

ASTERION HRL-X are sealed maintenance-free lead-acid batteries with gas recombination system (VRLA). Are manufactured by AGM technology (electrolyte absorbed in glass fiber separators).

Thanks to the use of modern technologies in production, batteries demonstrate high operation stability and highest quality. HR refers to a range of ASTERION UPS series, specifically designed for use in UPS Data Centers, communication systems and other equipment. The series is highly reliable and has a service-life up to 12 years.



**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.....10-12 years  
 Nominal capacity (25°C)  
     10 hours rate (4,5 A; 1,8 V/cell).....45 Ah  
     5 hours rate (7,8 A; 1,75 V/cell).....39 Ah  
     1 hours rate (29,3 A; 1,65 V/cell).....29,3 Ah  
 Self-discharge.....3% capacity per month 20°C  
 Internal resistance (25°C).....6,1 mΩ

**Operating temperature range**

Discharge.....-20+60°C  
 Charge.....-10+60°C  
 Storage.....-20+60°C  
 Maximum discharge current (25°C).....450A (5sec)  
 Cycle mode (2,35÷2,4 V/cell)  
     Max.charge current.....13,5 A  
     Temperature correction factor.....30 mV/°C  
 Standby mode (2,27÷2,3 V/cell)  
     Temperature correction factor.....20 mV/°C

**Application**

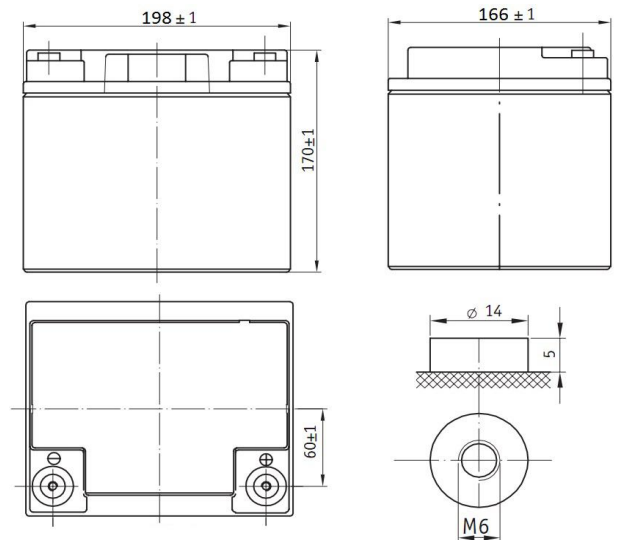
- Uninterruptable power supply
- Back up power supply
- Communication system
- Power engineering facilities
- Renewable energy systems

**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)**

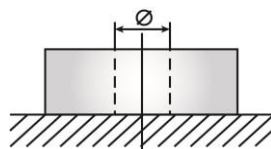
Length, mm.....198  
 Width, mm.....166  
 Height, mm.....170  
 Height over terminals, mm.....170  
 Weight (±3%), kg.....14,8



