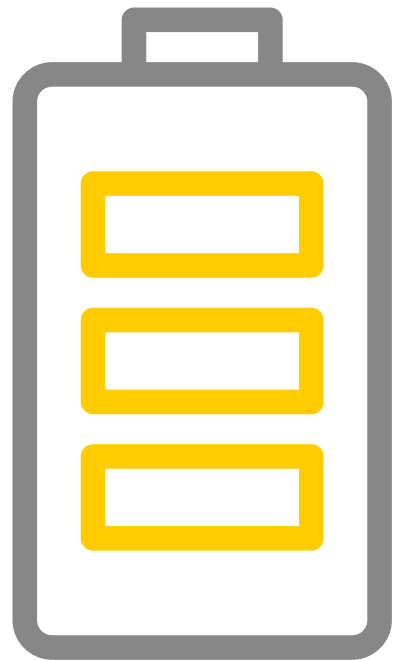


C&I STORAGE SYSTEMS



COMMERCIAL
INDUSTRIAL
UTILITY SCALE

krannich

Manufacturer



Type of commercial storage system	AXIhycon 12 / 15 / 20 H + 29.9 / 40 / 50 H		AXIhycon 29.9 / 40 / 50 H		
Application - Scenario (Self-consumption, peak shaving, network expansion avoidance, backup)	Self-consumption, Peak-Shaving ***, Dyn. Electricity tariffs, backup (<10ms)				
Connection of storage / connection of other PV generators	AC + DC - Coupling (Hybrid-WR) / ext.PV-WR				
AC power (kW)	12/15/20/29.9/40/50		29.9 / 40 / 50		
Mains connection voltage level	400 V				
Number of cascadeable WR / max. Total power AC	Up to 6 WR / 300 kVA				
Specified installation location Inverter / storage	Indoor + Outdoor / Indoor		Indoor + Outdoor / Outdoor	Indoor + Outdoor / Indoor	Indoor + Outdoor / Indoor*** + Outdoor
Manufacturer / Model Memory	Axitec AXIstorage Li SV1 10.1 to 23.6	Axitec AXIstorage Li SV2 6.7 to 16.9	BYD Battery-Max Lite 30 to 67.5 (Only AXIhycon 29.9 - 50)	Sunwoda Oasis Flex 25 - 60	Sunwoda Oasis 60
Capacity 1 storage unit gross / net (kWh)	10.1 to 23.6 (net)	6.7 to 16.9 (net)	30.0 to 67.5 (net)		60,0 (net)
Number of storage units per system / Time window for extension	6 units per system / up to 5 years		4 to 9 per unit, up to 2 units / unlimited		3 units per system / unlimited
Charging cycles ***	-		-		6000
Cell chemistry	LFP		LFP		LFP
Backup function / ext. Switching device	 / 				
Standardize	VDE 4105		VDE 4105 / 4110 (announced)		
Standard Warranty System / Memory ***	10 years / 10 years				
Interfaces external communication	WLAN, Ethernet				
Energy Management System / EZA Regulator	Integrated (limited range of functions) / to be checked individually				
Monitoring	Via Axitec Portal				
Release control mains relay, external NA protection, (VDE-AR-N 4105, up to 135 / 270 kVA)					
Installers certification possible					
Options Commissioning Support	Regular support				
Weight components (WR, Bat unit) kg / Transport + loading	WR 32,6-73, Bat total 119-259 / Forklift	WR 32,6-73, Bat total 82,5-189 / Forklift	WR 73, Rack 400, Bat 300-675 / Forklift or Crane		WR 73, Rack 207, Bat 600 / forklift or crane
System information	12.15, 20, 40, 50 kW with 4 MPPT - 29.9 kW with 3 MPPT; integrated arc detection; storage can be cascaded up to 6 times		12.15, 20, 40, 50 kW with 4 MPPT - 29.9 kW with 3 MPPT; integrated arc detection; storage flexibly scalable with plug-in modules		12.15, 20, 40, 50 kW with 4 MPPT - 29.9 kW with 3 MPPT; integrated arc detection; storage flexibly scalable; air-cooled

