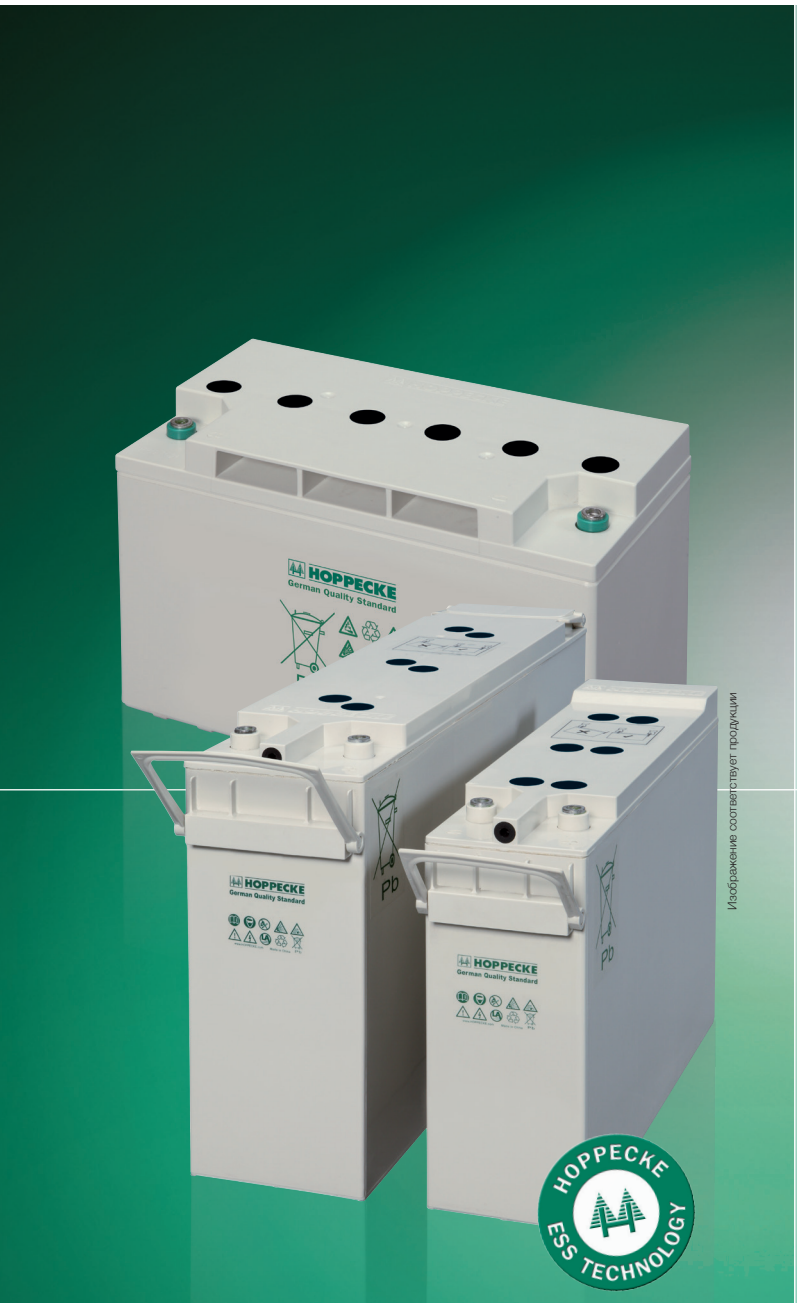
**https://hoppecke.nt-rt.ru || hec@nt-rt.ru**

Алматы (7273)495-231
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Владикавказ (8672)28-90-48
Владимир (4922)49-43-18
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (3522)50-90-47
Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Ноябрьск (3496)41-32-12
Новосибирск (383)227-86-73
Киргизия (996)312-96-26-47
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37
Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Саранск (8342)22-96-24
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Россия (495)268-04-70
Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97
Тверь (4822)63-31-35
Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Улан-Удэ (3012)59-97-51
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Чебоксары (8352)28-53-07
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
Ярославль (4852)69-52-93
Казахстан (772)734-952-31




Изображение соответствует продукции

# grid | power VR X и VR X-FT

## Герметизированные свинцово-кислотные батареи

### Область применения:

- Источники бесперебойного питания (ИБП)
- Телекоммуникации
  - Станции мобильной связи
  - Базовые станции
  - Автономные и неавтономные сети питания
- Системы энергоснабжения
- Аварийное освещение

