

Industrial Batteries / Motive Power

MARATHON

RUNNING FOR YOUR BUSINESS



These batteries truly live up to their new name – MARATHON

GNB® Industrial Power uses its technical expertise to make your business more profitable. The efficient and reliable GNB MARATHON team goes the distance for your business.

MARATHON®
Classic

Classic becomes
MARATHON Classic -
proven, powerful and reliable

MARATHON®
EXCELL

Liberator Silver becomes
MARATHON EXCELL -
low maintenance with water
and energy saving

MARATHON®
AQUA

Liberator Gold becomes
MARATHON AQUA -
minimum maintenance and
maximum efficiency



RUNNING FOR YOUR BUSINESS

From now on, GNB Liberator and Classic batteries combine all of their power **under the new MARATHON brand.**



+AIR

BOOST YOUR BATTERIES

MARATHON[®]
CLASSIC+AIR

MARATHON[®]
EXCELL+AIR

MARATHON[®]
AQUA+AIR

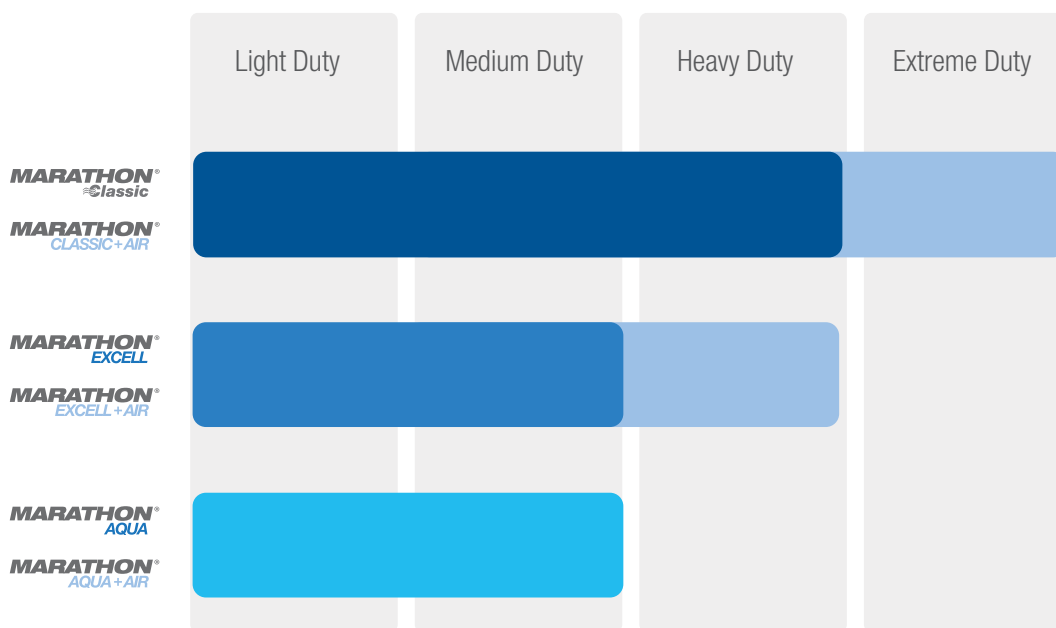
All MARATHON batteries can be equipped with AIR agitation – a forced electrolyte circulation system – for extended water-refilling intervals and high cycle life. +AIR reduces energy and water consumption even further to maximise cost savings and minimise your CO₂ footprint.

MARATHON batteries

The economical solution

Energy solutions for all applications

The innovative MARATHON battery range from GNB® Industrial Power creates a new standard in traction batteries. MARATHON batteries are the ideal choice for light duty to heavy duty applications. These batteries are designed to power all types of industrial trucks, and are also perfectly suited for all other applications where a powerful and robust power source with high cyclability is required. Low maintenance MARATHON EXCELL and AQUA batteries significantly decrease maintenance and energy costs, which can be decreased even further using the +AIR option.



Light Duty

- > Limited handling performance
- > 1 or 2-shift operations
- > Normal environmental conditions
- > Indoor applications, even ground
- > Example: hand pallet truck in a supermarket

Medium Duty

- > Medium handling performance
- > 1 or 2-shift operations
- > Temperature variations, dust
- > Partial outdoor applications, uneven ground
- > Example: 1-2t forklift at a loading ramp

Heavy Duty

- > High handling performance
- > 2 or 3-shift operations
- > Elevated temperatures, dust
- > Partial outdoor applications, uneven ground
- > Examples: 3-5t forklift, order picker, VNA truck in warehouse

Extreme Duty

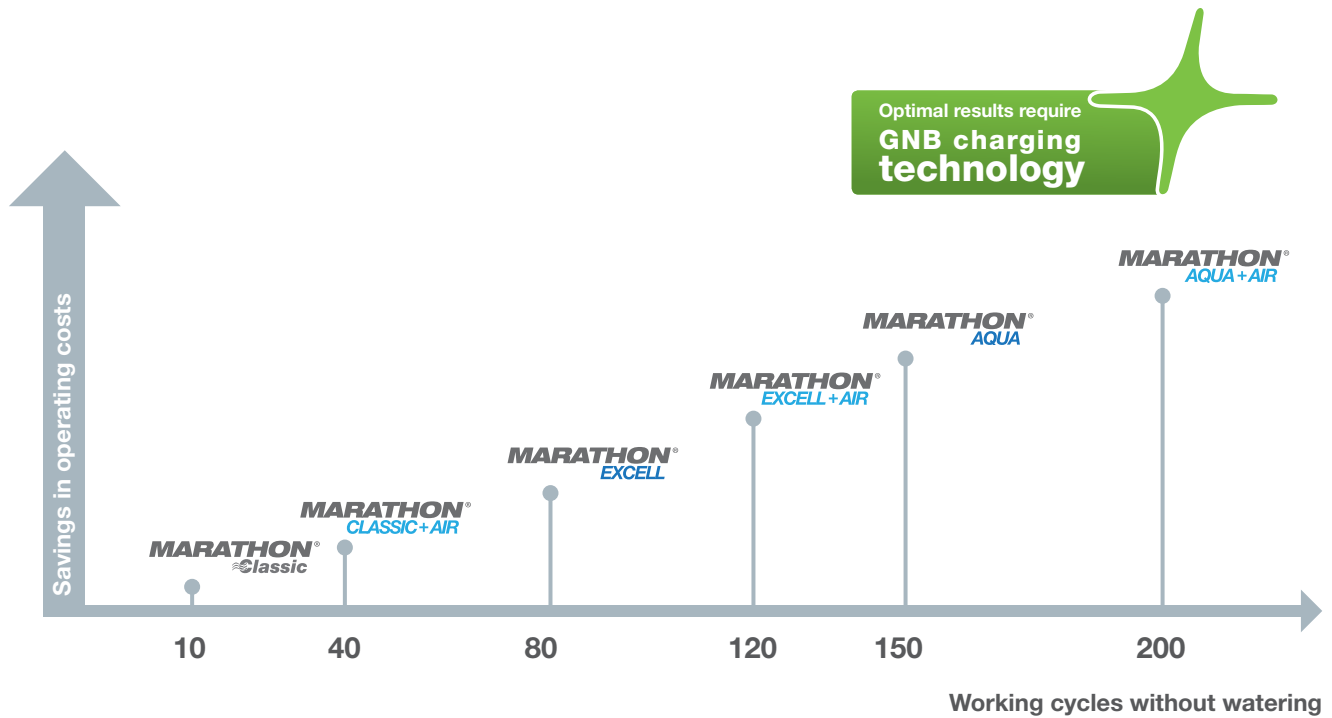
- > Superior handling performance
- > 2 or 3-shift operations
- > High dust load, very high or low temperatures
- > Indoor/outdoor applications
- > Accessory equipment (clamps, multiple forks)
- > Examples: Forklifts over 5t, distribution centres, cold storage, mining, chemical industry

