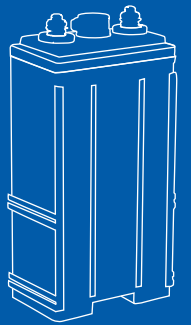




XHP

Low maintenance
high performance
batteries



Reliability inside

ALCAD

ADVANCED SOLUTIONS | ENGINEERING EXCELLENCE

Low maintenance, high performance Ni-Cd batteries

Powerful assurance for critical applications

depend upon XHP where vital UPS, engine starting and emergency back-up duties need guaranteed power in an instant. The built-in reliability of sintered/pbe technology and alkaline electrolyte provides up to 20+ years of cost-effective trouble-free service, requiring virtually no maintenance.

Future-proof construction

XHP's steel superstructure and tough polypropylene casing hold sintered and plastic-bonded electrodes with copious amounts of alkaline electrolyte. As none of these materials are corrosive, XHP confidently outperforms lead acid batteries by several years. On-going maintenance, unexpected downtime and replacement costs are completely eliminated with Ni-Cd. XHP batteries only require topping-up every 10 years after single rate charging.

Predictable cost and long life

Owing to its reliability, unique electrochemistry and sturdy construction, accurately predicting your battery's life-cost is now possible. XHP can easily repay your investment within 3-6 years – well within the lifetime of your application.

Reliable in all conditions

XHP is specified onshore for hospitals, traffic control, power generation and process control, and offshore in oil and gas exploration and other hazardous marine installations, where the implications of main power supply interruption cannot be contemplated.

Generally operating between temperatures of -20°C to $+50^{\circ}\text{C}$ (-4°F to $+122^{\circ}\text{F}$), XHP batteries can tolerate extremes of -50°C to $+70^{\circ}\text{C}$ (-58°F to $+158^{\circ}\text{F}$) for short periods. They can also remain in storage for many years before commissioning without affecting subsequent performance.



Best for engines – perfect for UPS

Electrical abuses such as AC ripple, over-discharging, voltage reversal or high overcharge currents have no effect upon XHP. The battery's plate and separator format make recharging quick and efficient at either single or dual rate.

Delivery of high power within a narrow voltage window perfectly suits XHP for UPS duties. There is no risk of sudden death, and because Ni-Cd batteries do not produce corrosive fumes, they can be installed next to sensitive electronic equipment. Even when partially discharged XHP is capable of providing repeated high currents up to 20 times its nominal capacity to make short work of starting your diesel engine or gas turbine.

Battery sizing made easy

An XHP battery can be designed to exactly match your installation criteria. With BaSics sizing software, calculations are quick and easy. Engineers are always available when you require additional expert advice.

Original equipment or replacement

From a broad range of sizes, weights and performances available, XHP can perfectly meet your requirement for guaranteed power.

Setting standards worldwide

XHP batteries satisfy all major electrical industry standards and are approved for operation on board ships and offshore installations.

Alcad recycle

Alcad also recycle old batteries as part of their responsibility to safeguard the environment.

XHP Range

XHP



Large electrolyte reserve with visible levels

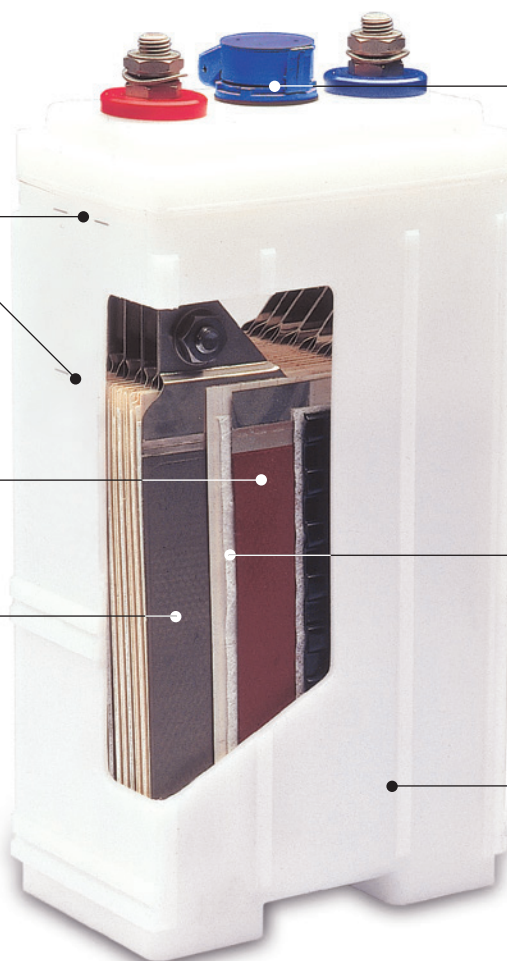
Plastic-bonded negative electrode

Sintered positive electrode

Bayonet flame-arrester vent plug

Separator

Container



Rapid charging characteristics

(+ 20°C ± 5°C / + 68°F ± + 9°F)

