

# 6 & 12 VOLT MONOBLOC AGM RANGE



The logo for HAZE, featuring the word 'HAZE' in a bold, blue, sans-serif font. The letters 'H' and 'Z' are stylized with yellow horizontal bars above them. The 'A' is a simple blue shape, and the 'E' has a yellow horizontal bar above its top bar.

Haze Battery Company Ltd

The Haze HZB - AGM range covers Ah capacities from 18Ah to 230Ah (C<sub>10</sub>) with dimensions suitable for racking systems for maximum space utilisation. Specially designed racks and cabinets are available with cables and connectors to suit. AGM is especially suited for premium sites with low to medium outage rates and climate controlled environments, for more extreme temperature variations and increased cyclic demands please consult the Haze HZY - GEL range. Haze facilities are fully accredited to ISO 14001 and the management system fully accredited to ISO 9001.



### Specifications

Nominal Voltage	12 Volts
Design Life	12 Years
Operating Temperature	-20 °C to 50 °C
Grid alloy	Calcium / Tin lead alloy
Plates	Flat Pasted
Separator	AGM - Absorbant Glass Mat
Active material	Very high purity lead
Case and cover	ABS (VO on request)
Charge Voltage	Float 2.27 - 2.30 VPC @20 °C Cycling 2.4 @20 °C Max. 2.45 VPC. Max ripple 0.05C (A)
Electrolyte	Sulphuric acid Analytical grade purity
Venting Valve	EPDM Rubber 1.5 to 2 psi (10.5 - 14 KPa) release pressure. Resealing at 1 psi (7 KPa)
Terminal	Epoxy sealed by extended mechanical paths
Torque setting	The recommended torque value is 5-7 Nm
Connectors	Supplied as standard (4 hr rate)

### Innovative Features

Designed to meet the needs of UPS and many other diverse applications where DC power is required on demand.

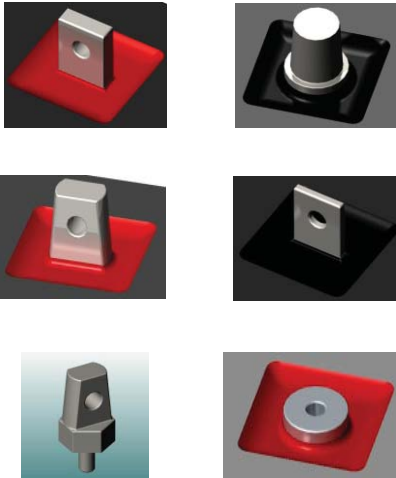
- Completely maintenance free, sealed construction eliminates the need for watering.
- Increased durability and deep cycle ability for heavy demand applications.
- Special formation process.
- Analytical Grade electrolyte.
- Spill proof / leak proof.
- Valve regulated Max internal pressure 2.5 psi.
- Multi-position usage.
- ABS Case and cover - V0 on request.
- Low self discharge.
- FAA and IATA approved as non-hazardous.
- Built to comply with IEC 896-2, DIN 43534, BS 6290 Pt4, Eurobat.



**Terminal Options** (left to right)

- Lead Flag
- Automotive
- J Type
- Copper Flag
- J Type Adapter
- Insert

Insert are made from brass with copper, nickel and silver plating giving excellent mechanical, electrical and corrosion resistant properties.



**CHARGING CHARACTERISTICS**

**Floating** - The optimum float voltage for a battery is temperature dependant, at 15 - 24°C the recommended value is 2.27 - 2.30V. It is recommended that battery installation sites are temperature controlled, however float voltage can be increased or decreased to compensate for temperature variations. Adjustment is calculated at +/- 3 mV per degree C.

Operating Temperature	Recommended Applied Float Voltage VPC
0-9	2.33 - 2.35
10-14	2.30 - 2.33
15-19	2.27 - 2.30
20-24	2.27 - 2.30
25-29	2.25 - 2.27
30-34	2.23 - 2.25
35-40	2.21 - 2.23

The most suitable charging method for battery life and performance is the constant voltage method with a limited initial current, usually limited to a maximum of  $C_{20}/4$ .