MARATHON batteries

Economical and powerful

Reduced operating costs due to extended watering intervals

Extended watering intervals help to cut operating costs by saving water and maintenance. When GNB charging technology is used, watering intervals can be extended to 40 and up to 200 working days depending on battery type.



Reduced emissions

Carbon dioxide (CO₂), soot and noise emissions must be significantly reduced to meet environmental and public health objectives. Shifting to electric-powered trucks puts these goals within easy reach. Future-ready MARATHON technology makes it easier to change from combustion-engine trucks to battery-powered trucks.

Environmentally friendly

Because MARATHON batteries are based on lead-acid technology, they are fully recyclable – an important additional advantage over other battery technologies. Long service life, high energy efficiency and recyclability make MARATHON batteries a true green choice.

MARATHON Classic and MARATHON Classic+AIR

Proven, powerful and reliable

EPzS/EPzB batteries are the ideal energy source for all material handling applications. They can also supply the energy and cycle life required for cleaning machines, tow tractors, mobile lifting platforms, electric road vehicles and electric/hybrid boats.



Technical features

- > Robust lead-acid battery technology with liquid electrolyte
- > Proven tubular plate technology for long cycle life
- > Fully insulated, bolted terminals and connectors
- > DIN and BS sizes according to IEC 60254-2
- > Manufactured in accordance with DIN EN ISO 9001
- > Environmental management in accordance with DIN EN ISO 14001
- > Fully recyclable



Expert tip:

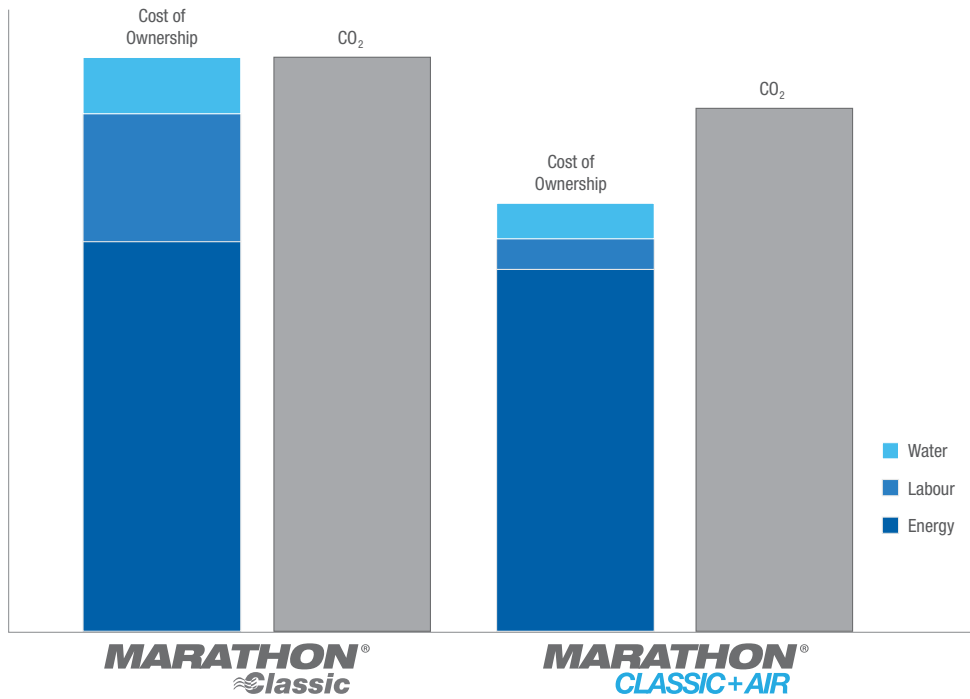
+AIR

Upgrade to MARATHON Classic+AIR!

- > Air agitation system (EUW) benefits:
 - > Reduces energy and water consumption
 - > Extends service life by reducing chemical stress and temperature rises when charging
 - > Speeds up the charging process and ensures smooth opportunity charging.



MARATHON Classic and MARATHON Classic+AIR Economic Comparison



Your benefits:

- > **Very robust & reliable**
- > **EXCELLent price/quality ratio**
- > **Environmentally friendly** and fully recyclable

Options:

- > **Explosion-proof** version (ATEX)
- > Automatic **water-refilling system**



MARATHON EXCELL and MARATHON EXCELL+AIR

Low maintenance with water and energy savings

MARATHON EXCELL, from GNB® Industrial Power, is reliable, durable and requires very little maintenance. The proven PzS tubular-plate technology guarantees durability, and the large selection of cell variants makes it perfect for all types of applications.

MARATHON
EXCELL

MARATHON EXCELL features extended watering intervals of up to 120 days, achieved through combining a special low-antimony alloy with an optimised charging technology. The optional electrolyte level sensor and an automatic watering system are making the maintenance of the battery even easier. This results in improved profitability and reduced total cost of ownership.

