Made in Germany
Qualität seit 1946

MOLL
BATTERIEN

General Catalog | 25/26

Dear Readers,

With pride and pleasure I present to you the new general catalog of **MOLL Batterien**.

For almost 80 years, our name has stood for top quality, innovative technologies and reliable energy solutions - **Made in Germany**. In times when mobility and energy efficiency are more important than ever, we see it as our responsibility to develop products that not only meet current requirements but are also equipped for future challenges. Our **AFB start-stop** and **EFB start-stop** batteries are examples of how we are driving the automotive industry forward with our innovative strength and technical expertise.

We at **MOLL** combine tradition with progress. Our many years of experience as an original equipment manufacturer for leading car manufacturers flow into every single battery that leaves our factory in Bad Staffelstein. We are also continuously investing in research and development to always offer our customers the best possible energy solutions.

Sustainability and environmental protection are not just buzzwords for us, they are a way of life. The recycling rate of over 99% for our lead-acid batteries is an important contribution to the preservation of natural resources.

In this catalog, you will not only find our extensive product portfolio, but also insights into our technologies and manufacturing processes.
No matter whether for cars, trucks or special applications - **MOLL** offers the right solution for every application.

I would like to take this opportunity to thank our customers, partners and employees for their confidence and commitment. Together, we will continue to develop innovative and sustainable energy solutions that will shape the mobility of tomorrow.

Discover the world of **MOLL batteries** on the following pages. We look forward to inspiring you with our products and supporting you as a reliable partner.

With kind regards

Dr. Klaus Eichhorn
CEO, MOLL Batterien GmbH

MOLL BATTERIEN

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Digitaler Katalog

MOLL – Over 80 years of success made in Germany

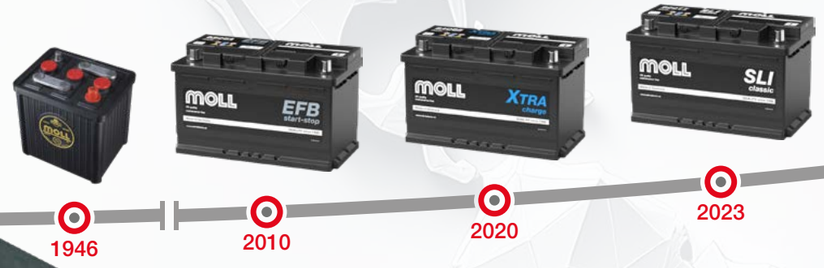
As a specialist, **MOLL** has had a decisive influence on the entire battery industry through innovations. The success of the medium-sized company is based on technical expertise, practical and future-oriented development and a consistently high level of quality. **MOLL** has therefore been supplying premium batteries to premium brands in the German automotive industry as original equipment for decades.

MOLL – The inventor of modern start-stop batteries

Since 1946, millions of **MOLL batteries** have left the factory in Bad Staffelstein, Bavaria, and are used all over the world. Pioneering technical developments, numerous in-house patents and the highest quality standards in production have always been the company‘s guiding principles. They still characterize the company philosophy today and guarantee the premium quality of the products.

MOLL has made a name for itself through continuous innovation and its own patents. The development of the modern EFB start-stop battery (Enhanced Flooded Battery) since 2010 is especially noteworthy. This innovative battery generation was developed to meet the highest customer requirements. The AFB (Advanced Flooded Battery) start-stop battery technology from **MOLL** represents a significant improvement on the AGM battery and impresses with its higher performance, longer service life and improved reliability.

Peter J. Moll



MOLL – Worldwide

The **MOLL** premium batteries have earned an excellent reputation worldwide. Thanks to the exceptional quality and reliability of **MOLL** batteries, not only German car manufacturers rely on **MOLL** products, but international customers also appreciate the performance of these batteries. The company‘s global presence, including through a network of licensees, is testament to the innovative strength and high quality standards that the **MOLL** brand stands for.

Premium Quality for Premium Brands

MOLL supplies renowned automobile and commercial vehicle manufacturers in original equipment, e.g.: Audi, Porsche, Mercedes-Benz, Seat, Škoda, Volkswagen, Ineos Grenadier, Ammann, Delko, Frankia, Hamm, Hammelmann, Holmer, Kaeser, Liebherr, Tadano Faun, Prinoth, Weber MT and many more.

