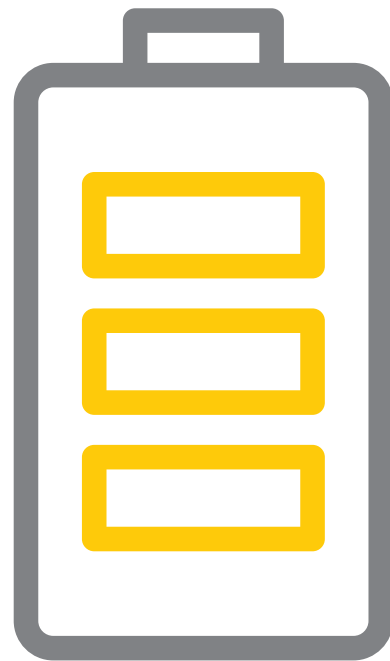# PROJECT STORAGE SYSTEMS

PROJECT
COMMERCIAL
INDUSTRY

krannich

Manufacturer

GOODWE

Type commercial storage system	GW ET Hybrid 15K / 20K / 25K / 29.9K			
Manufacturer / model storage	BYD B-Box HVS 5.1 to 12.8	BYD B-Box HVM 11.0 to 22.1	Goodwe Lynx Home F LX F6.6 to 16.4H	Goodwe Lynx Home F plus LX F6.6 to 16.4H
Application (self-consumption, peak shaving, grid expansion avoidance, backup)	Self-consumption, peak shaving, backup (<10ms)			
Installation site	Indoor			
AC Power (kW)	15 / 20 / 25 / 29,9			
Mains connection	400 V			
Backup function / changeover device	●/○			
Capacity gross / net (kWh)	5,1 to 12,8 (net)	11.0 to 22.1 (net)	6,55 to 16,38 (net)	6,55 to 131,04 (net)
Expandable / time window for expansion	2 units per system / unlimited		2 units per system / up to 2 years	
max. charge rate (C-value)	varies depending on the combination			
Charging cycles	-			
Cell Chemistry	LFP			
Norms	VDE 4105			
Warranty system / memory	10 years / 10 years			
Interfaces communication	WLAN, Ethernet			
Energy Management System integrated / external	integrated			
Monitoring	via Goodwe Portal			
Enable control Mains relay, external NA protection, (VDE-AR-N 4105, up to 135kVA)	●			
Default certification	○			
Inbetriebnahme Unterstützung	regular support			
System information	System currently not cascadable; 2 separate battery ports; ideal for small to medium commercial applications; peak shaving as operating mode possible; connection FRE via DRM inputs			

* Release and availability according to manufacturer's specifications

** Discontinuation announced by manufacturer

Manufacturer

HUAWEI

Type commercial storage system	"SUN2000 12 / 15 / 17 / 20 / 25 K MB0"		"SMART PCS SUN2000 100KTL-M1"
Manufacturer / model storage	Huawei SUN2000 LUNA 5 / 10 / 15-S0	Huawei SUN2000 LUNA 7 / 14 / 21-S1	Huawei LUNA 2000-200kWh-2H0
Application (self-consumption, peak shaving, grid expansion avoidance, backup)	Self-consumption, backup (announced)		Self-consumption, peak shaving
Installation site	Indoor		
AC Power (kW)	12 / 15 / 17 / 20 / 25		100
Mains connection	400 V		
Backup function / changeover device	● with backup box / ● announced		○
Capacity gross / net (kWh)	5,0 / 10,0 / 15,0 (gross = net)	7,0 / 14,0 / 21,0 (gross = net)	200 (gross = net)
Expandable / time window for expansion	unlimited		
max. charge rate (C-value)	varies depending on the combination		0,5
Charging cycles	-		-
Cell Chemistry	LFP		
Norms	VDE 4105 / 4110		VDE 4110
Warranty system / memory	10 years / 10 years		10 years / 5 years
Interfaces communication	Ethernet		
Energy Management System integrated / external	integrated		"Huawei Smart Logger / suitable parking controller"
Monitoring	via Huawei Portal		
Enable control Mains relay, external NA protection, (VDE-AR-N 4105, up to 135kVA)	●		○
Default certification	○		
Inbetriebnahme Unterstützung	regular support		expected regular support
System information	Up to 3 systems cascadable; 2 separate battery ports; ideal for small to medium commercial applications; FRE connection via Huawei Smart Logger		AC-coupled high-voltage storage system for connection to large plants