Technical features

- > Special low-antimony alloy for minimum maintenance and maximum reliability
- > Reduced water loss due to optimized charging technology
- > Extended watering intervals from 16 weeks (80 cycles) up to 24 weeks (120 cycles)
- > Long watering intervals throughout entire service life (no poisoning of negative plates)
- > Proven PzS technology/tubular plates guarantees durability
- > Recommended options: Electrolyte level sensor and automatic watering system
- > Exceptional cell diversity for all application areas, including DIN EPzS and BS EPzB cell sizes

Expert tip:

+AIR

Upgrade to MARATHON EXCELL+AIR!

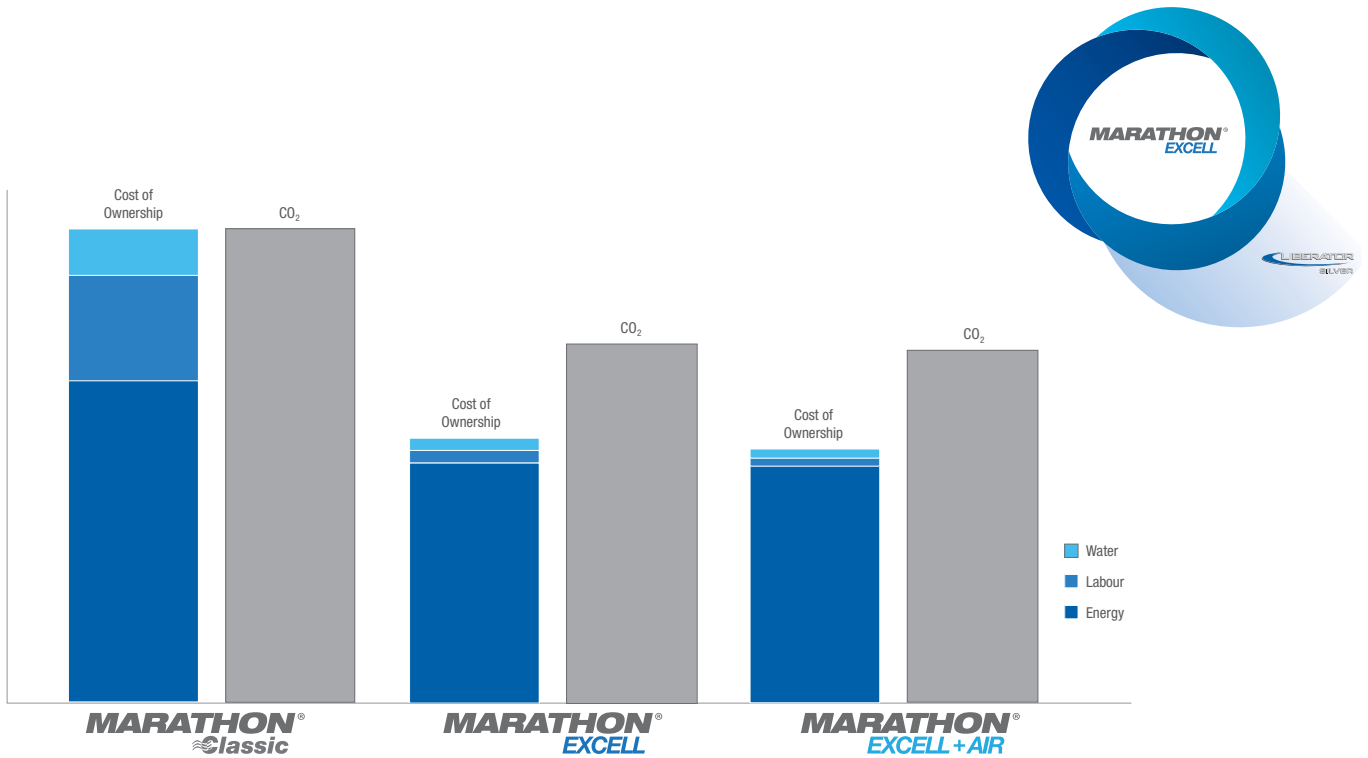
- > Air agitation system (EUW) benefits:
 - > Reduces energy and water consumption
 - > Extends service life by reducing chemical stress and temperature rises when charging

MARATHON
EXCELL + AIR



MARATHON EXCELL and MARATHON EXCELL+AIR

Economic Comparison



Your benefits:

- > Economical due to extended watering intervals
 - > **Less maintenance**
 - > **Less energy**
 - > **Less water**
- > Environmentally friendly
 - > **Reduced CO₂ footprint**
 - > **Fully recyclable**
 - > **EXCELLent cyclic durability**

MARATHON AQUA and MARATHON AQUA+AIR

Minimum maintenance – maximum efficiency

If you need to extend watering intervals to the maximum, MARATHON AQUA is the right choice. Based on the application of proven and reliable tubular plates, these batteries deliver extremely low maintenance and operational costs.

MARATHON
AQUA

Water-refilling intervals can be extended up to 200 cycles for all battery capacities in this range. This is achieved using a special low-antimony alloy and high electrolyte content. In addition, a low-antimony alloy combined with an optimised charging regime results in reduced water loss when charging. All these characteristics extend watering intervals to the extreme, significantly improving profitability.



Expert tip:

+AIR

Upgrade to MARATHON AQUA+AIR!