### Ваши преимущества:

- Необслуживаемые батареи, нет необходимости в доливе воды благодаря инновационной гелевой технологии ESS
- Увеличенная плотность энергии и мощности благодаря оптимизированной электрохимии
- Оптимальное использование пространства – горизонтальное размещение
- Защита от короткого замыкания при монтаже благодаря системе изолированных перемычек HOPPECKE
- Простой монтаж и установка – крышка батареи со встроенной ручкой
- Максимальная совместимость – размеры VR X-FT аналочны стандартам 19"- и 23"

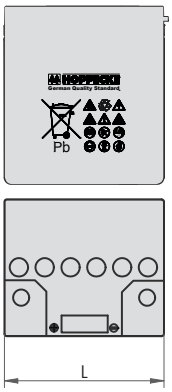
# Обзор модельного ряда **grid** | power VR X и VR X-FT

### Емкость, размеры и вес

| Тип | $C_{10}$/1,80 V Ач | $C_5$/1,75 V Ач | $C_3$/1,70 V Ач | $C_1$/1,70 V Ач | $C_{1/2}$/1,65 V Ач | $C_{1/6}$/1,65 V Ач | Вес Кг | Длина L мм | Ширина B мм | Высота H мм | Рис. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **grid** \| power VR X 12-57 | 57 | 54 | 50 | 38 | 31 | 22 | 19,0 | 207 | 177 | 230 | A |
| **grid** \| power VR X 12-63 | 63 | 61 | 59 | 50 | 42 | 30 | 23,3 | 229 | 177 | 230 | B |
| **grid** \| power VR X 12-68 | 68 | 66 | 64 | 55 | 49 | 36 | 25,7 | 229 | 177 | 230 | B |
| **grid** \| power VR X 12-88 | 88 | 89 | 85 | 68 | 54 | 38 | 30,8 | 344 | 177 | 230 | C |
| **grid** \| power VR X 12-102 | 102 | 97 | 91 | 74 | 64 | 47 | 33,6 | 344 | 177 | 230 | C |
| **grid** \| power VR X 12-114 | 114 | 109 | 104 | 89 | 76 | 53 | 38,7 | 344 | 177 | 230 | C |
| **grid** \| power VR X 12-142 | 142 | 140 | 134 | 108 | 88 | 61 | 46,2 | 498 | 177 | 230 | D |
| **grid** \| power VR X 12-153 | 153 | 146 | 138 | 112 | 97 | 70 | 48,2 | 498 | 177 | 230 | D |
| **grid** \| power VR X 12-166 | 166 | 158 | 150 | 125 | 106 | 71 | 53,3 | 498 | 177 | 230 | D |
| **grid** \| power VR X-FT 12-90 | 88 | 84 | 79 | 65 | 55 | 39 | 32,5 | 383 | 105 | 265 | E |
| **grid** \| power VR X-FT 12-115 | 113 | 104 | 97 | 77 | 63 | 45 | 36,4 | 541 | 125 | 217 | F |
| **grid** \| power VR X-FT 12-170 | 168 | 156 | 142 | 104 | 81 | 59 | 52,3 | 541 | 125 | 302 | F |
| **grid** \| power VR X-FT 12-180 | 177 | 171 | 164 | 132 | 106 | 70 | 59,0 | 541 | 125 | 302 | F |

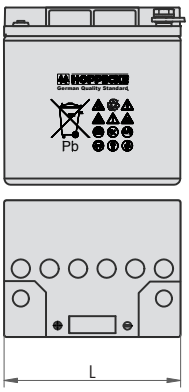
$C_{10}$, $C_5$, $C_3$, $C_1$, $C_{1/2}$ и $C_{1/6}$ = Емкость при 10-, 5-, 3- ,1- ,1/2-и 1/6 -часовом разряде

