



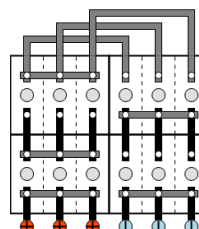
HB460P - Cell data sheet

Classification

Brand	
Cell type	HB460P
Cell P/N	310100781
Capacity at 5 hours rate	460 Ah
IEC Designation	KH460P
According to	IEC 60623



Wiring principle



Crosswise

Physical data

Overall height	410 mm		
Cell height	400 mm		
Width	195 mm	Weight per cell	38,3 Kg
Length	268 mm		

Construction

Container material	Polypropylene	No. of terminals/polarity	3
Separator type	Grid	Terminal material	Steel
Connection torque	30,0 +/- 3,0 Nm	Vent type	
Terminal size	M10 SW 16 mm	Handle	Yes

Plates

Positive		Negative	
Type of plates	Pocket	Type of plates	Pocket

Electrolyte

Electrolyte type: Renewal	E13	Max/Min	50 mm
Electrolyte type: Initial	E22	Vent oil quantity	
Electrolyte per cell: Liquid	9,6 liters		

Connection

Cable area of internal connection cables	120 mm ²	End-lug (and external cable)	120 mm ²
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Charging

Float voltage	1,4 V/Cell	High rate voltage (min)	1,45 V/Cell
Single-level voltage	1,43 V/Cell		

Resistance/Short circuit

Internal resistance	0,09 mOhm	Short circuit current	13679 A
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Performance data

Current discharge

After prolonged float charge of fully charged cells. Available amperes at +20°C +/- 5°C (+68°F +/- 9°F)

V/Cell	10h	8h	5h	3h	2h	1,5h	1h	30m	20m	15m	10m	5m	1m	30s	5s	1s
1	46,1	57,6	92,0	152	225	296	433	787	1.057	1.212	1.432	1.736	2.180	2.460	2.991	3.181
1,05	45,7	57,1	90,7	149	221	290	419	747	907	1.031	1.213	1.411	1.829	2.065	2.491	2.596
1,1	44,5	55,6	88,7	145	213	279	397	606	711	800	901	1.086	1.458	1.659	1.974	2.075
1,14	43,3	54,1	85,2	139	196	249	326	479	570	640	724	886	1.162	1.333	1.568	1.624
1,16	42,0	52,4	83,1	134	180	222	265	397	473	525	582	728	987	1.114	1.305	1.381

Engine starting performance

For a fully charged cell by a constant current charge according to IEC 60623 standard at +20°C +/- 5°C (+68°F +/- 9°F), 30 seconds discharge down to 0,85 V

Available amperes	4.016 A
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Power discharge

Available power (W), after prolonged float charged of fully charged cells at +20°C +/- 5°C (+68°F +/- 9°F)

V/Cell	10h	8h	5h	3h	2h	1,5h	1h	30m	20m	15m	10m	5m	1m	30s	5s	1s
1	55,8	69,7	110	180	266	336	471	818	1.082	1.231	1.443	1.736	2.180	2.460	2.991	3.181
1,05	55,3	69,1	108	177	261	332	466	805	968	1.094	1.280	1.482	1.921	2.169	2.615	2.727
1,1	53,8	67,3	106	172	252	324	452	678	790	885	994	1.195	1.604	1.825	2.172	2.283
1,14	52,4	65,5	102	165	231	291	378	550	653	731	827	1.010	1.325	1.520	1.788	1.851
1,16	50,8	63,5	99,3	159	212	261	309	462	550	610	676	845	1.145	1.292	1.514	1.602

Engine starting performance

For a fully charged cell by a constant current charge according to IEC 60623 standard at +20°C +/- 5°C (+68°F +/- 9°F), 30 seconds discharge down to 0,85 V

Available amperes	4.016 A
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Kt Factor

Current discharge

After prolonged float charge of fully charged cells. Kt factor at +20°C +/- 5°C (+68°F +/- 9°F)

V/Cell	10h	8h	5h	3h	2h	1,5h	1h	30m	20m	15m	10m	5m	1m	30s	5s	1s
1	10,0	7,98	5,00	3,03	2,04	1,55	1,06	0,58	0,44	0,38	0,32	0,26	0,21	0,19	0,15	0,14
1,05	10,1	8,05	5,07	3,08	2,08	1,59	1,10	0,62	0,51	0,45	0,38	0,33	0,25	0,22	0,18	0,18
1,1	10,3	8,27	5,19	3,17	2,15	1,65	1,16	0,76	0,65	0,58	0,51	0,42	0,32	0,28	0,23	0,22
1,14	10,6	8,50	5,40	3,30	2,35	1,85	1,41	0,96	0,81	0,72	0,64	0,52	0,40	0,35	0,29	0,28
1,16	11,0	8,77	5,53	3,44	2,56	2,07	1,74	1,16	0,97	0,88	0,79	0,63	0,47	0,41	0,35	0,33

Engine starting performance

For a fully charged cell by a constant current charge according to IEC 60623 standard at +20°C +/- 5°C (+68°F +/- 9°F), 30 seconds discharge down to 0,85 V

Available amperes 4.016 A

Power discharge

Kt factor power, after prolonged float charged of fully charged cells at +20°C +/- 5°C (+68°F +/- 9°F)

V/Cell	10h	8h	5h	3h	2h	1,5h	1h	30m	20m	15m	10m	5m	1m	30s	5s	1s
1	8,25	6,60	4,18	2,56	1,73	1,37	0,98	0,56	0,43	0,37	0,32	0,26	0,21	0,19	0,15	0,14
1,05	8,32	6,66	4,24	2,60	1,76	1,39	0,99	0,57	0,48	0,42	0,36	0,31	0,24	0,21	0,18	0,17
1,1	8,54	6,83	4,34	2,67	1,83	1,42	1,02	0,68	0,58	0,52	0,46	0,38	0,29	0,25	0,21	0,20
1,14	8,78	7,02	4,52	2,79	1,99	1,58	1,22	0,84	0,70	0,63	0,56	0,46	0,35	0,30	0,26	0,25
1,16	9,06	7,25	4,63	2,90	2,17	1,77	1,49	1,00	0,84	0,75	0,68	0,54	0,40	0,36	0,30	0,29

Engine starting performance

Kt factor power, after prolonged float charged of fully charged cells at +20°C +/- 5°C (+68°F +/- 9°F)

Available amperes 4.016 A