- > Air agitation system (EUW) benefits:
 - > Reduces energy and water consumption
 - > Extends service life by reducing chemical stress and temperature rises when charging

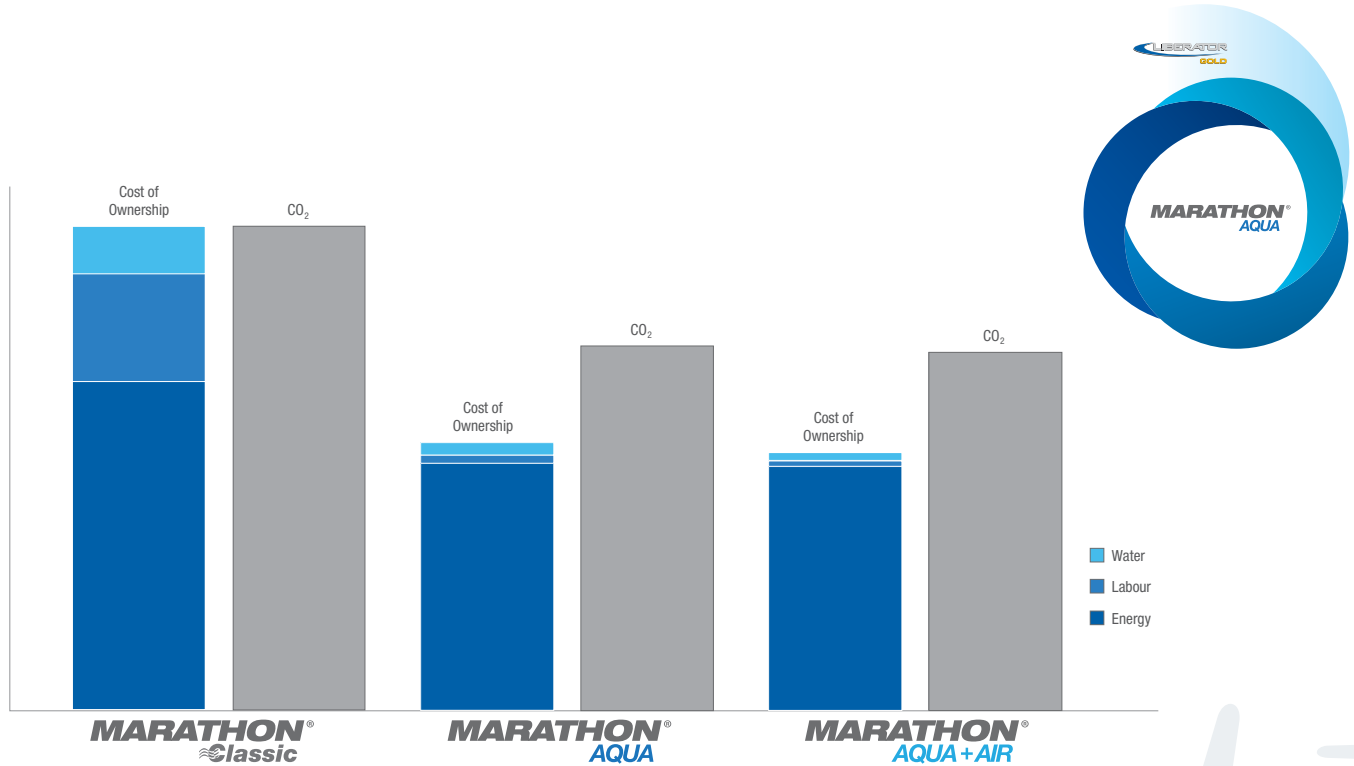
MARATHON
AQUA + AIR

Technical features

- | | |
|---|---|
| <ul style="list-style-type: none"> > Special low-antimony alloy and high electrolyte content for minimum maintenance and maximum reliability > Reduced water loss due to optimized charging technology > Extended watering intervals from 30 weeks (150 cycles) up to 40 weeks (200 cycles) | <ul style="list-style-type: none"> > Long watering intervals throughout entire service life (no poisoning of negative plates) > Proven PzS tubular-plate technology guarantees durability > Recommended options: Electrolyte level sensor and automatic watering system |
|---|---|

MARATHON AQUA and MARATHON AQUA+AIR

Economic Comparison



Your benefits:

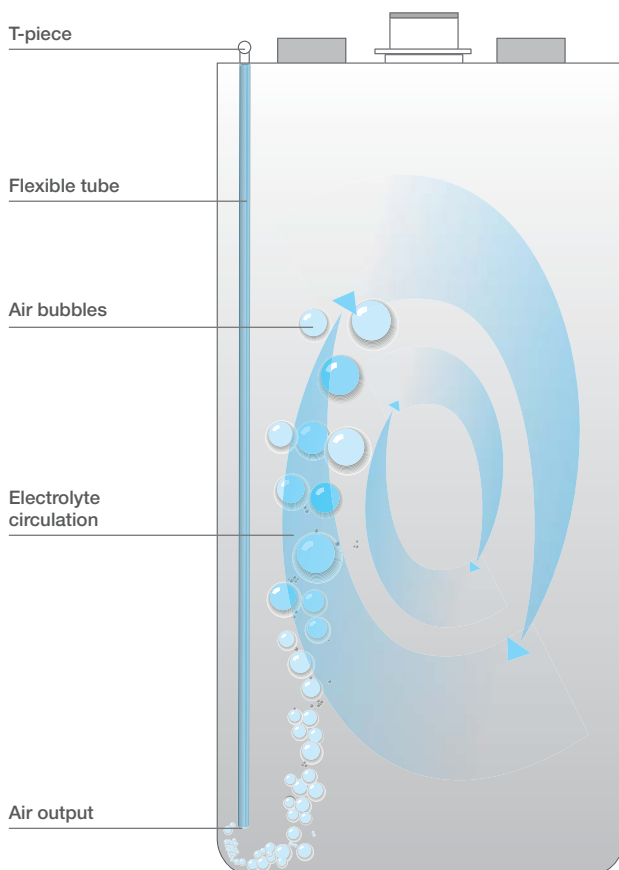
- > Economical due to maximum extended watering intervals
 - > **Less maintenance**
 - > **Less energy**
 - > **Less water**
- > Environmentally friendly
 - > **Reduced CO₂ footprint**
 - > **Fully recyclable**
 - > **High cycle life**

Forced Electrolyte Circulation System

Boost your batteries with Air Agitation

System and Functionality

Air agitation systems are designed to bubble air through the electrolyte during the charging process. Normally the required air pump is integrated inside the charger, but there are also charger-independent, battery-powered air agitation pumps available. The air is supplied via the plug to a tubing system on top of the battery that is connected to each individual cell. All cells are equipped with a T-piece on the lid that guides the air into the cell, where it flows down a flexible tube. On the inside bottom of the cell, the air bubbles out and creates a whirlpool, making the electrolyte circulate using the airlift pump principle.



Technical background

Charging a lead-acid battery generates intermediate acid stratification because lead sulphate located on the plates is converted to free sulphuric acid. Sulphuric acid is heavier than the electrolyte and therefore sinks to the bottom of the cell, generating a high concentration of acid there. This high acid concentration accelerates the corrosion rate at the lower end of the plates. It also causes deep discharges at the bottom of the plates during the discharging process, while the upper ends of the plates have less capacity due to the lack of acid.