Responsibility and values

Sense of responsibility of the MOLL company

The old **MOLL** production facility in Bad Staffelstein

Since the company was founded in 1946, **MOLL** has demonstrated social responsibility. In addition to purely economic aspects, social concerns, the well-being of society and environmental aspects are always taken into account by the company‘s management.

What we believe in and what we stand for

- ✓ We respect people, the environment and nature
- ✓ We respect the laws and cultures of the countries in which we operate
- ✓ We live and work according to ethical principles and generally recognised legal principles
- ✓ We always act honestly and with integrity
- ✓ We maintain an open and constructive dialog with all social groups
- ✓ We respect the interests of our customers, shareholders, employees, partners and suppliers and give them an appropriate share in our success
- ✓ We act in an environmentally conscious manner and thereby sustainably protect the climate and resources

Environmentally responsible use of resources

Protection of the environment and the careful and sparing use of our resources through the continuous improvement of our production processes is a fundamental part of our corporate philosophy. This is on an equal basis with other important goals such as economic efficiency and our quality standards.

We encourage all employees to act safely and responsibly through open communication channels and regular training and instruction. We also maintain an open dialog with the public and the authorities.

All resources are used responsibly and ecologically:

- **MOLL** collects used batteries and ensures that they are recycled.
- **MOLL** is certified according to ISO 14001 environmental management and ISO 50001 energy management.
- **MOLL** batteries are more than 99% recyclable.

Highest quality level

Certified quality, environmental and energy management system

Quality Management
according to IATF 16949

Quality Management
according to ISO 9001

Environmental Management System
according to ISO 14001

Energy Management System
according to ISO 50001

Original equipment quality even in the aftermarket

- Same production lines for original equipment and the aftermarket
- Same quality standards for original equipment and the aftermarket
- All batteries are 100% tested
- Development in close cooperation with automotive manufacturers
- Excellent process, product and development quality in accordance with IATF 16949/2016
- **MOLL** is consistently among the test winners in independent battery tests

MOLL Technology: Precision in every step

Electrode production

Gravity cast (Positive grids) › ConCast (Negative grids) › Paste application › Curing › Assembly › Putting into operation

The heart of a **MOLL** battery is the positive grid. This is manufactured using the precise gravity casting process. Since the quality of the initial material largely determines the subsequent battery performance, we use high-purity special alloys. In contrast to expanded metal or punched grids, a homogeneous crystalline structure is formed using gravity casting. This metal structure makes the grid significantly more resistant to corrosion, material failure and unwanted grid growth. Typical problems of conventional batteries are thereby prevented right from the start.

The reinforced grid design with optimised geometry also guarantees the best current distribution and an ideal grid-to-mass bonding for maximum service life.

The deliberately higher use of materials - recognizable in the higher battery weight - is a clear indicator of quality.

The state-of-the-art ConCast process is used to produce high-precision negative grids. As these are not exposed to the aggressive electrochemical processes such as positive grids, this more efficient manufacturing technology can be used here. The special design enables optimum current distribution for best performance.

The continuous grid production minimizes production tolerances and is energy and cost efficient with low CO2 emissions in production. The use of recycled lead also preserves natural resources.

Experienced employees monitor every step of the casting process and check the positive and negative grids for perfect quality.

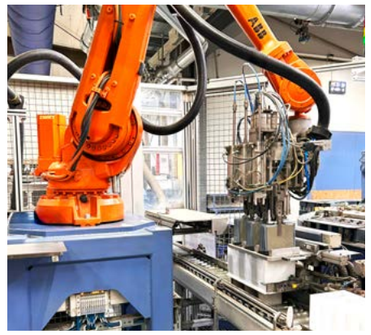
Our highly complex formulations for the active compounds have been optimized over decades. A formulation tailored to the individual performance was developed for each product range.

After mixing, the active mass is applied to the grids, i.e. the charge carriers in the ready-to-use battery. In addition to the exact composition of the additives, maximum process stability is also important. Even the smallest deviations in temperature, mixing speed or mixing time have a decisive impact on quality. The perfectly coordinated combination of these factors creates an ideal pore structure and maximum active surface area.

