

STARMAX

The world's leading battery brand



HRL SERIES-LONG LIFE **BATTERIES**

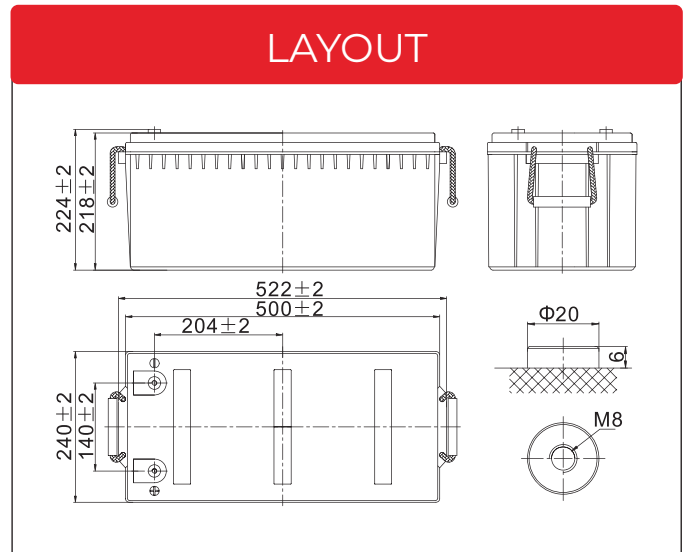
HRL 12750W



www.starmaxbatteries.com

HRL Series

HRL 12750W



General Features

- ✓ **High quality AGM separator:** Extend cycle life and prevent micro short circuit
- ✓ **PbCaSn alloy for plate grids:** Less gassing, less self-discharging
- ✓ **Unique vent valve design:** Reduce water losing and prevent air/spark going inside

Applications

- ✓ UPS
- ✓ Hospitals & Testing Laboratories
- ✓ Emergency Power Supply
- ✓ Industrial Process Control Facilities
- ✓ Banks & Financial Markets
- ✓ Data & Network Operation Centers

Standards

- ✓ Compliance with IEC 60896 and YD/T 3427 standards
- ✓ Manufactured in Starmax, ISO 45001, ISO 9001 and ISO 14001 certified production facilities



SPECIFICATIONS

Rated Voltage	12V		
Nominal Rate	(W ₁₅ ,1.67V/cell)	750W/cell	
Nominal Capacity	(C ₁₀ ,1.80V/cell)	210Ah	
Dimensions	Length	522±2mm (20.6 inches)	
	Width	240±2mm (9.45 inches)	
	Container height	218±2mm (8.58 inches)	
	Total height	224±2mm (8.82 inches)	
Approx. weight	65.3kg (144.0 lbs)		
Terminal	M8		
Container material	ABS: UL 94 HB or V-0		
Rated capacity (25°C)	210.0 Ah	C10(21.0A,1.80V/cell)	
	195.2 Ah	C8(24.4A,1.80V/cell)	
	185.0 Ah	C5(37.0A,1.75V/cell)	
	163.5 Ah	C3(54.5A,1.75V/cell)	
	133.6 Ah	C1(133.6A,1.60V/cell)	
Max. discharge current	2100A (5s)		
Internal resistance (25°C)	Approx 2.6mΩ		
Operating temp. range	Discharge	-20~55°C (4~131°F)	
	Charge	-20~40°C (-4~104°F)	
	Storage	-15~50°C (5~122°F)	
Nominal operating temp. range	25±3°C (77±5°F)		
Max.Charging Current(25°C)	52.5A		
Charge voltage(25°C)	Charge voltage		Temp. Coefficient
	Float	2.25~2.30V/cell	-3mV/cell/°C
	Equalization	2.30~2.40V/cell	-4mV/cell/°C
Effect of temp. to Capacity	40°C (104°F)		106%
	25°C (77°F)		100%
	0°C (32°F)		86%
Self discharge	≤3%/month @ 25°C		