Normally the acid stratification is resolved by overcharging, since the generation of hydrogen gas remixes the electrolyte. The negative side effects of this method are high energy and water consumption, and the battery temperature also rises significantly. If no overcharging is performed because of short charging times or frequent opportunity charging, acid stratification will cause sustained and unavoidable damage.

Batteries equipped with an air agitation system prevent detrimental acid stratification by mixing the electrolyte throughout the charging process. Less overcharge is required, which decreases the energy required and results in minimal water decomposition. Other positive side effects include lower temperature rises compared to standard charging, and the ability to carry out frequent opportunity charging before performing a full recharge.

Your benefits:

+AIR

- > Reduces energy and water consumption
- > Extends service life by reducing chemical stress and temperature rises when charging
- > Speeds up the charging process and ensures smooth opportunity charging.

Chargers

2100 Chargers, Fleet Management and Battery Monitoring

2100 Charger range

To meet the increased requirements of modern Motive Power batteries, GNB® Industrial Power uses its integrated project planning expertise to offer the ideal charging technology for your energy system. You benefit from better solutions and increased economic efficiency!

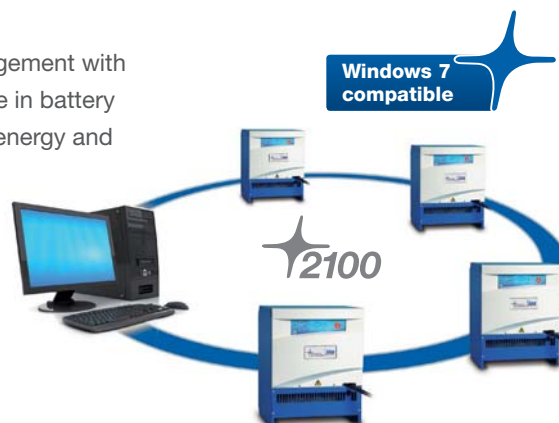
As a system provider of energy solutions, GNB® possesses more experience than any other company in the field. The combination of efficient GNB® charging technology and optimally adapted components ensures long service life and high performance for your valuable battery. GNB's powerful 2100 range includes an extensive portfolio of chargers for every type of Motive Power battery.



2100.net Fleet Management

The innovative 2100.net system from GNB combines intelligent fleet management with comprehensive battery monitoring. With more than 120 years of experience in battery development, production and application, GNB is your reliable partner for energy and cost-efficient customised solutions:

- > Low operating costs – optimise utilisation of your battery fleet
- > Central monitoring – determine battery availability via a central computer
- > Access all important data over the entire service life of the battery
- > Identify errors quickly and reliably



2100 Battery Monitoring

The battery monitoring function of 2100.net gives you access to all important data throughout the service life of a battery. With 2100.net, you require no electronic devices on the battery. A plug with an integrated RFID chip enables accurate battery identification and provides an extensive reporting system for battery picks, chargers and individual batteries.



Battery



BattID



Charger

Accessories

Useful add-ons for your batteries

Automatic watering system

For quick and safe topping-up of vented batteries, single point watering systems are recommended to enhance economy and safety.

GNB® Industrial Power offers two systems:

- > Float system
- > Injector system



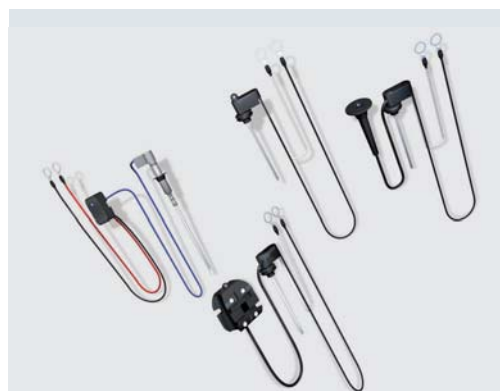
Watering tanks

GNB® Industrial Power also offers many useful components, including watering systems.

- > Mobile or wall mounted
- > Water gun and equipment
- > Water deioniser

AIR agitation (EUW)

Flooded cells can be equipped with a forced electrolyte circulation system (EUW). The cells will be equipped with a flexible tube with a tee. This tube is installed next to the plate set.



Electrolyte level sensors

To ensure safe use of Motive Power batteries, various sensors have been developed to control the electrolyte level of batteries. All sensors are of the same design and incorporate the same technology.

- Optional extras:
- > LED for remote dashboard
 - > Multilayer
 - > Battery-plug mounted

GNB® Service

Keeping your business moving

GNB® is the expert

Who could do the job better than the professionals at a company with more than 120 years of experience in battery development and production?

Leave batteries and charger maintenance to the professionals. A GNB® service contract delivers exceptional time savings, cost savings and increased safety!

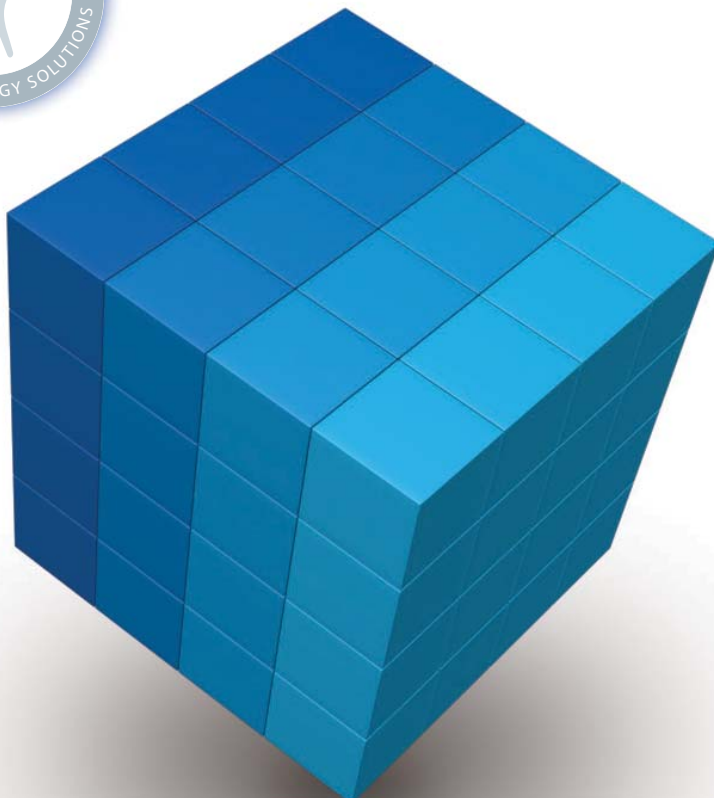


Whatever your application – GNB® has the experience



Professional handling is the key to a long service life for your batteries and chargers and to the maximum uptime of your fleet.

