

## RID HCS 12-170

### 12V 170 HIGH-CYCLE CARBON AGM VRLA BATTERY

#### Product characteristics:

- Valve-regulated lead-acid battery
- Stationary and reserve power applications
- EUROBAT design life definition: Very Long Life 12+ years
- Extremely long float life performance
- Superior cycling endurance
- Compact design with high energy density
- ETSI Rack integration
- Low installation cost, maintenance free product
- Sealed for leak-proof operation
- Delivered ready for use
- Non-hazardous cargo for ground, sea and air transport
- Fully recyclable product



#### Technical specifications:

##### Electrical specifications:

- Nominal voltage: 12V
- Number of cells: 6
- Rated capacity: 170 Ah (10 h rate to 1.80 Vpc at 20 °C)
- Internal resistance: 4.20 mOhm (IEC 60 896-21/22)
- Short circuit current: 3050 A (IEC 60 896 -21/22)

##### Design features:

- Design life at 20 °C: Very Long Life 12+ years
- Plates: Tick Flat Pasted
- Active material: Very high purity virgin lead
- Grid alloy: Lead-Calcium-Tin alloy
- Electrolyte: Sulphuric acid, Analytical grade
- Separator: Absorbing Glass Mat (AGM)
- Operating temperature: -20 °C to +60 °C (maximum)  
+15 °C to +35 °C (recommended)
- Venting valve: Rubber, one way, self resealing  
- Opening pressure: 3 PSI  
- Resealing pressure: 2 PSI
- Internal gas recombination efficiency: more than 99%
- Central degassing system: Available
- Flame arrestor: Available
- Storage temperatures: -20 °C to +40 °C
- Self discharge: Less than 2.0% per month at 20°C
- Storability without recharging: Up to 6 months at 20°C
- Shelf life: Up to 1 year
- Container / lid material: Shock resistant ABS FR;  
flammability class UL94 V0
- Terminal position: Front
- Terminal sealing: Mechanical + epoxy double sealing
- Terminal type: Brass; Female; M8 thread
- Terminal torque: 7Nm
- Terminal cover: Available
- Carrying Handle: Available (2)
- Connectors and bolts: Supplied as standard

##### Applicable standards:

- IEC 60896 - 21/22 • IEC 61427 - 1/2 • IEEE 1184
- EN 50272 - 2 • IEC 61056 - 1 • IEEE 1187 / 1188

##### Manufacture standards:

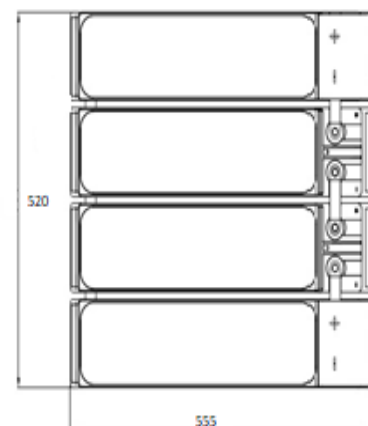
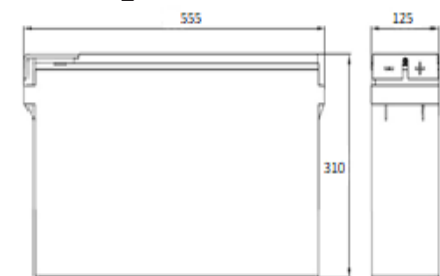
- ISO 9001, ISO 14001, OHSAS 18001, AQAP 2110

#### Physical characteristics:

	SI Units	US Units
Length	555 mm	21.8 inches
Width	125 mm	4.9 inches
Height	310 mm	12.15 inches
Weight	54.5 kg	120.1 lbs

*\*Dimensional tolerances: ±2%*

#### Drawings:



## RID HCS 12-170

Battery capacity at constant current discharge (Ah) for battery RID HC S 12-170 at 20°C

