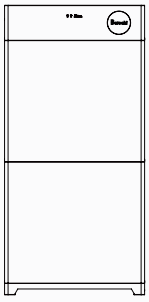
Energy Storage & Hybrid Inverter

At the heart of the Borochi system lies the combination of modular energy storage and a hybrid inverter. Together, they enable higher self-consumption, reduced grid dependency, and reliable power availability during outages.

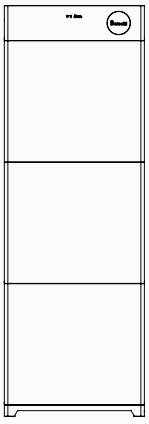
The modular storage architecture allows capacity expansion as household energy demand evolves. The hybrid inverter coordinates energy flow between photovoltaic generation, storage, household loads, and the grid.

Model	BRH008KH-B1	BRH010KH-B1	BRH012KH-B1	BRH015KH-B1
PV Input				
Recommended Max. PV Input Power [Wp]	10400	13000	15600	18750
Max. Input Voltage [V]	1000			
MPPT Voltage Range [V]	180 - 950			
Rated Voltage [V]	600			
Start-up Voltage [V]	200			
No. of MPP Trackers	2			
No. of PV Strings per MPPT	1/1		2/1	
Max. Input Current per MPPT [A]	15/15		30/15	
Max. Short-Circuit Current per MPPT [A]	18/18		36/18	
AC Output				
Rated Output Power [W]	8000	10000	12000	15000
Rated Output Current [A]	11.6	14.5	17.4	21.7
Max. Output Current [A]	12.7	16	19	23.8
Max. Apparent Output Power [VA]	8800	11000	13200	16500
Rated Output Voltage [V]	220/380; 230/400			
Rated Grid Frequency [Hz]	50/60			
Power Factor [cosϕ]	1/0.8 (leading) - 0.8 (lagging)			
THDi (@Rated Output Power)	< 3%			
AC Input (Grid)				
Max. Apparent Input Power [VA]	8800	11000	13200	16500
Max. Input Current [A]	12.7	15.9	19.1	23.8
Rated Output Voltage [V]	220/380; 230/400			
Rated Grid Frequency [Hz]	50/60			
Battery				
Battery Module Type	Lithium Iron Phosphate ($LiFePO_4$)			
Battery Voltage Range [V]	150 - 600			
Max. Charging/Discharging Current [A]	25			
Battery Communication	CAN			
AC Output (Off-Grid)				
Rated Output Power [W]	8000	10000	12000	15000
Rated Output Voltage [V]	220/380; 230/400			
Rated Output Frequency [Hz]	50/60			
Rated Output Current [A]	11.6	14.5	17.4	21.7
THDi (@Rated Output Power)	< 3%			
Switch Time [ms]	< 10			
Peak Apparent Power, Duration [VA, s]	12000, 30	15000, 30	18000, 30	22500, 30
Efficiency				
Max. Efficiency	98%			
Euro Efficiency	97.3%			
Charging/Discharging Efficiency of the Battery	98.5%@Charge / 97.0%@Discharge			
Protection				
DC-Switch	Integrated			
Insulation Resistance Detection	Integrated			
Input Reverse Polarity Protection	Integrated			
Anti-island Protection	Integrated			
Residual Current Monitoring	Integrated			
Overtemperature Protection	Integrated			
DC Surge Protection	Integrated (Type II)			
AC Surge Protection	Integrated (Type II)			
General Data				
Dimensions (W×H×D) [mm]	498 × 563 × 200			
Weight [kg]	28			29
Display	LCD / Web / App			
Communication	WiFi / RS485 / LAN			
Operating Temperature Range [°C]	-25 to +60			
Relative Humidity	≤ 95%, non-condensing			
Operating Altitude [m]	≤ 4000 (Derating above 2000)			
Standby Power Consumption [W]	< 15			
Topology	Transformerless			
Cooling Concept	Natural Convection			Smart Fan Cooling
Ingress Protection (IP) Rating	IP66			
Warranty	10 Years			
Certification	VDE 4105; EN IEC 62109-1/2; EN IEC 61000-6-1/3; CE; RoHS			

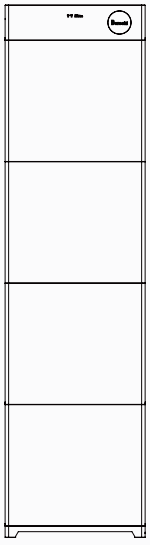
Model	BOR-5120-H2	BOR-5120-H3	BOR-5120-H4
Performance			
Number of Battery Modules	2	3	4
Rated Capacity [kWh]	10.24	15.36	20.48
Usable Capacity [kWh]	9.21	13.81	18.41
Rated DC Voltage [V]	204.8	307.2	409.6
Operating Voltage Range [V]	160 - 233.6	240 - 350.4	320 - 467.2
Rated Charging/Discharging Power [kW]	5.12	7.68	10.24
Rated Charging/Discharging Current [A]	25		
Max. Charging/Discharging Current [A]	50		
Max. Depth of Discharge (DoD)	90%		
General Data			
Charging Temperature Range [°C]	0 to +50		
Discharging Temperature Range [°C]	-20 to +50		
Recommended Storage Temperature [°C]	-30 to +60		
Relative Humidity	≤ 95%, non-condensing		
Operating Altitude [m]	≤ 4000 (Derating above 2,000)		
Weight [kg]	146.5	211.4	276.6
Dimensions (W×H×D) [mm]	600 × 1240 × 265	600 × 1760 × 265	600 × 2280 × 265
Ingress Protection (IP) Rating	IP65		
Installation	Floor Installation		
Cooling	Natural Convection		
Battery Technology	Lithium Iron Phosphate ($LiFePO_4$)		
Display	SoC, Operating Status		
Communication	CAN		
Warranty	10 Years (≥ 80% usable capacity)		
Certification	IEC 60730-1; IEC 62619; EN IEC 62477; EN 62477-1; EN IEC 61000-6-1/2/3/4; UN 38.3; CE; CB; RoHS		



1 × BOR-5120-H
2 × BOR-5120



1 × BOR-5120-H
3 × BOR-5120



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4 × BOR-5120