

HRL 12-170 W

12V 33Ah

ASTERION HRL-W series batteries are high-tech lead-acid batteries for modern uninterruptible power supply systems intended for responsible consumers. These are maintenance-free batteries manufactured with the use of AGM technology with a gas recombination system (VRLA). The HRL-W series is characterized by increased current efficiency due to the use of thicker electrodes, as well as high-tech formulations with structural agents in the active mass during the manufacturing process. The HRL-W series belongs to the ASTERION Xpert product line, designed especially for use in "heavy" uninterruptible power supply systems of data centers, communication systems and other high-tech equipment.



Battery construction

Element	Positive plate	Negative plate	Case	Lid	Valve	Terminal	Separator	Electrolyte
Material	Lead dioxide	Lead	ABS		Rubber	Copper	Fiberglass	Acid

Specifications

Nominal voltage.....	12 V
Cell.....	6
Design life.....	12 years
Nominal capacity (25°C)	
10 min. disch. by const. power up to 1,8V/cell.....	175 W
20 hours rate (1,75 A; 1,75 V/cell).....	35 Ah
10 hours rate (3,3 A; 1,80 V/cell).....	33 Ah
Self-discharge.....	3% capacity per month 20°C
Internal resistance (25°C).....	7 mΩ

Operating temperature range

Discharge.....	-20÷60°C
Charge.....	-10÷60°C
Storage.....	-20÷60°C
Maximum discharge current (25°C).....	330A (5sec)
Max.charge current.....	9,9 A
Cycle mode (2,35÷2,4 V/Cell)	
Temperature correction factor.....	30 mV/°C
Standby mode (2,27÷2,3 V/Cell)	
Temperature correction factor.....	20 mV/°C

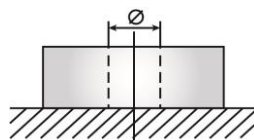
Application

- Uninterruptible power supply units
- Standby power service units
- Medical equipment
- Various fields of instrument-making industry

Layout E



Terminal type Insert Ø6 mm

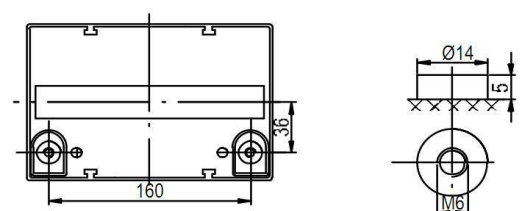
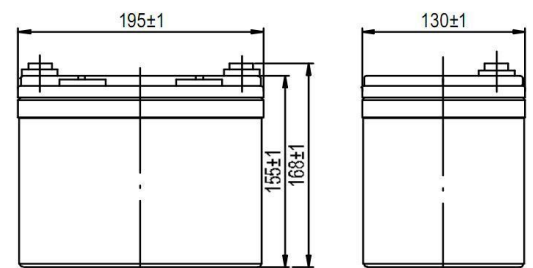


Performance & characteristics

- AGM technology allows to recombine 99% of the generated gas;
- No restrictions on air transportation;
- Compliance with the UL requirements;
- Lead plates, alloyed by calcium, provide high energy density;
- Maintenance-free. Do not require distillate topping;
- Long service life;
- The battery case is made of flame-retardant ABS plastic.

Dimensions (±2mm)

Length, mm.....	195
Width, mm.....	130
Height, mm.....	155
Height over terminals, mm.....	170
Weight (±3%), kg.....	11,5



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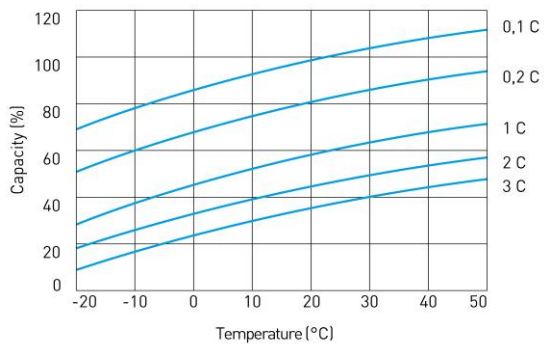
Discharge Constant Current, A (25°C)

V/cell	5 min	10 min	15 min	20 min	25 min	30 min	35 min	45 min	1 h
1,60	175	121	91,2	73,2	62,8	53,1	46,9	38,7	30,1
1,65	158	112	86,4	69,4	59,5	51,1	45,2	37,4	29,6
1,70	149	108	84,4	67,8	58,1	49,9	44,3	36,9	28,9
1,75	137	101	79,8	65,1	56,0	48,2	42,8	35,5	28,1
1,80	124	95,0	74,8	61,2	52,5	46,2	41,0	34,0	27,3

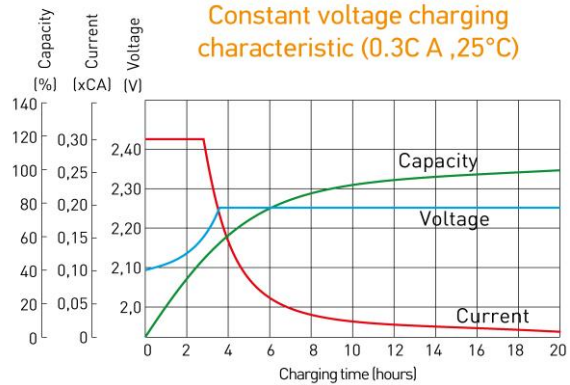
Discharge Constant Power, W/cell (25°C)

V/cell	5 min	10 min	15 min	20 min	25 min	30 min	35 min	45 min	1 h
1,60	314	221	160	138	118	101	89,5	74,1	57,2
1,65	284	208	158	132	113	97,7	86,8	72,3	56,3
1,70	273	200	154	128	109	96,1	85,0	70,2	55,2
1,75	251	188	145	123	105	92,8	82,6	68,9	54,2
1,80	227	175	138	118	101	89,8	80,3	67,6	53,5

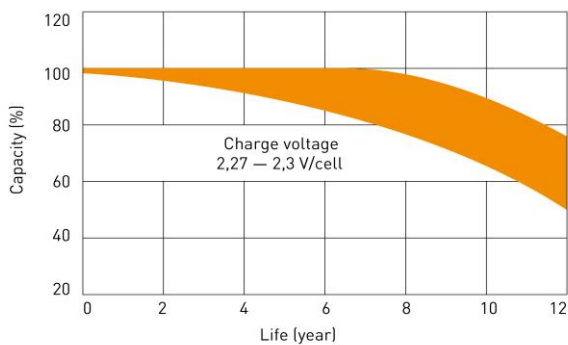
Temperature effects on capacity



Constant voltage charging characteristic (0.3C A, 25°C)



Life characteristics of Standby use



Cycle service life in relation to depth of discharge

