

### PIBAS® KGL...P/KGM...P Range - Extreme Low Maintenance

Based on the more than 130 years of experience PIBAS® KGL...P/KGM...P ranges are built on the well proven pocket plate design combined with the break-through PIBAS® AFM (absorbed fibre mat) technology ensuring the highest possible recombination efficiency. PIBAS® KGL...P/KGM...P is leading the battery world in terms of high performance, longest proven service life, widest operational temperature range and lowest maintenance requirements. The plate technology and electrolyte choice tolerates temperature fluctuations from -50°C to +70°C with no effect on plate structure. The high temperature characteristics offer the unchallenged, longest lifetime of any battery in this hostile environment. The PIBAS® KGL...P/KGM...P design offers a 20 years+ service life, while it remains maintenance free throughout its life by reaching a 95% gas recombination rate – being equipped with the break-through PIBAS® AFM-Technology. All this makes PIBAS® KGL...P/KGM...P the perfect product when the total cost of ownership (TOC) and an optimized OPEX is considered.

### PIBAS® AFM-Technology

PIBAS® AFM-Technology makes the battery virtually maintenance free by combining certain key features. PIBAS® has combined special new materials and proven plate design to deliver the most reliable battery available to today's engineers. By using a special fibre mat separator together with a low pressure flame arresting vent, enhance of negative plate capacity and special active materials no topping up is required through the life of the battery. All this makes the product unique in the today's market.

### Advantages of PIBAS® Ni-Cd batteries

- excellent resistance against electrical and mechanical stress
- no risk of terminal decompose or sudden death due to plate construction
- extremely long lifetime - 20 years+ service life in stationary standby operation
- robust construction - hard-wearing and insensitive to faults in maintenance
- PIBAS® single cell design for economical replacement and highest safety

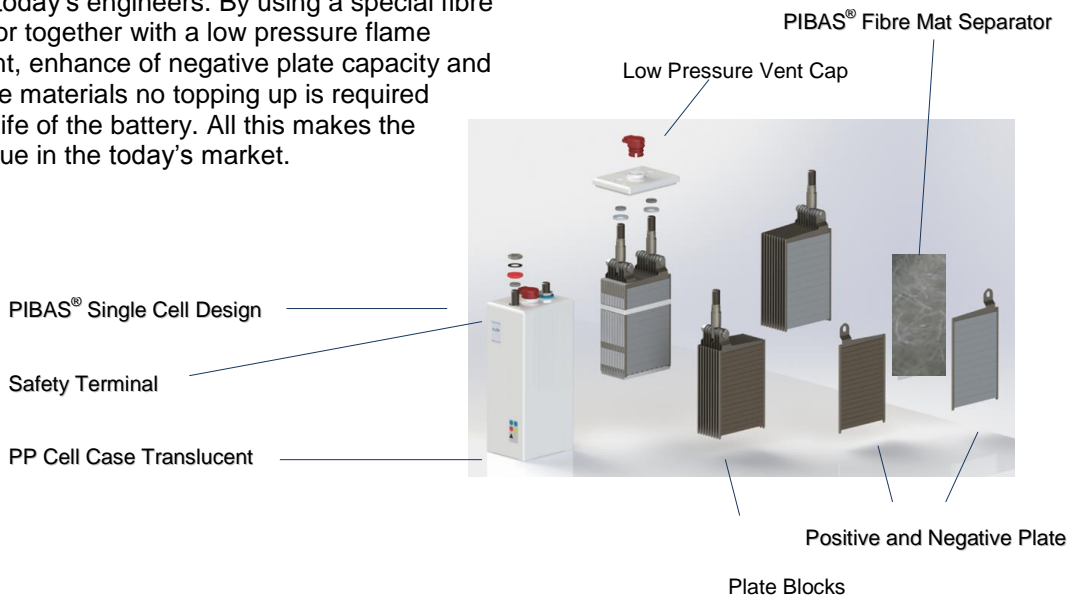
### Configuration forms

PIBAS® Ni-Cd cells can be assembled into many different configuration forms, for example:

- Putting up on battery racks and cabinets
- Mounting as compact blocks
- Assembling in plastic/ stainless steel crates or battery troughs

### Field of application

PIBAS® KGL...P/KGM...P is perfectly suited for all stationary standby energy storage applications and leading the market in Oil & Gas, Utility and Power Plants, demanding UPS and Telecom applications.