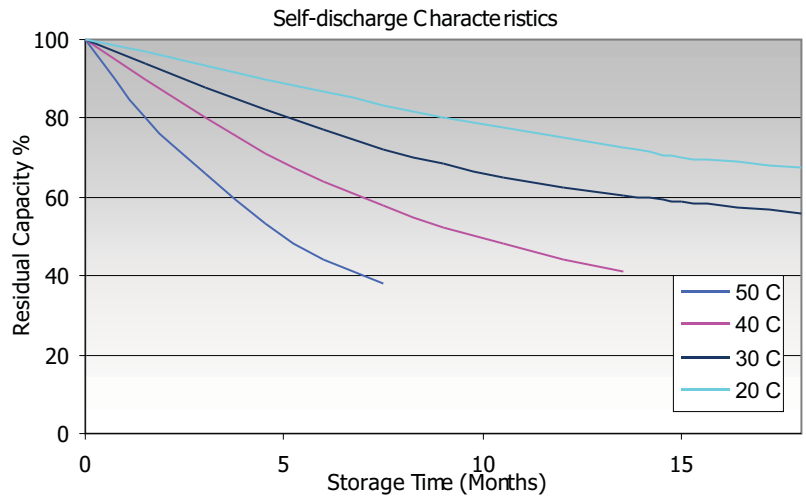
	Capacity temperature correction Factor to be applied to Data at 20 Degrees C												
Discharge Time	-30 °C	-20 °C	-10 °C	0 °C	5 °C	10 °C	15 °C	20 °C	25 °C	30 °C	35 °C	40 °C	50 °C
5 minutes to 59 minutes	0.23	0.417	0.605	0.778	0.86	0.91	0.96	1	1.037	1.063	1.085	1.1	1.116
1 Hour to 100 Hours	0.277	0.464	0.647	0.816	0.886	0.93	0.97	1	1.028	1.05	1.063	1.07	1.078

**AGM Vs Gel**

Each battery has advantages and disadvantages, it is therefore important to choose the right battery for the application.

Advantages of AGM Batteries:

- Lower initial cost when compared to Gelled Electrolyte cells.
- Ideal for starting and stationary applications.
- Superior performance for shorter duration / higher current discharges.
- Smaller size battery can be used for higher rate discharges.







End of Discharge Voltage = 1.60											DISCHARGE CURRENT in A							20 - 25 °C			
Model	5'	10'	15'	20'	25'	30'	35'	40'	45'	1 hr	90'	2 hr	3 hr	4 hr	5 hr	6 hr	7 hr	8 hr	10 hr	12 hr	20 hr
HZB12-18	66.8	45.1	34.4	28.3	24.5	21.6	19.2	17.2	15.5	12.1	8.7	6.94	5.04	3.96	-	-	-	-	-	-	-
HZB12-26	113	70.3	52.3	42.4	36.0	31.6	28.3	25.7	23.6	18.9	13.8	10.9	7.92	6.29	-	-	-	-	-	-	-
HZB12-28	124	77.1	58.9	48.2	41.4	36.4	32.5	29.3	26.7	21.2	15.3	12.0	8.62	6.82	-	-	-	-	-	-	-
HZB12-33	156	96.9	72.5	58.3	50.0	43.4	38.6	34.6	31.8	25.6	18.1	14.3	10.2	8.13	-	-	-	-	-	-	-
HZB12-44	193	123	93.1	75.8	64.0	55.4	49.0	44.0	40.0	31.8	23.0	18.2	13.1	10.5	-	-	-	-	-	-	-
HZB12-55	213	140	110	91.7	78.2	68.3	60.9	55.3	50.7	40.8	30.0	23.6	16.9	13.2	-	-	-	-	-	-	-
HZB12-70J	250	170	130	107	91.8	81.0	73.2	66.5	61.0	48.6	35.1	27.8	20.3	16.3	-	-	-	-	-	-	-
HZB12-70	232	181	144	119	101	89.0	79.9	72.9	66.7	53.8	39.5	31.6	22.9	18.4	-	-	-	-	-	-	-
HZB12-80	277	191	158	135	119	106	95.5	86.8	79.4	62.7	44.9	35.3	25.4	20.1	-	-	-	-	-	-	-
HZB12-100	371	248	198	167	145	127	113	102	92.9	74.2	53.6	42.6	31.0	24.6	-	-	-	-	-	-	-
HZB12-110	385	265	215	180	156	136	122	110	100	80.0	58.2	46.6	34.0	27.1	-	-	-	-	-	-	-
HZB12-120	389	271	225	189	163	144	129	117	107	85.8	62.4	49.8	36.5	29.2	-	-	-	-	-	-	-
HZB12-135	397	312	269	230	202	180	162	147	135	110	80.6	64.2	45.8	36.0	-	-	-	-	-	-	-
HZB12-150	417	295	251	223	199	181	164	151	139	112	82.1	64.7	46.5	36.6	-	-	-	-	-	-	-
HZB12-160	425	303	255	230	209	191	172	156	144	117	86.1	68.5	50.7	40.8	-	-	-	-	-	-	-
HZB12-200	502	395	332	288	255	230	209	192	176	143	107	85.7	62.6	49.5	-	-	-	-	-	-	-
HZB12-230	497	391	355	317	291	265	245	227	210	171	127	100	72.1	56.5	-	-	-	-	-	-	-
HZB6-110	379	261	211	177	153	134	120	109	100	80.4	57.8	45.9	33.5	26.7	-	-	-	-	-	-	-
HZB6-125	407	284	235	197	172	152	136	123	114	91.4	65.9	52.1	37.8	30.2	-	-	-	-	-	-	-
HZB6-160	472	360	288	243	212	189	170	155	143	115	84.7	68.6	51.0	41.5	-	-	-	-	-	-	-
HZB6-200	502	382	330	288	263	244	223	204	188	149	109	87.3	63.8	51.2	-	-	-	-	-	-	-



