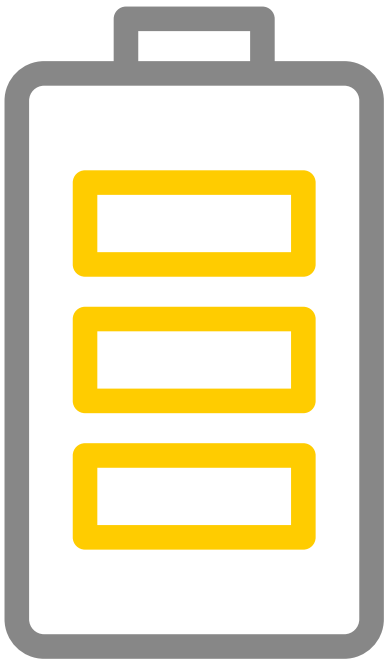
OVERVIEW

C&I STORAGE SYSTEMS



COMMERCIAL
INDUSTRIAL
UTILITY SCALE

krannich

Manufacturer AXITEC

Type of commercial storage system	**AXIhycon 12 / 15 / 20 H + 29.9 / 40 / 50 H**		
Application Scenario (Self-consumption, peak-shaving, expansion avoidance, backup)	self-consumption, Peak Shaving ***, dynamic electricity tariffs, Backup (<10 ms), Off-Grid		
Connection of storage (WR type) / connection of other PV generators	AC + DC coupling (hybrid inverter) / ext. PV inverter		
AC power (kW)	12 / 15 / 20 / 29,9 / 40 / 50		
Mains connection voltage level	400 V		
Number of cascadeable WR / max. Total power AC	up to 6 WR / 300 kVA (in DE only up to 135 kVA)		
Installation location specification Inverter / Storage	indoor + outdoor / indoor		
Manufacturer	AXITEC		
Storage model	AXIstorage Li SV1 10.1 to 23.6	AXIstorage Li SV2 6.7 to 16.9	AXIstorage Li SV3 9.7 to 34
Capacity 1 storage unit gross / net (kWh)	10,1 to 23,6 (net)	6,7 to 16,9 (net)	9,7 to 34,0 (net)
Number of storage units per system / Time window for extension	6 units per System* / up to 5 years		2 up to 5* (WR 5-10), up to 6* (WR 12-20), up to 7* (WR 29-50) / up to 2 years
Charging cycles * **	-		
Cell Chemistry	LFP		
Backup function / ext. Switchgear	● / ○		
Off-grid application possible (true island/off-grid system) / additional options	● direct generator connection possible		
Standards	VDE 4105		
Warranty system / storage (standard / extended) * **	10 years (-) / 10 years (-)		
External communication interfaces	WLAN, Ethernet		
Energy Management System / EZA Controller	integrated (limited functionality) / to be checked individually		
Monitoring	via Axitec Portal		
Release of control of mains relay, ext. NA protection (VDE-AR-N 4105, up to 135/270 kVA)	● from 29,9H		
Installer certification possible	○		
Options Commissioning Support	standard support		
Weight components (WR, Bat unit) kg / Transport + unloading	WR 32,6-73, battery total 119-259 / forklift	WR 32,6-73, battery total 82,5-189 / forklift	WR 32,6-73, battery total 92-287 / forklift
System information	12, 15, 20, 40, 50 kW with 4 MPPT - 29.9 kW with 3 MPPT; integrated arc-fault detection; storage can be cascaded up to 6 times; use of hybrid as off-grid system (with / without generator) possible		12, 15, 20, 40, 50 kW with 4 MPPT - 29.9 kW with 3 MPPT; integrated arc-fault detection; use of hybrid as off-grid system (with / without generator) possible

* 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	AXITEC			
Type of commercial storage system	**AXIhycon 29.9 / 40 / 50 H**			
Application Scenario (Self-consumption, peak-shaving, expansion avoidance, backup)	self-consumption, Peak Shaving ***, dynamic electricity tariffs, Backup (<10 ms), Off-Grid			
Connection of storage (WR type) / connection of other PV generators	AC + DC coupling (hybrid inverter) / ext. PV inverter			
AC power (kW)	29,9 / 40 / 50			
Mains connection voltage level	400 V			
Number of cascadeable WR / max. Total power AC	up to 6 WR / 300 kVA (in DE only up to 135 kVA)			
Installation location specification Inverter / Storage	indoor + outdoor / indoor	indoor + outdoor / indoor*** + outdoor	indoor + outdoor / indoor	indoor + outdoor / outdoor
Manufacturer	SUNWODA ENERGY			
Storage model	Oasis Flex 25 - 60	Oasis 60	Oasis Rack Pro+ -100 / -120 / -160 / -200	Oasis A200 -120 / -160 / -200
Capacity 1 storage unit gross / net (kWh)	22,5 to 54,0 (net)	60,0 (net)	100,0 to 200,0 (net)	120,0 to 200,0 (net)
Number of storage units per system / Time window for extension	6 units per System* / -	6 units per System* / unlimited	6 units per System* / -	6 units per System* / -
Charging cycles * **	6000	6000	9000	9000
Cell Chemistry	LFP	LFP	LFP	LFP
Backup function / ext. Switchgear	● / ○			
Off-grid application possible (true island/off-grid system) / additional options	● direct generator connection possible			
Standards	VDE 4105 / 4110 (announced)			
Warranty system / storage (standard / extended) * **	10 years (-) / 5 years (opt. 10 J.)		10 years (-) / 5 years (opt. 10 J.)	
External communication interfaces	WLAN, Ethernet			
Energy Management System / EZA Controller	integrated (limited functionality) / to be checked individually			
Monitoring	via Axitec Portal			
Release of control of mains relay, ext. NA protection (VDE-AR-N 4105, up to 135/270 kVA)	● from 29,9H			
Installer certification possible	○			
Options Commissioning Support	standard support			
Weight components (WR, Bat unit) kg / Transport + unloading	WR 73, Rack + Bat 248-570 / forklift	WR 73, Rack 207, Bat 600 / forklift or crane	WR 73, battery total up to 2100 / forklift	WR 73, Rack 650, Bat 690-1380 / forklift or crane
System information	12, 15, 20, 40, 50 kW with 4 MPPT - 29.9 kW with 3 MPPT; integrated arc-fault detection; observe air conditioning + fire protection requirements; use of hybrid as off-grid system (with / without generator) possible			