**Рис. A**



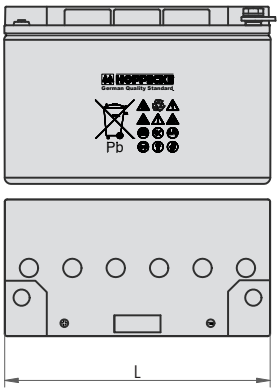

**grid** | power VR X 12-57

**Рис. B**



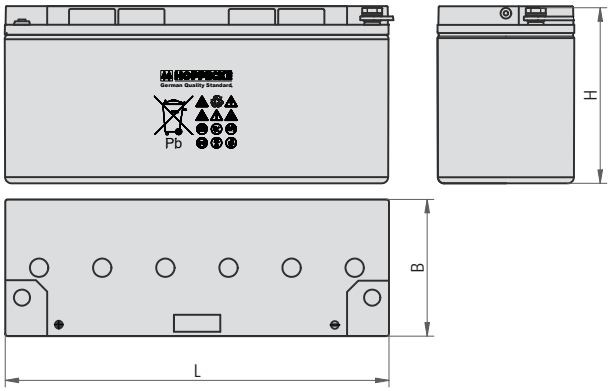

**grid** | power VR X 12-63 -
**grid** | power VR X 12-68

**Рис. C**



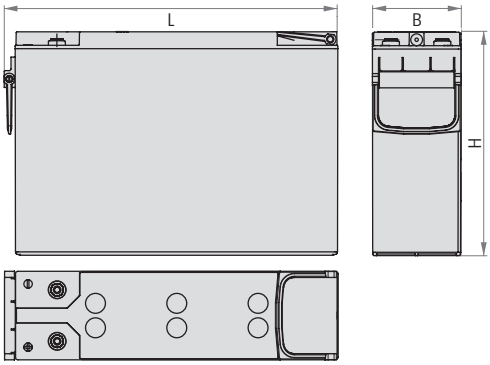

**grid** | power VR X 12-88 -
**grid** | power VR X 12-114

**Рис. D**



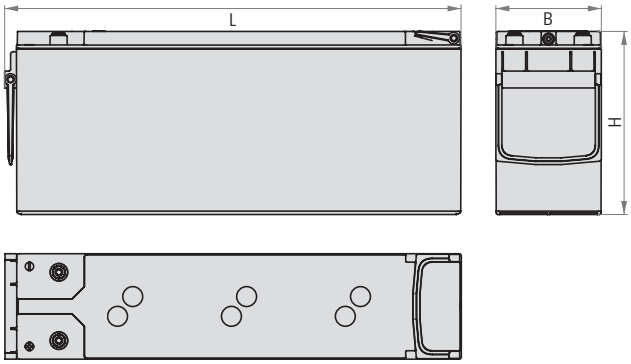

**grid** | power VR X 12-142 -
**grid** | power VR X 12-166

**Рис. E**




**grid** | power VR X-FT 12-90

**Рис. F**




**grid** | power VR X-FT 12-115, 12-170, 12-180

# Safety Data Sheet[1] - Product information

Product Range: HOPPECKE Valve regulated lead acid batteries

## 1. GENERAL INFORMATION

| | |
|---|---|
| **Manufacturer's Name:**<br>HOPPECKE Batterien GmbH & Co. KG<br>Bontkirchener Str. 1<br>59929 Brilon, Germany<br><br>**Telephone number for information: 02963 61 464**<br>**Emergency telephone number:**<br>**For transports only**<br>**National/International: +49 (0) 178 433 74 34**<br>**USA: 01149 178 433 74 34** | **Date: January 2022**<br>**Product:**<br>Sealed Valve Regulated Non Spillable Lead Acid Battery (VRLA)<br><br>**Brand names:**<br>power.com HC, power.com XC, net.power, sun \| power VR L, sun \| power VR M, grid \| power VR L, grid \| power VR M, grid \| power VR X, grid \| power VR X-FT, SUNBASIC, grid \| Xtreme VR, power.com H.C |

## 2. HAZARDS IDENTIFICATION

No labelling of the product is required as batteries are articles in the sense of the REACH regulation. Labelling is only required for substances and mixtures of substances.

## 3. HAZARDOUS INGREDIENTS/IDENTIFY NOTIFICATION

| Components | CAS Number |
|---|---|
| Inorganic Lead | 7439-92-1 |
| Electrolyte (Sulfuric Acid - H2SO4/H2O) | 7664-93-9 |

## 4. FIRST AID MEASURES

**Inhalation**
Sulfuric Acid: Remove to fresh air immediately. Consult a physician.
Lead: Remove from exposure, gargle, wash nose and lips; consult physician.