* Release and availability according to manufacturer's specifications

** Discontinuation announced by manufacturer

Manufacturer	**INTILION** Part of the HOPPECKE Group	
Type commercial storage system	Scalebloc **Energy / Power / Power Boost**	Scalestac **Power / Power Boost**
Manufacturer / model storage	Intilion Scalebloc	Intilion Scalestac
Application (self-consumption, peak shaving, grid expansion avoidance, backup)	Self-consumption, peak shaving, backup	
Installation site	Outdoor (air conditioned)	Indoor
AC Power (kW)	25 / 50 / 68,5	25 each (per slot, max. 16)
Mains connection	400 V	
Backup function / changeover device	⬤ / external (to be implemented on site)	
Capacity gross / net (kWh)	73 each / 65.6	154 / 138.6 (Power) 123 / 110.7 (Power Boost)
Expandable / time window for expansion	always as complete unit, up to 16 total / unlimited	always as a complete unit / unlimited
max. charge rate (C-value)	up to 1 C	up to 2 C (depending on design**)
Charging cycles	8000 (90% DoD)	> 5000 (90% DoD)
Cell Chemistry	NMC	LFP
Norms	VDE 4105 / 4110	
Warranty system / memory	10 years	
Interfaces communication	Ethernet, Modbus TCP/IP	
Energy Management System integrated / external	Intilion EMS integrated / optional	
Monitoring	via integrated Intilion web server / cloud	
Enable control Mains relay, external NA protection, (VDE-AR-N 4105, up to 135kVA)	◯	⬤
Default certification	⬤ (at the manufacturer or on site with installation support)	
Inbetriebnahme Unterstützung	Support installation / complete installation	
System information	Commercial storage system for small to medium-sized applications, outdoor, batteries certified according to VDE-AR-N 2510-50 (FLEPS fire protection concept)	Commercial storage system for larger applications, indoor, as option ** with certification according to VDE-AR-N 2510-50 (FLEPS fire protection concept, optional depending on system size)

Manufacturer

Type commercial storage system	Commercial Storage Solution 30-20	Commercial Storage Solution 50-20
Manufacturer / model storage	SMA Commercial Storage	
Application (self-consumption, peak shaving, grid expansion avoidance, backup)	Self-consumption, Peak-Shaving, Multi-Use	
Installation site	Indoor	
AC Power (kW)	30	50
Mains connection	400 V	
Backup function / changeover device	prepared / external box SMA	
Capacity gross / net (kWh)	32	56
Expandable / time window for expansion	up to 6 batteries per rack / up to 6 months up to 4 racks per WR, 50 WR total / unlimited	up to 10 batteries per rack / up to 6 months up to 4 racks per WR, 50 WR total / unlimited
max. charge rate (C-value)	1 C	
Charging cycles	8000 (expected)	
Cell Chemistry	NMC	
Norms	VDE 4105 / 4110	
Warranty system / memory	10 years (for IBN according to SMA specification)	
Interfaces communication	Ethernet	
Energy Management System integrated / external	integrated SMA System Manager (up to 5 devices) / with SMA Data Manager M (up to 50 WR)	
Monitoring	via SMA ennexOS portal	
Enable control Mains relay, external NA protection, (VDE-AR-N 4105, up to 135kVA)	◯	
Default certification	Training at SMA	
Inbetriebnahme Unterstützung	Initial commissioning support on site	
System information	Set includes SMA Energy Meter Commercial, SMA System Manager integrated in inverter, prepared for backup power (announced Q3/24), Sunny Design sizing service	