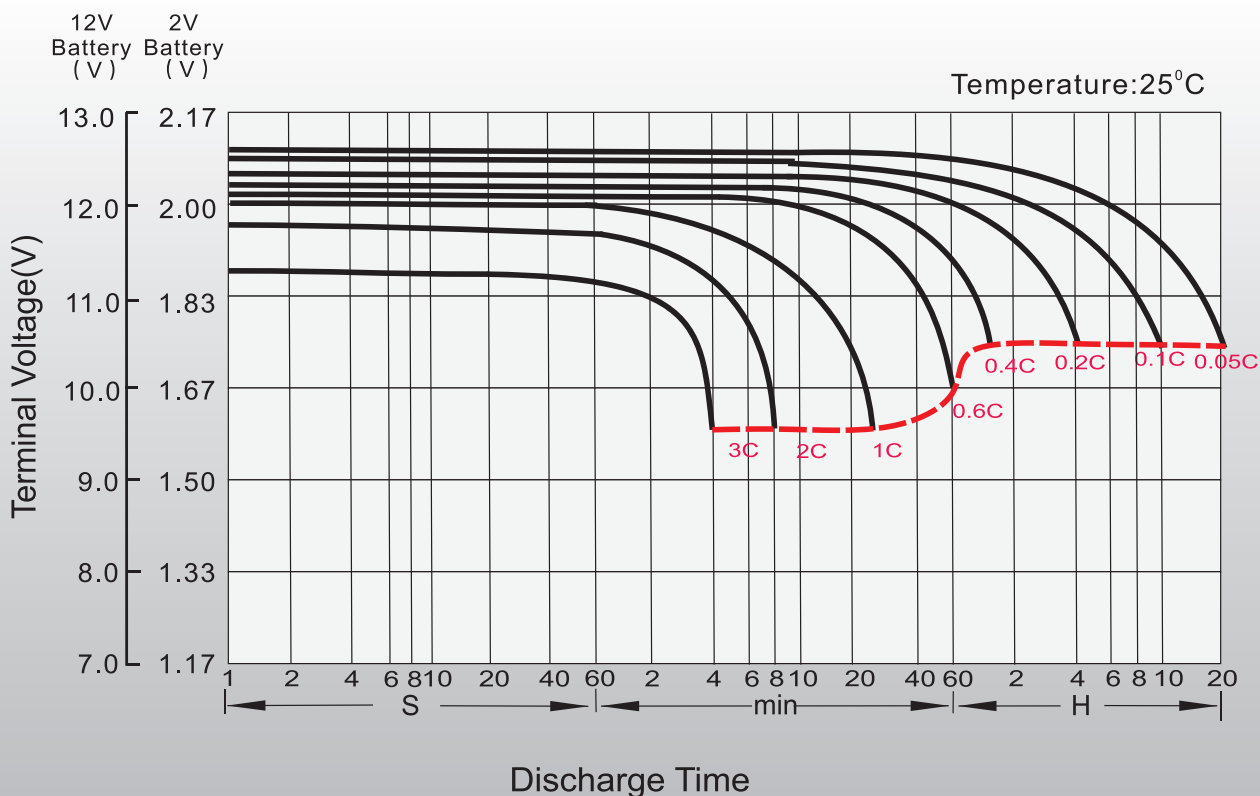
Constant Current Discharge (Amperes) at 25°C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	8h	10h
1.85V/cell	448.7	358.2	310.6	244.2	172.3	128.6	115.6	84.9	69.4	51.7	40.9	34.6	23.9	20.4
1.80V/cell	510.2	406.6	351.9	276.1	194.3	137.5	119.5	87.4	73.5	53.4	42.4	35.9	24.4	21.0
1.75V/cell	554.2	440.9	381.0	298.1	209.0	143.8	124.4	91.0	76.3	54.5	43.8	37.0	24.6	21.1
1.70V/cell	592.5	470.1	404.6	316.1	221.5	148.9	129.8	94.8	78.1	55.7	44.8	37.8	25.0	21.2
1.67V/cell	613.2	485.0	416.4	324.7	226.8	156.3	131.2	97.3	80.0	57.0	45.4	38.3	25.3	21.6
1.60V/cell	634.9	501.6	429.4	333.0	232.3	165.0	133.6	100.6	81.6	58.4	46.5	39.1	25.4	21.7