We continuously analyze the composition and quality of the pastes in our in-house laboratory.This precision is the basis for maximum performance and service life of every **MOLL** battery.

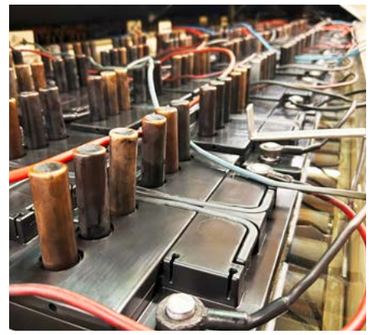
In the next production stage, the pasted grids undergo a complex electrochemical maturing process. The electrodes are made current-acceptable with specially developed curing programs for humidity and temperature. Each curing chamber is permanently monitored by state-of-the-art sensor technology and experienced production staff. Temperature, humidity and process time must be precisely maintained. This is the only way to achieve the perfect “marriage” between the grid and the active mass to the finished electrode.

This precision work results in outstanding charge acceptance and maximum performance of the active mass for each product range.



The assembly is crucial for the reliability of the battery. The optimized connector design with improved geometry ensures minimal internal resistance and high vibration resistance.

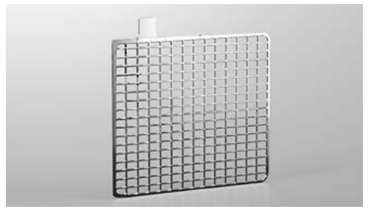
A special **MOLL** innovation is the patented oval Schneidring for intercell welding: its concentric ring structure is precisely imprinted in the partition wall of the box, creating a significantly larger connection area for absolute leak tightness and maximum mechanical stability. The specially developed and patented double lid has special electrostatically protected sealing plugs that prevent dangerous sparking caused by static discharge. The sophisticated labyrinth design with integrated backfire protection also ensures maximum safety and prevents acid from leaking, even under extreme conditions.



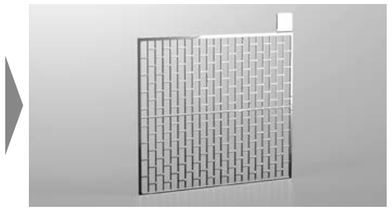
As an original equipment manufacturer for leading German car manufacturers, we produce exclusively in original equipment quality. All batteries that leave our factory meet the strict OE quality guidelines of the automotive industry.

During the initial filling and charging process, we make no compromises: instead of quick partial charges, we invest the necessary time in a complete and gentle charge with individual programs. This is the only way we can guarantee the full performance and maximum service life of our batteries from the very first moment.

Finally, every **MOLL** battery undergoes a 100% quality check to ensure a “good start” in the car.



Gravity cast grids ©MOLL



ConCast grids ©MOLL

Pasted negative and positive plates ©MOLL

Cured negative and positive plates ©MOLL

Sectional view of assembled plate group ©MOLL

MOLL AFB ready for use ©MOLL

Innovations from MOLL

Electrode Manufacturing

Nano Carbon Technology

The **Nano-Carbon Technology** incorporates over 80 years of **MOLL** battery expertise. The active mass formulations for the various **MOLL** product lines have been individually adapted and further optimized over the years. Each formulation has a unique mix of carefully selected carbon materials that ensure a large active surface area and a pore structure advantageous for each specific application.

Advantages of Nano-Carbon Technology:

