

# HRL 12-155 W

12V 28Ah

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 1,60V/cell.....	155 W
20 hours rate (1,48 A; 1,75 V/cell).....	29,6 Ah
10 hours rate (2,8 A; 1,80 V/cell).....	28 Ah
Self-discharge.....	3% capacity per month 20°C
Internal resistance (20°C).....	6,7 mΩ

## Operating temperature range

Discharge.....	-20÷60°C
Charge.....	-10÷60°C
Storage.....	-20÷60°C
Maximum discharge current (20°C).....	310A (5sec)
Max.charge current.....	8,4 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

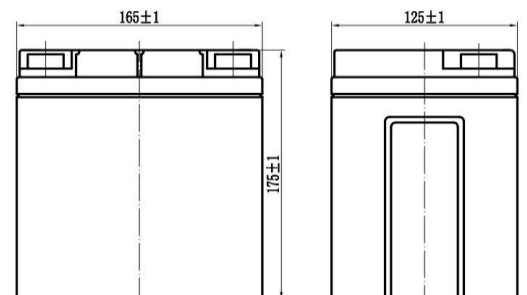
- Uninterruptible power supply units
- Standby power service units
- Medical equipment
- Various fields of instrument-making industry

## 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)

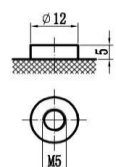
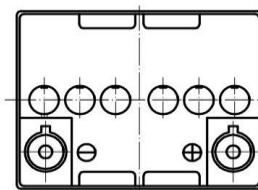
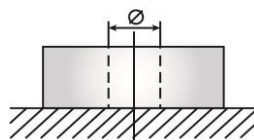
Length, mm.....	165
Width, mm.....	125
Height, mm.....	175
Height over terminals, mm.....	175
Weight (±3%), kg.....	9,5



Layout  
E



Terminal type  
Insert Ø5 mm



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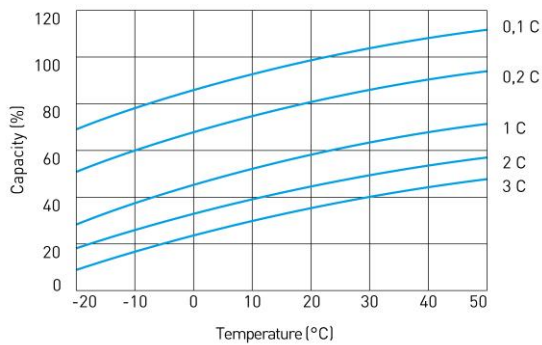
## Discharge Constant Current, A (25°C)

V/cell	5 min	10 min	15 min	20 min	25 min	30 min	35 min	45 min	1 h
1,60	125	87,5	67,3	54,5	46,8	41,7	36,5	29,6	23,5
1,65	117	82,7	63,8	51,7	44,4	39,6	34,7	28,1	22,4
1,70	110	78,0	60,3	48,9	42,0	37,4	32,8	26,7	21,4
1,75	103	73,2	56,8	46,1	39,6	35,3	31,0	25,3	20,3
1,80	98,2	70,5	54,8	44,6	38,5	34,4	30,2	24,7	19,8

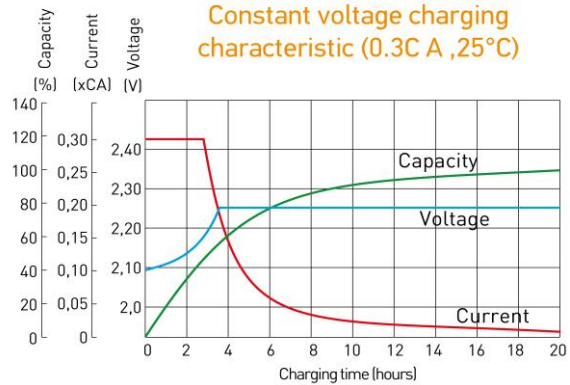
## Discharge Constant Power, W/cell (25°C)

V/cell	5 min	10 min	15 min	20 min	25 min	30 min	35 min	45 min	1 h
1,60	229	155	118	95,3	81,7	72,6	64,6	53,9	43,5
1,65	219	149	114	92,1	79,0	70,3	62,6	52,3	42,3
1,70	210	144	110	89,0	76,3	67,9	60,5	50,7	41,1
1,75	200	138	106	85,8	73,6	65,6	58,5	49,0	39,9
1,80	190	132	102	82,6	71,0	63,2	56,4	47,4	38,7

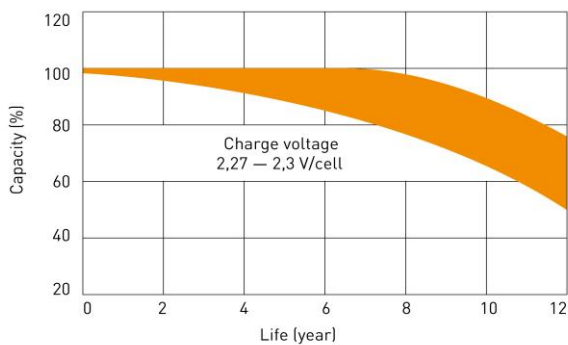
### Temperature effects on capacity



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



### Life characteristics of Standby use



### Cycle service life in relation to depth of discharge