* Release and compatibility according to manufacturer's specifications

** only possible through the use of external EMS

*** Requirements and assumptions for this information can be found in the manufacturer's documentation and guarantees

Manufacturer



Type of commercial storage system	Verto Plus 15.0 / 17.5 / 20.0 / 25.0 / 30.0 / 33.0		
Application - Scenario (Self-consumption, peak shaving, network expansion avoidance, backup)	Self-consumption, Peak-Shaving, Dyn. Electricity tariffs, backup		
Connection of storage / connection of other PV generators	AC + DC - Coupling (Hybrid-WR) / ext.PV-WR		
AC power (kW)	15 / 17,5 / 20 / 25 / 30 / 33		
Mains connection voltage level	400 V		
Number of cascadeable WR / max. Total power AC	Not cascadeable according to the current status		
Specified installation location Inverter / storage	Indoor + Outdoor / Indoor		Indoor + Outdoor / Indoor + Outdoor***
Manufacturer / Model Memory	BYD B-Box HVS 5.1 to 12.8	BYD B-Box HVM 11.0 to 22.1	Fronius Reserve 6.3 / 9.5 / 12.6 / 15.8
Capacity 1 storage unit gross / net (kWh)	5.1 to 12.8 (net)	11.0 to 22.1 (net)	6.3 to 15.8 (net)
Number of storage units per system / Time window for extension	2 - 5 per eggNheit, up to 3 units parallel / unlimited	4 - 8 per unit, up to 3 units parallel / unlimited	2 - 5 per unit, up to 4 units parallel / up to 2 years
Charging cycles ***	-	-	-
Cell chemistry	LFP		
Backup function / ext. Switching device	☐ / ☒		
Standardize	VDE 4105 / 4110 (only 25.0 to 33.0)		
Standard Warranty System / Memory ***	10 years / 10 years		
Interfaces external communication	WLAN, Ethernet		
Energy Management System / EZA Regulator	Integrated (limited range of functions) / to be checked individually		
Monitoring	About Fronius Portal		
Release control mains relay, external NA protection, (VDE-AR-N 4105, up to 135 / 270 kVA)	☐		
Installers certification possible	☐		
Options Commissioning Support	Regular support		
Weight components (WR, Bat unit) kg / Transport + loading	WR 43, Bat total 91-205 / Forklift	WR 43, Bat total 153-319 / Forklift	WR 43, Bat total 86,5-187 / Forklift
System information	15, 17.5, 20, 25, 30, 33 kW with 3 MPPT; integrated Arc Guard arc detection; connection FRE via DI inputs		

Manufacturer

GOODWE

Type of commercial storage system	GW ET Hybrid 15K / 20K / 25K / 29.9K / 40K / 50K		
Application - Scenario (Self-consumption, peak shaving, network expansion avoidance, backup)	Own consumption, peak shaving, backup (<10ms)		
Connection of storage / connection of other PV generators	AC + DC - Coupling (Hybrid-WR) * / ext. PV-WR *		
AC power (kW)	15 / 20 / 25 / 29,9 / 40 / 50		
Mains connection voltage level	400 V		
Number of cascadeable WR / max. Total power AC	3 x GW 29.9 ET / 99.7 kW 4 x GW 40+50 ET / up to 200 kW		
Specified installation location Inverter / storage	Indoor + Outdoor / Indoor		
Manufacturer / Model Memory	BYD B-Box HVS 5.1 to 12.8 (Only GW ET 15K - 30K)	BYD B-Box HVM 11.0 to 22.1 (Only GW ET 15K - 30K)	Goodwe Lynx D 5.0 to 40.0 (Only GW ET 15K - 30K)
Capacity 1 storage unit gross / net (kWh)	5.1 to 12.8 (net)	11.0 to 22.1 (net)	5.0 to 40.0 (net)
Number of storage units per system / Time window for extension	2 units per system / unlimited		1 to 8 units per system / unlimited
Charging cycles ***	-		-
Cell chemistry	LFP		LFP
Backup function / ext. Switching device	 / 		
Standardize	VDE 4105		
Standard Warranty System / Memory ***	10 years / 10 years		10 years / 10 years
Interfaces external communication	WLAN, Ethernet		
Energy Management System / EZA Regulator	Integrated (limited range of functions) / to be checked individually		
Monitoring	Via Goodwe Portal		
Release control mains relay, external NA protection, (VDE-AR-N 4105, up to 135 / 270 kVA)			
Installers certification possible			
Options Commissioning Support	Remote Commercial Support		
Weight components (WR, Bat unit) kg / Transport + loading	WR 48-65, Bat total 91-205 / Forklift	WR 48-65, Bat total 153-319 / Forklift	WR 48-65, Bat total 52-416 / Forklift
System information	2 separate battery ports; ideal for small toMedium commercial applications; connection FRE via DRM inputs; optional with AFCI		