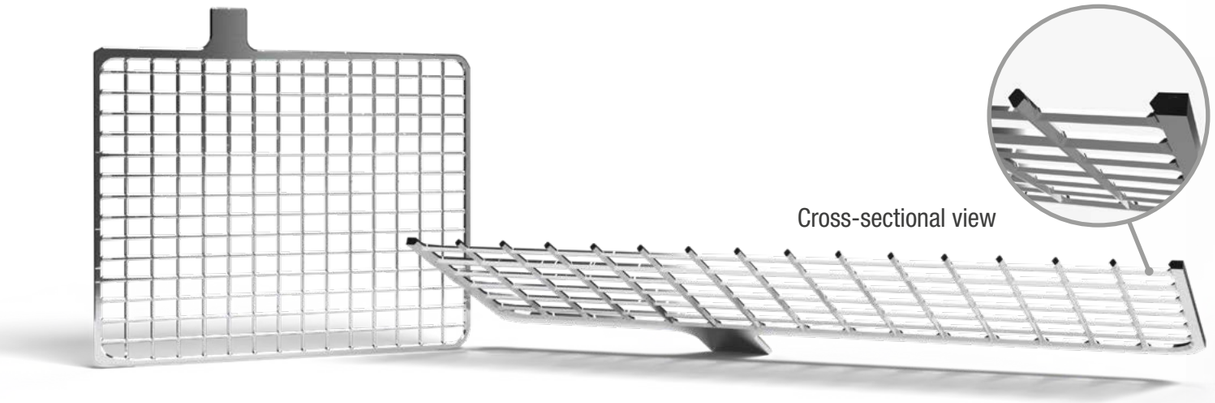
- Larger surface area
- Advantageous pore structure
- High current acceptance
- High cycle stability

Gravity Casting Process

Decades of accumulated experience are also embedded in the gravity casting process. The proven, robust gravity casting method is used to manufacture the positive electrode. The grid design, casting process, and grid alloys have been continuously refined.

Advantages of the Gravity Casting Process:

- Maximum corrosion resistance
- Reinforced grid design
- Optimized web geometry
- Optimized web spacing
- Optimized current distribution
- Improved grid-to-mass bonding
- Minimal grid growth
- Long service life