Manufacturer Fronius

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, expansion avoidance, backup)	self-consumption, Peak Shaving, dynamic electricity tariffs, Backup				
Connection of storage (WR type) / connection of other PV generators	AC + DC coupling (hybrid inverter) / ext. PV inverter				
AC power (kW)	15 / 17,5 / 20 / 25 / 30 / 33				
Mains connection voltage level	400 V				
Number of cascadeable WR / max. Total power AC	currently not cascadeable				
Installation location specification Inverter / Storage	indoor + outdoor / indoor			indoor + outdoor / indoor + outdoor***	
Manufacturer	BYD			Fronius	
Storage model	B-Box HVS / + 5.1 to 12.8	B-Box HVM / + 11.0 to 22.1	B-Box HVB 11.8 to 29.6	Reserva 6.3 / 9.5 / 12.6 / 15.8	Reserva PRO 12.0/16.0/20.0/ 24.0/28.0/32.0
Capacity 1 storage unit gross / net (kWh)	5,1 to 12,8 (net)	11,0 to 22,1 (net)	11,88 to 26,69 (net)	6,3 to 15,8 (net)	6,3 to 15,8 (net)
Number of storage units per system / Time window for extension	2 - 5 per unit, up to 3 units parallel* / unlimited	4 - 8 per unit, up to 3 units parallel* / unlimited	4 - 10 per unit, up to 3 units parallel* / unlimited	2 - 5 per unit, up to 4 units parallel* / up to 2 years	3 - 8 per unit, up to 4 units parallel* / unlimited
Charging cycles * **	-	-	-	-	-
Cell Chemistry	LFP				
Backup function / ext. Switchgear	○ / ●				
Off-grid application possible (true island/off-grid system) / additional options	○				
Standards	VDE 4105 / 4110 (only 25.0 to 33.0)				
Warranty system / storage (standard / extended) * **	2 years (with registration 10 J., opt. 15 J.) / 10 years (-)		2 years (with registration 10 J., opt. 15 J.) / 15 years (-)	2 years (with registration 10 J., opt. 15 J.) / 10 years (-)	
External communication interfaces	WLAN, Ethernet				
Energy Management System / EZA Controller	integrated (limited functionality) / to be checked individually				
Monitoring	via Fronius Portal				
Release of control of mains relay, ext. NA protection (VDE-AR-N 4105, up to 135/270 kVA)	○				
Installer certification possible	○				
Options Commissioning Support	standard support				
Weight components (WR, Bat unit) kg / Transport + unloading	WR 43, battery total 91-205 / forklift	WR 43, battery total 153-319 / forklift	WR 43, battery total 124-287 / forklift	WR 43, battery total 86,5-187 / forklift	WR 43, battery total 126-306 / forklift
System information	15, 17.5, 20, 25, 30, 33 kW with 3 MPPT; integrated Arc Guard arc-fault detection; FRE connection via DI inputs				

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Manufacturer	GOODWE					
Type of commercial storage system	**GW ET Hybrid** **15K / 20K / 25K / 29.9K / 40K / 50K / 80K / 99.9 / 100K**					
Application Scenario (Self-consumption, peak-shaving, expansion avoidance, backup)	self-consumption, Peak Shaving, Backup (<10 ms)					
Connection of storage (WR type) / connection of other PV generators	AC + DC coupling (hybrid inverter) * / ext. PV inverter *					
AC power (kW)	15 / 20 / 25 / 29,9 / 40 / 50 / 80 / 99,9 / 100					
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		15 x GW 100K-ET / up to 1000 kW		
Installation location specification Inverter / Storage	indoor + outdoor / indoor			indoor + outdoor / outdoor		
Manufacturer	BYD		GOODWE			ZYC ENERGY
Storage model	B-Box HVS / + 5.1 to 12.8 (GW ET 15K - 30K only)	B-Box HVM / + 11.0 to 22.1 (GW ET 15K - 30K only)	Lynx D 5.0 to 40.0 (GW ET 15K - 30K only)	Lynx D G2 5.0 / 6.0 / 8.0 / 9.0 (up to 12 modules freely combinable)	BAT-C 61.4 / 112.6 (61.4 not with ET 80-100K)	SIMPO HV Pro 72-9 (GW ET 40K + 50K only)
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)	5,0 to 108,0 (net)	60,0 / 110,0 (net)	72,58 (net)
Number of storage units per system / Time window for extension	2 units per system* / unlimited		1 - 8 per unit / -	1 - 12 per unit/ unlimited	1 to 4 units per system / unlimited only as complete unit with WR	9 per unit, up to 16 units* / unlimited
Charging cycles * **	-		-	-	6000	-
Cell Chemistry	LFP		LFP			
Backup function / ext. Switchgear	● / ○					
Off-grid application possible (true island/off-grid system) / additional options	● generator connection via ext. ATS box					
Standards	VDE 4105 / 4110 (ET 40K / 50K / 100K only)					
Warranty system / storage (standard / extended) * **	10 years (ET 15-30) 5 years (ET 40-100, opt. 10 J.) / 10 years (-)		10 years (ET 15-30) 5 years (ET 40-100, opt. 10 J.) / 10 years (-)			10 years (ET 15-30) 5 years (ET 40-100, opt. 10 J.) / 10 years (-)
External communication interfaces	WLAN, Ethernet					
Energy Management System / EZA Controller	integrated (limited functionality) / to be checked individually					
Monitoring	via Goodwe Portal					
Release of control of mains relay, ext. NA protection (VDE-AR-N 4105, up to 135/270 kVA)	● (only 40K / 50K / 100K: no approval)					
Installer certification possible	○					
Options Commissioning Support	remote Commercial Support					
Weight components (WR, Bat unit) kg / Transport + unloading	WR 48-65, battery total 91-205 / forklift	WR 48-65, battery total 153-319 / forklift	WR 48-65, battery total 52-416 / forklift	WR 48-65, battery total 58-1068 / forklift	WR 48-65, Rack 410, Bat 540-990 / forklift or crane	WR 48-65, Rack 360, Bat 585 / forklift or crane
System information	2 separate battery ports; ideal for small to medium-sized commercial applications; FRE connection via DRM inputs; optional with AFCI					

Manufacturer GOODWE

Type of commercial storage system	GW ETR 125K	GW ESA All-in-One 125 / 261
Application Scenario (Self-consumption, peak-shaving, expansion avoidance, backup)	self-consumption, Peak-Shaving, Backup (only with STS Box)	self-consumption, Peak Shaving, Backup (only with STS 500 Box)
Connection of storage (WR type) / connection of other PV generators	AC + DC coupling (hybrid inverter) * / external PV inverter *	AC coupling
AC power (kW)	125	125
Mains connection voltage level	400V	400 V
Number of cascadeable WR / max. Total power AC	up to 10 inverter / 1250 kVA (On-Grid)	up to 15 WR / 1875 kVA
Installation location specification Inverter / Storage	Indoor + Outdoor / Outdoor	outdoor
Manufacturer	GOODWE	GOODWE
Storage model	BAT-C 261.2	ESA 261 (AIO)
Capacity 1 storage unit gross / net (kWh)	261,25 (net)	261,25 (net)
Number of storage units per system / Time window for extension	1 to 4 units per system / unlimited only as complete unit with inverter	always as a complete unit / unlimited
Charging cycles ***	-	-
Cell Chemistry	LFP	LFP
Backup function / ext. Switchgear	● / ● (only with STS Box)	● / ● (only with STS 500 Box)
Off-grid application possible (true island/off-grid system) / additional options	● / ● (only with STS Box)	● / ● (only with STS 500 Box)
Standards	VDE 4105 / 4110 + 4120 announced	VDE 4105 / 4110 + 4120 announced
Warranty system / storage (standard / extended) ***	5 years (opt. 10/15/20 J.) / X years	5 years (opt. 10 J.) / 10 years (-)
External communication interfaces	WLAN, Ethernet	WLAN, Ethernet
Energy Management System / EZA Controller	**to be implemented via a third-party provider / -	**to be implemented via third party / -
Monitoring	via Goodwe Portal	via Goodwe Portal
Release of control of mains relay, ext. NA protection (VDE-AR-N 4105, up to 135/270 kVA)	○	○
Installer certification possible	○	○
Options Commissioning Support	remote Commercial Support	remote Commercial Support
Weight components (WR, Bat unit) kg / Transport + unloading	inverter 82-98, battery total 2400 / forklift or crane	Complete 2580 / forklift or crane
System information	Modular commercial storage system; 1-4 storage per inverter; liquid cooling; optional backup with STS Box; Micro-Grid	Compact commercial storage system; liquid cooling; optional backup with STS 500 Box

* Release and compatibility according to manufacturer's specifications
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Manufacturer HUAWEI

