

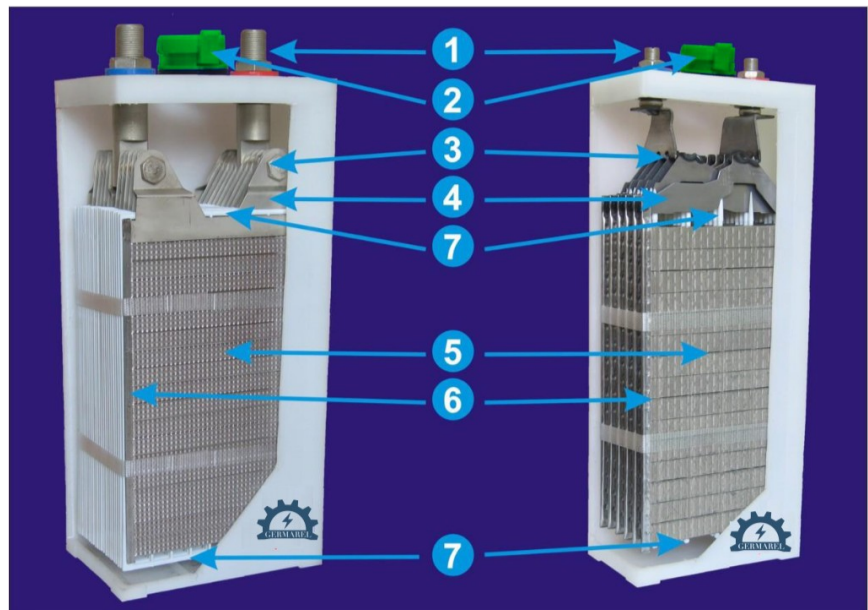
KGL450P Series NiCd 450Ah



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CONSTRUCTION:

Alkaline nickel-cadmium cell consists of pocket plate positive oxide-nickel and negative cadmium electrodes, divided by plastic separators, which provide stable spark gap and free circulation of electrolyte.



- 1. Terminal** - provides the current takeoff and cell connection.
- 2. Plug** - provides convenient electrolyte filling, free gas outlet during charging, and excludes electrolyte splashing and its aerosol steams.
- 3. Electrode connection** - connects the electrodes and provides the current transfer from electrodes to terminal.
- 4. Contact banks** - are welded to electrode and provide the current takeoff from the electrodes.
- 5. Electrode** - consists of horizontally located pocket plates, contains active material enclosed in steel perforated strip.
- 6. Rib** - provide electrode rigidity and current transfer to the contact banks.
- 7. Frame separator** - divides positive and negative electrodes, provides free circulation of electrolyte between the electrodes.

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Electrolyte requirements:

Electrolyte is a water solution of potassium hydroxide GOST 9285-78 of superior grade with density $(1200 \pm 10) \text{ kg/m}^3$, $(1,19 - 1,21 \text{ g/cm}^3)$ with addition of lithium hydroxide GOST 8595-83 in amounts of $(20 \pm 1) \text{ g/l}$. At the electrolyte temperature less than $-30 \text{ }^\circ\text{C}$ use electrolyte with density $1,26 - 1,28 \text{ g/cm}^3$ without addition of lithium hydroxide.

General characteristics:

- Batteries are supplied in the form of separate cells or battery blocks with compounds;
- Nominal voltage of cell is 1,2V, the block voltage depends on the number of the cells in the block (2,4 V; 3,6 V; 4,8 V; 6,0 V; 7,2 V; 8,4 V; 9,6 V; 10,8 V; 12,0 V);
- Cells and batteries provide full operation after storage during three months within the whole working temperature range without charge when putting into operation, under condition, that battery was charged and powered off before placing in storage;
- Cells and batteries ensure operation after six months storage, under condition, that battery was charged and powered off before placing in storage, battery should be charged before starting operation;
- Criterion of cells limiting state is a lowering of available capacity to less than 60 % of nominal capacity;

After completion of operation, Germarel accept cells for recycling together with electrolyte.



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MAINTENANCE-FREE ALKALINE NICKEL-CADMIUM CELLS OF KGL TYPE AND BLOCKS OF THEM

The cells of KGL type are alkaline cells with gas recombination and comply with international standard IEC 62259. These cells don't require periodic correction of electrolyte level when operated at long charge rate by low current or under specified stabilized charge voltage.

APPLICATIONS:

- Back-up power for cellular base stations, wire automatic telephone systems and other telecommunication objects;
- Signaling systems; emergency lighting and electrical power supply;
- Solar and wind power objects;
- Oil and gas complex (recovery, transportation and refining);
- Electric power objects (generation and distribution);
- Power systems of navigation marks;
- Underground;
- Passenger railway carriages;
- Electric locomotives and electric trains;
- Urban electric transport;
- Sea and river ships.

It's possible to develop and supply battery blocks with the different number of cell and individual layout according to customer's technical requirements.