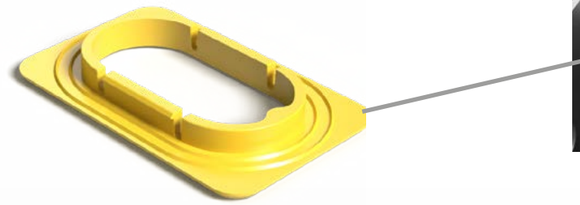
Assembly of High-Quality Components

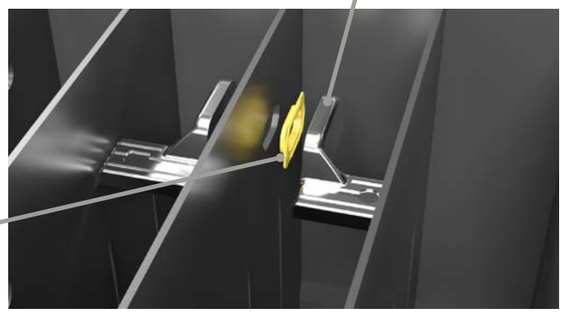
Optimized Bridge Design

- Low internal resistance
- High vibration resistance

Oval Cutting Ring

- Larger cross-sectional area
- High vibration resistance

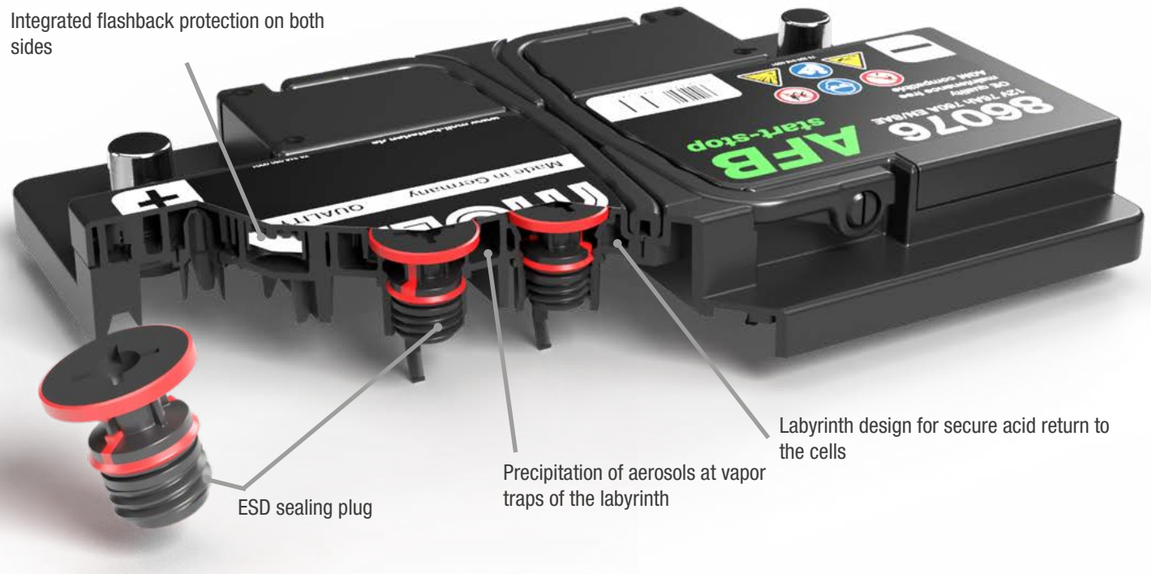




Intercell Welding with Oval Cutting Ring

Patented MOLL Double Lid

- Leak-proof according to VW specifications
- Special sealing plug with electrostatic discharge protection (ESD)



Starter Battery Range

Performance Parameters and Applications

	AFB start-stop	EFB start-stop	XTRA charge	SLI classic	HOT climate	EVR extreme vibration resistance	EFB Super Heavy Duty
Capacity Range	66Ah - 106Ah	64Ah - 94Ah	48Ah - 110Ah	46Ah - 95Ah	63Ah - 103Ah	40Ah	110Ah - 225Ah
Starting Current Range (EN)	680A - 950A	620A - 860A	470A - 960A	440A - 800A	540A - 830A	300A	760A - 1150A
Fitting Range	H4(L1) - H9(L6)	H4(L1) - H8(L5) T6(Lb3); T7(Lb4)	H5(L2) - H9(L6) T4(Lb1) -T6(Lb3)	H4(L1) - H8(L5)	H5(L2) - H9(L6)	T4(Lb1)	DIN A,B,C MAC 110
Central Gas Ventilation	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Current Acceptance (Quick Charging Capability)	++	++	+++	++	++	+	++
Cycle Lifespan	E3	E3	E2	E1	E2	E1	E2
Vibration Resistance	V3	V3	V3	V3	V3	>V4	V3
Water Consumption	W4	W4	W4	W4	W5	W4	W4
Leakage Protection	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hot Installation Location	++	++	++	++	+++	++	+
Micro-Hybrid Suitability	+++	+++	+	+	-	-	++
Brake Energy Recovery (Recuperation)	+++	+++	+	+	-	-	++
Usable as AGM in Vehicle	Yes	No	No	No	No	No	No
Maintenance-free, No Water Refilling	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Application	Vehicles with Micro-Hybrid Systems (start-stop and recuperation), as replacement for AGM	Vehicles with Micro-Hybrid Systems (start-stop and recuperation), as replacement for EFB	Vehicles with numerous electrical consumers / diesel vehicles; older vehicles. Especially suitable for cold climate zones	Older vehicles with standard equipment	Vehicles with numerous electrical consumers. Especially suitable for hot climate zones	Vehicles, machines, applications with very high vibration stress	Trucks, construction machinery, special vehicles, agricultural machinery

MOLL AFB start-stop

MOLL Sets New Standards in the Replacement Market with AFB Start-Stop Technology

MOLL, the inventor of the modern **EFB** (**E**nhanced **F**looded **B**attery), sets new standards with the new **AFB start-stop batter**y (**A**dvanced **F**looded **B**attery). This innovative battery is the smarter and more efficient alternative to the AGM battery and was specially developed for vehicles with start-stop function.

Innovative Technology from MOLL

The **AFB start-stop** is based on the proven **MOLL EFB technology** and has been further developed to seamlessly integrate into an AGM electrical system. This means that the **MOLL AFB start-stop** can be used in vehicles originally designed for AGM batteries - a significant advancement for the replacement market.

While AGM batteries were developed for high cyclic loads that are often not needed in modern vehicles, the **MOLL AFB start-stop** excels with higher micro-cycle stability in original equipment quality.

The **MOLL AFB start-stop** also features excellent recuperation capability. It can efficiently absorb and store energy recovered during braking, further improving fuel efficiency and reducing CO2 emissions. This characteristic makes it particularly suitable for modern vehicles with energy recovery systems.

In laboratory tests, the **MOLL AFB start-stop** demonstrates its exceptional endurance: it masters up to 78,000 start-stop cycles - an impressive performance for years of reliable use in demanding urban traffic.

