
TUDOR



VR AGM Batteries

Charging characteristics

Tudor Highpower H4, H5, H6/H7, SCP and Tudor Rackpower RPA batteries should be charged using constant voltage after the initial limitation of the charge current. *Figures 25 and 26* show typical recharge times following various depths of discharge and constant voltage settings of 2.27 and 2.40 volts/cell, respectively, and at 20°C ambient temperature.

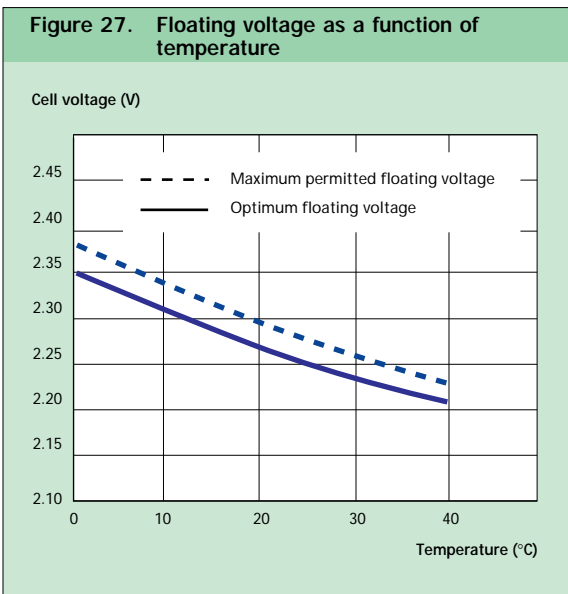
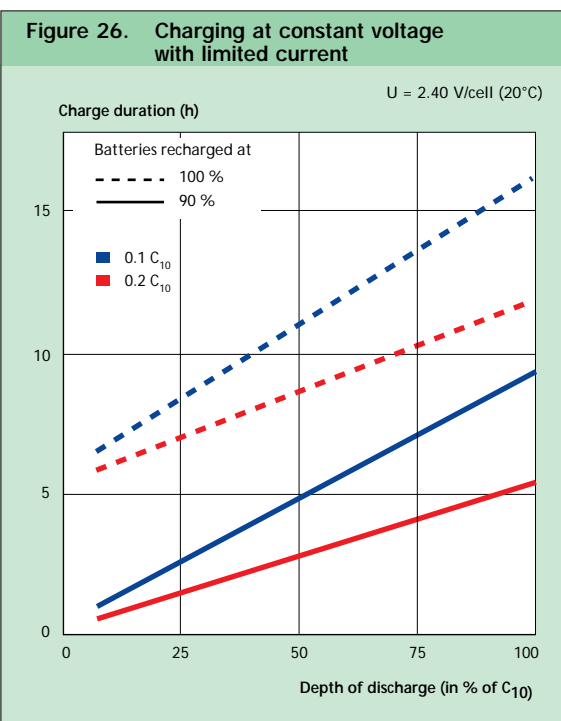
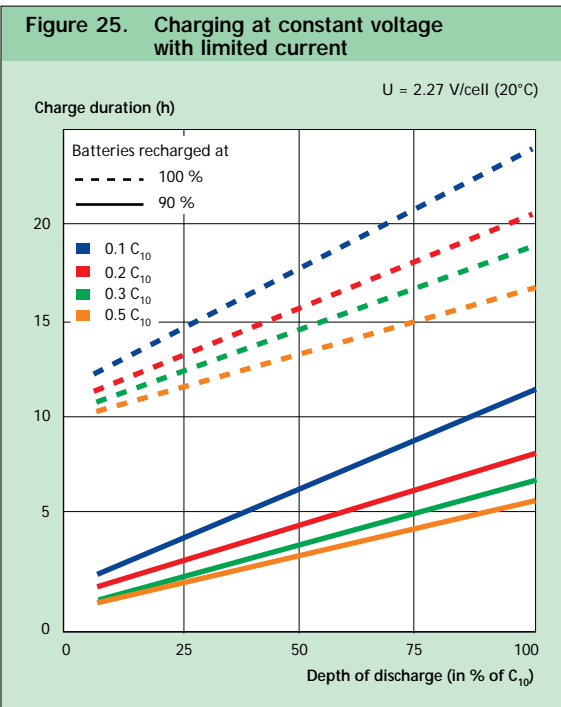
A higher initial current limit setting will not give a corresponding reduction in charging time.

Chargers using voltage settings of more than 2.27 volts/cell must have a restriction of the charge duration time.

Example:

A battery which has been discharged to 25% of its available capacity will require approximately 6 hours to reach 90% charged state with 2.27 volts/cell and an initial current limit of $0.2 \times C_{10}$.

Note: For constant voltage settings of 2.40 volts/cell, the initial current setting must be restricted to $0.3 \times C_{10}$ maximum.



