuit breaker)
AC INPUT		
AC start-up voltage	120-140 VAC	120-140 VAC
Auto restart voltage	180 VAC	180 VAC
Acceptable Input voltage range	170 - 280 VAC	170 - 280 VAC
Nominal frequency	50 Hz / 60 Hz	50 Hz / 60 Hz
AC Input power	5100VA/5100W	5100VA/5100W
Maximum AC input current	30 A	30 A
Inrush input current	30 A	30 A
Grid circuit protection	2 pole 240 volt 32 Amp (isolator)	2 pole 240 volt 32 Amp (isolator)
BATTERY MODE OUTPUT (AC)		
Nominal output voltage	208/220/230/240 VAC	208/220/230/240 VAC
Output frequency	50 Hz / 60 Hz (auto sensing)	50 Hz / 60 Hz (auto sensing)
Output waveform	pure sine wave	pure sine wave
Output power	3000VA/3000W	3000VA/3000W
Output current	14.4A/13.6A/13A/12.5A	14.4A/13.6A/13A/12.5A
Efficiency (DC to AC)	92%	92%
BATTERY & CHARGER		
Nominal DC voltage	48 VDC	48 VDC
Maximum battery discharging current	150 A	150 A
Maximum charging current	25 A	25 A
BATTERY CAPACITY		
Battery capacity in Ah (100% DOD)	100 Ah (Lead Crystal®)	170 Ah (Lead Crystal®)
Battery capacity in kWh (100% DOD)	4.8 kWh	8.2 kWh
Battery DC circuit protection	2 pole 60 volt 100 Amp (isolator)	2 pole 60 volt 100 Amp (isolator)
GENERAL CHARACTERISTICS		
Dimensions H x W x D (mm)	1400 x 600 x 350	1400 x 600 x 350
Net weight (kg)	200 kg	300 kg
Chassis construction material	laser cut galvanized steel	laser cut galvanized steel
Enclosure construction material	UL94 V0 thermo molded ABS	UL94 V0 thermo molded ABS
INTERFACE		
Communication port	RS-232/USB (wifi optional)	RS-232/USB (wifi optional)
Intelligent slot	optional SNMP, modbus and AS-400 cards available	optional SNMP, modbus and AS-400 cards available
ENVIRONMENT		
Protective class	I	I
Ingress protection rating	IP55	IP55
Cooling	internal electrical fan	internal electrical fan
Humidity	1 ~ 90% RH (non condensing)	1 ~ 90% RH (non condensing)
Operating temperature	0 to 40°C	0 to 40°C
Altitude	1 ~ 1000 m	1 ~ 1000 m



YOUR POWER STORAGE SOLUTION!



HYBRID
POWERED BY **Betta Batteries**

TECHNICAL DATA

MODEL	HYBRID LEISURE 2 KW (single phase)	HYBRID LEISURE 3 KW (single phase)
Rated power	2400 W	3200 W
Maximum charging power	1500 W	3000 W
PV INPUT (DC)		
Maximum DC input power	1500 W	3000 W
Nominal DC voltage	30 - 115 VDC	30 - 115 VDC
Maximum DC voltage	145 VDC	145 VDC
Start-up voltage / initial feeding voltage	30 - 115 VDC	30 - 115 VDC
MPP voltage range	30 - 115 VDC	30 - 115 VDC
Number of MPP trackers	1	1
Maximum input current	15 A	25 A
Isc PV (absolute maximum)	25 A	25 A
PV circuit protection	2 pole 200 volt 15 Amp	2 Pole 200 volt 25 Amp
PV circuit surge protection (optional)	PRD40r 200DC	PRD40r 200DC
Max. inverter backfeed current to the array	0 Amp	0 Amp
GRID AND LOAD OUTPUT (AC)		
Nominal output voltage	208/220/230/240 VAC	208/220/230/240 VAC
Output voltage range	184 - 265 VAC	184 - 265 VAC
Output frequency range	47.5 ~ 51.5 Hz or 59.3 ~ 60.5 Hz	47.5 ~ 51.5 Hz or 59.3 ~ 60.5 Hz
Nominal output current	21 A	21 A
Inrush current	60 A	60 A
Maximum output fault current	40 A	40 A
Maximum output overcurrent protection	50 A	50 A
Power factor range	0.9 lead - 0.9 lag	0.9 lead - 0.9 lag
Load circuit protection	2 pole 240 volt 32 Amp (circuit breaker)	2 pole 240 volt 32 Amp (circuit breaker)
AC INPUT		
AC start-up voltage	120-140 VAC	120-140 VAC per phase
Auto restart voltage	180 VAC	180 VAC per phase
Acceptable input voltage range	170 - 280 VAC	171 - 280 VAC per phase
Nominal frequency	50 Hz / 60 Hz	50 Hz / 60 Hz
AC input power	3000 VA	4000 VA
Maximum AC input current	40 A	40 A
Inrush input current	40 A / 1ms	40 A / 1ms
Grid circuit protection	2 pole 240 volt 50 Amp (isolator)	2 pole 240 volt 50 Amp (isolator)
BATTERY MODE OUTPUT (AC)		
Nominal output voltage	208/220/230/240 VAC	208/220/230/240 VAC
Output frequency	50 Hz / 60 Hz (auto sensing)	50 Hz / 60 Hz (auto sensing)
Output waveform	Pure sine wave	Pure sine wave
Output power	3000VA / 2400W	4000VA / 3200W
Output current	20 A	25 A
Efficiency (DC to AC)	92%	92%
BATTERY & CHARGER		
Nominal DC voltage	20 to 31 VDC	40 to 62 VDC
Maximum battery discharging current	200 A	200 A
Maximum charging current	120 A	120 A
BATTERY CAPACITY		
Battery capacity in Ah (100% DOD)	24V 100 Ah (Lead Crystal®)	48V 55 Ah (Lead Crystal®)
Battery capacity in kWh (100% DOD)	2.4 kWh	2.7 kWh
Battery DC circuit protection	2 pole 60 volt 200 Amp (isolator)	2 pole 60 volt 200 Amp (isolator)
GENERAL CHARACTERISTICS		
Dimension H x W x D (mm)	850 x 600 x 350 mm	850 x 600 x 350 mm
Net weight (kg)	120 kg	120 kg
Chasis construction material	Laser cut galvanized steel	Laser cut galvanized steel
Enclosure construction material	UL94 V0 thermo molded ABS	UL94 V0 thermo molded ABS
INTERFACE		
Communication port	RS-232/USB (wifi optional)	RS-232/USB (wifi optional)
Intelligent slot	Not available	Not available
ENVIRONMENT		
Protective class	I	I
Ingress protection rating	IP55	IP55
Cooling	Internal electrical fan	Internal electrical fan
Humidity	0 ~ 90% RH (non condensing)	0 ~ 90% RH (non condensing)
Operating temperature	0 to 55°C	0 to 55°C
Altitude	1 ~ 2000 m	1 ~ 2000 m