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## grid | power FNC-VR

Valve regulated  
Fibre Nickel Cadmium Batteries

## grid | power FNC-VR

The extremely low-maintenance grid | power FNC-VR battery is developed in line with the HOPPECKE proven fibre matrix plate technology. The addition of the special recombinant technology of this battery to the fibre plate design gives exceptional reliability in critical applications. Therefore, the grid | power FNC-VR provides superior performance to other valve regulated Nickel Cadmium technologies.

The grid | power FNC-VR battery was developed for applications where the system must be completely reliable with minimal maintenance. Typical applications are:

- UPS systems
- Telecommunications systems
- Power stations and substations
- Safety lighting

### Extremely low maintenance

- The incorporation of a low-pressure valve and a flame arresting vent with the grid | power FNC-VR technology, recombines oxygen and hydrogen gasses inside the cell with up to 90% efficiency.
- The grid | power FNC-VR cell technology with liquid electrolyte has significant advantages over other valve regulated battery systems in which only minimal electrolyte reserves are available.
  - Large electrolyte reserve to protect against dry out in the case of a charger failure.
  - No tendency to thermal runaway. Therefore, the grid | power FNC-VR can be used in a large temperature range.
- No water addition or filling is required over a period of 20 years when operated on float charge at 20°C.

### Product advantages

Fibre Nickel Cadmium (FNC®) technology provides the best solution for long reliable battery life with minimal maintenance.



### Technical data

- Operating temperature range: -50°C to +60°C
- Float Charge: 1.40 to 1.45 V/cell
- Boost Charge: 1.50 to 1.70 V/cell
- Water maintenance period 1.40 V/cell: 20 years at 20°C
- Recharge time to 90% available capacity: 7 - 8 hours at normal boost charge voltage
- Low pressure valve
- Cell jar/lid: Translucent Polypropylene, optional opaque flame retardant polypropylene, UL-94 V0
- Jar/Lid seal: Welded, leak proof
- Terminals: Nickel plated steel
- Electrode design: Nickel plated steel tab welded to the fiber structure
- Electrolyte: KOH density = 1.190 kg/l

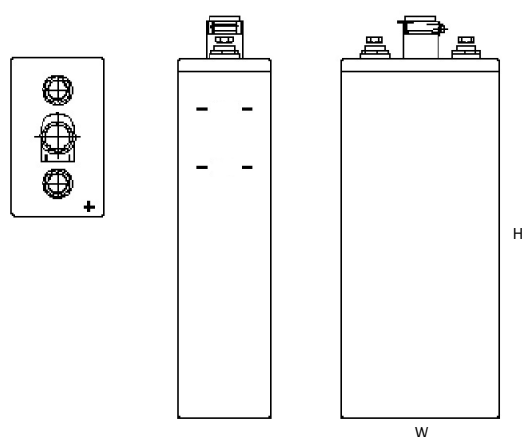




## Capacities, dimensions and weights

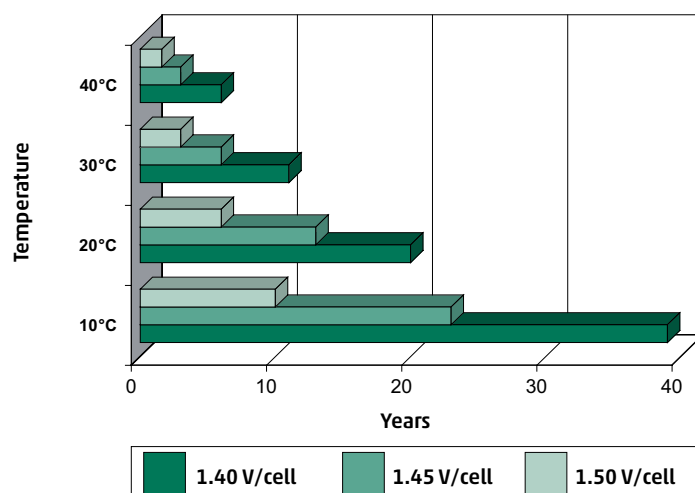
Type	Capacity $C_5$ (Ah)	Length (mm)	Width (mm)	Height (mm)	Cell weight with electrolyte (kg)	Cell weight without electrolyte (kg)	Electrolyte quantity (l)
FNC® VR 40 M	40	47	122	299	2.60	1.60	0.84
FNC® VR 60 M	60	47	122	299	2.80	2.20	0.50
FNC® VR 80 M	80	72	122	299	4.00	2.70	1.09
FNC® VR 100 M	100	72	122	299	4.20	3.10	0.92
FNC® VR 120 M	120	92	122	299	5.40	3.70	1.43
FNC® VR 140 M	140	92	122	299	5.60	4.20	1.18
FNC® VR 160 M	160	115	122	299	6.70	4.80	1.60
FNC® VR 180 M	180	115	122	299	6.90	5.20	1.43
FNC® VR 200 M	200	92	194	299	8.70	6.30	2.02
FNC® VR 234 M	235	92	194	299	8.90	6.80	1.76
FNC® VR 265 M	265	115	194	299	10.50	8.00	2.10
FNC® VR 300 M	300	115	194	299	11.20	8.90	1.93
FNC® VR 333 M	333	155	198	299	13.80	9.70	3.45
FNC® VR 367 M	367	155	198	299	14.20	10.40	3.19
FNC® VR 400 M	400	155	198	299	14.60	11.10	2.94
FNC® VR 433 M	433	155	198	299	14.90	11.90	2.52

Type	Capacity $C_5$ (Ah)	Length (mm)	Width (mm)	Height (mm)	Cell weight with electrolyte (kg)	Cell weight without electrolyte (kg)	Electrolyte quantity (l)
FNC® VR 45 L	45	47	122	299	2.50	1.50	0.84
FNC® VR 66 L	66	47	122	299	2.70	1.90	0.76
FNC® VR 90 L	90	72	122	299	3.90	2.50	0.59
FNC® VR 110 L	110	72	122	299	4.10	2.90	1.01
FNC® VR 132 L	132	92	122	299	5.20	3.30	1.51
FNC® VR 154 L	154	92	122	299	5.40	3.70	1.43
FNC® VR 176 L	176	115	122	299	6.40	4.30	1.76
FNC® VR 198 L	198	115	122	299	6.90	5.20	1.43
FNC® VR 222 L	222	92	194	299	8.50	5.80	2.27
FNC® VR 259 L	259	92	194	299	8.80	6.40	2.02
FNC® VR 296 L	296	115	194	299	10.60	7.30	2.77
FNC® VR 333 L	333	115	194	299	10.90	7.90	2.52
FNC® VR 370 L	370	115	194	299	11.20	8.80	2.02
FNC® VR 407 L	407	155	198	299	14.10	10.10	3.36
FNC® VR 444 L	444	155	198	299	14.50	10.80	3.11
FNC® VR 481 L	481	155	198	299	14.80	11.50	2.77
FNC® VR 518 L	518	155	198	299	15.20	12.10	2.61



Maintenance Interval for grid | power FNC-VR - L-types

Years at temperature & charge voltage



HOPPECKE Batterien GmbH & Co. KG  
Bontkirchener Str. 1  
D - 59929 Brilon  
Tel: +49 (0) 2963 61-374  
Fax: +49 (0) 2963 61-270  
E-Mail: [reservepower@hoppecke.com](mailto:reservepower@hoppecke.com)