Type of commercial storage system	**SUN2000 12 / 15 / 17 / 20 / 25 K MB0**		**LUNA2000 215-2S10**	**LUNA2000 241-2S1**
Application Scenario (Self-consumption, peak-shaving, expansion avoidance, backup)	self-consumption; Dynamic electricity tariffs (EMMA), Backup (single-phase only)		self-consumption**, Peak Shaving**	self-consumption**, peak shaving**, Backup**
Connection of storage (WR type) / connection of other PV generators	AC + DC coupling (hybrid inverter) / ext. PV inverter		AC coupling (storage inverter) / ext. PV inverter	AC coupling (storage inverter) / ext. PV inverter
AC power (kW)	12 / 15 / 17 / 20 / 25		108	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	up to 20 WR / 2160 kVA
Installation location specification Inverter / Storage	indoor + outdoor / indoor		completely outdoor	completely outdoor
Manufacturer	HUAWEI			
Storage model	SUN2000 LUNA 5 / 10 / 15-S0	SUN2000 LUNA 5/7/10/14/15/21-S1	LUNA 2000 -215 kWh (Liquid cooled)	LUNA 2000 -241 kWh (Liquid cooled)
Capacity 1 storage unit gross / net (kWh)	5,0 / 10,0 / 15,0 (gross = net)	5,0/7,0/10,0/14,0/15,0 /21,0 (gross = net)	215,0 (gross = net)	241,0 (gross = net)
Number of storage units per system / Time window for extension	to 2 / unlimited		always as a complete unit / unlimited	always as a complete unit / unlimited
Charging cycles * **	-		7300	7300
Cell Chemistry	LFP			
Backup function / ext. Switchgear	● , with Backup Box / ● - with Smart Guard Box		○	○
Off-grid application possible (true island/off-grid system) / additional options	○		○	○
Standards	VDE 4105 / 4110			
Warranty system / storage (standard / extended) * **	10 years (-) / 10 years (-)	10 years (-) / 15 years (-)	10 years (-) / 10 years (-)	5 years (opt. 10/15 J.) / 5 years (opt. 10/15 J.)
External communication interfaces	Ethernet		Ethernet, LWL	Ethernet, LWL
Energy Management System / EZA Controller	**to be implemented via third party / to be checked individually			
Monitoring	via Huawei Portal			
Release of control of mains relay, ext. NA protection (VDE-AR-N 4105, up to 135/270 kVA)	●		○	○
Installer certification possible	○			
Options Commissioning Support	standard support		Remote Support	Remote Support
Weight components (WR, Bat unit) kg / Transport + unloading	WR 21, Bat 63,8-163,8 / forklift	WR 21, Bat 80-252 / forklift	Complete 2800 / forklift or crane	Complete 2800 / forklift or crane
System information	up up to 3 systems cascadeable; 2 separate battery ports; ideal for small to medium-sized commercial applications; FRE connection via Huawei Smart Logger		AC-coupled high-voltage storage system for connection to large-scale systems; system with liquid cooling; 20 systems can be cascaded	AC-coupled high-voltage storage system for connection to large-scale systems; system with liquid cooling; 20 systems can be cascaded

Manufacturer

KACO new energy.

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, expansion avoidance, backup)	self-consumption**, Peak Shaving**			self-consumption**, Peak Shaving**	
Connection of storage (WR type) / connection of other PV generators	AC coupling (storage inverter) / ext. PV inverter			AC coupling (storage inverter) / ext. PV inverter	
AC power (kW)	92			110	137
Mains connection voltage level	400 V			400 V / 480 V	600 V
Number of cascadeable WR / max. Total power AC	according to specification Birdtical			according to specification Birdtical	
Installation location specification Inverter / Storage	indoor + outdoor / outdoor			indoor + outdoor / outdoor	
Manufacturer	SUNWODA ENERGY			SUNWODA ENERGY	
Storage model	Oasis L241 *	Oasis L261	Oasis L385 *	Oasis L385 *	
Capacity 1 storage unit gross / net (kWh)	241,0 (net)	261,0 (net)	385,0 (net)	385,0 (net)	
Number of storage units per system / Time window for extension	always as a complete unit with inverter / unlimited			always as a complete unit with inverter / unlimited	
Charging cycles * **	9000	9000	9000	9000	9000
Cell Chemistry	LFP			LFP	
Backup function / ext. Switchgear	○ / ○			○ / ○	
Off-grid application possible (true island/off-grid system) / additional options	○			○	
Standards	VDE 4105 / 4110 + 4120			VDE 4105 / 4110 + 4120	
Warranty system / storage (standard / extended) * **	5 years (no warranty extension for DE) / 10 years (-)			5 years (no warranty extension for DE) / 10 years (-)	
External communication interfaces	Ethernet			Ethernet	
Energy Management System / EZA Controller	**implemented via third party Birdtical / to be checked individually			**implemented via third party Birdtical / up to be checked individually	
Monitoring	via Kaco Portal / via Birdtical ConneX Portal			via Kaco Portal / via Birdtical ConneX Portal	
Release of control of mains relay, ext. NA protection (VDE-AR-N 4105, up to 135/270 kVA)	○			○	
Installer certification possible	○			○	
Options Commissioning Support	standard support			standard support	
Weight components (WR, Bat unit) kg / Transport + unloading	WR 80, Bat 2520 / forklift or crane	WR 80, Bat 2300 / forklift or crane	WR 80, Bat 3480 / forklift or crane	WR 80, battery total 3480 / forklift or crane	
System information	AC-coupled high-voltage storage system for connection to large-scale systems			AC-coupled high-voltage storage system for connection to large-scale systems; system with liquid cooling; special AC voltage level	

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Manufacturer	SIGENERGY

Type of commercial storage system	**SigenStack**
Application Scenario (Self-consumption, peak-shaving, expansion avoidance, backup)	Self-consumption; Peak-Shaving; Backup; Trading; Dynamic Electricity Tariffs
Connection of storage (WR type) / connection of other PV generators	AC+DC - Coupling (Hybrid Inverter) / ext. PV Inverter
AC power (kW)	50 / 60 / 80 / 100 / 110 / 125
Mains connection voltage level	400 V
Number of cascadeable WR / max. Total power AC	up to 100 WR / 12500 kVA
Installation location specification Inverter / Storage	kompl. Outdoor or Indoor
Manufacturer	SIGENERGY
Storage model	SigenStack BAT 12.0 (48.0 up to 252.0)
Capacity 1 storage unit gross / net (kWh)	12,0 (net)
Number of storage units per system / Time window for extension	4 up to 21 / up to 4 years
Charging cycles ***	10000
Cell Chemistry	LFP
Backup function / ext. Switchgear	● / ●
Off-grid application possible (true island/off-grid system) / additional options	●
Standards	VDE 4110 + 4120
Warranty system / storage (standard / extended) ***	10 years (opt. 15 J.) / 10 years (opt. 15 J.)
External communication interfaces	WLAN, Ethernet, RS485, Sigen CommMod (4G/3G)
Energy Management System / EZA Controller	**to be implemented via third-party provider / to be checked individually
Monitoring	via Sigenergy Portal
Release of control of mains relay, ext. NA protection (VDE-AR-N 4105, up to 135/270 kVA)	●
Installer certification possible	○
Options Commissioning Support	regular support
Weight components (WR, Bat unit) kg / Transport + unloading	WR 78, Bat each 105 / forklift
System information	DC-coupledes high-voltage storage system for commercial applications; Backup-Outputs be synchronisiert; modulares Storagekonzept;

