

## Technical Specification for Stationary VLA - Cells

### 1. Application

BAE OGi - cells are suitable for backup power applications where operational safety and long service-life is a top priority. The OGi performs extremely well where discharge currents are required for short duration discharge times. It also works very well when these short discharge demands are coupled with continuous loads over longer duration discharge times.

BAE uses a round-grid flat-plate design for its OGi cells. Due to its excellent lead-mass and grid plate a long operational life and a very good high-current performance is realized. The sleek straight-walled containers and bridge- supported plates provide a high power-density in a compact footprint. The transparent container allows visibility and control for easier maintenance and service.

They are used as a stand-by energy source in transmission and/or distribution substations, as well as in data centres for UPS; for emergency lighting equipment and other applications requiring 1hr or less backup time.



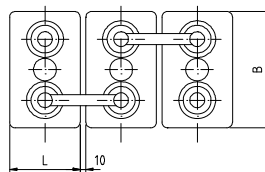
### 2. Types, capacities, dimensions, weights

Type	C10 20°C	C <sub>1min</sub> 25°C	C <sub>15min</sub> 25°C	C1 25°C	C3 25°C	C5 25°C	C8 25°C	R <sub>i</sub> 1)	I <sub>Ks</sub> 2)	length	width	height (Max)	Mass 3)	Mass 4)
U <sub>e</sub> V / cell	Ah	Amps	Amps	Amps	Amps	Amps	Amps	mΩ	kA	inch	inch	inch	lbs	lbs
8 OGi 200	223	548.0	341.0	149	64.1	41.8	27.8	0.49	4.24	4.06	8.11	15.95	31.7	41.4
10 OGi 250	279	685.0	426.0	187	80.1	52.2	34.8	0.39	5.31	4.88	8.11	15.95	37.9	49.8
12 OGi 300	335	822.0	511.0	224	96.1	62.7	41.7	0.33	6.36	5.71	8.11	15.95	43.9	58.2
14 OGi 350	384	959.0	590.0	258	110	71.9	47.8	0.28	7.43	5.71	8.11	15.95	49.2	63.3

1) 2) internal resistance and short-circuit current according to IEC 896-11

3) dry-charged

4) filled and charged



8 OGi 200 to 14 OGi 350

# Technical Specification for BAE *SECURA OGI*

## 3. Design

Positive electrode	round-grid flat plate with low antimony alloy (1,6%), circular bars
Negative electrode	high lead weight solid grids in a corrosion-resistant PbSb1.6SnSe - alloy
Separation	round-grid flat plate in low antimony alloy with long-life expander material
Electrolyte	microporous separator
Container	sulphuric acid with a density of 1.24 kg/l,
Lid	high impact, transparent SAN (Styrol-Acrylic-Nitrile), UL-94 rating: HB
Flame arrestors	high impact SAN in dark grey color, UL-94 rating: HB
	includes standard ceramic arrestors with optional ceramic flip-top funnel arrestors acc. DIN 40 740 available
Pole - bushing	100% gas- and electrolyte-tight, sliding, injection-moulded "Panzerpole"
Kind of pole	M10 brass insertion
Intercell connectors	insulated PVC coated solid copper connectors with cross-sections of 90, 150 or 300 mm <sup>2</sup> depending upon application
Inter-tier connectors	flexible insulated copper cables
Connector screw	M10 stainless steel with insulated cap
Kind of protection	IP 25 regarding DIN 40050, touch protected according VBG 4.

## 4. Charging

IU - characteristic	$I_{max}$ without limitation $U = 2.23 \text{ V/cell} \pm 1\%$ , between 10°C and 30°C (50 °F and 86 °F) $\Delta U/\Delta T = \pm 0.003 \text{ V/K}$ below 10°C in the monthly average
Float current	15mA/100Ah, increasing to 45mA/100Ah at the end of life
Equalize charge	$U = 2.33$ to $2.40 \text{ V/cell}$ , time limited
Charging time up to 90%	6h with $1.5 \cdot I_{10}$ initial current, 2.23 V/cell, 80% C3 discharged

## 5. Discharge characteristics

Reference temperature	25°C (77 °F)
Initial capacity	95% or better at time of delivery
Depth of discharge (DOD)	normally up to 80%
Deep discharges	more than 80% DOD or discharges beyond final discharge voltages (dependent on discharge current) have to be avoided

## 6. Maintenance

Every 6 months	check and record battery voltage, pilot cell voltage and temperature
Every 12 months	check and record battery voltage, cell voltages and temperatures

## 7. Operational data

Operational life	20 years in stand-by operation, float at 20 to 25 °C (68 °F to 77 °F)
Water - refilling - interval	2 to 3 years at 25°C (77 °F) for first 12-15 years at normal float conditions
IEC 60 896-2 cycles	> 1200
Self-discharge	app. 3% per month at 20°C (68 °C)
Operational temperature	-20°C to 55°C (-4 °F to 131 °F); recommended 10°C to 30°C (50 °F to 86 °F)
Battery according to	DIN 40 737 part 3
Tests according to	IEC 60 896 - 11
Safety standard, ventilation	DIN EN 50 272-2
Transport	Batteries are not subject to ADR (road transport), if the conditions of the special rule (chapter 3.3) are observed.

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