Reserve Power Systems
Product Overview

Motive Power Systems
Reserve Power Systems
Special Power Systems
Service

Your benefits with HOPPECKE standby batteries

- **Highest safety** - more than 80 years experience in manufacturing first-class energy storage systems
- **Maximum project flexibility** - optimized product range fulfills requirements of various applications
- **German quality standard** - equal product quality around the world
- **Comprehensive competence** - one source for planning, installation, operation, service and training
- **Individual support** - worldwide distribution- and service network

Typical applications of HOPPECKE standby batteries

- IT/Telecom
- UPS
- Power plants
- Safety Lighting
- Signaling systems
- Engine start
- Solar

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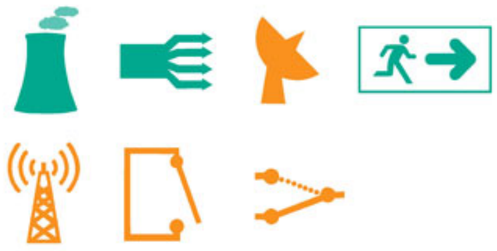
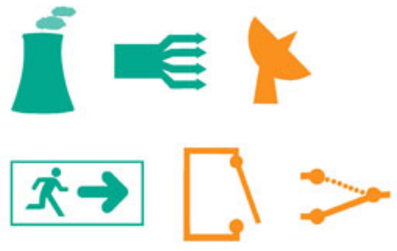
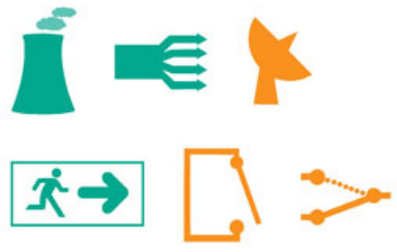
Type range - vented products

	GroE	OSP.HC	OSP.XC
			
Short description			
Standards	DIN 40738, IEC 60896-11	IEC 60896-11	IEC 60896-11
Capacity range in Ah	75 - 2.600	105 - 3.780	120 - 4.140
Nominal voltage range	2 V	2 V	2 V
Container material (UL 94-V0 on request)	SAN, clear	SAN, clear	SAN, clear
Grid alloy			
Positive	pure lead	Pb + <2% Sb	Pb + <2% Sb
Negative	Pb + <2% Sb	Pb + <2% Sb	Pb + <2% Sb
Positive plate	Planté	Grid	Grid
Negative plate	Grid	Grid	Grid
Electrolyte	H_2SO_4, liquid	H_2SO_4, liquid	H_2SO_4, liquid
Applications			
Connector design	Fully insulated bolted connector	Fully insulated bolted connector	Fully insulated bolted connector
Current behaviour  ≙ excellent ≙ good			
Design life up to (in years)	25	20	18
Cycles up to			
Charging voltage in V/cell			
Float charge	2.23	2.23	2.25
Boost charge	2.40	2.40	2.40
Float charging current/100 Ah nominal capacity (20°C, U_{float} =2.23 / 2.25 V/cell)	20 - 40 mA	20 - 50 mA	20 - 50 mA
Position independent operation possible	No	No	No
Water-refilling intervals in years at permanent float-charging/with AquaGen®	> 5/not necessary	> 3/not necessary	> 3/not necessary
Self discharge of nominal capacity at 20°C ambient temperature/per month	~ 3%	~ 3%	~ 3%
Operating temperature range in °C	-20 - +40	-20 - +40	-20 - +40
Ventilation requirement	with AquaGen® similar to VRLA	with AquaGen® similar to VRLA	with AquaGen® similar to VRLA
Storage time at 20°C before refreshing charge	3 months	3 months	3 months

Type of thread for all types M8

Key:
Emergency Power **Engine Start** **Power Plant** **Power Supply** **Rail** **Signal tower** **Solar**

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	OPzS	OPzS solar.power	OGi bloc	OGi bloc HC
				