Manufacturer	SMA			
Type of commercial storage system	**STP Hybrid X 20 / 25 / 30 -70**			
Application Scenario (Self-consumption, peak-shaving, expansion avoidance, backup)	Self-consumption; Peak-Shaving; Multi-Use; Backup			
Connection of storage (WR type) / connection of other PV generators	DC - Coupling (Hybrid Inverter) / ext. PV Inverter			
AC power (kW)	20 / 25 / 30			
Mains connection voltage level	400 V			
Number of cascadeable WR / max. Total power AC	up to 5 WR / 150 kVA			
Installation location specification Inverter / Storage	Indoor + Outdoor / Indoor			
Manufacturer	SMA	BYD		
Storage model	Storage M 12.3 up to 49.1	"B-Box HVS+ 5.1 to 12.8"	"B-Box HVM+ 8.3 to 22.1"	"B-Box HVB 8.9 to 29.6"
Capacity 1 storage unit gross / net (kWh)	12,28 up to 49,12 (net)	5,1 to 12,8 (net)	8,3 to 22,1 (net)	8,9 to 29,6
Number of storage units per system / Time window for extension	1 (up to 4 announced), up to 5 devices parallel/ up to 2 years	2 - 5, up to 3 towers parallel / unlimited	3 - 8, up to 3 towers parallel / unlimited	3 - 10, up to 3 towers parallel / unlimited
Charging cycles * **	kA	N/A		
Cell Chemistry	LFP	LFP		
Backup function / ext. Switchgear	● (direct socket connection) / yes (SMA AC-Box)			
Off-grid application possible (true island/off-grid system) / additional options	○			
Standards	VDE 4105			
Warranty system / storage (standard / extended) * **	5 years (with registration 10 J.) / 2 years (with registration 10 J.)	5 years (with registration 10 J.) / 10 years		5 years (with registration 10 J.) / 15 years
External communication interfaces	Ethernet			
Energy Management System / EZA Controller	integratethe SMA System-Manager (up to 5 devices)			
Monitoring	via SMA ennexOS Portal			
Release of control of mains relay, ext. NA protection (VDE-AR-N 4105, up to 135/270 kVA)	●			
Installer certification possible	○			
Options Commissioning Support	regular support			
Weight components (WR, Bat unit) kg / Transport + unloading	inverter 45, battery 914-1797 / forklift	inverter 45, battery 92-207 / forklift	inverter 45, battery 138-245 / forklift	inverter 45, battery 69-287 / forklift
System information	up to 5 devices sater Powersklasse parallel (Backup only 3 WR); integr. Backup-Connection Steckdose; with Backup Box completer Hfromanschluss			

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Manufacturer SMA

Type of commercial storage system	**STP Storage X 30-20**	**STP Storage X 50-20**
Application Scenario (Self-consumption, peak-shaving, expansion avoidance, backup)	self-consumption; Peak Shaving; Multi-Use;	
Connection of storage (WR type) / connection of other PV generators	AC coupling (storage inverter) / ext. PV inverter	
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	
Installation location specification Inverter / Storage	indoor + outdoor / indoor	indoor + outdoor / outdoor
Manufacturer	SMA	
Storage model	Storage XL 89 / 197 - indoor (possible system combinations see shop)	Storage XL 107 / 197 - outdoor (possible system combinations see shop)
Capacity 1 storage unit gross / net (kWh)	89,0 / 197,0 (net)	107,0 / 197,0 (net)
Number of storage units per system / Time window for extension	up to 4 units per system* (DC Combiner Box required) / -	up to 4 units per system* / -
Charging cycles ***	Trading**; dynamic electricity tariffs**	12000
Cell Chemistry	LFP	
Backup function / ext. Switchgear	● / ● (SMA AC-Box)	
Off-grid application possible (true island/off-grid system) / additional options	○	
Standards	VDE 4105 / 4110	
Warranty system / storage (standard / extended) ***	5 years (with registration + commissioning report 10 years) full system warranty	
External communication interfaces	Ethernet	
Energy Management System / EZA Controller	integrated SMA system manager (up to 5 devices), with SMA Data Manager EDMM-20 (up to 50 inverters)	
Monitoring	via SMA ennexOS Portal	
Release of control of mains relay, ext. NA protection (VDE-AR-N 4105, up to 135/270 kVA)	● (with I/O module)	
Installer certification possible	●	
Options Commissioning Support	Full service / remote support (only for certified installers)	
Weight components (WR, Bat unit) kg / Transport + unloading	WR 104, Bat 914-1797 / forklift or crane	WR 104, Bat 1515-2200 / forklift or crane
System information	On-grid applications; SMA System-Manager integrated in inverter for up to 10 devices; 2 storage variants for indoor / outdoor; Air-cooled	

Manufacturer SMA

Type of commercial storage system	**Sunny Island X 30-20**			
Application Scenario (Self-consumption, peak-shaving, expansion avoidance, backup)	self-consumption; Peak Shaving; Multi-Use; Off-Grid (additional 3rd-party components required)			
Connection of storage (WR type) / connection of other PV generators	AC coupling (storage inverter) / ext. PV inverter			
AC power (kW)	30			
Mains connection voltage level	400 V			
Number of cascadeable WR / max. Total power AC	up to 50 WR / 1500 - 2500 kVA			
Installation location specification Inverter / Storage	indoor + outdoor / indoor	indoor + outdoor / indoor*** + outdoor	indoor + outdoor / indoor	indoor + outdoor / outdoor
Manufacturer	SUNWODA ENERGY			
Storage model	Oasis Flex 25 - 60	Oasis 60	Oasis Rack Pro+ -100 / -120 / -160 / -200	Oasis A200 -120 / -160 / -200
Capacity 1 storage unit gross / net (kWh)	22,5 to 54,0 (net)	60,0 (net)	100,0 to 200,0 (net)	120,0 to 200,0 (net)
Number of storage units per system / Time window for extension	6 units per system* / -	6 units per system / unlimited	12 units per system* / -	always as complete unit with WR / unlimited
Charging cycles * **	6000	7000 (0,5C)	9000	9000
Cell Chemistry	LFP			
Backup function / ext. Switchgear	● / ● (SMA AC-Box)			
Off-grid application possible (true island/off-grid system) / additional options	● (with SMA AC-Box)			
Standards	VDE 4105 / 4110			
Warranty system / storage (standard / extended) * **	5 years (with registration 10 years) / 10 years (-)			
External communication interfaces	Ethernet			
Energy Management System / EZA Controller	integrated SMA system manager (up to 5 devices), with SMA Data Manager EDMM-20 (up to 50 inverters)			
Monitoring	via SMA ennexOS Portal			
Release of control of mains relay, ext. NA protection (VDE-AR-N 4105, up to 135/270 kVA)	● (with I/O module)			
Installer certification possible	○			
Options Commissioning Support	standard support			
Weight components (WR, Bat unit) kg / Transport + unloading	WR 104, Bat 248-570 / forklift	WR 104, Rack 207, Bat 600 / forklift or crane	WR 73, Rack 600, battery total to 2100 / forklift	WR 73, battery total to 2300 / forklift or crane
System information	On-grid and off-grid applications; SMA System-Manager integrated in inverter for up to 10 devices; storage flexibly scalable; Air-cooled			

* Release and compatibility according to manufacturer's specifications
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*** Requirements and assumptions for this information can be found in the manufacturer's documentation and guarantees