Temperature and float voltage

Figure 27 shows the relationship between recommended charging float voltage levels and ambient temperatures.

At 20°C the recommended float charge voltage is 2.27 volts/cell. For applications which experience fluctuation of ambient temperature it is recommended that an automatic temperature compensation of float charge voltage is considered.

Internal resistance and short-circuit current

Table 2. Internal resistance and short-circuit current for Tudor Highpower H4

Battery type	R _i (mΩ/block)	R _i (mΩ/cell)	I _{sc} (A)
H4 12/32	8.00	1.33	1500
H4 12/42	7.00	1.17	1700
H4 12/55	5.80	0.97	2050
H4 12/80	4.20	0.70	2850
H4 06/115	1.60	0.53	3800
H4 06/165	1.30	0.43	4650
H4 02/205	0.35	0.35	5750
H4 02/255	0.28	0.28	7150
H4 02/305	0.22	0.22	9150
H4 02/355	0.18	0.18	11150
H4 02/405	0.15	0.15	13400

Table 3. Internal resistance and short-circuit current for Tudor Highpower H5

Battery type	R _i (mΩ/block)	R _i (mΩ/cell)	I _{sc} (A)
H5 12/07	30.0	5.00	400
H5 06/10	9.40	3.13	650
H5 12/10	18.8	3.13	650
H5 12/17	13.0	2.17	900
H5 12/24	10.0	1.67	1200
H5 12/25	10.0	1.67	1200
H5 12/40	7.50	1.25	1600
H5 12/50	6.50	1.08	1850
H5 12/60	5.80	0.97	2050
H5 12/90	4.00	0.67	3000
H5 06/125	1.50	0.50	4000
H5 06/185	1.20	0.40	5000
H5 02/235	0.31	0.31	6500
H5 02/305	0.24	0.24	8350
H5 02/375	0.19	0.19	10550
H5 02/425	0.17	0.17	11800
H5 02/500	0.14	0.14	14350

Table 4. Internal resistance and short-circuit current for Tudor Highpower H6/H7

Battery type	R _i (mΩ/block)	R _i (mΩ/cell)	I _{sc} (A)
H6 12/08	26.0	4.33	450
H6 06/11	9.00	3.00	650
H6 12/27	10.0	1.67	1200
H6 12/28	9.50	1.58	1250
H6 12/45	7.00	1.17	1700
H6 12/55	6.20	1.03	1950
H6 12/80	5.50	0.92	2200
H6 12/110	4.00	0.67	3000
H6 06/165	1.50	0.50	4000
H6 06/200	1.20	0.40	5000
H7 12/07	25.0	4.17	450
H7 12/10	17.0	2.83	700

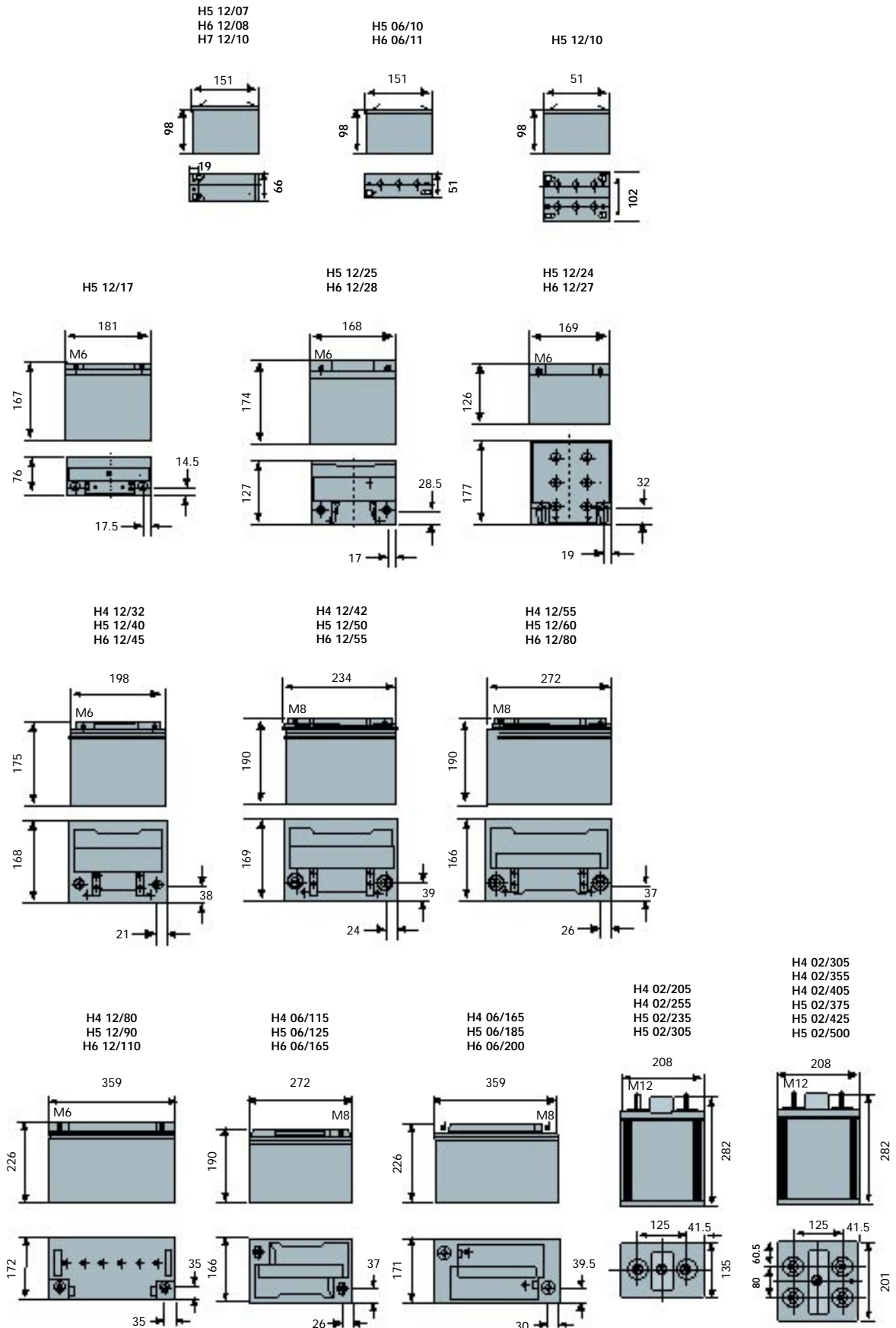
Table 5. Internal resistance and short-circuit current for Tudor Highpower SCP