	DIN 40736-1, IEC 60896-11	IEC 60896-11, IEC 61427 Design according to DIN 40736-1	DIN 40739, IEC 60896-11	IEC 60896-11
	200 - 3.000	280 - 4.340	18 - 256	140 - 364
	2 V	2 V	4 V, 6 V, 12 V	4 V, 6 V
	SAN, clear	SAN, clear	PP, high translucent	PP, high translucent
	Pb + <2% Sb Pb + <2% Sb	Pb + <2% Sb Pb + <2% Sb	Pb + <2% Sb Pb + <1% Ca	Pb + <2% Sb Pb + <1% Ca
	Tubular Grid	Tubular Grid	Grid Grid	Grid Grid
	H_2SO_4, liquid	H_2SO_4, liquid	H_2SO_4, liquid	H_2SO_4, liquid
	Fully insulated bolted connector	Fully insulated bolted connector	Fully insulated bolted connector	Fully insulated bolted connector
	20		15	12
	1.500	1.500		
	2.23 2.40	2.23 2.40	2.23 2.40	2.23 2.40
	20 - 50 mA	20 - 50 mA	20 - 50 mA	20 - 50 mA
	No	No	No	No
	> 3/not necessary	> 3/not necessary	> 3/not necessary	> 3/not necessary
	~ 3%	~ 3%	~ 3%	~ 3%
	-20 - +40	-20 - +40	-20 - +40	-20 - +40
	with AquaGen® similar to VRLA	with AquaGen® similar to VRLA	with AquaGen® similar to VRLA	with AquaGen® similar to VRLA
	3 months	3 months	3 months	3 months

Switch Gear Telecom Transformer Station UPS

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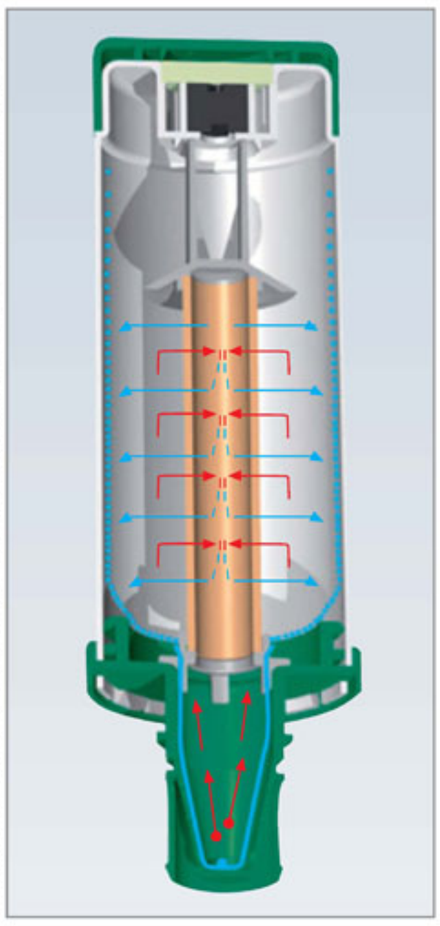
	power.bloc OPzS	OPzS bloc solar.power	FNC®	AquaGen® premium.top
				
	DIN 40737-3, IEC 60896-11	IEC 60896-11, IEC 61427 Design according to DIN 40737-3	DIN 40763, IEC 623	
	50 - 300	70 - 400	10 - 1100	
	6 V, 12 V	6 V, 12 V	1.2 V	
	PP, high translucent	PP, high translucent	PP translucent, PP-VO, Grilon	
	Pb + <2% Sb Pb + <2% Sb	Pb + <2% Sb Pb + <2% Sb		
	Tubular Grid	Tubular Grid	metallized fibre electrode (Ni) metallized fibre electrode (Ni)	
	H_2SO_4, liquid	H_2SO_4, liquid	KOH, liquid	
	Fully insulated bolted connector	Fully insulated bolted connector		
	18		25	
	1.400	1.400	>2.000	
	2.23 2.40	2.23 2.40	1.40 - 1.50 (type depending) 1.55 - 1.60 (type depending)	
	20 - 50 mA	20 - 50 mA	30 - 180 mA (type depending) at 1.45 V/C, 20°C	
	No	No	No	
	> 3/not necessary	> 3/not necessary	>3 (type depending) >10 with AquaGen®	
	~ 3%	~ 3%	<7%	
	-20 - +40	-20 - +40	-50 - +60	
	with AquaGen® similar to VRLA	with AquaGen® similar to VRLA	with AquaGen® similar to VRLA	
	3 months	3 months	>3 years, see operating instructions	

New patented technology

Advantages of AquaGen® premium.top

- Extends maintenance intervals up to the level of maintenance free
- No damage due to topping-up with polluted water
- Reduction of ventilation requirements
- Reduced costs for ventilation requirements
- Reduced explosion risk through integrated arc-back protection
- No significant escape of gas or of electrolyte fumes



Recombination principle in the AquaGen® premium.top
→ Gas
→ Watervapour
..... Water

For more information: www.hoppecke.com

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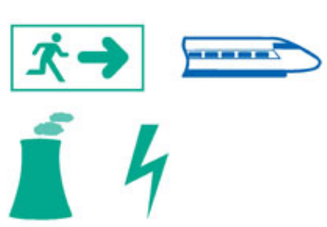
Type range - sealed (VRLA) products