* Release and compatibility according to manufacturer's specifications

** only possible through the use of external EMS

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Manufacturer

GOODWE

Type of commercial storage system	GW ET Hybrid 15K / 20K / 25K / 29.9K / 40K / 50K			
Application - Scenario (Self-consumption, peak shaving, network expansion avoidance, backup)	Own consumption, peak shaving, backup (<10ms)			
Connection of storage / connection of other PV generators	AC + DC - Coupling (Hybrid-WR) / ext.PV-WR			
AC power (kW)	15 / 20 / 25 / 29,9 / 40 / 50			
Mains connection voltage level	400 V			
Number of cascadeable WR / max. Total power AC	3 x GW 29.9 ET / 99.7 kW 4 x GW 40+50 ET / up to 200 kW			
Specified installation location Inverter / storage	Indoor + Outdoor / Outdoor	Indoor + Outdoor / Outdoor	Indoor + Outdoor / Outdoor	Indoor + Outdoor / Outdoor
Manufacturer / Model Memory	Goodwe Lynx C 60K	Goodwe Lynx C LX C 101 / 120 / 138 / 156 (Only GW ET 40K + 50K)	BYD Battery-Max Lite 30 to 67.5 (Only GW ET 40K + 50K)	ZYC SIMPO HV Pro 72-6 to -9 (Only GW ET 40K + 50K)
Capacity 1 storage unit gross / net (kWh)	60.0 / 60.0	101/119/138/156	30.0 to 67.5 (net)	48.38 to 72.58 (net)
Number of storage units per system / Time window for extension	3 units / up to 6 months	3 units / up to 1 year	4 to 9 per unit, up to 2 units / unlimited	6 to 9 per unit, up to 16 units / unlimited
Charging cycles ***	> 5000	-	-	-
Cell chemistry	LFP			
Backup function / ext. Switching device	 / 			
Standardize	VDE 4105			
Standard Warranty System / Memory ***	10 years / 10 years			
Interfaces external communication	WLAN, Ethernet			
Energy Management System / EZA Regulator	Integrated (limited range of functions) / to be checked individually			
Monitoring	Via Goodwe Portal			
Release control mains relay, external NA protection, (VDE-AR-N 4105, up to 135 / 270 kVA)				
Installers certification possible				
Options Commissioning Support	Remote Commercial Support			
Weight components (WR, Bat unit) kg / Transport + loading	Complete 1029,5 / Forklift + Crane	WR 48-65, Rack 240-290, Bat 880-1360 / Forklift or Crane	WR 48-65, Rack 400, Bat 300-675 / Forklift or Crane	WR 48-65, Rack 360, Bat 390-585 / Forklift or Crane
System information	2 separate battery ports; ideal for small toMedium commercial applications; connection FRE via DRM inputs; optional with AFCI			

Manufacturer



Type of commercial storage system	SUN2000 12/15/17/20/25 K MBO		LUNA2000 215-2510
Application - Scenario (Self-consumption, peak shaving, network expansion avoidance, backup)	Own consumption; Dynamic electricity tariffs (EMMA), backup (only single-phase)		Own consumption**, peak-shaving**
Connection of storage / connection of other PV generators	AC + DC - Coupling (Hybrid-WR) / ext.PV-WR		AC coupling (memory WR) / Ext. PV-WR
AC power (kW)	12/15/17/20/25		108
Mains connection voltage level	400 V		
Number of cascadeable WR / max. Total power AC	Up to 3 WR / 75 kVA		Up to 20 WR / 2160 kVA
Specified installation location Inverter / storage	Indoor + Outdoor / Indoor		Compl. Outdoor
Manufacturer / Model Memory	Huawei SUN2000 LUNA 5 / 10 / 15-S0	Huawei SUN2000 LUNA 7 / 14 / 21-S1	Huawei LUNA 2000 -215 kWh (Liquid cooled)
Capacity 1 storage unit gross / net (kWh)	5.0 / 10.0 / 15.0 (Gross = net)	7.0 / 14.0 / 21.0 (Gross = net)	215.0 (Gross = net)
Number of storage units per system / Time window for extension	Up to 2 / unlimited		Always as a complete unit / unlimited
Charging cycles ***	-		7300
Cell chemistry	LFP		
Backup function / ext. Switching device	 , with Backup Box /  - with Smart Guard Box		
Standardize	VDE 4105/4110		
Standard Warranty System / Memory ***	10 years / 10 years		10 years / 5 years
Interfaces external communication	Ethernet		Ethernet, fiber optic
Energy Management System / EZA Regulator	**Via third-party providers / to be checked individually		
Monitoring	Via Huawei Portal		
Release control mains relay, external NA protection, (VDE-AR-N 4105, up to 135 / 270 kVA)			
Installers certification possible			
Options Commissioning Support	Regular support		On-site support
Weight components (WR, Bat unit) kg / Transport + loading	WR 21, Bat 63.8-163.8 / Forklift	WR 21, Bat 80-252 / Forklift	Complete 2800 / Forklift or Crane
System information	Up to 3 systems cascadeable; 2 separate battery ports; ideal for small to medium commercial applications; connection FRE via Huawei Smart Logger		AC-coupled high-voltage storage system for connection to large systems; system with liquid cooling; 20 systems can be cascaded