Manufacturer	SMA				
Type of commercial storage system	**Sunny Island X 30-20**				
Application Scenario (Self-consumption, peak-shaving, expansion avoidance, backup)	self-consumption; Peak Shaving; Multi-Use; Off-Grid (additional 3rd-party components required)				
Connection of storage (WR type) / connection of other PV generators	AC coupling (storage inverter) / ext. PV inverter				
AC power (kW)	30				
Mains connection voltage level	400 V				
Number of cascadeable WR / max. Total power AC	up to 50 WR / 1500 - 2500 kVA				
Installation location specification Inverter / Storage	indoor + outdoor / outdoor		indoor + outdoor / indoor	indoor + outdoor / outdoor	Indoor + Outdoor / Outdoor
Manufacturer	SUNWODA ENERGY		SMA		ZYC ENERGY
Storage model	Oasis L241	Oasis L261	Storage XL 89 / 197 - indoor (possible system combinations see shop)	Storage XL 107 / 197 - outdoor (possible system combinations see shop)	SIMPO HV Pro 72-9
Capacity 1 storage unit gross / net (kWh)	241,0 (net)	261,0 (net)	89,0 / 197,0 (net)	107,0 / 197,0 (net)	72,58 (net)
Number of storage units per system / Time window for extension	always as a complete unit with inverter / unlimited	always as a complete unit with inverter / unlimited	up to 4 units per system* (DC Combiner Box required) / -	up to 4 units per system* / -	9 per unit, up to 16 units* / unlimited
Charging cycles ***	9000	9000	12000	12000	-
Cell Chemistry	LFP				
Backup function / ext. Switchgear	● / yes (SMA AC-Box)				
Off-grid application possible (true island/off-grid system) / additional options	● (with SMA AC-Box)				
Standards	VDE 4105 / 4110				
Warranty system / storage (standard / extended) ***	5 years (with registration 10 years) / 10 years (-)		5 years (with registration 10 J.) / 2 years (with registration + commissioning report 10 J.)		5 years (with registration 10 years) / 10 years
External communication interfaces	Ethernet				
Energy Management System / EZA Controller	integrated SMA system manager (up to 5 devices), with SMA Data Manager EDMM-20 (up to 50 inverters)				
Monitoring	via SMA ennexOS Portal				
Release of control of mains relay, ext. NA protection (VDE-AR-N 4105, up to 135/270 kVA)	● (with I/O module)				
Installer certification possible	○				
Options Commissioning Support	standard support				
Weight components (WR, Bat unit) kg / Transport + unloading	WR 104, battery total 2520 / forklift or crane	WR 104, battery total 2300 / forklift or crane	WR 104, Bat 914-1797 / forklift or crane	WR 104, Bat 1515-2200 / forklift or crane	inverter 104, Rack 360, battery 585 / forklift or crane
System information	On-grid and off-grid applications; SMA System-Manager integrated in inverter for up to 10 devices; storage with liquid cooling		On-grid and off-grid applications; SMA System-Manager integrated in inverter for up to 10 devices; indoor only; no air conditioning		

Manufacturer SMA

Type of commercial storage system	**Sunny Island X 50-20**			
Application Scenario (Self-consumption, peak-shaving, expansion avoidance, backup)	self-consumption; Peak Shaving; Multi-Use; Off-Grid (additional 3rd-party components required)			
Connection of storage (WR type) / connection of other PV generators	AC coupling (storage inverter) / ext. PV inverter			
AC power (kW)	50			
Mains connection voltage level	400 V			
Number of cascadeable WR / max. Total power AC	up to 50 WR / 1500 - 2500 kVA			
Installation location specification Inverter / Storage	indoor + outdoor / indoor	indoor + outdoor / indoor*** + outdoor	indoor + outdoor / indoor	indoor + outdoor / outdoor
Manufacturer	SUNWODA ENERGY			
Storage model	Oasis Flex 25 - 60	Oasis 60	Oasis Rack Pro+ -100 / -120 / -160 / -200	Oasis A200 -120 / -160 / -200
Capacity 1 storage unit gross / net (kWh)	22,5 to 54,0 (net)	60,0 (net)	100,0 to 200,0 (net)	120,0 to 200,0 (net)
Number of storage units per system / Time window for extension	6 units per system / -	6 units per system / unlimited	12 units per system / -	1 / -
Charging cycles * **	6000	7000 (0,5C)	9000	9000
Cell Chemistry	LFP			
Backup function / ext. Switchgear	● / yes (SMA AC-Box)			
Off-grid application possible (true island/off-grid system) / additional options	● (with SMA AC-Box)			
Standards	VDE 4105 / 4110			
Warranty system / storage (standard / extended) * **	5 years (with registration 10 years) / 10 years (-)			
External communication interfaces	Ethernet			
Energy Management System / EZA Controller	integrated SMA system manager (up to 5 devices), with SMA Data Manager EDMM-20 (up to 50 inverters)			
Monitoring	via SMA ennexOS Portal			
Release of control of mains relay, ext. NA protection (VDE-AR-N 4105, up to 135/270 kVA)	● (with I/O module)			
Installer certification possible	○			
Options Commissioning Support	standard support			
Weight components (WR, Bat unit) kg / Transport + unloading	WR 104, Bat 248-570 / forklift	WR 104, Rack 207, Bat 600 / forklift or crane	WR 73, Rack 600, battery total to 2100 / forklift	WR 73, battery total to 2300 / forklift or crane
System information	On-grid and off-grid applications; SMA System-Manager integrated in inverter for up to 10 devices; storage flexibly scalable; Air-cooled			

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Manufacturer	SMA				
Type of commercial storage system	**Sunny Island X 50-20**				
Application Scenario (Self-consumption, peak-shaving, expansion avoidance, backup)	self-consumption; Peak Shaving; Multi-Use; Off-Grid (additional 3rd-party components required)				
Connection of storage (WR type) / connection of other PV generators	AC coupling (storage inverter) / ext. PV inverter				
AC power (kW)	50				
Mains connection voltage level	400 V				
Number of cascadeable WR / max. Total power AC	up to 50 WR / 1500 - 2500 kVA				
Installation location specification Inverter / Storage	indoor + outdoor / outdoor		indoor + outdoor / indoor	indoor + outdoor / outdoor	Indoor + Outdoor / Outdoor
Manufacturer	SUNWODA ENERGY		SMA		ZYC ENERGY
Storage model	Oasis L241	Oasis L261	Storage XL 89 / 197 - indoor (possible system combinations see shop)	Storage XL 107 / 197 - outdoor (possible system combinations see shop)	SIMPO HV Pro 72-9
Capacity 1 storage unit gross / net (kWh)	241,0 (net)	261,0 (net)	89,0 / 197,0 (net)	107,0 / 197,0 (net)	72,58 (net)
Number of storage units per system / Time window for extension	always as a complete unit with inverter / unlimited	always as a complete unit with inverter / unlimited	up to 4 units per system* (DC Combiner Box required) / -	up to 4 units per system* / -	9 per unit, up to 16 units* / unlimited
Charging cycles ***	9000	9000	12000	12000	-
Cell Chemistry	LFP				
Backup function / ext. Switchgear	● / yes (SMA AC-Box)				
Off-grid application possible (true island/off-grid system) / additional options	● (with SMA AC-Box)				
Standards	VDE 4105 / 4110				
Warranty system / storage (standard / extended) ***	5 years (with registration 10 years) / 10 years (-)		5 years (with registration 10 J.) / 2 years (with registration + commissioning report 10 J.)		5 years (with registration 10 years) / 10 years
External communication interfaces	Ethernet				
Energy Management System / EZA Controller	integrated SMA system manager (up to 5 devices), with SMA Data Manager EDMM-20 (up to 50 inverters)				
Monitoring	via SMA ennexOS Portal				
Release of control of mains relay, ext. NA protection (VDE-AR-N 4105, up to 135/270 kVA)	● (with I/O module)				
Installer certification possible	○				
Options Commissioning Support	standard support				
Weight components (WR, Bat unit) kg / Transport + unloading	WR 104, battery total 2520 / forklift or crane	WR 104, battery total 2300 / forklift or crane	WR 104, Bat 914-1797 / forklift or crane	WR 104, Bat 1515-2200 / forklift or crane	inverter 104, Rack 360, battery 585 / forklift or crane
System information	On-grid and off-grid applications; SMA System-Manager integrated in inverter for up to 10 devices; storage with liquid cooling		On-grid and off-grid applications; SMA System-Manager integrated in inverter for up to 10 devices; indoor only; no air conditioning		