Based on many years of experience GNB® is your competent partner for all questions regarding batteries and chargers. GNB® offers tailored solutions to power your intralogistic operations.



- ✦ Inspection Contract
- ✦ Maintenance Contract
- ✦ Lifetime Warranty Contract
- ✦ Full Service Contract



»GNB® Service –
individualised, professional
service across Europe!

MARATHON Classic and MARATHON Classic+AIR

Technical Data

Applications

EPzS batteries are the ideal energy source for all material handling applications. They can also supply the energy and cycle life required for cleaning machines, tow tractors, mobile lifting platforms, electric road vehicles and electric/hybrid boats.

Technical characteristics and data (DIN - cells) width (b/w) 198 mm

Type 60 Ah* B	Nominal Capacity	Weight**	Length (l)	Type 80 Ah* C	Nominal Capacity	Weight**	Length (l)	Type 90 Ah* D	Nominal Capacity	Weight**	Length (l)	Type 105 Ah* E	Nominal Capacity	Weight**	Length (l)
Height (h1) 333 mm Height (h2) 363 mm	[Ah]	[kg]	[mm]	Height (h1) 396 mm Height (h2) 426 mm	[Ah]	[kg]	[mm]	Height (h1) 463 mm Height (h2) 493 mm	[Ah]	[kg]	[mm]	Height (h1) 511 mm Height (h2) 541 mm	[Ah]	[kg]	[mm]
2 EPzS 120	120	8.50	47.0	2 EPzS 160	160	10.0	47.0	2 EPzS 180	180	11.9	47.0	2 EPzS 210	210	13.5	47.0
3 EPzS 180	180	12.0	65.0	3 EPzS 240	240	14.2	65.0	3 EPzS 270	270	17.0	65.0	3 EPzS 315	315	19.1	65.0
4 EPzS 240	240	15.4	83.0	4 EPzS 320	320	18.4	83.0	4 EPzS 360	360	22.1	83.0	4 EPzS 420	420	24.6	83.0
5 EPzS 300	300	19.0	101	5 EPzS 400	400	22.6	101	5 EPzS 450	450	27.1	101	5 EPzS 525	525	30.5	101
6 EPzS 360	360	22.5	119	6 EPzS 480	480	26.7	119	6 EPzS 540	540	32.2	119	6 EPzS 630	630	36.1	119
7 EPzS 420	420	26.0	137	7 EPzS 560	560	31.3	137	7 EPzS 630	630	37.2	137	7 EPzS 735	735	41.8	137
8 EPzS 480	480	29.5	155	8 EPzS 640	640	35.1	155	8 EPzS 720	720	42.3	155	8 EPzS 840	840	47.4	155
9 EPzS 540	540	33.0	173	9 EPzS 720	720	39.3	173	9 EPzS 810	810	47.4	173	9 EPzS 945	945	53.1	173
10 EPzS 600	600	36.5	191	10 EPzS 800	800	43.4	191	10 EPzS 900	900	52.4	191	10 EPzS 1050	1050	58.4	191

Type 115 Ah* F	Nominal Capacity	Weight**	Length (l)	Type 125 Ah* F	Nominal Capacity	Weight**	Length (l)	Type 140 Ah* G	Nominal Capacity	Weight**	Length (l)	Type 155 Ah* G	Nominal Capacity	Weight**	Length (l)
Height (h1) 542 mm Height (h2) 572 mm	[Ah]	[kg]	[mm]	Height (h1) 573 mm Height (h2) 603 mm	[Ah]	[kg]	[mm]	Height (h1) 683 mm Height (h2) 713 mm	[Ah]	[kg]	[mm]	Height (h1) 713 mm Height (h2) 743 mm	[Ah]	[kg]	[mm]
2 EPzS 230	230	14.2	47.0	2 EPzS 250	250	15.0	47.0	2 EPzS 280	280	17.5	47.0	2 EPzS 310	310	18.9	47.0
3 EPzS 345	345	20.3	65.0	3 EPzS 375	375	21.2	65.0	3 EPzS 420	420	24.7	65.0	3 EPzS 465	465	26.7	65.0
4 EPzS 460	460	26.4	83.0	4 EPzS 500	500	27.4	83.0	4 EPzS 560	560	31.8	83.0	4 EPzS 620	620	34.6	83.0
5 EPzS 575	575	32.4	101	5 EPzS 625	625	33.9	101	5 EPzS 700	700	39.3	101	5 EPzS 775	775	42.6	101
6 EPzS 690	690	39.0	119	6 EPzS 750	750	40.3	119	6 EPzS 840	840	46.7	119	6 EPzS 930	930	50.5	119
7 EPzS 805	805	44.7	137	7 EPzS 875	875	46.5	137	7 EPzS 980	980	53.9	137	7 EPzS 1085	1085	58.5	137
8 EPzS 920	920	50.6	155	8 EPzS 1000	1000	53.1	155	8 EPzS 1120	1120	61.3	155	8 EPzS 1240	1240	66.4	155
9 EPzS 1035	1035	56.6	173	9 EPzS 1125	1125	59.4	173	9 EPzS 1260	1260	68.6	173	9 EPzS 1395	1395	74.4	173
10 EPzS 1150	1150	62.7	191	10 EPzS 1250	1250	66.0	191	10 EPzS 1400	1400	76.0	191	10 EPzS 1550	1550	82.4	191

* Capacity per positive plate Ah (C₂₀) at 30°C

** Filled and charged cell weights +/- 5%

Heights given +/- 2mm

See page 17 for specifications and dimensions



MARATHON Classic and MARATHON Classic+AIR

Technical Data

Applications

EPzB batteries are the ideal energy source for material handling trucks, cleaning machines, electrical road vehicles, tractors and other electrical vehicles with narrow battery installation space and high cyclic load.