XHP can be charged by all normal methods:

- Taper
- Constant current
- Constant voltage
- Pulse

The cells continue to operate satisfactorily in any state of charge. For operating conditions other than fully charged, consult Alcad.

Capacity

The rated capacity (C_5) of a cell is the capacity available in ampere-hours (Ah) at the 5 hour discharge rate to an end voltage of 1.00 V/cell.

Nominal discharge voltage

The nominal discharge voltage is 1.2 V/cell.

Constant current charging

Standard charge $0.2 \times C_5$ amperes for 8 hours.

Constant voltage charging

No current limit is necessary.

With boost

Maintenance float voltage:
 1.40 ± 0.01 V

Boost voltage range:
 $1.45 \text{ V} \pm 0.01$ V

Without boost

Float voltage:
 $1.41 \text{ V} \pm 0.01$ V

These voltages are applicable from +20°C to +25°C (+68°F to +77°F)

Cell data

D.C. internal resistance:
 $40 \times 1/C_5 \text{ m}\Omega$

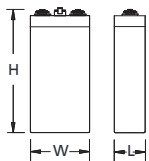
Short circuit current:
 $1.8 \times$ cell discharge current at 1 s to 0.65 V

XHP

Capacity and dimensions

XHP type	Capacity at the 5hr rate (Ah)	Length per cell		Width per cell		Overall height		Approx. weight per cell		Volume of liquid electrolyte above plates (cc)
		(mm)	L (in)	(mm)	W (in)	(mm)	H (in)	(kg)	(lb)	
XHP 11	11	46.5	1.8	86	3.4	196	7.2	1.0	2.2	66
XHP 16	16	46.5	1.8	86	3.4	276	10.9	1.5	3.5	160
XHP 21	21	46.5	1.8	86	3.4	276	10.9	1.6	3.5	160
XHP 24	24	46.5	1.8	86	3.4	276	10.9	1.7	3.8	160
XHP 28	28	61	2.4	86	3.4	276	10.9	2.0	4.4	215
XHP 36	36	86	3.4	86	3.4	276	10.9	2.7	6.0	325
XHP 45	45	86	3.4	86	3.4	276	10.9	2.9	6.4	315
XHP 52	52	86	3.4	86	3.4	276	10.9	2.9	6.4	315
XHP 60	60	86	3.4	86	3.4	306	12.1	3.4	7.5	405
XHP 70	70	86	3.4	86	3.4	306	12.1	3.5	7.5	405
XHP 80	80	86	3.4	86	3.4	306	12.1	3.5	7.5	390
XHP 90	90	78	3.1	166	6.5	339	13.4	5.8	12.8	750
XHP 100	100	78	3.1	166	6.5	339	13.4	6.1	13.5	735
XHP 115	115	78	3.1	166	6.5	339	13.4	6.3	13.9	720
XHP 130	130	87	3.4	166	6.5	339	13.4	7.0	15.4	815
XHP 150	150	103	4.1	166	6.5	339	13.4	8.2	18.1	990
XHP 170	170	117	4.6	166	6.5	339	13.4	9.7	21.6	1135
XHP 190	190	117	4.6	166	6.5	339	13.4	10.0	22.3	1115
XHP 220	220	198	7.9	166	6.5	339	13.4	14.7	32.4	2155
XHP 250	250	198	7.9	166	6.5	339	13.4	15.3	33.7	2120
XHP 280	280	198	7.9	166	6.5	339	13.4	15.8	34.6	2080
XHP 300	300	198	7.9	166	6.5	339	13.4	16.1	35.5	2060
XHP 320	320	198	7.9	166	6.5	339	13.4	16.5	36.2	2030

Alcad XHP batteries fulfil all requirements specified by IEC publication 60623.
Flame retardant (F) option available. Please add 1.5% to dimensions.



Terminals

XHP 11 - XHP 80	M10
XHP 90 - XHP 150	M12
XHP 170 - XHP 320	2 x M12



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Reliability inside

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