



Certificate of Conformity

Certificate num.	Registration date	Version	Valid until	
afp - 2430	15-Jun-2010	Number 2+	Issue date 1-Jan-2012	30-Apr-2013

Product designation

Fullriver, HGL Series, valve regulated sealed lead acid batteries
(Refer to the Schedule/enclosures for further specified details)

Agent/distributor

R & J Batteries
852 Latrobe Street, BALLARAT, VIC, AUSTRALIA, 3350

Registrant

Guangzhou Fullriver Industry Co. Ltd
Taishi Industrial Area, Yu Wo Tou Town, Panyu Zone, GUANGZHOU, GUANG DONG PROVINCE, CHINA, 511475

Producer

Guangzhou Fullriver Industry Co. Ltd
Taishi Industrial Area, Yu Wo Tou Town, Panyu Zone, GUANGZHOU, GUANG DONG PROVINCE, CHINA, 511475

Conformance criteria and evaluation

The Fullriver, HGL Series, valve regulated sealed lead acid batteries has been evaluated and verified as conforming with the relevant requirements of the following criteria.

1. Technical Specification TS001, Version 1.1, 17-Jul-2006, 'Lead-acid batteries for control and indicating equipment, AS 4428.5-1998, clause 2.6'.

Limitations/conditions of conformance

Limitations/conditions of conformance, where identified on this certificate, are derived from qualifications from evaluation(s) for conformity and/or other related technical documentation. All details with respect to design, assembly and installation instructions and restrictions should be checked against the producer's current technical manual/data sheets and the requirements of the Authority having Jurisdiction.

This certification is issued within the scope of CSIRO Verification Services – Rules governing ActivFire Scheme and is valid only for the product(s) as submitted for evaluation and verification of conformity, subject to the following conditions.

- Reference to details, limitations and requirements, where documented as a schedule/enclosure with this certificate.
- The Registrant is responsible for their attestation of conformity and ensuring that on-going production complies with the conformance criteria defined in this certificate.
- This certificate will not be valid if any changes or modifications are made to the product which have not been notified and validated by CSIRO Verification Services.
- This certificate is subject to periodical re-validation upon verification that all requirements, as determined by the conformity assessment body, continue to be satisfactorily met by the Registrant.
- This certificate may only be reproduced in its published form, without modification and inclusive of all schedules/enclosures.
- Any changes, errors or omissions, must be submitted in writing and if necessary or requested, substantiated with relevant evidence.
- Any representations, such as advertising or other marketing related activities or articles shall reflect the correct contents of this certificate and conform with all relevant trade practices and consumer protection legislation and regulations.
- Any terms or conditions of use as applicable to content and documentation as published or accessed through web sites administered by the CSIRO Verification Services.

Issued by

David Whittaker
Executive Officer – ActivFire Scheme



Schedule to Certificate of Conformity

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Producer's description

The Fullriver, HGL Series, valve regulated sealed lead acid batteries utilize an electrolyte suspension system consisting of high porosity, glass fibre material which in conjunction with plates, totally absorb and contain the electrolyte. No silica gels or any other contaminants are used. Fullriver batteries incorporate a built in design that controls gas generation.

The batteries are equipped with safety release valves, designed to operate between 2 and 5 psi and automatically reseal.

For cyclic use, a service life of 1000 discharge/recharge cycles can be realized, dependent on the average depth of discharge.

For float applications, this equipment have an expected life span of 3 to 5 years.

Technical specification

The following details are a representative extract of the technical specification for the Fullriver, HGL Series, valve regulated sealed lead acid batteries and may be subject to change. Complete and current details should be determined from the designated producer's technical manual/data sheets.

Design life:	3 to 5 years
Operating temperature:	-15°C to 50°C (recommended)
Grid alloy:	Calcium/Tin lead allow
Plates:	Flat pasted
Separator:	AGM (Absorbed Glass Mat)
Active material:	Lead
Case and cover material:	ABS
Charge voltage:	Float 2.27-2.30 VPC@25°C, Cycling 2.40-2.49 VPC@25°C
Electrolyte:	Sulphuric acid
Terminal:	faston tab type, bolt fastening type, threaded post style, or lead wire type, depending upon the type of battery.

