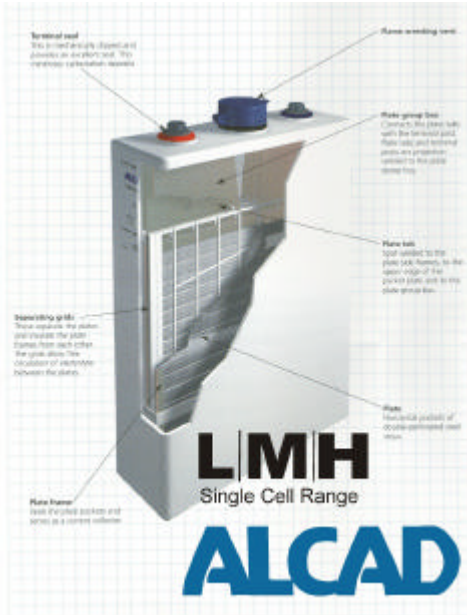




# ALCAD L|M|H Ranges Nickel Cadmium Batteries



- 25+ year life in many applications
- Outstanding performance
- Operation over wide temperature (-20°C to +50°C)
- Long maintenance intervals
- Virtually unlimited storage time

## Description

### SINGLE CELL POCKET PLATE NICAD CELLS

The single cell range (L/M/H) from ALCAD offer a dependable and highly responsive form of back up power. They operate faultlessly under a wide variety of climatic conditions and are built to withstand mechanical and electrical abuse. All ALCAD cells comply with relevant IEC, Eurobat, DIN and BSI standards.

The ALCAD single cell portfolio comprises of three ranges:

#### ● L Range

Designed for general purpose applications where discharge is infrequent, but for long periods, typically 2 hours and longer.

#### ● M Range

Suitable for medium discharge periods between 30 minutes and 3 hours. Ideal for standby power supplies including UPS systems.

#### ● H Range

Excellent high rates of discharge between 1 second and 30 minutes such as engine starting. The ALCAD range is typically suited for starter applications and critical UPS equipment, examples of which are:

- Diesel Engine Starting
- Switch Closing
- Uninterruptible Power Supplies (UPS)
- Emergency Lighting
- Sub-Zero climate conditions
- Critical DC Standby Applications

## Product Specification

### Voltage Range:

nominal voltage 1.2V single cell

### Capacity Range:

nominal capacity  
 L Range (LC only) 10Ah - 355Ah  
 M range (MC only) 9Ah - 335Ah  
 H Range (HC only) 9Ah - 335Ah

### Charging

charging methods (recommended) constant current charging

recommended float charge 1.43 to 1.50 volt/cell  
 recommended equalising charge 1.47 to 1.70 volt/cell

standard charge 10% Ah capacity of cell  
 Fast recharge 20% Ah capacity of cell for 2.5Hrs followed by 10% Ah capacity for 2-3Hrs

### General:

charging temperature range  
 Electrolyte should never exceed 45°C during charging

Conforms to IEC 623 / DIN EN 60623

# Battery Selection Chart

## TABLE 1 CONSTANT CURRENT DISCHARGE PERFORMANCE DATA

Discharge current to final discharge at 1.00V per cell (20 - 25 DEG C)									
Model	Times of discharge								
	seconds		minutes					hours	
	30	60	10	15	30	60	90	2	3
MC9P	27.5	24.0	13.0	11.4	8.86	6.58	5.16	4.29	2.94
MC14P	42.7	37.3	20.3	17.8	13.8	8.02	8.02	6.68	4.58
MC22P	62.4	55.5	31.9	28.2	22.0	12.5	12.5	10.5	7.19
MC31P	87.9	78.2	44.9	39.7	31.0	17.7	17.7	14.8	10.1
MC39P	111	98.4	56.5	49.9	39.0	22.2	22.2	18.6	12.8
MC47P	133	119	68.1	60.1	47.0	26.8	26.8	22.4	15.4
MC55P	156	139	79.7	70.4	55.0	31.4	31.4	26.2	18.0
MC70P	213	187	109	95.8	74.6	40.4	40.4	33.5	22.9
MC90P	274	241	140	123	95.0	51.9	51.9	43.0	29.4
MC110P	335	294	171	151	117	63.4	63.4	52.6	36.0
MC130P	395	348	202	178	139	75.0	75.0	62.1	42.5
MC145P	441	388	226	198	155	83.6	83.6	69.3	47.4
MC165P	502	441	257	226	176	95.1	95.1	78.9	54.0
MC185P	563	495	288	253	197	107	107	88.4	60.5
MC215P	619	553	328	291	227	124	124	103	70.3
MC240P	691	617	366	325	254	138	138	115	45.5
MC285P	820	733	435	386	302	164	164	136	93.2
MC310P	892	797	473	419	328	179	179	148	101
MC335P	964	862	511	453	354	193	193	160	110