* Release and compatibility according to manufacturer's specifications

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Manufacturer



Type of commercial storage system	Blueplanet gridsave 92.0 TL3-S	Blueplanet gridsave 110 TL3-S	Blueplanet gridsave 137 TL3-S
Application - Scenario (Self-consumption, peak shaving, network expansion avoidance, backup)	Own consumption**, peak-shaving**		
Connection of storage / connection of other PV generators	AC coupling (memory WR) / Ext.PV-WR		
AC power (kW)	92	110	137
Mains connection voltage level	400 V	480 V	600 V
Number of cascadeable WR / max. Total power AC	Up to 3 WR / 411 kVA		
Specified installation location Inverter / storage	Indoor + Outdoor / Outdoor	Indoor + Outdoor / Outdoor	Indoor + Outdoor / Outdoor
Manufacturer / Model Memory	BYD Battery-Max Lite 82.5 to 90	Sunwoda Oasis L215	Sunwoda Oasis L344
Capacity 1 storage unit gross / net (kWh)	82.5 to 90.0 (net)	215.0 (net)	344.0 (net)
Number of storage units per system / Time window for extension	9 to 10 per Einheit, up to 2 units / unlimited	Always as a complete unit with WR / unlimited	Always as a complete unit with WR / unlimited
Charging cycles ***	-	-	-
Cell chemistry	LFP		
Backup function / ext. Switching device	○ / ○		
Standardize	VDE 4105 / 4110 + 4120 (only 92.0)		
Standard Warranty System / Memory ***	5 years / 10 years	5 years / 5 years	
Interfaces external communication	Ethernet		
Energy Management System / EZA Regulator	**Via third-party ConnecticaTo implement / to be checked individually		
Monitoring	About Kaco Portal		
Release control mains relay, external NA protection, (VDE-AR-N 4105, up to 135 / 270 kVA)	○		
Installers certification possible	○		
Options Commissioning Support	Regular support		
Weight components (WR, Bat unit) kg / Transport + loading	WR 80, Rack 400, Bat 300-675 / Forklift or Crane	WR 80, Bat total 2520 / Forklift or crane	WR 80, Bat total 3480 / Forklift or crane
System information	AC-coupled high-voltage storage system for connection to large systems	AC-coupled high-voltage storage system for connection to large systems; system with liquid cooling; special AC voltage level	

Manufacturer



Type of commercial storage system	Powershaper2	Powershaper XL
Application - Scenario (Self-consumption, peak shaving, network expansion avoidance, backup)	Self-consumption, peak-shaving**	
Connection of storage / connection of other PV generators	AC coupling (memory WR) / ext. PV-WR	
AC power (kW)	50	60
Mains connection voltage level	400 V	
Number of cascadeable WR / max. Total power AC	Up to 20 WR (with 1 x Master Gateway, multiple gateways with ext.EMS adjustable) / 1200 kVA	
Specified installation location Inverter / storage	Depending on the version Indoor (active fans) + Outdoor (air-conditioned)	
Manufacturer / Model Memory	Pixii LFP	Pixii LFP
Capacity 1 storage unit gross / net (kWh)	Each 50 / 40.0	201.6 / 181.44
Number of storage units per system / Time window for extension	Always as a complete unit / unlimited	
Charging cycles ***	4000	7200
Cell chemistry	LFP	LFP
Backup function / ext. Switching device	☐	
Standardize	VDE 4105/4110	
Standard Warranty System / Memory ***	5 years	
Interfaces external communication	Ethernet, Wifi, 4G, Modbus RTU*, TCP/IP, MQTT	
Energy Management System / EZA Regulator	Integrated (limited range of functions) / to be checked individually	
Monitoring	Via integrated Pixii web server	
Release control mains relay, external NA protection, (VDE-AR-N 4105, up to 135 / 270 kVA)	☐	
Installers certification possible	☒	
Options Commissioning Support	On-site / Remote Support	
Weight components (WR, Bat unit) kg / Transport + loading	WR 30, Rack 220, Bat 450/ Forklift or crane	WR 36, Rack 250, Bat 1680 / Forklift or crane
System information	Modular cabinet system, power parts (Pixii boxes) Hot-plug capable, LFP and NMC cell chemistry to choose from, version rack with / without fan, resp. Air conditioning	Modular cabinet system, power parts (Pixii boxes) hot-plug capable, LFP cell chemistry; version rack with fan / air conditioning

Manufacturer



Type of commercial storage system	CSS-00
Application - Scenario (Self-consumption, peak shaving, network expansion avoidance, backup)	Self-consumption; Peak-Shaving; Announced: Trading; Dynamic electricity tariffs
Connection of storage / connection of other PV generators	AC coupling (memory WR) / ext. PV-WR
AC power (kW)	50
Mains connection voltage level	400 V
Number of cascadeable WR / max. Total power AC	Up to 10 WR / 500 KVA (announced)
Specified installation location Inverter / storage	Compl. Outdoor or indoor
Manufacturer / Model Memory	SolarEdge CSS-OU-20 Battery Cabinet
Capacity 1 storage unit gross / net (kWh)	102.4 / 97.3
Number of storage units per system / Time window for extension	Up to 2 / - , only complete units
Charging cycles ***	6000
Cell chemistry	LFP
Backup function / ext. Switching device	☐
Standardize	VDE 4105/4110
Standard Warranty System / Memory ***	10 years
Interfaces external communication	Ethernet, RS485, CAN, Modbus TCP + RTU
Energy Management System / EZA Regulator	☒ / to be checked individually
Monitoring	Via SolarEdge Portal
Release control mains relay, external NA protection, (VDE-AR-N 4105, up to 135 / 270 kVA)	☐
Installers certification possible	☒ (mandatory for first installation)
Options Commissioning Support	On-site support (included at no extra charge)
Weight components (WR, Bat unit) kg / Transport + loading	WR 68, Cabinet complete 1433 / Forklift or crane
System information	Up to 1 MWh scalable (announced), air conditioning