Uf, Vpc	5 min	15 min	30 min	1 h	2 h	3 h	4 h	5 h	6 h	8 h	10 h	20 h
1.60	36	61	88	106.8	124.3	136.5	145.4	152.3	157.6	168.1	175.1	187.3
1.65	35	61	87	106.3	123.8	136.0	144.7	151.6	156.9	167.3	174.3	186.3
1.70	35	61	87	105.7	123.1	135.3	144.0	150.8	156.1	166.4	173.4	185.5
1.75	34	60	86	104.7	121.9	134.0	142.5	149.4	154.5	164.9	171.7	183.6
1.80	34	60	85	103.7	120.7	132.6	141.1	147.9	153.0	163.2	170.0	181.9
1.85	33	58	83	101.2	117.6	129.2	137.7	144.2	149.3	159.1	165.8	177.3

Discharge performance at constant current discharge (A) for battery RID HC S 12-170 at 20°C

Uf, Vpc	5 min	15 min	30 min	1 h	2 h	3 h	4 h	5 h	6 h	8 h	10 h	20 h
1.60	431	245	175	106.8	62.1	45.5	36.3	30.5	26.3	21.0	17.5	9.37
1.65	423	244	174	106.3	61.9	45.3	36.2	30.3	26.2	20.9	17.4	9.32
1.70	416	243	173	105.7	61.5	45.1	36.0	30.2	26.0	20.8	17.3	9.27
1.75	412	241	172	104.7	60.9	44.7	35.6	29.9	25.8	20.6	17.2	9.18
1.80	408	238	170	103.7	60.4	44.2	35.3	29.6	25.5	20.4	17.0	9.10
1.85	398	232	166	101.2	58.8	43.1	34.4	28.8	24.9	19.9	16.6	8.87

Discharge performance at constant power discharge (W per cell) for battery RID HC S 12-170 at 20°C

Uf, Vpc	5 min	15 min	30 min	1 h	2 h	3 h	4 h	5 h	6 h	8 h	10 h	20 h
1.60	861	490	350	213.5	124.3	91.0	72.7	60.9	52.5	42.0	35.0	18.73
1.65	836	488	349	212.5	123.8	90.7	72.4	60.7	52.3	41.8	34.9	18.63
1.70	830	486	347	211.5	123.1	89.8	72.0	60.3	52.0	41.6	34.7	18.55
1.75	824	481	343	209.4	121.9	88.8	71.2	59.8	51.5	41.0	34.3	18.36
1.80	816	476	340	207.4	120.7	88.4	70.6	59.2	51.0	40.8	34.0	18.19
1.85	796	464	332	202.3	117.6	86.1	68.9	57.7	49.7	39.8	33.1	17.73

Temperature correction factor of capacity at constant current discharge

Discharge time	-10 °C	0 °C	10 °C	15 °C	20 °C	25 °C	30 °C	35 °C	40 °C	45 °C
From 5 to 59 minutes	0.70	0.80	0.90	0.95	1	1.05	1.10	1.13	1.15	1.16
From 1 to 20 hours	0.82	0.88	0.94	0.97	1	1.03	1.05	1.08	1.09	1.10

BATTERY CHARGE CONDITIONS AT 25°C			
Charge regime: constant voltage and limited current (IU)			
Charge current limit	Float charge voltage	Equalization charge voltage	Boost charge voltage
0.1 – 0.25C <sub>10</sub> A Recommended: 0.20C <sub>10</sub> A	2.27 V per cell at 25 °C; Temperature correction: -3 mV / cell / °C	2.32 V per cell at 25 °C Recommended: every 3 months for 24h during long time float operation	2.40 V per cell at 25 °C Temperature correction: -4 mV / cell / °C
Float application: 0.20C <sub>10</sub> A / 2.27 V per cell at 25 °C		Cycling applications: 0.20C <sub>10</sub> A / 2.40 V per cell at 25 °C; Recharge Ah input at least 105% from previous discharge Ah	