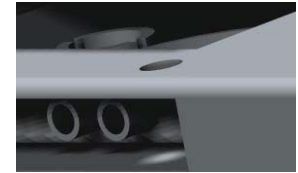




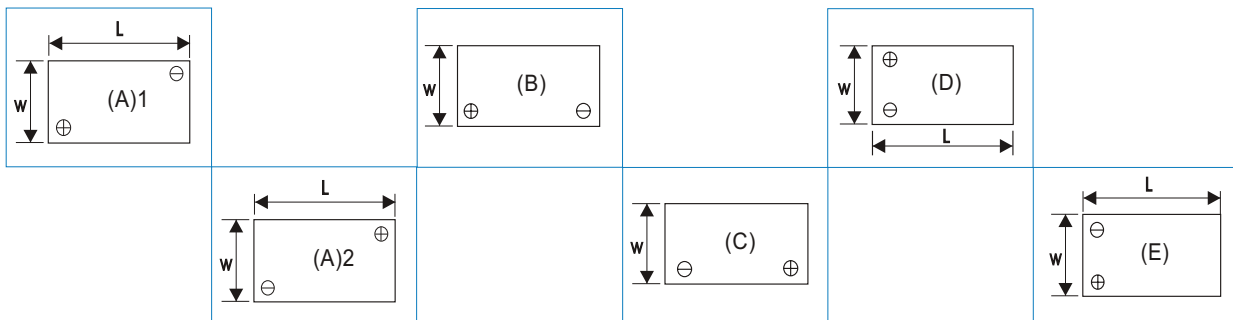




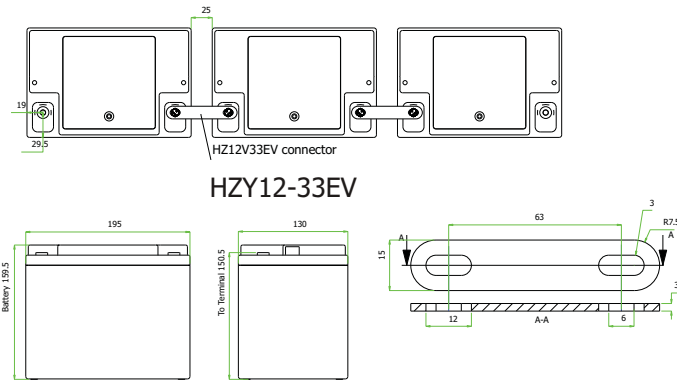
**Central Gassing** - Haze produce some models with a integral central gassing system. This system is a useful feature when batteries are installed in an IP66 cabinet. Sealing prevents any escaping gas from exiting the enclosure. Central gassing allows a tube carrying the emissions to pass through a seal to atmosphere. Haze are adding this feature to a number of sizes, if you require this feature please contact us for an up-to-date list of models included.