* Release and compatibility according to manufacturer's specifications

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Manufacturer



Type of commercial storage system	Commercial Storage Solution 30-20	Commercial Storage Solution 50-20
Application - Scenario (Self-consumption, peak shaving, network expansion avoidance, backup)	Self-consumption, Peak-Shaving, Multi-Use	
Connection of storage / connection of other PV generators	AC coupling (memory WR) / ext. PV-WR	
AC power (kW)	30	50
Mains connection voltage level	400 V	
Number of cascadeable WR / max. Total power AC	Up to 50 WR / 1500 kVA	Up to 50 WR / 2500 kVA
Specified installation location Inverter / storage	Compl. Indoor	
Manufacturer / Model Memory	SMA Commercial Storage	
Capacity 1 storage unit gross / net (kWh)	32	56
Number of storage units per system / Time window for extension	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 monthsUp to 4 racks per WR, 50 WR total / unlimited
Charging cycles ***	8000 (expected)	
Cell chemistry	NMC	
Backup function / ext. Switching device	Prepared / external box SMA	
Standardize	VDE 4105 / 4110	
Standard Warranty System / Memory ***	2 years (by registration 10 years) / 10 years (for IBN according to SMA specifications)	
Interfaces external communication	Ethernet	
Energy Management System / EZA Regulator	Integrated SMA system manager (up to 5 devices) / with SMA Data Manager EDMM-20 (up to 50 WR)	
Monitoring	Via SMA ennexOS Portal	
Release control mains relay, external NA protection, (VDE-AR-N 4105, up to 135 / 270 kVA)	● (with I/O module)	
Installers certification possible	●	
Options Commissioning Support	On-site support (mandatory) / Remote support for already trained professionals (optional)	
Weight components (WR, Bat unit) kg / Transport + loading	WR 104, Rack 119, Bat 336-560 / Forklift or crane	
System information	Set contains SMA Energy MetHe Commercial, SMA System Manager up to 11 devices integrated in WR, Sunny Design Design Service	

Manufacturer



Type of commercial storage system	Sunny Island X 30-20	Sunny Island X 50-20
Application - Scenario (Self-consumption, peak shaving, network expansion avoidance, backup)	Self-consumption; Peak-Shaving; Multi-use; Off-grid (additional 3rd party components required)	
Connection of storage / connection of other PV generators	AC coupling (memory WR) / ext. PV-WR	
AC power (kW)	30	50
Mains connection voltage level	400 V	
Number of cascadeable WR / max. Total power AC	Up to 50 WR / 1500 - 2500 kVA	
Specified installation location Inverter / storage	Indoor + Outdoor / Indoor*** + Outdoor	Indoor + Outdoor / Outdoor
Manufacturer / Model Memory	Sunwoda Oasis 60	Sunwoda Oasis L215
Capacity 1 storage unit gross / net (kWh)	60,0 (net)	215,0 (net)
Number of storage units per system / Time window for extension	3 units per system / unlimited	always as a complete unit with WR / unlimited
Charging cycles ***	7000 (0.5C)	6000 (0.5C)
Cell chemistry	LFP	LFP
Backup function / ext. Switching device	Announced / ☐	
Standardize	VDE 4105 / 4110	
Standard Warranty System / Memory ***	2Years (by registration 10 years) / 5 years	
Interfaces external communication	Ethernet	
Energy Management System / EZA Regulator	Integrated SMA system manager (up to 5 devices) / with SMA Data Manager EDMM-20 (up to 50 WR)	
Monitoring	Via SMA ennexOS Portal	
Release control mains relay, external NA protection, (VDE-AR-N 4105, up to 135 / 270 kVA)	Yes (with I/O module)	
Installers certification possible	☐	
Options Commissioning Support	Regular support	
Weight components (WR, Bat unit) kg / Transport + loading	WR 104, Rack 400, Bat 300-675 / Forklift or Crane	WR 104, Rack 207, Bat 600 / forklift or crane
System information	On- and off-grid applications; SMA system manager up to 11 devices integrated in WR; memory flexibly scalable; air-cooled	On- and off-grid applications; SMA system manager up to 11 devices integrated in WR; storage with liquid cooling