Manufacturer solaredge

Type of commercial storage system	**CSS-OD**	
Application Scenario (Self-consumption, peak-shaving, expansion avoidance, backup)	self-consumption; peak shaving**; Trading**; dynamic electricity tariffs**	
Connection of storage (WR type) / connection of other PV generators	AC coupling (storage inverter) / ext. PV inverter	
AC power (kW)	50	50 / 2 x 50
Mains connection voltage level	400 V	
Number of cascadeable WR / max. Total power AC	up to 20 WR / 1000 KVA	
Installation location specification Inverter / Storage	completely outdoor or indoor	
Manufacturer	solaredge	
Storage model	CSS-OU-107 Battery Cabinet	CSS-OU-197 Battery Cabinet
Capacity 1 storage unit gross / net (kWh)	107,0 / 102,14	197,12 / 187,15
Number of storage units per system / Time window for extension	up to 2 / - , complete units only	1 / - , complete units only
Charging cycles * **	6000	7000
Cell Chemistry	LFP	LFP
Backup function / ext. Switchgear	○	
Off-grid application possible (true island/off-grid system) / additional options	○	
Standards	VDE 4105 / 4110	
Warranty system / storage (standard / extended) * **	10 years (-) / 10 years (-)	
External communication interfaces	Ethernet, RS485, CAN, Modbus TCP + RTU	
Energy Management System / EZA Controller	yes* / to be checked individually	
Monitoring	via SolarEdge Portal	
Release of control of mains relay, ext. NA protection (VDE-AR-N 4105, up to 135/270 kVA)	○	
Installer certification possible	● (mandatory for initial installation)	
Options Commissioning Support	On-site Support (included at no extra charge)	
Weight components (WR, Bat unit) kg / Transport + unloading	inverter 68, complete cabinet 1435 / forklift or crane	WR 68, cabinet complete 2360 / forklift or crane
System information	up to 1 MWh scalable, air conditioning	up to 1 MWh scalable, 2 inverters per storage cabinet possible, air conditioning

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Manufacturer SOFAR

Type of commercial storage system	**HYD 10 / 15 / 20 KTL**					
Application Scenario (Self-consumption, peak-shaving, expansion avoidance, backup)	self-consumption, Peak Shaving (20 KTL only), Backup (<10 ms)					
Connection of storage (WR type) / connection of other PV generators	AC + DC coupling (hybrid inverter) / ext. PV inverter					
AC power (kW)	15.10.2020					
Mains connection voltage level	400 V					
Number of cascadeable WR / max. Total power AC	up up to 10 inverters / 200 kVA					
Installation location specification Inverter / Storage	indoor + outdoor / indoor					
Manufacturer	PYLONTECH		SOFAR	AXITEC		SUNWODA ENERGY
Storage model	Force H1 13.5 to 23.6	Force H2 10.1 to 16.9	BTS-D5 E5 to E20	AXIstorage Li SV1 13.5 to 23.6	AXIstorage Li SV2 10.1 to 16.9	Oasis 60
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)	60,0 (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		6 units per system / unlimited
Charging cycles ***	-					7000 (0,5C)
Cell Chemistry	LFP					
Backup function / ext. Switchgear	● / ●, manual transfer switch					
Off-grid application possible (true island/off-grid system) / additional options	●					
Standards	VDE 4105 (HYD 10 + 15) / 4110 (HYD 20 + Power Magic)					
Warranty system / storage (standard / extended) ***	5 years (opt. 10/15/20 J.) / 10 years		5 years (opt. 10/15/20 J.) / 5 years	5 years (opt. 10/15/20 J.) / 10 years		5 years (opt. 10/15/20 J.) / 10 years (-)
External communication interfaces	Ethernet					
Energy Management System / EZA Controller	integrated (limited functionality, expandable with ext. Sofar EMS box) / to be checked individually					
Monitoring	via Sofar Portal					
Release of control of mains relay, ext. NA protection (VDE-AR-N 4105, up to 135/270 kVA)	●					
Installer certification possible	○					
Options Commissioning Support	standard support (optional)					
Weight components (WR, Bat unit) kg / Transport + unloading	WR 37, battery total 154-259 / forklift	WR 37, battery total 118-189 / forklift	WR 37, battery total 57,5-207,5 / forklift	WR 37, battery total 154-259 / forklift	WR 37, battery total 118-189 / forklift	WR 37, Rack 207, Bat 600 / forklift or crane
System information	up up to 10 systems cascadeable; 2 separate battery ports; ideal for small to medium-sized commercial applications; FRE connection integrated					

Manufacturer	SOFAR	
Type of commercial storage system	**HYD 40 / 50 / 60 K-T1**	**Power Magic 2.0**
Application Scenario (Self-consumption, peak-shaving, expansion avoidance, backup)	self-consumption, Peak Shaving (20 KTL only), Backup (<10 ms)	self-consumption, peak shaving**, (Backup** - announced for Q4/26)
Connection of storage (WR type) / connection of other PV generators	AC + DC coupling (hybrid inverter) / ext. PV inverter	AC coupling (storage inverter) / ext. PV inverter
AC power (kW)	40 / 50 /60	125
Mains connection voltage level	400 V	400 V
Number of cascadeable WR / max. Total power AC	up to 6 WR / 360 kVA	up to 6 WR (Off-Grid), up to 8 WR (On-Grid) / 750 kVA, 1000 kVA
Installation location specification Inverter / Storage	indoor + outdoor / indoor	completely outdoor
Manufacturer	SOFAR	SOFAR
Storage model	CBS8000 64.0 to 96.0	LFP/314Ah
Capacity 1 storage unit gross / net (kWh)	64,31 to 96,46 (net)	261,0
Number of storage units per system / Time window for extension	6 units per cabinet, up to 4 cabinets per system / unlimited	3 Racks per system / Bat-Rack only simultaneously, complete systems unlimited
Charging cycles * **	-	>8000
Cell Chemistry	LFP	LFP
Backup function / ext. Switchgear	● / ●, manual transfer switch	● / Sofar Backup Cabinet
Off-grid application possible (true island/off-grid system) / additional options	●	●
Standards	VDE 4105 (4110 announced)	VDE 4105 + 4110
Warranty system / storage (standard / extended) * **	5 years (opt. 10/15/20 J.) / 10 years	complete system: 5 years (opt. 10 years)
External communication interfaces	Wifi, Ethernet	Ethernet
Energy Management System / EZA Controller	integrated (limited functionality, expandable with ext. Sofar EMS box) / to be checked individually	
Monitoring	via Sofar Portal	
Release of control of mains relay, ext. NA protection (VDE-AR-N 4105, up to 135/270 kVA)	●	●
Installer certification possible	○	announced
Options Commissioning Support	standard support (optional)	On-site Support (mandatory)
Weight components (WR, Bat unit) kg / Transport + unloading	Complete 860-1080 / forklift or crane	Complete 2800 / forklift or crane
System information	up up to 6 systems cascadeable; for small to medium-sized commercial applications; direct generator connection possible	Modular large-scale storage system; parallel operation on-grid up to 8 systems; backup and off-grid application possible; liquid cooling; fire protection system