Appearance of KGL type cells



KGL45P
KGL60P



KGL70P



KGL100P
KGL125P
KGL140P



KGL160P



KGL200P
KGL250P
KGL300P

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Range and main characteristics of KGL type cells

Cell type	IEC 62259 designation	Nominal capacity, C5	Cell dimensions, mm			Cell weight with electrolyte, kg	Terminals
			W	L	H		
KGL60P	KGL60P	60	113	59	270	2,9	M10
KGL70P	KGL70P	70	127	62,5	282	4,0	M14
KGL100P	KGL100P	100	137	78	360	5,8	M10
KGL125P	KGL125P	125	137	78	360	6,1	M10
KGL140P	KGL140P	140	137	78	362	6,5	M14
KGL160P	KGL160P	160	137	113	327	8,5	M16
KGL200P	KGL200P	200	171	118	356	11,4	M20
KGL200P	KGL200P	200	171	118	370	11,4	M20
KGL250P	KGL250P	250	171	118	356	12,0	M20
KGL250P	KGL250P	250	171	118	370	12,0	M20
KGL300P	KGL300P	300	171	118	356	12,4	M20
KGL300P	KGL300P	300	171	118	370	12,4	M20
KGL300P	KGL300P	300	172	119	405	13,2	M20
KGL350P	KGL350P	350	171	174	370	17,9	M20
KGL400P	KGL400P	400	169	174	411	19,2	2×M16
KGL450P	KGL450P	450	169	174	411	19,9	2×M16
KGL500P	KGL500P	500	169	174	411	20,0	2×M16

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Blocks Dimensions

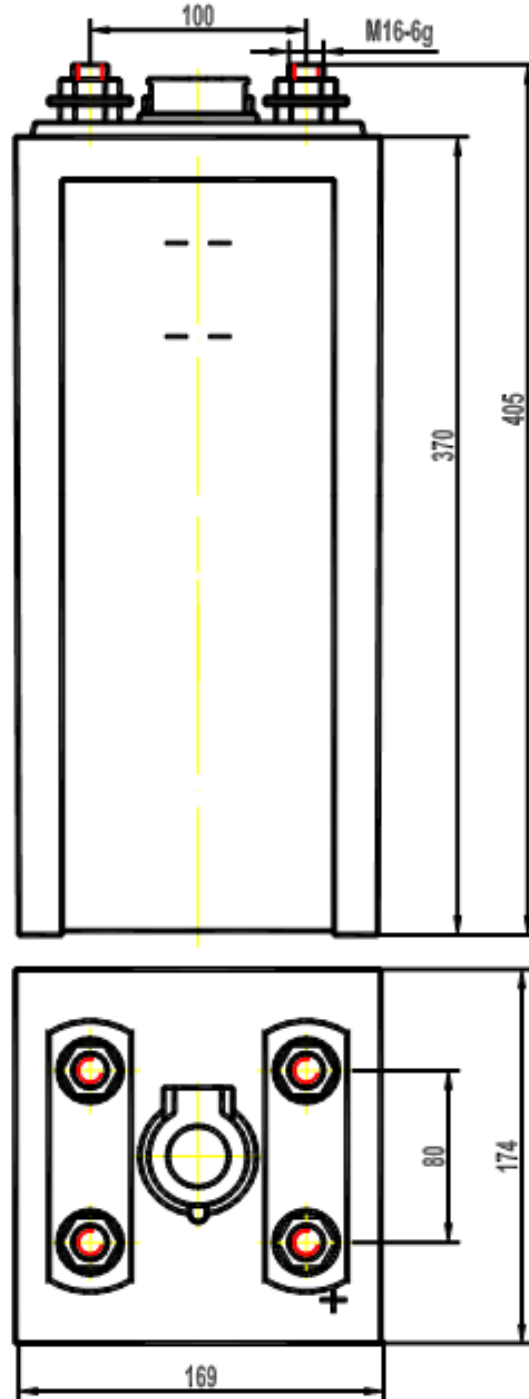
Cell type	Block dimensions, mm										
	W	H	L / L1								
			2	3	4	5	6	7	8	9	10
KGL45P	138	280	148	207	266	325	399	458	517	576	635
KGL60P	138	280	148	207	266	325	399	458	517	576	635
KGL70P	150	295	155	218	280	343	420	483	545	608	670
KGL100P	170	370	192 / 230	270 / 308	348 / 386	426 / 464	522 / 560	600 / 638	678 / 716	756 / 794	834 / 872
KGL125P	170	370	192 / 230	270 / 308	348 / 386	426 / 464	522 / 560	600 / 638	678 / 716	756 / 794	834 / 872
KGL140P	170	370	192 / 230	270 / 308	348 / 386	426 / 464	522 / 560	600 / 638	678 / 716	756 / 794	834 / 872
KGL160P	170	338	262	375	488	601	-	-	-	-	-
KGL200P	205	370	270	388	506	624	-	-	-	-	-
KGL200P	205	384	270	388	506	624	-	-	-	-	-
KGL250P	205	370	270	388	506	624	-	-	-	-	-
KGL250P	205	384	270	388	506	624	-	-	-	-	-
KGL300P	205	370	270	388	506	624	-	-	-	-	-
KGL300P	205	384	270	388	506	624	-	-	-	-	-
KGL300P	205	419	272	391	510	629	-	-	-	-	-
KGL350P	205	380	382 / 437	556 / 611	-	-	-	-	-	-	-

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KGL450P Drawing



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