* Release and compatibility according to manufacturer's specifications

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Manufacturer

SOFAR

Type of commercial storage system	Self-consumption, peak shaving (only 20 KTL), backup (<10ms)				
Application - Scenario (Self-consumption, peak shaving, network expansion avoidance, backup)	Own consumption, backup (<10ms)				
Connection of storage / connection of other PV generators	AC + DC - Coupling (Hybrid-WR) / ext.PV-WR				
AC power (kW)	10/15/20				
Mains connection voltage level	400 V				
Number of cascadeable WR / max. Total power AC	Up to 10 WR / 200 kVA				
Specified installation location Inverter / storage	Indoor + Outdoor / Indoor				
Manufacturer / Model Memory	Pylontech Force H1 13.5 to 23.6	Pylontech Force H2 10.1 to 16.9	Sofar BTS-D5 E5 to E20	Axitec AXIstorage Li SV1 13.5 to 23.6	Axitec AXIstorage Li SV2 10.1 to 16.9
Capacity 1 storage unit gross / net (kWh)	13.5 to 23.6 (net)	10.1 to 16.9 (net)	4.75 to 19.0 (net)	13.5 to 23.6 (net)	10.1 to 16.9 (net)
Number of storage units per system / Time window for extension	6 units per system / up to 2 years		2 units per system / unlimited	6 units per system / up to 5 years	
Charging cycles ***	-				
Cell chemistry	LFP				
Backup function / ext. Switching device	 /  , manual switching device				
Standardize	VDE 4105 (HYD 10 + 15) / 4110 (HYD 20 + Power Magic)				
Standard Warranty System / Memory ***	5 years / 10 years				
Interfaces external communication	Ethernet				
Energy Management System / EZA Regulator	Integrated (limited range of functions, with ext.Sofar EMS Box expandable) / to be checked individually				
Monitoring	About Sofar Portal				
Release control mains relay, external NA protection, (VDE-AR-N 4105, up to 135 / 270 kVA)					
Installers certification possible					
Options Commissioning Support	Regular support (optional)				
Weight components (WR, Bat unit) kg / Transport + loading	WR 37, Bat total 154-259 / Forklift	WR 37, Bat total 118-189 / Forklift	WR 37, Bat total 57,5-207,5 / Forklift	WR 37, Bat total 154-259 / Forklift	WR 37, Bat total 118-189 / Forklift
System information	Up to 10 systems can be cascaded; 2 separate battery ports; ideal for small to medium-sized commercial applications; connection FRE integrated				

Manufacturer

SOFAR

Type of commercial storage system	Power Magic	
Application - Scenario (Self-consumption, peak shaving, network expansion avoidance, backup)	Self-consumption, peak-shaving**	
Connection of storage / connection of other PV generators	AC coupling (memory WR) / ext. PV-WR	
AC power (kW)	125	
Mains connection voltage level	400 V	
Number of cascadeable WR / max. Total power AC	Up to 12 WR / 1500 kVA	
Specified installation location Inverter / storage	Compl. Outdoor	
Manufacturer / Model Memory	Sofar LFP/280Ah (6 Pack)	Sofar LFP/280Ah (5 Pack)
Capacity 1 storage unit gross / net (kWh)	258,0	215,0
Number of storage units per system / Time window for extension	3 racks per system / Bat-Rack only at the same time, entire systems unlimited	
Charging cycles ***	7000	
Cell chemistry	LFP	
Backup function / ext. Switching device	Announced / announced	
Standardize	VDE 4105 (HYD 10 + 15) / 4110 (HYD 20 + Power Magic)	
Standard Warranty System / Memory ***	5 years / 10 years	
Interfaces external communication	Ethernet	
Energy Management System / EZA Regulator	Integrated (limited range of functions, with ext.Sofar EMS Box expandable) / to be checked individually	
Monitoring	About Sofar Portal	
Release control mains relay, external NA protection, (VDE-AR-N 4105, up to 135 / 270 kVA)	●	
Installers certification possible	Announced	
Options Commissioning Support	On-site support (mandatory)	
Weight components (WR, Bat unit) kg / Transport + loading	Complete 2500 / Forklift or Crane	Complete 2800 / Forklift or Crane
System information	Modular large storage;Parallel operation AC up to 12 systems; Liquid cooling; Fire Protection System	

* Release and compatibility according to manufacturer's specifications

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Manufacturer



Type of commercial storage system	X3-Ultra 15K / 19.9K / 20K / 25K / 30K		Aelio P50B100/P50B200/P60B100/P60B200	
Application - Scenario (Self-consumption, peak shaving, network expansion avoidance, backup)	Own consumption, peak shaving, backup (<10ms)		Self-consumption, Peak-Shaving, Backup (<10ms), Off-Grid	
Connection of storage / connection of other PV generators	AC + DC - Coupling (Hybrid-WR) / ext.PV-WR		AC + DC - Coupling (Hybrid-WR) / ext.PV-WR	
AC power (kW)	15 / 19,9 / 20 / 25 / 30		50 / 60	
Mains connection voltage level	400 V		400 V	
Number of cascadeable WR / max. Total power AC	Up to 10 WR / 300 kVA		Up to 10 WR / up to 600 kVA	
Specified installation location Inverter / storage	Indoor + Outdoor / Indoor		Compl. Outdoor (recommended) or indoor	
Manufacturer / Model Memory	Solax T-BAT HV-S 2.5 (7.6 to 33.2)	Solax T-BAT HV-S 5.1 (15.3 to 66.5)	Solax Aelio B100 / B200	Solax T-BAT HV-S 5.1 (15.3 bis 66.5)
Capacity 1 storage unit gross / net (kWh)	7.6 to 33.2 / 6.9 to 29.9	15.3 to 66.5 / 13.7 to 59.8	90,0 / 180,0 (netto)	125,6 bis 66,5 / 23,0 bis 59,8
Number of storage units per system / Time window for extension	2 units per system / unlimited		Compact system / unlimited (only whole systems)	2 Einheiten pro System / unbegrenzt
Charging cycles ***	>6000	6000	8000	6000
Cell chemistry	LFP		LFP	LFP
Backup function / ext. Switching device	 /  , with Solax EPS Parallel Box		 / 	
Standardize	VDE 4105		VDE 4105	
Standard Warranty System / Memory ***	10 years / 10 years		10 years / 10 years	
Interfaces external communication	Ethernet		Ethernet	
Energy Management System / EZA Regulator	Integrated / to be checked individually		Yes, to check individually with EMS1000 Pro /	
Monitoring	Via Solax Portal			
Release control mains relay, external NA protection, (VDE-AR-N 4105, up to 135 / 270 kVA)				
Installers certification possible				
Options Commissioning Support	Regular support		ReRegular support (on-site support for first project)	
Weight components (WR, Bat unit) kg / Transport + loading	WR 47, Bat total 94-262 / Forklift	WR 47, Bat total 156,5-616,5 / Forklift	WR 105, Rack + Bat 1500-2700 / Forklift or Crane	WR 105, Bat total 248,5-616,5 / Forklift or crane
System information	Up to 10 systems can be cascaded; 2 separate battery ports; ideal for small to medium commercial applications; connection FRE via DI inputs		Up to 10 systems can be cascaded; 6 MPPT; 2 separate battery ports; ideal for small to medium commercial applications;FRE connection via integrated EMS1000 Pro logger; 4-stage fire protection concept	