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Manufacturer	SOLAX POWER			
Type of commercial storage system	**X3-Ultra 15K / 19.9K / 20K / 25K / 30K**		**Aelio P50B100 / P50B200 / P60B100 / P60B200**	
Application Scenario (Self-consumption, peak-shaving, expansion avoidance, backup)	self-consumption, Peak Shaving, Backup (<10 ms)		self-consumption, Peak Shaving, Backup (<10 ms), Off-Grid	
Connection of storage (WR type) / connection of other PV generators	AC + DC coupling (hybrid inverter) / ext. PV inverter		AC + DC coupling (hybrid inverter) / ext. PV inverter	
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 up to 10 inverters / 300 kVA		up up to 10 inverters / up to 600 kVA	
Installation location specification Inverter / Storage	indoor + outdoor / indoor		completely outdoor or indoor***	
Manufacturer	SOLAX POWER			
Storage model	T-BAT HV-S 2.5 (7.6 to 33.2)	T-BAT HV-S 5.1-O (15.3 to 66.5)	Aelio B100 / B200	T-BAT HV-S 5.1-O (15.3 to 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 (net)	125,6 to 66,5 / 23,0 to 59,8
Number of storage units per system / Time window for extension	2 units per system / unlimited		Compact system / unlimited (complete systems only)	2 units per system / unlimited
Charging cycles * **	>6000	6000	8000	6000
Cell Chemistry	LFP		LFP	LFP
Backup function / ext. Switchgear	● / ●, with Solax EPS Parallel Box		● / ●, Solax Nexus Zero Box	
Off-grid application possible (true island/off-grid system) / additional options	● generator connection via ext. ATS box		● incl. generator connection	
Standards	VDE 4105		VDE 4105 / 4110	
Warranty system / storage (standard / extended) * **	10 years / 10 years		5 years (opt. 10/15 J.) / 5 years (opt. 10 J.)	5 years (opt. 10/15 J.) / 10 years
External communication interfaces	Ethernet		Ethernet	
Energy Management System / EZA Controller	integrated / to be checked individually		yes, with EMS1000 Pro / to be checked individually	
Monitoring	via Solax Portal		via Solax Portal	
Release of control of mains relay, ext. NA protection (VDE-AR-N 4105, up to 135/270 kVA)	●		●	
Installer certification possible	○		●	
Options Commissioning Support	standard support		standard support (on-Site Support for first project)	
Weight components (WR, Bat unit) kg / Transport + unloading	WR 47, battery total 94-262 / forklift	WR 47, battery total 156,5-616,5 / forklift	WR 105, Rack + Bat 1500-2700 / forklift or crane	WR 105, battery total 248,5-616,5 / forklift or crane
System information	up up to 10 systems cascadeable; 2 separate battery ports; ideal for small to medium-sized commercial applications; FRE connection via DI inputs		up up to 10 systems cascadeable; 6 MPPT; 2 separate battery ports; ideal for small to medium-sized commercial applications; FRE connection via integrated EMS1000 Pro logger; 4-stage fire protection concept	

Manufacturer SOLAX POWER

Type of commercial storage system	**Trene P100B215I (Air cooling)**	**Trene P125B261L-E (Liquid cooling)**	**Trene P500B1044L-2H (Liquid cooling)**
Application Scenario (Self-consumption, peak-shaving, expansion avoidance, backup)	self-consumption, Peak Shaving, Off-Grid*, Backup (with Nexus Zero Cabinet)	self-consumption, Peak Shaving, Off-Grid*, Backup (with Nexus Zero Cabinet)	self-consumption, Peak Shaving, Off-Grid*, Backup (with Nexus Zero Cabinet)
Connection of storage (WR type) / connection of other PV generators	AC coupling (storage inverter) / ext. PV inverter	AC coupling (storage inverter) / ext. PV inverter	AC coupling (storage inverter) / ext. PV inverter
AC power (kW)	100	125	249 / 250 / 260 / 319 / 399 / 499 / 500
Mains connection voltage level	400 V	400 V	400 V
Number of cascadeable WR / max. Total power AC	open / open	open / open	open / open
Installation location specification Inverter / Storage	completely outdoor	completely outdoor	completely outdoor
Manufacturer	SOLAX POWER		
Storage model	Trene B215I	Trene B261I	Trene B1044L
Capacity 1 storage unit gross / net (kWh)	193,5 (net)	234,9 (net)	1040,0 (net)
Number of storage units per system / Time window for extension	Compact system / unlimited (complete systems only)	Compact system / unlimited (complete systems only)	Compact system / unlimited (complete systems only)
Charging cycles ***	8000	8000	-
Cell Chemistry	LFP	LFP	LFP
Backup function / ext. Switchgear	○ / ●, Solax Nexus Zero Box	○ / ●, Solax Nexus Zero Box	○ / ●, Solax Nexus Zero Box
Off-grid application possible (true island/off-grid system) / additional options	announced		
Standards	VDE 4105 / 4110	VDE 4105 / 4110	VDE 4105 / 4110
Warranty system / storage (standard / extended) ***	5 years (opt. 10 J.) / 5 years (opt. 10 J.)	5 years (opt. 10 J.) / 5 years (opt. 10 J.)	5 years (opt. 10 J.) / 5 years (opt. 10 J.)
External communication interfaces	Ethernet	Ethernet	Ethernet
Energy Management System / EZA Controller	yes, with EMS1000 Pro / to be checked individually		
Monitoring	via Solax Portal		
Release of control of mains relay, ext. NA protection (VDE-AR-N 4105, up to 135/270 kVA)	○		
Installer certification possible	●		
Options Commissioning Support	standard support (on-Site Support for first project)		
Weight components (WR, Bat unit) kg / Transport + unloading	Complete 2800 / forklift or crane	Complete 2810 / forklift or crane	Complete 13000 / crane
System information	can be cascaded many times; ideal for medium to large commercial applications; FRE connection via integrated EMS1000 Pro logger; 4-stage fire protection concept; air conditioning with air or liquid cooling;		can be cascaded many times; ideal for medium to large commercial applications; FRE connection via integrated EMS1000 Pro logger; 4-stage fire protection concept; liquid cooling;

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Manufacturer SUNGROW Clean power for all