[1] Batteries are considered as articles under REACH regulation 1907/2006/EC and, as such, do not require the publication of a safety data sheet. However, there is a requirement to provide safety information on products. This document, which fulfils this requirement, is commonly called an MSDS, but, in Europe, is more correctly referred to as 'Instructions for the Safe Handling of Lead-Acid Batteries'. As the product contains a SVHC substance, this notification in the form of product information is obligatory.

**Ingestion**
Sulfuric Acid: Give large quantities of water. Consult a physician.
Lead: Consult physician immediately.

**Skin**
Sulfuric Acid: Flush with large amounts of water for at least 15 minutes; remove contaminated clothing completely.
If symptoms persist, seek medical attention. Wash contaminated clothing before reuse. Discard contaminated shoes.
Lead: Wash immediately with soap and water.

**Eyes**
Sulfuric Acid and Lead: Flush immediately with large amounts of water for least 15 minutes while lifting lids. Seek immediate medical attention.

## 5. FIRE FIGHTING MEASURES

| | |
|---|---|
| **Flash Point (Method Used):** | non flammable |
| **Flammable Limits:** | *Hydrogen Gas |
| **Extinguishing Media:** | Class ABC extinguisher, |
| **Limits:** | LEL = 4.1% (Hydrogen Gas) UEL = 74.2% |

**NOTE: $CO_2$ may be used, but not directly on the cell. The thermal shock may cause cracking of the battery case and/or cases.**
**Hydrogen gas may be generated during battery charging.**

Special Fire Fighting Procedures: If batteries are on charge, turn off power. Use positive pressure, self-contained breathing apparatus in fighting fire. Water applied to electrolyte generates heat and causes it to splatter. Wear acid resistant clothing. Ventilate area well.

Unusual Fire and Explosion Hazards: Hydrogen and oxygen gases are generated in cells during normal battery operation or when on charge. (Hydrogen is flammable and oxygen supports combustion). These gases enter the air through the vent caps during battery overcharging. To avoid risk of fire or explosion, keep sparks and other sources of ignition away from the battery. Do not allow metal objects to simultaneously contact both positive and negative terminal of batteries. Ventilate area well.

## 6. PRECAUTIONS FOR SAFE HANDLING AND USE

**Steps to be Taken in Case Material is Released or Spilled:** Electrolyte material is corrosive. Contains sulfuric acid. Neutralize any spilled material. Reference 1996 North American Emergency Response Guidebook, #154.
**Waste Disposal Method:** Lead-acid batteries are completely recyclable. For information on returning batteries to HOPPECKE Batterien GmbH & Co. KG for recycling, contact your HOPPECKE Representative. Dispose of any collected material in accordance with local, state or applicable federal regulations.
**Precautions to be Taken in Handling and Storing:** Store away from reactive material as defined in Section V, Reactivity Data. Place cardboard between layers of stacked batteries to avoid damage and short circuit. Do not allow metallic materials to simultaneously contact both terminals.
**Other Precautions:** If battery case is broken, avoid direct contact with internal components. Keep away from ignition sources during charging.

## 7. HANDLING AND STORAGE

**Handling:**
Unless involved in recycling operations, do not breach the casing or empty the contents of the battery. There may be increasing risk of electric shock from strings of connected batteries.
Keep containers tightly closed when not in use. If battery case is broken, avoid contact with internal components. Keep away from combustible materials, organic chemicals, reducing substances, metals, strong oxidizers and water.

**Storage:**
Store batteries in cool, dry, well-ventilated areas with impervious surfaces. Batteries should also be stored under roof for protection against adverse weather conditions. Separate from incompatible materials. Avoid damage to containers. Keep away from fire, sparks and heat. Keep away from metallic objects could bridge the terminals on a battery and create a dangerous short-circuit.

**Charging:**
There is a possible risk of electric shock from charging equipment and from strings of series connected batteries, whether or not being charged. Shut-off power to chargers whenever not in use and before detachment of any circuit connections. Batteries being charged will generate and release flammable hydrogen gas. Charging space must be ventilated. Prohibit smoking and avoid creation of flames and sparks nearby.

## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

| Common Name | OSHA PEL | ACGIH TLV | Range Percent by Weight |
|---|---|---|---|
| Negative Electrode and Grid | 0.05 mg/m3 | 0.15 mg/m3 | 54-62% wt |
| Electrolyte | 1.00 mg/m3 | 1.00 mg/m3 | 26-40% wt |

Percentages of components are dependent both on the model of the battery and stets of charge/discharge of the battery. Inorganic lead and electrolyte (sulphuric acid) are the primary components of every battery manufactured by HOPPECKE Batterien GmbH & CO. KG.