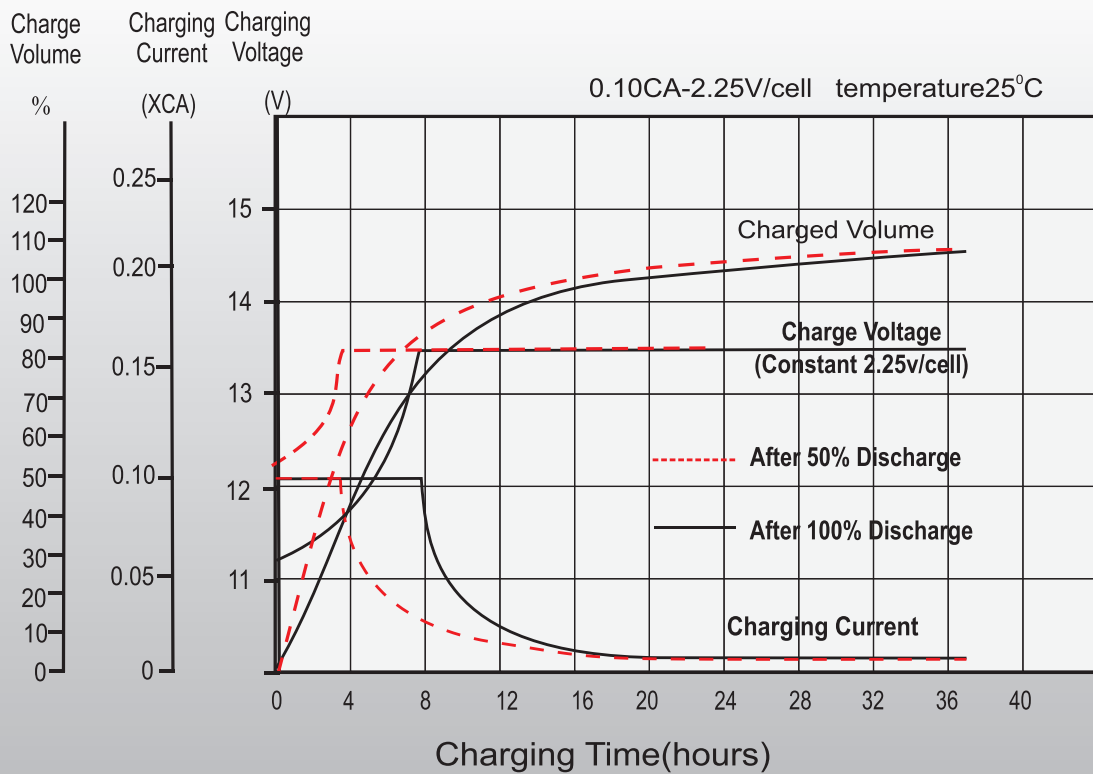
Constant Power Discharge (Watts/cell) at 25°C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	8h	10h
1.85V/cell	837.9	673.8	588.0	464.5	329.3	247.3	223.6	164.5	135.0	101.0	80.2	68.1	47.4	40.6
1.80V/cell	937.3	753.8	657.8	519.6	368.3	262.5	229.8	168.6	142.2	103.9	82.8	70.5	48.3	41.7
1.75V/cell	1000.4	804.5	702.0	554.6	393.1	273.0	238.2	174.8	147.1	105.8	85.3	72.3	48.6	41.8
1.70V/cell	1051.7	845.7	738.0	583.0	413.3	280.8	247.3	181.2	150.0	107.7	87.0	73.7	49.3	42.1
1.67V/cell	1068.8	859.5	750.0	592.5	420.0	293.1	248.6	185.0	152.9	109.6	87.8	74.4	49.8	42.7
1.60V/cell	1083.7	871.5	760.5	600.8	425.9	306.5	251.4	189.9	155.0	111.8	89.5	75.5	49.9	42.8

