



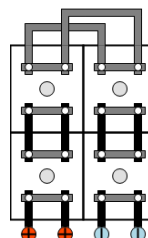
# XHP220 - Cell data sheet

## Classification

Brand	Alcad
Cell type	XHP220
Cell P/N	212423
Capacity at 5 hours rate	220 Ah
IEC Designation	KH220P
According to IEC 60623	



Wiring principle



Crosswise

## Physical data

Overall height	339 mm		
Cell height			
Width	165 mm	Weight per cell	14,7 Kg
Length	198 mm		

## Construction

Container material	Polypropylene	No. of terminals/polarity	2
Separator type	Microporous	Terminal material	Copper
Connection torque	15,0 +/- 2,0 Nm	Vent type	Flame arresting vent
Terminal size	M12		
		Handle	No

## Plates

Positive		Negative	
Type of plates	Sintered	Type of plates	Plastic bonded

## Electrolyte

Electrolyte type: Renewal		Max/Min	65 mm
Electrolyte type: Initial	E4	Vent oil quantity	
Electrolyte per cell: Liquid	4,8 liters		

## Connection

Cable area of internal connection cables	185 mm <sup>2</sup>	End-lug (and external cable)	185 mm <sup>2</sup>
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## Charging

Float voltage	1,4 V/Cell	High rate voltage (min)	1,45 V/Cell
Single-level voltage	1,41 V/Cell		

## Resistance/Short circuit

Internal resistance	0,18 mOhm	Short circuit current	7950 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	22,5	27,9	44,0	72,9	108	144	212	402	561	655	775	917	1.250	1.401	1.719	1.849
1,05	22,3	27,7	43,6	72,4	108	142	210	384	494	563	641	751	1.063	1.196	1.467	1.594
1,1	22,0	27,3	43,1	70,8	105	138	198	311	377	425	489	595	863	1.000	1.222	1.317
1,14	21,7	27,0	42,5	67,9	100	129	172	246	292	331	384	468	719	836	1.033	1.134

### 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	2.390 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	27,2	33,8	52,6	86,4	128	163	230	418	574	665	781	917	1.250	1.401	1.719	1.849
1,05	27,0	33,5	52,2	85,8	127	163	233	414	528	597	677	789	1.116	1.256	1.541	1.674
1,1	26,6	33,1	51,6	84,0	124	160	225	348	418	470	539	654	949	1.100	1.345	1.449
1,14	26,3	32,6	50,8	80,5	117	150	200	282	334	378	438	534	820	954	1.178	1.293

### 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	2.390 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	9,8	7,88	5,00	3,02	2,03	1,53	1,04	0,55	0,39	0,34	0,28	0,24	0,18	0,16	0,13	0,12
1,05	9,9	7,95	5,04	3,04	2,04	1,55	1,05	0,57	0,44	0,39	0,34	0,29	0,21	0,18	0,15	0,14
1,1	10,0	8,05	5,10	3,10	2,10	1,60	1,11	0,71	0,58	0,52	0,45	0,37	0,26	0,22	0,18	0,17
1,14	10,1	8,16	5,18	3,24	2,21	1,71	1,28	0,90	0,75	0,66	0,57	0,47	0,31	0,26	0,21	0,19

### 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 2.390 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	8,08	6,51	4,18	2,55	1,72	1,35	0,95	0,53	0,38	0,33	0,28	0,24	0,18	0,16	0,13	0,12
1,05	8,16	6,57	4,22	2,57	1,73	1,35	0,94	0,53	0,42	0,37	0,32	0,28	0,20	0,18	0,14	0,13
1,1	8,26	6,65	4,27	2,62	1,78	1,38	0,98	0,63	0,53	0,47	0,41	0,34	0,23	0,20	0,16	0,15
1,14	8,37	6,74	4,33	2,73	1,87	1,46	1,10	0,78	0,66	0,58	0,50	0,41	0,27	0,23	0,19	0,17

### 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 2.390 A