**Layout**  
E



**Terminal type**  
Insert Ø6 mm

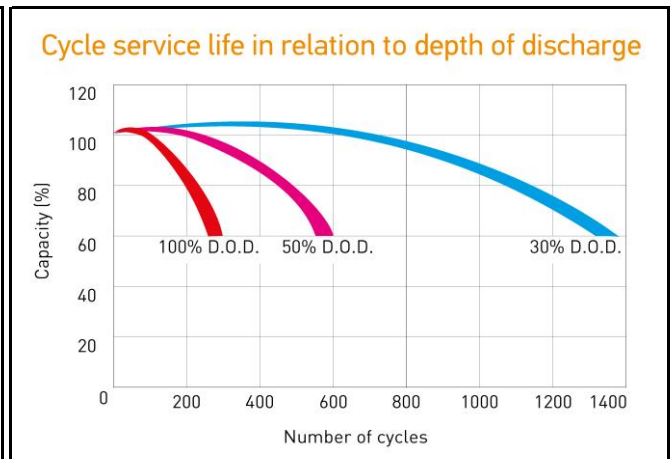
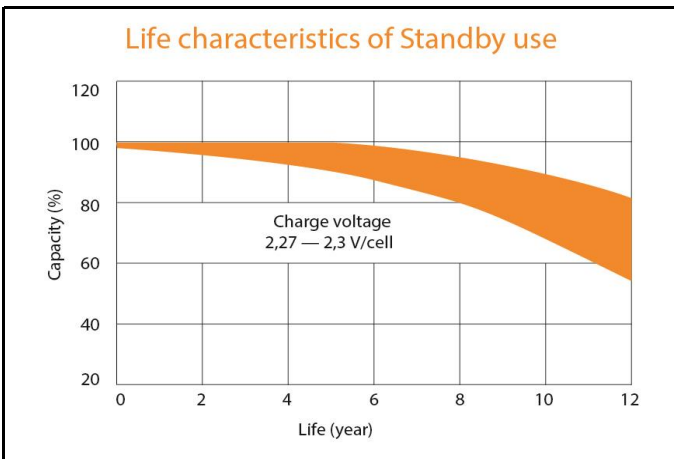
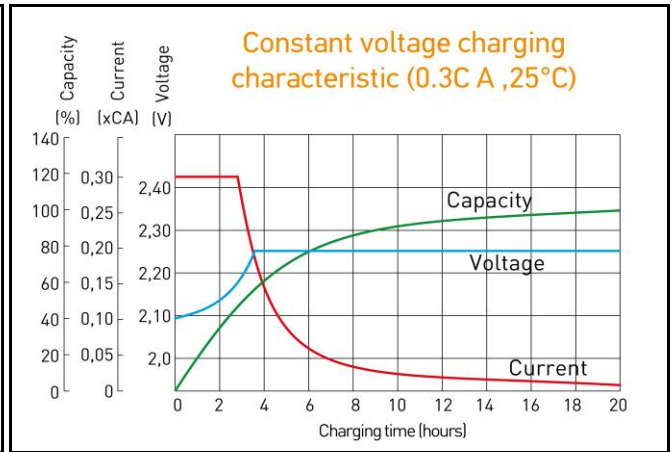
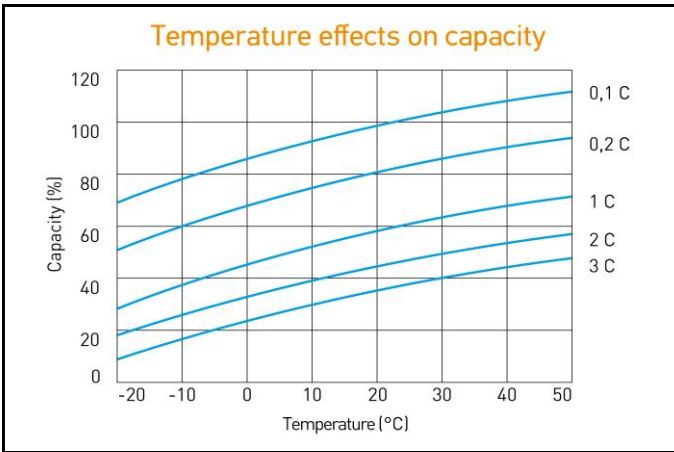


**Discharge Constant Current, A ( 25°C)**

V/cell	5 min	10 min	15 min	30 min	45 min	1 h	3 h	5 h	10 h
1,60	158	109	85,8	51,4	38,8	30,7	13,0	8,87	5,06
1,65	148	103	81,4	48,7	36,9	29,3	12,5	8,51	4,88
1,70	139	96,6	76,9	46,1	35,0	27,9	11,9	8,16	4,70
1,75	129	91,2	72,5	43,5	33,2	26,5	11,4	7,82	4,54
1,80	124	87,7	69,9	42,3	32,3	25,9	11,2	7,70	4,50

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

V/cell	5 min	10 min	15 min	30 min	45 min	1 h	3 h	5 h	10 h
1,60	279	191	153	90,3	69,6	57,4	23,7	16,3	9,35
1,65	268	183	148	87,4	67,5	56,7	23,1	15,9	9,20
1,70	256	176	143	84,5	65,4	55,9	22,6	15,6	9,06
1,75	243	169	138	81,5	63,4	52,8	22,1	15,3	8,95
1,80	232	162	132	78,6	61,3	51,3	21,5	14,9	8,79



ALL DATA IS SUBJECT TO CHANGE WITHOUT NOTICE