Manufacturer

SOFAR

Type commercial storage system	HYD 10 / 15 / 20 KTL				
Manufacturer / model storage	Pylontech Force H1 13.5 to 23.6	Pylontech Force H2 10.1 to 13.5	Sofar BTS-D5 E5 to E20	Axitec AXIstorage Li SV1 13.5 to 23.6	Axitec AXIstorage Li SV2 10.1 to 13.5
Application (self-consumption, peak shaving, grid expansion avoidance, backup)	Self-consumption, backup (<10ms)				
Installation site	Indoor				
AC Power (kW)	10 / 15 / 20				
Mains connection	400 V				
Backup function / changeover device	● / ● , manual changeover device				
Capacity gross / net (kWh)	13,5 to 23,6 (net)	6,7 to 13,5 (net)	4,75 to 19,0 (net)	13,5 to 23,6 (net)	6,7 to 13,5 (net)
Expandable / time window for expansion	6 units per system / up to 2 years		2 units per system / unlimited	6 units per system / up to 2 years	
max. charge rate (C-value)	variiert je nach Kombination		varies depending on the combination	varies depending on the combination	
Charging cycles	-				
Cell Chemistry	LFP				
Norms	VDE 4105 / 4110				
Warranty system / memory	5 years / 10 years				
Interfaces communication	Ethernet				
Energy Management System integrated / external	integrated				
Monitoring	via Sofar Portal				
Enable control Mains relay, external NA protection, (VDE-AR-N 4105, up to 135kVA)	●				
Default certification	○				
Inbetriebnahme Unterstützung	regular support				
System information	up to 10 systems cascadable; 2 separate battery ports; ideal for small to medium commercial applications; connector FRE integrated				

* Release and availability according to manufacturer's specifications

** Discontinuation announced by manufacturer

Manufacturer	SOLAX POWER	VARTA	
	X3-Ultra 15K / 19.9K / 20K / 25K / 30K	Flex Storage E	Flex Storage E Backup
Type commercial storage system	X3-Ultra 15K / 19.9K / 20K / 25K / 30K	Flex Storage E	Flex Storage E Backup
Manufacturer / model storage	"Solax T-BAT HV-S 10.0 to 33.2"	Varta Storage	
Application (self-consumption, peak shaving, grid expansion avoidance, backup)	Self-consumption, backup (<10ms)	Self-consumption, Peak-Shaving	Self-consumption, Peak-Shaving, Backup
Installation site	Indoor	Indoor	
AC Power (kW)	15 / 19,9 / 20 / 25 / 30	36 / 80 / 120	
Mains connection	400 V	400 V	
Backup function / changeo-ver device	● / ● , with Solax EPS Parallel Box	○ / ○	● (only 50% kWh usable) / integrated
Capacity gross / net (kWh)	10,0 to 33,2 / 9,2 to 29,9	Unit with 75 / 67.5 each	
Expandable / time window for expansion	2 units per system / unlimited	up to 5 units / unlimited	
max. charge rate (C-value)	varies depending on the combination	0,5 C	
Charging cycles	>6000	>4000	
Cell Chemistry	LFP	NMC	
Norms	VDE 4105	VDE 4105 / 4110	
Warranty system / memory	tbd	5 years / 10 years (replacement of current value)	
Interfaces communication	Ethernet	Ethernet, Modbus TCP	
Energy Management System integrated / external	integrated	Varta EMS integrated / optional	
Monitoring	via Solax Portal	via Varta portal	
Enable control Mains relay, external NA protection, (VDE-AR-N 4105, up to 135kVA)	tbd	●	
Default certification	○	○ (must be done by manufacturer service)	
Inbetriebnahme Unter-stützung	regular support	included with each memory	
System information	up to 10 systems cascadable; 2 separate battery ports; ideal for small to medium commercial applications; connection FRE via DI inputs	Integrated grid switching device, backup PV / Load = AC charging power	