Other ingredients may be present dependent upon battery type. Contact your HOPPECKE Batterien GmbH & CO. KG representative for additional information.

Under normal use and handling the customer has no contact with the internal components of the battery or the chemical hazards. Under normal use and handling these batteries do not emit regulated or hazardous substances. Warning: Battery terminals posts and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands thoroughly after working with batteries and before eating, drinking or smoking.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical State: Article**
Electrolyte (Sulfuric Acid):
See enclosed MSDS electrolyte

Lead:
See enclosed MSDS lead

## 10. REACTIVITY DATA

**Stability:** Stable
**Condition to Avoid:** Prolonged overcharging, sources of ignition

**Incompatibility (Materials to Avoid):** Sulfuric Acid: Contact with combustibles and organic materials may cause fire and explosion. Also reacts violently with strong reducing agents, metals, strong oxidizers and water. Contact with metals may produce toxic sulfur dioxide fumes and may release flammable hydrogen gas. Combination of Sulfuric acid with combustibles and organic materials may cause fire and explosion. Avoid strong reducing agents, most metals, carbides, chlorates, nitrates, picrate.

**Hazardous Decomposition Products:** Sulfuric Acid: Excessive overcharging or fire may create sulfur trioxide, carbon monoxide, sulfuric acid mist and sulfur dioxide.
Lead Compounds: Contact with strong acid or base or presence of nascent hydrogen may generate highly toxic arsine gas.

Hydrogen gas may be generated in an overcharged condition, in fire or at very high temperatures. CO, $CO_2$, and sulfur oxides may emit in fire. Hazardous polymerization will not occur.

The above reactions can only occur if the battery is damaged and the ingredients can leak out.

## 11. TOXICOLOGICAL INFORMATION

Electrolyte (Sulfuric Acid):
See enclosed MSDS electrolyte

Lead:
See enclosed MSDS lead

## 12. ECOLOGICAL INFORMATION

Electrolyte (Sulfuric Acid):
See enclosed MSDS electrolyte

Lead:
See enclosed MSDS lead

## 13. DISPOSAL CONSIDRERATIONS

**Waste Disposal Method:** Lead-acid batteries are completely recyclable. For information on returning batteries to HOPPECKE Batterien GmbH & Co. KG for recycling, contact your HOPPECKE Representative. Dispose of any collected material in accordance with local, state or applicable federal regulations.

## 14. TRANSPORT INFORMATION

**Transport regulations for hazardous substances contained**

**Cargo freights ADR/RID and GGVSEB (trans border/national):**

| | |
|---|---|
| **ADR/RID-GGVS/E class** | 8 |
| **UN-Number** | UN 2800 |
| **Label** | 8 |
| **Technical name** | batteries, wet, non-spillable |
| **Specifics** | Due to the passed tests (special provision 238 ADR) the above-mentioned product is not subject to the further provisions of the ADR. |

**Maritime transports IMDG/GGVSee:**

| | |
|---|---|
| **IMDG/GGVSee-class** | 8 |
| **UN-Number** | UN 2800 |
| **Label** | 8 |
| **Technical name** | batteries, wet, non-spillable |
| **Specifics** | Due to the passed tests (special provision 238 ADR) the above-mentioned product is not subject to the further provisions of the IMDG Code. |

**Air transport ICAO-TI and IATA-DGR:**

| | |
|---|---|
| **ICAO/IATA-class** | 8 |
| **UN/ID-Number** | UN 2800 |
| **Label** | 8 |
| **Technical name** | batteries, wet, non-spillable |
| **Specifics** | Based on the tests passed and in compliance with IATA Special Provision A67, the above product is not a dangerous good in air cargo.<br>Note to AWB: "not restricted", "Special Provision A67". |

## 15. REGULATORY INFORMATION

Electrolyte (Sulfuric Acid):
See enclosed MSDS electrolyte

Lead:
See enclosed MSDS lead

## 16. OTHER INFORMATION

The information given above is provided in good faith based on existing knowledge and does not constitute an assurance of safety under all conditions. It is the user's responsibility to observe all laws and regulations applicable for storage, use, maintenance or disposal of the product. If there are any queries, the supplier should be consulted.
However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.