Battery type	R _i (mΩ/block)	R _i (mΩ/cell)	I _{sc} (A)
SCP 6088	1.85	0.62	3800
SCP 6106	1.55	0.52	4500
SCP 6137	1.20	0.40	5900
SCP 6155	1.05	0.35	6600
SCP 6210	0.77	0.26	8900
SCP 6270	0.62	0.21	11400
SCP 4328	0.35	0.18	13900
SCP 4355	0.30	0.15	15000

Table 6. Internal resistance and short-circuit current for Tudor Rackpower RPA

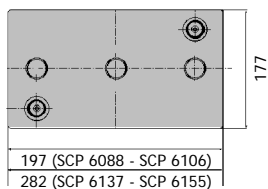
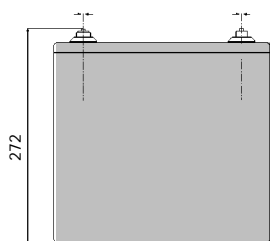
Battery type	R _i (mΩ/block)	R _i (mΩ/cell)	I _{sc} (A)
RPA 12/35	8.80	1.47	1300
RPA 12/50	7.40	1.23	1700
RPA 12/60	6.20	1.03	2100
RPA 12/75	4.70	0.78	2700
RPA 12/100	3.60	0.60	3600
RPA 12/130	3.10	0.52	4500

Dimensions

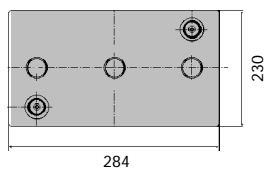
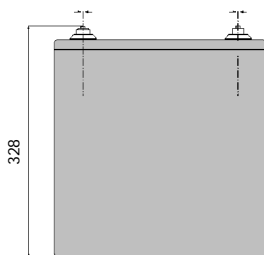




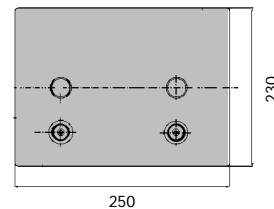
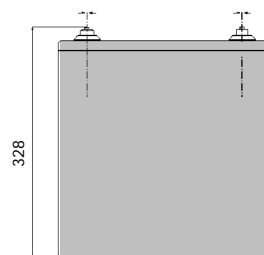
SCP 6088
up to
SCP 6155



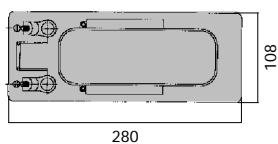
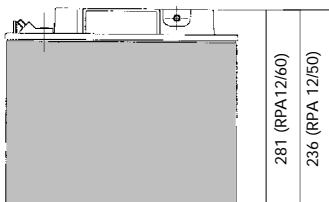
SCP 6210
SCP 6270



SCP 4328
SCP 4355



RPA 12/35
up to
RPA 12/60



RPA 12/75
up to
RPA 12/130