Type of commercial storage system	**SH 15 / 20 / 25 T**		**SG 50 / 80 / 125 CX**	
Application Scenario (Self-consumption, peak-shaving, expansion avoidance, backup)	self-consumption, Peak Shaving*, Backup (<10 ms)		self-consumption, Peak Shaving*, Backup (<10 ms), Smart Trading, virtual power plant	
Connection of storage (WR type) / connection of other PV generators	AC + DC coupling (hybrid inverter) / ext. PV inverter		AC + DC coupling (hybrid inverter) / ext. PV inverter	
AC power (kW)	15 / 20 / 25		50 / 80 / 125	
Mains connection voltage level	400 V		400 V	
Number of cascadeable WR / max. Total power AC	up up to 4 inverters / 100 kVA		up to 24 / 3000 kVA	
Installation location specification Inverter / Storage	indoor + outdoor / indoor		kompl. indoor + outdoor	
Manufacturer	SUNGROW Clean power for all			
Storage model	SBR 12.8 to 25.6 (1 tower only)	SBH 150 to 400 (2 towers)	ST050CF to ST250CF	PowerStack-DC 245CS-S-2H
Capacity 1 storage unit gross / net (kWh)	12,8 to 25,6 (net)	each 15,0 to 40,0 (net)	49,9 to 249,5 (net)	245,0 (net)
Number of storage units per system / Time window for extension	up to 2 / 1 Jahr *	up to 2 (V12 only 1) / 1 year *	up to 4* / unlimited	1 / unlimited (only as complete systems)
Charging cycles * **	-	-	-	8760
Cell Chemistry	LFP		LFP	LFP
Backup function / ext. Switchgear	● / ○		● / ○	
Off-grid application possible (true island/off-grid system) / additional options	○		○	
Standards	VDE 4105		VDE 4105 / 4110	
Warranty system / storage (standard / extended) * **	10 years (-) / 10 years (-)		5 years (opt. 10 J.) / 5 years (opt. 10 J.)	5 years (opt. 10 J.) / under clarification
External communication interfaces	Ethernet, WLAN		Ethernet, WLAN	
Energy Management System / EZA Controller	integrated / to be checked individually		with Logger 1000 / to be checked individually	
Monitoring	via Sungrow Portal		via Sungrow Portal	
Release of control of mains relay, ext. NA protection (VDE-AR-N 4105, up to 135/270 kVA)	●		○	
Installer certification possible	○		○	
Options Commissioning Support	standard support		standard support	
Weight components (WR, Bat unit) kg / Transport + unloading	WR 38, battery total 147-279 / forklift	WR 38, battery total 151-376 / forklift	WR 128, battery total 430-2040 / forklift	inverter 128, battery total 2800 / forklift or crane
System information	backup connection to 63 A rated; up to 4 devices in the parallel operation; additional PV inverters via AC coupling (up to 5 inverters from the CX series); (only identical inverter power classes possible); FRE connection via DI inputs; SBH V11 + V12 versions not compatible		modular C&I System; AC-Kopplung; 24 systems parallel possible; up up to 40 cm temporary floodwater; Synchronized backup outputs (only with 2 WR parallel)	

Manufacturer SUNGROW Clean power for all

Type of commercial storage system	Power Stack 255kWh-125kW	Power Stack 510kWh-125kW
Application Scenario (Self-consumption, peak-shaving, expansion avoidance, backup)	self-consumption, Peak Shaving**	self-consumption, Peak Shaving**
Connection of storage (WR type) / connection of other PV generators	AC coupling (storage inverter) / ext. PV inverter	AC coupling (storage inverter) / ext. PV inverter
AC power (kW)	125	125
Mains connection voltage level	400 V	400 V
Number of cascadeable WR / max. Total power AC	up up to 25 inverters / 2750 kVA	up up to 25 inverters / 3125 kVA
Installation location specification Inverter / Storage	completely outdoor	completely outdoor
Manufacturer	SUNGROW Clean power for all	
Storage model	ST255kWh	ST510kWh
Capacity 1 storage unit gross / net (kWh)	257,0 / 257,0	514,0
Number of storage units per system / Time window for extension	Compact system / unlimited (complete systems only)	Compact system / unlimited (complete systems only)
Charging cycles * **	8760	8760
Cell Chemistry	LFP	LFP
Backup function / ext. Switchgear	○ / ○	○ / ○
Off-grid application possible (true island/off-grid system) / additional options	○	
Standards	VDE 4105 / 4110	VDE 4105 / 4110
Warranty system / storage (standard / extended) * **	5 years (opt. 10/15 J.) / 5 years (opt. 10/15 J.)	5 years (opt. 10/15 J.) / 5 years (opt. 10/15 J.)
External communication interfaces	Ethernet	Ethernet
Energy Management System / EZA Controller	with EMS300CP / to be checked individually	with EMS300CP / to be checked individually
Monitoring	via Sungrow Portal	via Sungrow Portal
Release of control of mains relay, ext. NA protection (VDE-AR-N 4105, up to 135/270 kVA)	○	○
Installer certification possible	○	○
Options Commissioning Support	On-site Support	On-site Support
Weight components (WR, Bat unit) kg / Transport + unloading	Complete 3200 / forklift or crane	Complete 5300 / forklift or crane
System information	Grid-parallel up to 2can be cascaded 5 times; Off-Grid up up to 10 times; ideal for medium to large commercial applications; liquid cooling; 3-stage fire protection concept; 2 versions: with integriertem / separatem Hilfstromkreis	Grid-parallel up to 2can be cascaded 5 times; Off-Grid up up to 10 times; ideal for medium to large commercial applications; liquid cooling; 3-stage fire protection concept; FRE connection via suitable logger

* 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	SUNWODA ENERGY		
Type of commercial storage system	**Oasis A200 All-in-One**	**Oasis L261 All-in-One**	**Oasis L261 All-in-One Backup**
Application Scenario (Self-consumption, peak-shaving, expansion avoidance, backup)	self-consumption, Peak Shaving**		self-consumption, Peak Shaving**, Backup
Connection of storage (WR type) / connection of other PV generators	AC coupling (storage inverter) / ext. PV inverter		
AC power (kW)	125	125	125
Mains connection voltage level	400 V		
Number of cascadeable WR / max. Total power AC	up up to 20 systems / 2500 kVA	up to the MWh range (on request)	up to the MWh range (on request)
Installation location specification Inverter / Storage	completely outdoor		
Manufacturer	SUNWODA ENERGY		
Storage model	CIESS-A-200	CIESS-261	
Capacity 1 storage unit gross / net (kWh)	180,0 (net)	261,0 (net)	
Number of storage units per system / Time window for extension	Compact system / unlimited (complete systems only)		
Charging cycles * **	9000	9000	
Cell Chemistry	LFP		
Backup function / ext. Switchgear	○ / ○		● / ● (integrated)
Off-grid application possible (true island/off-grid system) / additional options	○		○
Standards	VDE 4105 / 4110 / 4120		
Warranty system / storage (standard / extended) * **	complete system: 5 years (opt. 10 years)		
External communication interfaces	Ethernet, Wifi		
Energy Management System / EZA Controller	integrated / to be checked individually		
Monitoring	via Sunwoda Portal		
Release of control of mains relay, ext. NA protection (VDE-AR-N 4105, up to 135/270 kVA)	○		
Installer certification possible	○		
Options Commissioning Support	On-site Support		
Weight components (WR, Bat unit) kg / Transport + unloading	Complete 2400 / forklift or crane	Complete 2300 / forklift or crane	Complete 2400 / forklift or crane
System information	Grid-parallel up up to 20 times cascadeable; ideal for medium to large commercial applications; air cooling; multi-stage fire protection concept; FRE connection via suitable logger	ideal for medium to large commercial applications; liquid cooling; multi-stage fire protection concept; FRE connection via suitable logger	Integrated transfer switchgear; ideal for medium to large commercial applications; liquid cooling; multi-stage 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?
Off-grid application possible (true island/off-grid system) / additional options	Whether use as a permanently off-grid system is approved by the manufacturer and which additional components may be required
Standards	Certification of the system.
Warranty system / storage (standard / extended) ***	Manufacturer warranties. Standard coverage and extension options respectively.
Interfaces external communication	Integrated interfaces for portal, EVU control, etc.
Energy Management System / EZA Regulator	Does the device include its own energy managementNt 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.

Krannich Solar GmbH & Co. KG
Heimsheimer Str. 65/1
71263 Weil der Stadt/Hausen
Deutschland

Tel. +49 (0) 7033 3042-0
info@de.krannich-solar.com

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