Discharge current to final discharge at 1.00V per cell (20 - 25 DEG C)										
Model	Times of discharge									
	seconds		minutes							
	5	30	1	5	10	15	20	30	60	
HC12P	88.4	70.5	62.2	42.1	35.0	30.7	27.2	20.6	11.3	
HC17P	125	99.9	88.1	59.6	49.6	43.5	38.5	29.1	16.0	
HC21P	155	123	109	73.6	61.2	53.7	47.6	35.9	9.7	
HC25P	184	147	130	87.6	72.9	64.0	56.7	42.7	23.5	
HC29P	214	170	150	102	84.5	74.2	65.8	49.6	27.3	
HC34P	251	200	176	119	99.1	87.0	77.1	58.1	32.0	
HC40P	297	237	206	145	120	105	92.8	68.4	37.6	
HC50P	372	296	258	181	150	132	116	85.5	47.0	
HC60P	446	355	309	217	180	158	139	103	56.4	
HC70P	520	414	361	253	210	185	162	120	65.8	
HC80P	595	473	412	290	240	211	186	137	75.2	
HC90P	669	532	464	326	270	237	209	154	84.6	
HC100P	743	592	515	362	300	264	232	171	94.0	
HC110P	818	651	567	398	330	290	255	188	103	
HC120P	892	710	618	435	360	316	278	205	113	
HC130P	847	696	613	445	377	334	297	222	122	
HC155P	1010	829	731	531	449	399	355	265	146	
HC185P	1210	990	873	633	536	476	423	316	174	
HC210P	1370	1120	991	719	608	540	481	359	197	

## TABLE 2 GENERAL SPECIFICATION

Model	Nominal Capacity (Ah) (5Hr)	Dimensions			
		L (mm)	W (mm)	H (mm)	Cell filled (Kg)
MC9P	9	42	121	275	1.64
MC14P	14	42	121	275	1.69
MC22P	22	42	121	275	1.91
MC31P	31	42	121	275	2.10
MC39P	39	66	121	275	3.07
MC47P	47	66	121	275	3.28
MC55P	55	66	121	275	3.47
MC70P	70	68	192	358	6.26
MC90P	90	68	192	358	6.56
MC110P	110	68	192	358	7.22
MC130P	130	68	192	358	7.68
MC145P	145	93	192	358	9.86
MC165P	165	93	192	358	10.30
MC185P	185	93	192	358	10.70
MC215P	215	93	192	414	12.30
MC240P	240	93	192	414	12.80
MC285P	285	122	192	414	16.20
MC310P	310	122	192	414	16.70
MC335P	335	122	192	414	17.30

Model	Nominal Capacity (Ah) (5Hr)	Dimensions			
		L (mm)	W (mm)	H (mm)	Cell filled (Kg)
HC12P	12	42	121	275	1.91
HC17P	17	42	121	275	2.06
HC21P	21	66	121	275	3.01
HC25P	25	66	121	275	3.15
HC29P	29	66	121	275	3.32
HC34P	34	66	121	275	3.46
HC40P	40	68	192	358	6.21
HC50P	50	68	192	358	6.57
HC60P	60	68	192	358	7.00
HC70P	70	68	192	358	7.35
HC80P	80	68	192	358	7.71
HC90P	90	93	192	358	9.80
HC100P	100	93	192	358	10.10
HC110P	110	93	192	358	10.50
HC120P	120	93	192	358	10.80
HC130P	130	93	192	414	12.00
HC155P	155	93	192	414	12.80
HC185P	185	122	192	414	16.40
HC210P	210	122	192	414	17.20

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