Manufacturer



Type of commercial storage system	Trene P100B215I (Air cooling)	Trene P125B261L-E (Liquid cooling)
Application - Scenario (Self-consumption, peak shaving, network expansion avoidance, backup)	Self-consumption, peak-shaving, Off-grid*	Self-consumption, peak-shaving, Off-grid*
Connection of storage / connection of other PV generators	AC coupling (memory WR) / Ext. PV-WR	AC coupling (memory WR) / Ext. PV-WR
AC power (kW)	100	125
Mains connection voltage level	400 V	400 V
Number of cascadeable WR / max. Total power AC	Open / open	Open / open
Specified installation location Inverter / storage	Compl. Outdoor	Compl. Outdoor
Manufacturer / Model Memory	Solax Trene B215I	Solax Trene B215I
Capacity 1 storage unit gross / net (kWh)	193.5 (net)	234.9 (net)
Number of storage units per system / Time window for extension	Compact system / unlimited (only whole systems)	Compact system / unlimited (only whole systems)
Charging cycles ***	8000	8000
Cell chemistry	LFP	LFP
Backup function / ext. Switching device	☐ / ☐	☐ / ☐
Standardize	VDE 4105/4110	VDE 4105/4110
Standard Warranty System / Memory ***	10 years / 10 years	10 years / 10 years
Interfaces external communication	Ethernet	Ethernet
Energy Management System / EZA Regulator	Yes, to check individually with EMS1000 Pro /	
Monitoring	Via Solax Portal	
Release control mains relay, external NA protection, (VDE-AR-N 4105, up to 135 / 270 kVA)	☐	
Installers certification possible	☒	
Options Commissioning Support	ReRegular support (on-site support for first project)	
Weight components (WR, Bat unit) kg / Transport + loading	Complete 2800 / Forklift or Crane	Complete 2810 / Forklift or Crane
System information	Cascadeable; ideal for medium to large commercial applications; FRE connection via integrated EMS1000 Pro logger; 4-stage fire protection concept; KliMatization with air or liquid cooling;	

* Release and compatibility according to manufacturer's specifications

** only possible through the use of external EMS

*** Requirements and assumptions for this information can be found in the manufacturer's documentation and guarantees

Manufacturer

SUNGROW

Clean power for all

Type of commercial storage system	SH 15 / 20 / 25 T		Power Stack	Power Stack 455kWh-110kW
Application - Scenario (Self-consumption, peak shaving, network expansion avoidance, backup)	Self-consumption, Peak-Shaving*, Backup (<10ms)		Self-consumption, peak-shaving**	Self-consumption, peak-shaving**
Connection of storage / connection of other PV generators	AC + DC - Coupling (Hybrid-WR) / ext.PV-WR		AC coupling (memory WR) / ext. PV-WR	AC coupling (memory WR) / ext. PV-WR
AC power (kW)	15 / 20 / 25		110	110
Mains connection voltage level	400 V		400 V	400 V
Number of cascadeable WR / max. Total power AC	Up to 4 WR / 100 kVA		Up to 25 WR / 2750 kVA	Up to 25 WR / 2750 kVA
Specified installation location Inverter / storage	Indoor + Outdoor / Indoor		Compl. Outdoor	Compl. Outdoor
Manufacturer / Model Memory	Sungrow SBR 12.8 to 25.6 (only 1 tower)	Sungrow SBH 150 to 400 (2 towers)	Sungrow ST225kWh	Sungrow ST455kWh
Capacity 1 storage unit gross / net (kWh)	12.8 to 25.6 (net)	Each 15.0 to 40.0 (net)	229.0 / 225.0	229.0 / 225.0
Number of storage units per system / Time window for extension	Up to 2 / 1 year *	Up to 2 / 1 year *	Compact system / unlimited (only whole systems)	Compact system / unlimited (only whole systems)
Charging cycles ***	-	-	6500	6500
Cell chemistry	LFP		LFP	LFP
Backup function / ext. Switching device	 / 		 / 	 / 
Standardize	VDE 4105		VDE 4105/4110	VDE 4105/4110
Standard Warranty System / Memory ***	10 years / 10 years		5 years / 5 years	5 years / 5 years
Interfaces external communication	Ethernet, Wi-Fi		Ethernet	Ethernet
Energy Management System / EZA Regulator	Integrated / to be checked individually		With EMS300CP / to be individually checked	With EMS300CP / to be individually checked
Monitoring	About Sungrow Portal		About Sungrow Portal	About Sungrow Portal
Release control mains relay, external NA protection, (VDE-AR-N 4105, up to 135 / 270 kVA)	-			
Installers certification possible				
Options Commissioning Support	Regular support		On-site support	On-site support
Weight components (WR, Bat unit) kg / Transport + loading	WR 38, Bat total 147-279 / Forklift	WR 38, Bat total 151-376 / Forklift	Complete 3100 / Forklift or Crane	Complete 5300 / Forklift or crane
System information	Backup connection up to 63 A loadable; up to 4 devices in parallel operation; additional PV inverters via AC coupling (up to 5 WR of the CX series); (only the same inverter power classes possible); Connection FRE via DI inputs		Can be cascaded up to 25 times in parallel with mains; Off-grid up to 10 times; ideal for medium to large commercial applications; Liquid cooling; 3-stage fire protection concept; FRE connection via suitable loggers	Can be cascaded up to 25 times in parallel with mains; off-grid up to 10 times; ideal for medium to large commercial applications; liquid cooling; 3-stage fire protection concept; FRE connection via suitable logger

