

RANGE SUMMARY AVANTGARDE NI-CD BATTERIES KGM...P / LONG LIFE – ZERO MAINTENANCE

PIBAS® KGM...P Range – Zero Maintenance

Based on the more than 130 years of experience PIBAS® KGM...P ranges are built on the well proven pocket plate design combined with the break-through PIBAS® AFM-Technology (absorbed fibre mat) ensuring the highest possible recombination efficiency. PIBAS® 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 $+70^{\circ}\text{C}$ with no effect on plate structure. The high temperature characteristics offer the unchallenged, longest lifetime of any battery in this hostile environment. The PIBAS® 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® 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.

PIBAS® Modular Single Cell Concept

All PIBAS® KGM...P single cell cases are made by robust polypropylene container material moulded out of one piece to ensure 100% leak free operation, maximum stability to withstand internal recombination pressure, easy and fast installation and economical replacement/reduced OPEX throughout the lifetime.

Advantages of PIBAS® Avantgarde KGM...P 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
- Advanced plate design leads to outstanding performance and smaller batteries
- Excellent chargeability – narrow voltage windows can be used
- Gas recombination rate – far beyond the IEC62259 requirements
- Zero maintenance* but without the risk of boiling out
- Robust construction - hard-wearing and insensitive to faults in maintenance
- PIBAS® single cell concept for economical replacement and highest safety
- 44 capacity steps (11 Ah - 1560 Ah) ensuring a close economic fit to any load
- Optimized for mixed loads with low and high discharge rates

Field of application

PIBAS® 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.

* Zero maintenance means no topping up with water is necessary during the lifetime if PIBAS' s operating conditions are observed.

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® 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 $20^{\circ}\text{C} \pm 5^{\circ}\text{C}$. Nominal voltage per cell is 1.2 V.

PIBAS® Ni-Cd battery cells 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.

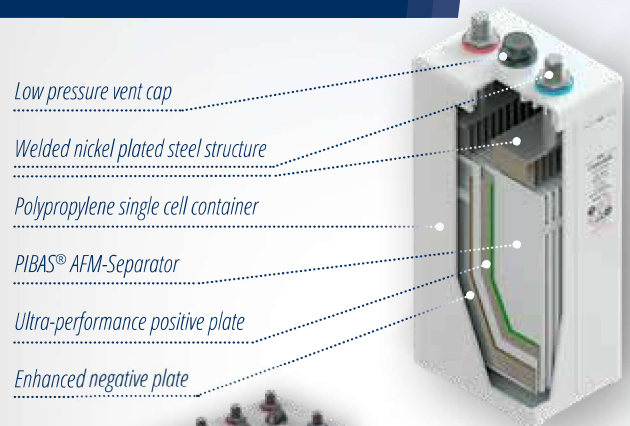
Charging conditions

1. Two level charge: Floating: 1.40 V/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.

PIBAS® Avantgarde Single Cell Concept



PIBAS® Avantgarde
Modular High Capacity
Single Cell

PIBAS® AVANTGARDE KGM...P RANGE CELL DIMENSIONAL DETAILS / LONG LIFE - ZERO MAINTENANCE / NI-CD SINGLE CELL

TYPE	NOMINAL CAPACITY		DIMENSIONS [mm]				TERMINALS Size	WEIGHT kg
			l	w	h	h ₁		
	5 hr rate [Ah]*							
KGM	11	P	59	113	213	235	2 x M10	2,2
KGM	18	P	59	113	213	235	2 x M10	2,3
KGM	24	P	59	113	213	235	2 x M10	2,4
KGM	30	P	59	113	213	235	2 x M10	2,6
KGM	40	P	60	127	253	275	2 x M14	3,3
KGM	48	P	60	127	253	275	2 x M14	3,4
KGM	55	P	74	136	339	357	2 x M14	5
KGM	65	P	74	136	339	357	2 x M14	5,1
KGM	70	P	74	136	339	357	2 x M14	5,2
KGM	75	P	74	136	339	357	2 x M14	5,3
KGM	90	P	74	136	339	357	2 x M14	5,7
KGM	100	P	74	136	339	357	2 x M14	7,7
KGM	110	P	74	136	339	357	2 x M14	7,8
KGM	125	P	112	134	291	327	2 x M16	8
KGM	140	P	112	134	291	327	2 x M16	8,1
KGM	160	P	118	167	327	362	4 x M20	11,5
KGM	170	P	118	167	327	362	4 x M20	11,6
KGM	185	P	118	167	327	362	4 x M20	11,8
KGM	205	P	118	167	327	362	4 x M20	12,1
KGM	225	P	118	167	327	362	4 x M20	14,4
KGM	250	P	129	167	364	400	2 x M20	14,6
KGM	265	P	150	195	370	400	4 x M10	19,5
KGM	270	P	129	167	364	400	2 x M20	15
KGM	295	P	150	195	370	400	4 x M10	20
KGM	300	P	129	167	364	400	2 x M20	18,8
KGM	320	P	129	167	364	400	2 x M20	19
KGM	340	P	171	174	337	372	4 x M20	30,2
KGM	355	P	171	174	337	372	4 x M20	30,4
KGM	380	P	171	174	337	372	4 x M20	30,5
KGM	400	P	171	174	337	372	4 x M20	30,6
KGM	420	P	195	268	375	405	6 x M20	30,8
KGM	450	P	195	268	375	405	6 x M20	31,4
KGM	500	P	195	268	375	405	6 x M20	32,5
KGM	520	P	195	268	375	405	6 x M20	32,9
KGM	570	P	195	268	375	405	6 x M20	33,2
KGM	600	P	195	268	376	405	6 x M20	33,9
KGM	630	P	195	268	376	405	6 x M20	34,5
KGM	675	P	195	268	376	405	6 x M20	50
KGM	690	P	195	268	375	405	6 x M20	50,4
KGM	750	P	195	437	375	405	10 x M20	51
KGM	770	P	195	437	375	405	10 x M20	52
KGM	800	P	195	437	375	405	10 x M20	53,3
KGM	850	P	195	437	375	405	10 x M20	55,5
KGM	950	P	195	437	375	405	10 x M20	57,4
KGM	1000	P	195	437	375	405	10 x M20	57,8
KGM	1030	P	195	437	375	405	10 x M20	57
KGM	1100	P	195	472	375	405	10 x M20	64,5
KGM	1250	P	195	472	375	405	10 x M20	65,5
KGM	1350	P	195	523	375	405	12 x M20	68,44
KGM	1560	P	195	523	375	405	12 x M20	75,66

h₁ = height over terminals/ All dimensions and weights are subject to manufacturing tolerances. Issue June 2006.