Battery Model	Qty Per Box	Dimensions (mm) & weight (kg)				Dimensions (Inches) & weight (lbs)				Terminal Layout	BCI Group Size	Internal Resistance mOhms	Conductance Values +/- 25%	Max. Charge Current	CCA at 0 °C	Short Circuit Amps
		Length	Width	Height	Weight	Length	Width	Height	Weight							
HZB12-18	2	181	76	167	5.45	7.13	2.99	6.57	12.0	C - M5	-	9	400	4.5	270	732
HZB12-26	1	168	178	124	8.4	6.61	7.01	4.88	18.6	C - M5	-	8	420	6.5	300	900
HZB12-28	1	166	125	175	9	6.54	4.92	6.89	19.9	C - M5	-	7.75	450	7	305	910
HZB12-33	1	195	130	160	10.7	7.68	5.12	6.30	23.6	B - M6	U1	5.75	500	8	320	1100
HZB12-44	1	198	167	157	13.8	7.80	6.57	6.18	30.5	C - M6	-	5.2	670	11	350	1400
HZB12-55	1	229	138	213	17.3	9.02	5.43	8.39	38.2	B - M6	22NF	5.8	600	14	380	1700
HZB12-60	1	228	139	217	18.6	8.98	5.47	8.54	41.1	B - M6	-	5.7	680	15	410	1750
HZB12-70J	1	349	168	175	21.1	13.74	6.61	6.89	46.6	C - M6	-	4.2	900	18	550	2100
HZB12-70	1	260	168	211	24.7	10.24	6.61	8.31	54.6	B - M6	24	4.7	1000	18	550	2100
HZB12-80	1	260	168	211	26	10.24	6.61	8.31	57.5	B - M6	24	4	1150	20	620	2400
HZB12-100	1	306	168	211	29.7	12.05	6.61	8.31	65.6	B - M6	27	3.4	1300	25	780	2900
HZB12-110	1	329	173	209	32.6	12.95	6.81	8.23	72.0	B - M6	31	3.2	1200	27	960	3000
HZB12-115	1	349	174	216.5	37.7	13.74	6.85	8.52	83.3	B - M6	-	3.1	1230	28.5	980	3100
HZB12-120	1	408	176	224	37.4	16.06	6.93	8.82	82.7	B - M6	-	3	1250	30	1020	3300
HZB12-135	1	340	173	283	43.3	13.39	6.81	11.14	95.7	B - M6	-	3.2	1300	35	1160	3750
HZB12-150	1	482	170	240	45.3	18.98	6.69	9.45	100.1	B - M6	-	2.8	1300	38	1300	4200
HZB12-160	1	530	209	214	56	20.87	8.23	8.43	123.8	E - M6	4D	2.7	1750	40	1440	4700
HZB12-200	1	522	240	220	64.8	20.55	9.45	8.66	143.2	E - M8	-	2.5	2050	50	1670	5400
HZB12-230	1	521	269	203	73.5	20.51	10.59	7.99	162.4	E - M8	8D	2.2	2150	57	1870	5900
HZB6-110	1	193	168	205	17.7	7.60	6.61	8.07	39.1	A - M6	-	1.7	1300	27	1010	3200
HZB6-125	1	345	128	202	19.1	13.58	5.04	7.95	42.2	A2 - M6	-	1.8	1400	31	1100	3500
HZB6-160	1	298	171	226	26.4	11.73	6.73	8.90	58.3	A - M6	-	1.4	1500	40	1290	4600
HZB6-200	1	323	178	225	30.9	12.72	7.01	8.86	68.3	A - M8	-	1.25	2050	50	1600	5000