Battery type	Nominal voltage (Vdc)	Nominal capacity 20 Hr (Ah)	Length (mm)	Height (mm)	Width (mm)	Total height (mm)	Approx. weight (kg)
HGL1.2-6	6	1.2	97	24	52	58	0.31
HGL3.2-6	6	3.2	134	34	61	67	0.59
HGL4-6A	6	4	70	47	101	107	0.71
HGL4-6B	6	4	70	47	106	106	0.71
HGL4-6C	6	4	70	47	98	104	0.71
HGL5-6A	6	5	70	47	101	107	0.77
HGL5-6B	6	5	67	67	97	115	0.92
HGL7-6	6	7	151	34	95	101	1.18
HGL8-6	6	8	99	57	115	115	1.69
HGL10-6	6	10	151	50	95	101	1.58
HGL12-6	6	12	151	50	95	101	1.84
HGL14-6CQ	6	14	108	71	140	140	2.38
HGL14-6TS	6	14	108	71	140	140	2.38
HGL14-6TH	6	14	108	71	140	140	2.38
HGL14-6PL	6	14	108	71	140	140	2.38
HGL20-6	6	20	157	83	125	125	4.45
HGL42-6	6	42	162	88	163	170	6.20
HGL180-6	6	180	306	169	220	226	28.10
HGL240-6	6	240	244	190	275	275	31.00
HGL0.8-12	12	0.8	96	25	61	61	0.34
HGL1.2-12	12	1.2	97	43	52	58	0.59
HGL2.0-12	12	2	177	35	61	67	0.90
HGL2.3-12	12	2.3	177	35	61	67	0.92
HGL2.6-12	12	2.6	178	35	60	66	1.02
HGL2.9-12	12	2.9	80	55.5	98	104	1.20
HGL3.2-12	12	3.2	134	67	61	67	1.15
HGL4-12	12	4	90	70	101	107	1.39
HGL5-12	12	5	90	70	101	107	1.48
HGL7.2-12	12	7.2	151	65	95	101	2.30
HGL8.5-12	12	8.5	151	65	95	101	2.60
HGL10-12	12	10	151	65	111	117	3.30

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HGL12-12	12	12	151	99	95	101	3.75
HGL18-12	12	18	181	77	167	167	5.50
HGL22-12	12	22	181	77	167	167	6.05
HGL24-12	12	24	165	176	125	125	7.70
HGL26-12A	12	26	166	126	174	174	8.50
HGL26-12B	12	26	165	176	125	125	7.80
HGL28-12	12	28	166	126	174	174	8.60
HGL33-12	12	33	196	131	155	167	10.20
HGL35-12	12	35	196	131	155	167	10.30
HGL38-12	12	38	198	166	170	170	13.30
HGL40-12	12	40	198	166	174	174	13.40
HGL45-12	12	45	198	166	174	174	13.50
HGL50-12	12	50	229	138	208	212	17.10
HGL55-12	12	55	229	138	208	212	17.20
HGL60-12	12	60	229	138	208	212	17.30
HGL65-12	12	65	351	167	176	176	21.20
HGL70-12A	12	70	351	167	176	176	21.30
HGL70-12B	12	70	260	169	211	215	23.00
HGL75-12	12	75	260	169	211	215	23.10
HGL80-12A	12	80	260	169	211	215	23.20
HGL80-12B	12	80	351	167	179	183	26.00
HGL90-12	12	90	307	169	211	215	28.20
HGL100-12A	12	100	328	172	214	220	30.40
HGL100-12B	12	100	331	175	214	218	30.50
HGL100-12C	12	100	307	169	211	215	30.60
HGL120-12A	12	120	407	174	210	240	37.60
HGL120-12B	12	120	331	175	214	218	32.00
HGL140-12	12	140	341	173	281	287	42.50
HGL160-12	12	160	484	171	241	241	45.70
HGL180-12	12	180	530	209	214	218	55.30
HGL200-12	12	200	530	209	214	218	57.60
HGL210-12	12	210	522	242	218	222	61.00
HGL230-12	12	230	522	242	218	222	64.50
HGL240-12	12	240	520	269	204	208	70.20
HGL260-12	12	260	521	269	220	224	75.50