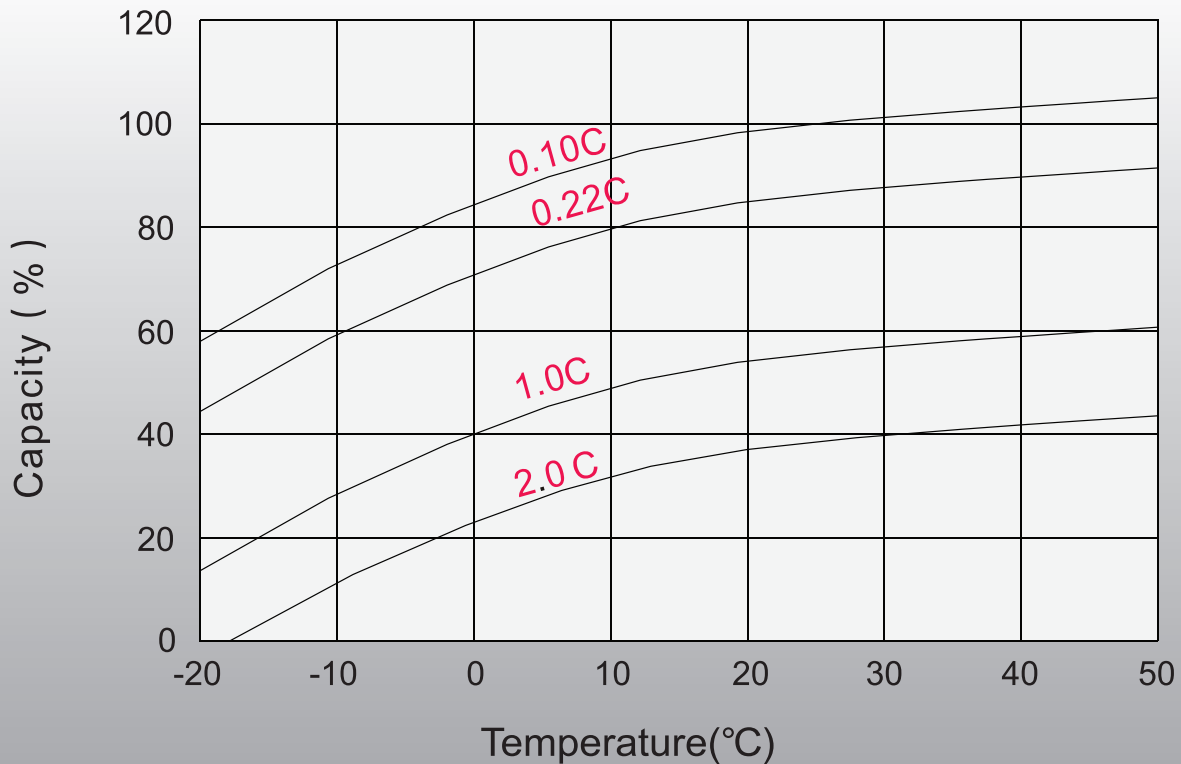
Discharge Characteristics



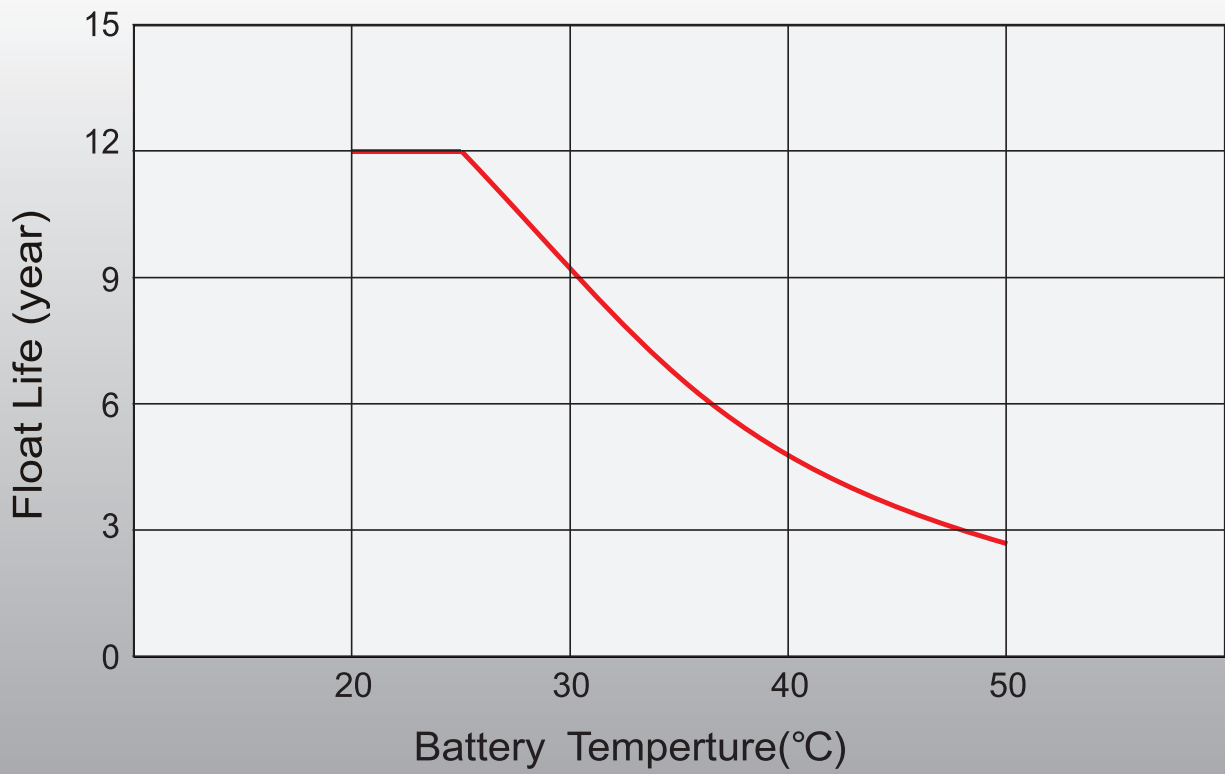
Float Charging Characteristics



Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Time Float Life





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