### PIBAS® KGL...P Range

This PIBAS® KGL...P is used for low rates of discharge over long periods with a recommended discharge time of 1 h to over 100 h. It is used when the discharge current is relatively low compared with the total stored energy. PIBAS® KGL...P offers a good cycle life for which pocket plate batteries are known of. PIBAS® KGL...P range offers 43 capacity steps (12 Ah to 1570 Ah) ensuring a close economic fit to your load requirement – you can buy what you need with accuracy.

Type	Nominal capacity [Ah]*	P	Dimensions [mm]				Pol / Terminals Size	Weight Total weight
			l	w	h	h <sub>1</sub>		
KGL	12	P	46	85	167	193	2 x M10	1,03
KGL	20	P	59	113	213	235	2 x M10	1,48
KGL	25	P	59	113	213	235	2 x M10	1,51
KGL	35	P	59	113	213	235	2 x M10	1,64
KGL	45	P	59	113	213	235	2 x M10	2,68
KGL	50	P	59	113	213	235	2 x M10	2,82
KGL	60	P	59	113	213	235	2 x M10	2,97
KGL	70	P	60	127	253	275	2 x M14	4,85
KGL	80	P	74	136	339	357	2 x M10	5,00
KGL	100	P	74	136	339	357	2 x M10	6,18
KGL	120	P	74	136	339	357	2 x M10	6,51
KGL	135	P	112	134	291	327	2 x M16	7,67
KGL	155	P	112	134	291	327	2 x M16	7,84
KGL	175	P	118	167	327	362	4 x M20	10,61
KGL	205	P	118	167	327	362	4 x M20	10,91
KGL	225	P	118	167	327	362	4 x M20	11,17
KGL	245	P	118	167	327	362	4 x M20	11,62
KGL	275	P	129	167	364	400	2 x M20	12,22
KGL	300	P	129	167	364	400	2 x M20	16,30
KGL	330	P	129	167	364	400	2 x M20	16,50
KGL	350	P	129	167	364	400	2 x M20	17,00
KGL	375	P	171	174	337	372	4 x M20	17,50
KGL	390	P	171	174	337	372	4 x M20	18,00
KGL	420	P	171	174	337	372	4 x M20	18,50
KGL	440	P	171	174	337	372	4 x M20	18,90
KGL	500	P	176	246	382	410	4 x M16	27,30
KGL	555	P	176	246	382	410	4 x M16	28,30
KGL	585	P	176	246	382	410	4 x M16	28,70
KGL	610	P	176	246	382	410	4 x M16	29,30
KGL	645	P	176	246	382	410	4 x M16	29,80
KGL	665	P	176	368	382	420	6 x M16	40,70
KGL	705	P	176	368	382	420	6 x M16	41,40
KGL	750	P	176	368	382	420	6 x M16	41,90
KGL	795	P	176	368	382	420	6 x M16	42,60
KGL	835	P	176	368	382	420	6 x M16	43,10
KGL	890	P	176	448	382	420	8 x M16	49,20
KGL	990	P	176	448	382	420	8 x M16	53,70
KGL	1110	P	176	448	382	420	8 x M16	56,00
KGL	1260	P	176	558	382	420	10 x M16	64,30
KGL	1320	P	176	558	382	420	10 x M16	66,80
KGL	1390	P	176	558	382	420	10 x M16	68,90
KGL	1460	P	176	558	382	420	10 x M16	70,50
KGL	1570	P	176	558	382	420	10 x M16	71,60