Short description

	OPzV	OPzV solar.power	power.bloc OPzV
			
Standards	DIN 40742, IEC 60896-21/22	IEC 60896-21/22, IEC 61427 Design according to DIN 40742	DIN 40744, IEC 60896-21/22
Capacity range in Ah	200 - 3.000	250 - 3.500	50 - 300
Nominal voltage range	2 V	2 V	6 V, 12 V
Container material (UL 94-V0 on request)	ABS	ABS	PP, talcum
Grid alloy Positive Negative	 Pb + <1% Ca Pb + <1% Ca	 Pb + <1% Ca Pb + <1% Ca	 Pb + <1% Ca Pb + <1% Ca
Positive plate Negative plate	Tubular Grid	Tubular Grid	Tubular Grid
Electrolyte	H_2SO_4-Gel	H_2SO_4-Gel	H_2SO_4-Gel
Applications			
Connector design	Fully insulated bolted connector	Fully insulated bolted connector	Fully insulated bolted connector
Current behaviour (≙ am besten, ≙ gut)			
Design life up to (in years)	18		15
Cycles up to	1.200	1.600	1.000
Charging voltage in V/cell Float charge Boost charge	 2.25 2.40	 2.25 2.40	 2.25 2.40
Float charging current/100 Ah nominal capacity (20°C, U_{float} =2.25 / 2.27 V/cell)	20 - 50 mA	20 - 50 mA	20 - 50 mA
Position independent operation possible	up to 1500 Ah (optionally)	up to 1500 Ah (optionally)	Yes (optionally)
Water-refilling intervals in years at permanent float-charging/with AquaGen®	–	–	–
Self discharge of nominal capacity at 20°C ambient temperature/per month	2 - 3%	2 - 3%	2 - 3%
Operating temperature range in °C	-20 - +40	-20 - +40	-20 - +40
Ventilation requirement	VRLA regulation; EN 50272-2	VRLA regulation; EN 50272-2	VRLA regulation; EN 50272-2
Storage time at 20°C before refreshing charge	6 months	12 months	6 months

Type of thread for all types M8

Key:

Emergency Power · Engine Start · Power Plant · Power Supply · Rail

Signal tower · Solar · Switch Gear · Telecom · Transformer Station · UPS

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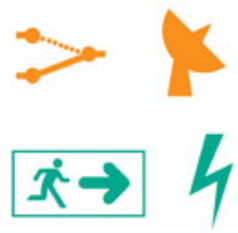
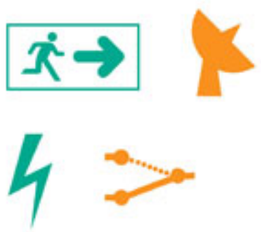
	OPzV bloc solar.power	power.com SB/*HC*	net.power	solar.bloc
				
	IEC 60896-21/22, IEC 61427 Design according to DIN 40744	IEC 60896-21/22	IEC 60896-21/22, BS 6290-4	IEC 60896-21/22
	70 - 370	50 - 400/*35 - 400*	85 - 166	58 - 250
	6 V, 12 V	2 V, 6 V, 12 V/*2 V, 12 V*	12 V	6 V, 12 V
	PP, talcum	PP, talcum	ABS, UL 94-VO	PP
	Pb + <1% Ca Pb + <1% Ca	Pb + <1% Ca Pb + <1% Ca	Pb + <1% Ca Pb + <1% Ca	Pb + <1% Ca Pb + <1% Ca
	Tubular Grid	Grid Grid	Grid Grid	Grid Grid
	H_2SO_4-Gel	H_2SO_4, fixed in AGM	H_2SO_4, fixed in AGM	H_2SO_4, fixed in AGM
				
	Fully insulated bolted connector	Fully insulated bolted connector	Fully insulated bolted connector	cramp connector, bolted connector
				
		12/*10 - 12*	12	
	1.300			750
	2.25 2.40	2.25 2.40	2.25/2.27 2.40	2.25 2.40
	20 - 50 mA	10 - 40 mA	10 - 40 mA	10 - 40 mA
	Yes (optionally)	Yes	Yes	Yes
	–	–	–	–
	2 - 3%	2 - 3%	2 - 3%	2 - 3%
	-20 - +40	-20 - +40	-20 - +40	-20 - +40
	VRLA regulation; EN 50272-2	VRLA regulation; EN 50272-2	VRLA regulation; EN 50272-2	VRLA regulation; EN 50272-2
	12 months	6 months	6 months	6 months

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