Technical characteristics and data (BS - cells) width (b/w) 160 mm

Type 55 Ah*	Nominal Capacity	Weight	Length (l)	Type 65 Ah*	Nominal Capacity	Weight	Length (l)	Type 75 Ah*	Nominal Capacity	Weight	Length (l)
Height (h1) 402 mm Height (h2) 435 mm	[Ah]	[kg]	[mm]	Height (h1) 454 mm Height (h2) 487 mm	[Ah]	[kg]	[mm]	Height (h1) 514.5 mm Height (h2) 547.5 mm	[Ah]	[kg]	[mm]
2 EPzB 110**	110	7.30	46.0	2 EPzB 130**	130	8.40	46.0	2 EPzB 150**	150	9.60	46.0
3 EPzB 165**	165	10.3	62.0	3 EPzB 195**	195	11.7	62.0	3 EPzB 225**	225	13.4	62.0
4 EPzB 220	220	13.3	78.0	4 EPzB 260	260	15.1	78.0	4 EPzB 300	300	17.3	78.0
5 EPzB 275	275	16.2	94.0	5 EPzB 325	325	18.5	94.0	5 EPzB 375	375	21.2	94.0
6 EPzB 330	330	19.2	110	6 EPzB 390	390	21.8	110	6 EPzB 450	450	25.0	110
7 EPzB 385	395	22.1	126	7 EPzB 455	455	25.2	128	7 EPzB 525	525	28.9	126
8 EPzB 440	440	25.1	142	8 EPzB 520	520	28.5	142	8 EPzB 600	600	32.8	142
9 EPzB 495	495	28.1	158	9 EPzB 585	585	32.0	158	9 EPzB 675	675	36.7	158
10 EPzB 550	550	31.3	174	10 EPzB 650	650	25.6	174	10 EPzB 750	750	40.8	174

Type 80 Ah*	Nominal Capacity	Weight	Length (l)	Type 86 Ah*	Nominal Capacity	Weight	Length (l)	Type 100 Ah*	Nominal Capacity	Weight	Length (l)
Height (h1) 514.5 mm Height (h2) 547.5 mm	[Ah]	[kg]	[mm]	Height (h1) 568 mm Height (h2) 601 mm	[Ah]	[kg]	[mm]	Height (h1) 601 mm Height (h2) 634 mm	[Ah]	[kg]	[mm]
2 EPzB 160**	160	9.90	46.0	2 EPzB 172**	172	10.5	46.0	2 EPzB 200**	200	11.6	46.0
3 EPzB 240**	240	14.0	62.0	3 EPzB 258**	258	14.7	62.0	3 EPzB 300*	300	16.3	62.0
4 EPzB 320	320	18.1	78.0	4 EPzB 344	344	19.0	78.0	4 EPzB 400	400	21.0	78.0
5 EPzB 400	400	22.1	94.0	5 EPzB 430	430	23.2	94.0	5 EPzB 500	500	25.7	94.0
6 EPzB 480	480	26.1	110	6 EPzB 516	516	27.4	110	6 EPzB 600	600	30.4	110
7 EPzB 560	560	30.2	126	7 EPzB 602	602	31.6	126	7 EPzB 700	700	35.2	126
8 EPzB 640	640	34.3	142	8 EPzB 688	688	35.9	142	8 EPzB 800	800	40.2	142
9 EPzB 720	720	38.4	158	9 EPzB 774	774	40.4	158	9 EPzB 900	900	45.0	158
10 EPzB 800	800	42.7	174	10 EPzB 860	860	44.7	174	10 EPzB 1000	1000	49.7	174

Special types

Type 42 Ah*	Nominal Capacity	Weight	Length (l)
Height (h1) 324 mm Height (h2) 357 mm	[Ah]	[kg]	[mm]
5 EPzB 210	210	13.1	94.0
6 EPzB 252	252	15.5	110
7 EPzB 294	294	17.8	126

* Capacity per positive plate Ah (C₂₀) at 30°C
 ** Air agitation system and electrolyte level sensor are not available for these cells

Filled and charged cell weights +/- 5%
 Heights given +/- 2mm

Specifications



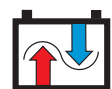
Nominal capacity
 DIN - Cells
 120 - 1550 Ah
 BS - Cells
 110 - 1000 Ah



Single cell



Tubular plate



1,500 cycles
 acc. to
 DIN EN 60254-1/
 IEC 60254-1

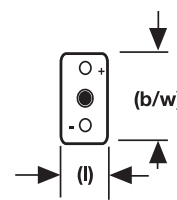
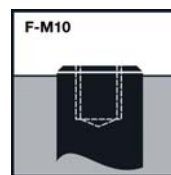
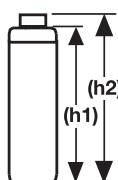


Recyclable



Option:
 Explosive-proof
 (ExI/ExII)

Dimensions, terminal and torque



Not to scale!

MARATHON
 Classic

MARATHON
 CLASSIC+AIR

MARATHON EXCELL and MARATHON EXCELL+AIR

Technical Data

DIN-Cells

Type 60 Ah Height (h1): 333 mm Height (h2): 363 mm	Nominal Capacity [Ah]	Weight [kg]	Length (l) [mm]	Type 80 Ah Height (h1): 396 mm Height (h2): 426 mm	Nominal Capacity [Ah]	Weight [kg]	Length (l) [mm]	Type 90 Ah Height (h1): 463 mm Height (h2): 493 mm	Nominal Capacity [Ah]	Weight [kg]	Length (l) [mm]	Type 105 Ah Height (h1): 511 mm Height (h2): 541 mm	Nominal Capacity Ah	Weight kg	Length (l) mm
2 EPzS	120 SL	8.5	47	2 EPzS	160 SL	10.0	47	2 EPzS	180	11.9	47	2 EPzS	210	13.5	47
3 EPzS	180 SL	12.0	65	3 EPzS	240 SL	14.2	65	3 EPzS	270	17.0	65	3 EPzS	315	19.1	65
4 EPzS	240 SL	15.4	83	4 EPzS	320 SL	18.4	83	4 EPzS	360	22.1	83	4 EPzS	420	24.6	83
5 EPzS	300 SL	19.0	101	5 EPzS	400 SL	22.6	101	5 EPzS	450	27.1	101	5 EPzS	525	30.5	101
6 EPzS	360 SL	22.5	119	6 EPzS	480 SL	26.7	119	6 EPzS	540	32.2	119	6 EPzS	630	36.1	119
7 EPzS	420 SL	26.0	137	7 EPzS	560 SL	31.3	137	7 EPzS	630	37.2	137	7 EPzS	735	41.8	137
8 EPzS	480 SL	29.5	155	8 EPzS	640 SL	35.1	155	8 EPzS	720	42.3	155	8 EPzS	840	47.4	155