Typ Type	Bemessungs- kapazität		Abmessungen				Pole / Terminals	Gewicht
	Nominal capacity	P	Dimensions				Größe Size	Weight
			[ mm ]					
			l	w	h	h <sub>1</sub>		
[Ah]*							Gesamtgewicht total weight	
KGM	11	P	46	85	167	193	2 x M10	1,03
KGM	18	P	59	113	213	235	2 x M10	1,48
KGM	24	P	59	113	213	235	2 x M10	1,59
KGM	30	P	59	113	213	235	2 x M10	1,72
KGM	40	P	59	113	213	235	2 x M10	2,76
KGM	48	P	59	113	213	235	2 x M10	2,82
KGM	55	P	59	113	213	235	2 x M10	2,97
KGM	65	P	60	127	253	275	2 x M14	4,85
KGM	75	P	74	136	339	357	2 x M14	5,00
KGM	90	P	74	136	339	357	2 x M14	6,18
KGM	110	P	74	136	339	357	2 x M14	6,51
KGM	125	P	112	134	291	327	2 x M16	7,67
KGM	140	P	112	134	291	327	2 x M16	7,84
KGM	160	P	118	167	327	362	4 x M20	10,61
KGM	185	P	118	167	327	362	4 x M20	10,91
KGM	205	P	118	167	327	362	4 x M20	11,17
KGM	225	P	118	167	327	362	4 x M20	11,62
KGM	250	P	129	167	364	400	2 x M20	12,22
KGM	270	P	129	167	364	400	2 x M20	16,30
KGM	300	P	129	167	364	400	2 x M20	16,50
KGM	320	P	129	167	364	400	2 x M20	17,00
KGM	340	P	171	174	337	372	4 x M20	17,50
KGM	355	P	171	174	337	372	4 x M20	18,00
KGM	380	P	171	174	337	372	4 x M20	18,50
KGM	400	P	171	174	337	372	4 x M20	18,90
KGM	450	P	176	246	382	410	4 x M16	27,30
KGM	500	P	176	246	382	410	4 x M16	28,30
KGM	520	P	176	246	382	410	4 x M16	28,90
KGM	570	P	176	246	382	410	4 x M16	29,70
KGM	600	P	176	246	382	410	4 x M16	40,70
KGM	630	P	176	368	382	420	6 x M16	41,15
KGM	675	P	176	368	382	420	6 x M16	41,90
KGM	690	P	176	368	382	420	6 x M16	42,25
KGM	750	P	176	368	382	420	6 x M16	43,10
KGM	770	P	176	368	382	420	6 x M16	45,40
KGM	800	P	176	448	382	420	8 x M16	49,10
KGM	850	P	176	448	382	420	8 x M16	51,40
KGM	950	P	176	448	382	420	8 x M16	53,70
KGM	1000	P	176	448	382	420	8 x M16	56,00
KGM	1030	P	176	448	382	420	8 x M16	58,90
KGM	1250	P	176	558	382	420	10 x M16	68,90
KGM	1350	P	176	558	382	420	10 x M16	68,90
KGM	1560	P	176	558	382	420	10 x M16	72,50

### PIBAS® KGM...P Range

This PIBAS® KGM...P has been especially designed for "mixed loads" that include a mixture of high and low rates of discharge. It is used for frequent and infrequent discharges and the recommended discharge time is 30 min to 3 h. PIBAS® KGMP range offers 43 different capacities from 11 Ah to 1560 Ah.

## Important

The rated capacity  $C_5$  is not the basis for the performance of the batteries. It is to take into account that the performance depends on the battery construction, i.e. on the different battery ranges. Therefore, our discharge tables should be used to find out the appropriated cell type for a specific application in comparison to prices, dimensions ...

The rated capacity  $C_5$  of PIBAS® KGL...P/KGM...P range batteries is based on the available ampere hours (Ah) at a discharge rate of 5 hours to the final discharge voltage which is stated in technical specification table per cell at  $20\text{ °C} \pm 5\text{ °C}$ .

Nominal voltage per cell is 1.2 V.

PIBAS® Ni-Cd battery cells KGL..P & KGM ...P fulfil all requirements according to IEC 62259.

## Discharging conditions

The rated capacities  $C_5$  given in this brochure are only valid for fully charged cells in accordance with IEC 62259.

## Charging conditions

### 1. Two level charge

Floating: 1.40V/cell - 1.42 V/cell

Boost charge: 1.45 V/cell

**Current limitation: 0.1  $I_t$  A**

### 2. Single level charge

Standard charge: 1.42 V/cell

**Note: A higher charging level is possible but effects the recombination rate and causes in a higher water consumption.**

All dimensions and weights are subject to manufacturing tolerances.

Issue July 2018



PIBAS Power & Industrial Battery Systems GmbH  
Klosterstr. 1  
08056 Zwickau / GERMANY  
**Tel: +49 375 88351937**  
**Fax: +49 375 88351936**  
Internet: [www.pibas.de](http://www.pibas.de)  
Email: [power@pibas.de](mailto:power@pibas.de)

