



**VISION Rechargeable Products  
Sealed Lead Acid Battery**

[www.vision-batt.com](http://www.vision-batt.com)

# HP&HF Series

## High Rate Discharge

The new VISION HP/HF series batteries are specially designed for applications where need high power output. By optimum design of battery grids and plate paste formula, the HP/HF series can deliver up to 40% more power than VISION standard CP/FM series.

Shenzhen Center power tech co., ltd has more than 15 year's experience in the manufacturing of VRLA batteries. SZCPT is one of the biggest manufacturers of SLA (or VRLA) batteries in the world, the biggest one in Mainland China and the first in China to develop and commercialize the sealed lead-acid battery with brand name VISION and has been at the forefront of battery technology from day one.

SZCPT leads the world in innovative battery technology. Our global network of sales and service engineers, backed in turn by our agents and distributors, means that we are currently active in more than 100 countries.

**Shenzhen Center Power Tech. Co., Ltd**

# HF12-605W-X 12V 135Ah

(Edition Nov 2006)

## General Features

- Positive and negative plates in lead-calcium tin alloy
- Superior energy density
- Operates at a low internal pressure.
- Gas Recombination
- Usable in any orientation
- A recognized component of UL
- Very high power output
- Application specific designs
- A couple Range from 13W to 890W per cell for 10' @ 1.60Vpc
- Six months shelf life at 20°C
- Design life 10 years



## Dimensions and Weight

	SI Units	English Units
Length	482±2mm	19.0±2inch
Width	170±1mm	6.69±1inch
Height	240±2mm	9.45±2inch
Total Height	240±2mm	9.45±2inch
Approx. Weight	44.8Kg	98.8lbs

## Performance Characteristics

- Nominal Voltage 12V
- Number of cell 6
- Nominal Capacity 68°F(20°C)
  - 10 min wattage @ 1.6V605W/cell
  - 20 hour rate (7.25A, 10.5V) 145Ah
- Nominal Capacity 77°F(25°C)
  - 10 hour rate (13.5A, 10.8V) 135Ah
- Internal Resistance
  - Fully Charged battery 68°F(20°C) 3.1mOhms
- Self-Discharge
  - 3% of capacity declined per month at 20°C(average)
- Operating Temperature Range
  - Discharge -20~60°C
  - Charge -10~60°C
  - Storage -20~60°C
- Max. Discharge Current 68°F(20°C) 970A(5s)
- Charge Methods: Constant Voltage Charge 68°F(20°C)
  - Cycle use 14.5-14.7V
  - Maximum charging current 40A
  - Temperature compensation -30mV/°C
- Standby use 13.6-13.8V
  - Temperature compensation -20mV/°C



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## Discharge Data

Constant Current Discharge Data ( Amperes at 20°C )																									
End Voltage Per cell / V	5min	10min	15min	20min	25min	30min	35min	40min	45min	50min	55min	60min	1.5h	2h	2.5h	3h	4h	5h	6h	7h	8h	9h	10h	12h	24h
1.60		340	283	234	205	186	163	146	133	121	111	103	73.2	58.0	48.9	42.9	33.3	27.6	23.5	20.6	18.4	16.8	15.4	13.1	6.77
1.65		322	268	222	195	177	155	138	126	115	106	98.7	69.9	55.5	46.8	41.1	31.9	26.4	22.5	19.8	17.7	16.1	14.8	12.7	6.54
1.70		303	254	210	184	167	147	131	119	109	101	94.1	66.6	52.9	44.7	39.3	30.5	25.3	21.6	19.0	17.0	15.6	14.2	12.2	6.31
1.75		285	239	198	174	158	138	124	113	103	95.8	89.2	63.3	51.2	42.6	37.4	29.2	24.5	21.0	18.5	16.5	15.1	13.8	11.9	6.08
1.80		274	230	192	169	153	135	121	110	101	93.3	87.2	61.9	49.3	41.7	36.7	28.6	23.7	20.3	17.9	16.0	14.6	13.4	11.5	6.01

Constant Power Discharge Data ( Watts per cell at 20°C )																									
End Voltage Per cell / V	5min	10min	15min	20min	25min	30min	35min	40min	45min	50min	55min	60min	1.5h	2h	2.5h	3h	4h	5h	6h	7h	8h	9h	10h	12h	24h
1.60		605	505	417	364	329	291	263	241	219	201	186	135	109	91.1	79.2	63.2	53.7	46.1	40.6	36.6	33.4	30.0	25.9	13.2
1.65		583	487	403	352	318	282	255	234	213	196	182	132	107	89.2	77.2	61.7	52.4	45.1	39.8	35.8	32.7	29.3	25.5	13.0
1.70		560	470	389	340	308	273	247	227	207	191	178	129	104	86.8	75.2	60.3	51.0	44.0	38.9	35.0	32.0	28.8	24.7	12.6
1.75		537	452	375	328	297	264	239	220	202	187	174	125	101	84.4	73.3	58.8	50.0	43.0	38.0	34.0	31.0	28.1	24.0	12.4
1.80		515	435	361	316	286	255	231	212	195	181	170	122	97.6	81.8	71.3	57.3	48.8	42.0	37.0	33.0	30.0	27.5	23.0	12.2

(Note)The above characteristics data are average values obtained within three charge/discharge cycles not the minimum values.

## Performance drawings