Type 115 Ah Height (h1): 542 mm Height (h2): 572 mm	Nominal Capacity [Ah]	Weight [kg]	Length (l) [mm]	Type 125 Ah Height (h1): 537 mm Height (h2): 603 mm	Nominal Capacity [Ah]	Weight [kg]	Length (l) [mm]	Type 140 Ah Height (h1): 683 mm Height (h2): 713 mm	Nominal Capacity [Ah]	Weight [kg]	Length (l) [mm]	Type 155 Ah Height (h1): 713 mm Height (h2): 743 mm	Nominal Capacity Ah	Weight kg	Length (l) mm
2 EPzS	230 SL	14.2	47	2 EPzS	250 SL	15.0	47	2 EPzS	280	17.5	47	2 EPzS	310	18.9	47
3 EPzS	345 SL	20.3	65	3 EPzS	370 SL	21.2	65	3 EPzS	420	24.7	65	3 EPzS	465	26.7	65
4 EPzS	460 SL	26.4	83	4 EPzS	500 SL	27.4	83	4 EPzS	560	31.8	83	4 EPzS	620	34.6	83
5 EPzS	575 SL	32.4	101	5 EPzS	625 SL	33.9	101	5 EPzS	700	39.3	101	5 EPzS	775	42.6	101
6 EPzS	690 SL	39.0	119	6 EPzS	750 SL	40.3	119	6 EPzS	840	46.7	119	6 EPzS	930	50.5	119
7 EPzS	805 SL	44.7	137	7 EPzS	875 SL	46.5	137	7 EPzS	980	53.9	137	7 EPzS	1085	58.5	137
8 EPzS	920 SL	50.6	155	8 EPzS	1000 SL	53.1	155	8 EPzS	1120	61.3	155	8 EPzS	1240	66.4	155

BS-Cells

Type 75 Ah Height (h1): 514,5 mm Height (h2): 547,5 mm	Nominal Capacity [Ah]	Weight [kg]	Length (l) [mm]	Type 80 Ah Height (h1): 514,5 mm Height (h2): 547,5 mm	Nominal Capacity [Ah]	Weight [kg]	Length (l) [mm]	Type 86 Ah Height (h1): 568 mm Height (h2): 601 mm	Nominal Capacity [Ah]	Weight [kg]	Length (l) [mm]	Type 100 Ah Height (h1): 601 mm Height (h2): 634 mm	Nominal Capacity Ah	Weight kg	Length (l) mm
2 EPzB/**	150 SL	9.6	46	2 EPzB/**	110 SL	7.3	46	2 EPzB/**	130 SL	8.4	46	2 EPzB/**	150 SL	9.6	46
3 EPzB/**	225 SL	13.4	62	3 EPzB/**	165 SL	10.3	62	3 EPzB/**	195 SL	11.7	62	3 EPzB/**	225 SL	13.4	62
4 EPzB	300 SL	17.3	78	4 EPzB	220 SL	13.3	78	4 EPzB	260 SL	15.1	78	4 EPzB	300 SL	17.3	78
5 EPzB	375 SL	21.2	94	5 EPzB	275 SL	16.2	94	5 EPzB	325 SL	18.5	94	5 EPzB	375 SL	21.2	94
6 EPzB	450	25.0	110	6 EPzB	330 SL	19.2	110	6 EPzB	390 SL	21.8	110	6 EPzB	450	25.0	110
7 EPzB	525 SL	28.9	126	7 EPzB	385 SL	22.1	126	7 EPzB	455 SL	25.2	126	7 EPzB	525 SL	28.9	126
8 EPzB	600	32.8	142	8 EPzB	440 SL	25.1	142	8 EPzB	520 SL	28.6	142	8 EPzB	600	32.8	142

* At present without air agitation system

** No electrolyte level sensor possible

Heights given +/- 2mm

See page 19 for specifications and dimensions

MARATHON
EXCELL

MARATHON
EXCELL+AIR

MARATHON AQUA and MARATHON AQUA+AIR

Technical Data

Type 115 Ah	Nominal Capacity	Weight	Length (l)	Type 140 Ah	Nominal Capacity	Weight	Length (l)
Height (h1): 573 mm Height (h2): 603 mm	[Ah]	[kg]	[mm]	Height (h1): 713 mm Height (h2): 743 mm	[Ah]	[kg]	[mm]
2 EPzS	230 SX	14.5	47	2 EPzS	280 SX	17.6	47
3 EPzS	345 SX	20.6	65	3 EPzS	420 SX	25.6	65
4 EPzS	460 SX	26.4	83	4 EPzS	560 SX	33.3	83
5 EPzS	575 SX	32.4	101	5 EPzS	700 SX	40.5	101
6 EPzS	690 SX	38.6	119	6 EPzS	840 SX	48.2	119
7 EPzS	805 SX	44.7	137	7 EPzS	980 SX	55.9	137
8 EPzS	920 SX	50.8	155	8 EPzS	1120 SX	63.6	155

Filled and charged cell weights +/- 5%
Heights given +/- 2mm

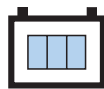
Specifications for MARATHON EXCELL and MARATHON AQUA



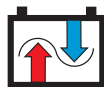
Nominal capacity
120 - 1240 Ah
MARATHON EXCELL
230 - 920 Ah
MARATHON AQUA



Single cell



Tubular plate

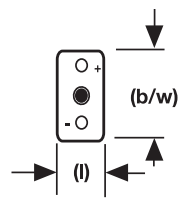
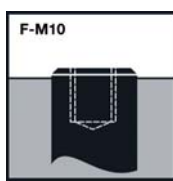
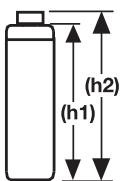


1,500 cycles
acc. to
DIN EN 60254-1/
IEC 60254-1



Recyclable

Dimensions, terminal and torque



Not to scale!

MARATHON
AQUA

MARATHON
AQUA + AIR