**Terminal Layout details**



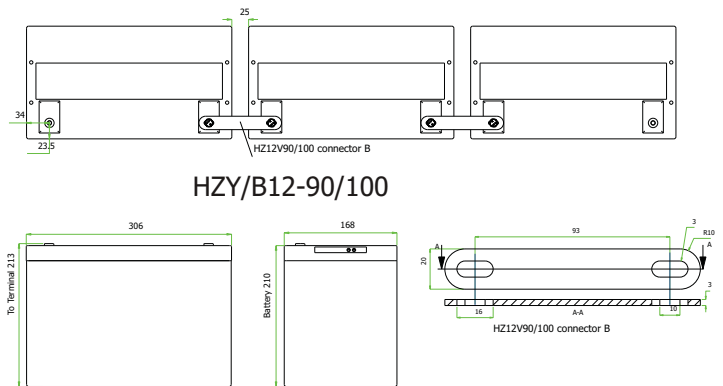
HZY12-33EV

Battery installations have many variables : space available, autonomy times, load carrying requirements etc.

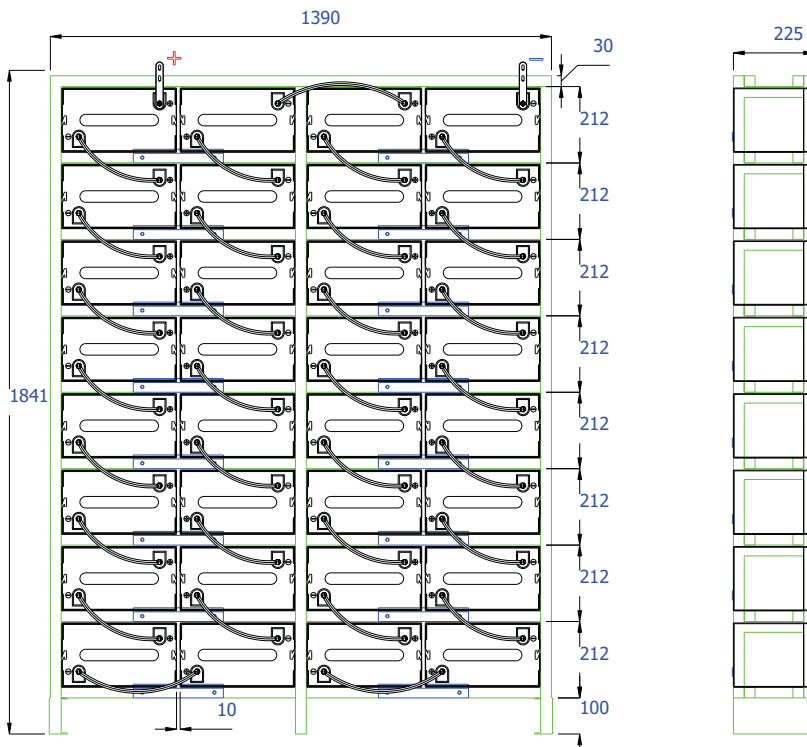
Haze Engineering department is at the customers disposal to find the best solution, provide dimensioned layout drawings and wiring diagrams.

A tailor made solution to meet the customers requirements.

All drawings are submitted for customer approval to ensure trouble free installation.



HZY/B12-90/100



Racking is available to suit available space and required configuration.

Special cables and / or standard connectors can be provided on request along with wiring diagrams.

A range of terminal covers are available to cover large and small batteries and cables or connectors.

The example rack shown is for HZB/Y6-200.



## Haze Battery Company Ltd

### Product Range

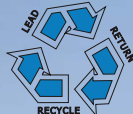
4, 6 & 12 Volt AGM 1.3 to 230AH  
6 & 12 Volt Gel 7.5 to 230AH  
12 Volt Front Access AGM  
12 Volt Front Access Gel  
2 Volt AGM & Gel 50 to 3850AH  
EV Gel  
EV AGM  
Marine Gel  
Solar  
OPzV  
OPzS

**Website: [www.hazebattery.com](http://www.hazebattery.com)**

**E mail [sales@hazebattery.com](mailto:sales@hazebattery.com)**

**Note: The discharge data contained within is obtained by laboratory testing of production batteries, results may vary after a period of shipping and/or storage.**

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Haze Battery Company keenly encourages environmental awareness; PLEASE follow guidelines for the recycling /disposal of lead.