Manufacturer



Type of commercial storage system	Oasis A180 All-in-One
Application - Scenario (Self-consumption, peak shaving, network expansion avoidance, backup)	Self-consumption, peak-shaving**
Connection of storage / connection of other PV generators	AC coupling (memory WR) / ext. PV-WR
AC power (kW)	125
Mains connection voltage level	400 V
Number of cascadeable WR / max. Total power AC	Up to 20 systems / 2500 kVA
Specified installation location Inverter / storage	Compl. Outdoor
Manufacturer / Model Memory	Sunwoda CIESS-A-179
Capacity 1 storage unit gross / net (kWh)	179.2 (net)
Number of storage units per system / Time window for extension	Compact system / unlimited (only whole systems)
Charging cycles ***	9000
Cell chemistry	LFP
Backup function / ext. Switching device	☐ / ☐
Standardize	VDE 4105/4110/4120
Standard Warranty System / Memory ***	5 years / 5 years
Interfaces external communication	Ethernet, Wifi
Energy Management System / EZA Regulator	Integrated / to be checked individually
Monitoring	About Sunwoda Portal
Release control mains relay, external NA protection, (VDE-AR-N 4105, up to 135 / 270 kVA)	☐
Installers certification possible	☐
Options Commissioning Support	On-site support
Weight components (WR, Bat unit) kg / Transport + loading	Complete 2400 / Forklift or crane
System information	Can be cascaded parallel to the mains up to 20 times; ideal for medium to large commercial applications; air cooling; multi-level fire protection concept; FRE connection via suitable logger

Manufacturer

Manufacturer's name

Type of commercial storage system	Model / Series
Application - Scenario (Self-consumption, peak shaving, network expansion avoidance, backup)	Area of application of the system
Connection of storage / connection of other PV generators	Is the memory DC-coupled (Hybrid-WR) or AC-coupled (memory-WR) usable? How can other WR be connected?
AC power (kW)	AC power of the inverter
Mains connection voltage level	Voltage of the mains connection
Number of cascadeable WR / max. Total power AC	How many inverters can be connected in parallel / resulting total power AC
Specified installation location Inverter / storage	Requirements for installation location inverter / memory
Manufacturer / Model Memory	Manufacturer and model of the storage system
Capacity 1 storage unit gross / net (kWh)	Energy quantity of a storage unit gross / actually usable
Number of storage units per system / Time window for extension	How large is a memory unit expandable? / In what time frame?
Charging cycles ***	A full cycle corresponds to a complete loading and unloading. Gives conclusions about the service life / performance.
Cell chemistry	Material combination of the battery cells. Mostly lithium-iron phosphate (LFP) or lithium-nickel-manganese cobalt (NMC).
Backup function / ext. Switching device	Is replacement power possible with this system? / How is the switching device, if any?
Standardize	Certification of the system.
Standard Warranty System / Memory ***	Guarantees from the manufacturer.
Interfaces external communication	Integrated interfaces for portal, EVU control, etc.
Energy Management System / EZA Regulator	Does the device include its own energy management system, alternatively performed in a superordinate manner?
Monitoring	Which portal can be used to monitor the system?
Release control mains relay, external NA protection, (VDE-AR-N 4105, up to 135 / 270 kVA)	Can the system of aBe controlled by external, central network monitor?
Installers certification possible	Is a certification for the installer required by the manufacturer?
Options Commissioning Support	What types of support are possible? Personally on site, only online, etc.
Weight components (WR, Bat unit) kg / Transport + loading	Weight of individual components / approved by the manufacturer options for unloading + transport
System information	Additional information about the system, cascading capability, technical features, etc.

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