Sustainable and Economical Solution

With **AFB** technology, **MOLL** focuses on the requirements of modern motor vehicles: significant CO2 and fuel savings thanks to start-stop function. The long-lasting **MOLL AFB start-stop** thus offers a sustainable and value-appropriate direct AGM replacement for the aftermarket.

Proven Technology and Innovation

Since 2012, the **MOLL EFB** has been installed as standard in millions of cars, including those from the VW Group. Now **MOLL** is setting new standards again with the **AFB start-stop**.

For questions, our sales team is at your disposal:
✉ **service@moll-batterien.de**

MOLL BATTERIEN

Why Choose the MOLL AFB Start-Stop Battery?

- ✓ **Replaces AGM:** The **MOLL AFB start-stop** is the smart alternative to AGM batteries and integrates seamlessly into any vehicle electrical system.
- ✓ **Original Equipment Quality:** The battery is manufactured to OE quality standards and meets the highest demands for reliability and performance.
- ✓ **Gravity Casting Process:** Maximum corrosion resistance for extended service life.
- ✓ **Nano-Carbon Technology:** Ultra-fast charging capability and high cold-starting performance.
- ✓ **Maximum Leakage Protection:** The patented double lid ensures maximum protection against leakage.
- ✓ **Start-Stop Technology:** Optimally designed for vehicles with start-stop systems.
- ✓ **Highest Cycle Stability:** The battery features even higher cycle stability, making it perfect for demanding applications.
- ✓ **Quick-Charge Capability:** Thanks to advanced technology, the battery can be charged particularly quickly.
- ✓ **Recuperation Capable:** Efficient energy recovery from braking processes.
- ✓ **High Resilience with Many Electrical Consumers:** The **MOLL AFB start-stop** easily handles the demands of modern vehicles with numerous electrical consumers.
- ✓ **Outstanding Cold-Start Performance:** Reliable even at extremely low temperatures.
- ✓ **Excellent Thermal Stability:** The robust construction ensures high resistance to heat.
- ✓ **High Vibration Resistance:** Developed to withstand the most demanding conditions.
- ✓ **Maintenance-Free:** Low water consumption thanks to Ca/Ca technology.
- ✓ **Recyclable:** Over 99% recyclable.
- ✓ **Qualität Made in Germany:** Verlässliche deutsche Qualität und Ingenieurskunst.

Sectional view ©MOLL Batterien

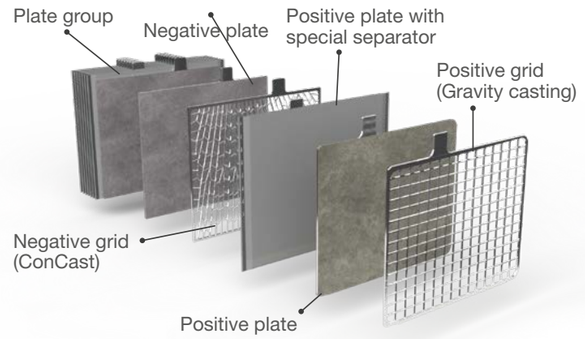


Plate group ©MOLL Batterien

MOLL Type no	Capacity Ah (20h)	Cold-cranking current A (EN)	Terminal position	Terminal type	Box	Max. outer dimensions [mm]		
						Length	Width	Height
86054	54	540	0	4	H4/L1	207	175	190
86066	66	680	0	1	H5/L2	242	175	190
86076	76	760	0	1	H6/L3	278	175	190
86086	86	800	0	1	H7/L4	315	175	190
86096	96	860	0	1	H8/L5	353	175	190
86106	106	950	0	1	H9/L6	394	175	190

All specifications according to EN 50342

As of 2 | 2025

MOLL EFB start-stop

Developed for Micro-Hybrid Applications

MOLL is the inventor of the modern start-stop battery based on a flooded battery. The **MOLL EFB** (**E**nhanced **F**looded **B**attery) has been successfully used for over a decade by renowned automobile manufacturers as original equipment as alternative technology to AGM. Thanks to Nano-Carbon technology, the **MOLL EFB** impresses with outstanding micro-hybrid cycle performance and high cold-start power – ideal for the challenges of urban traffic.

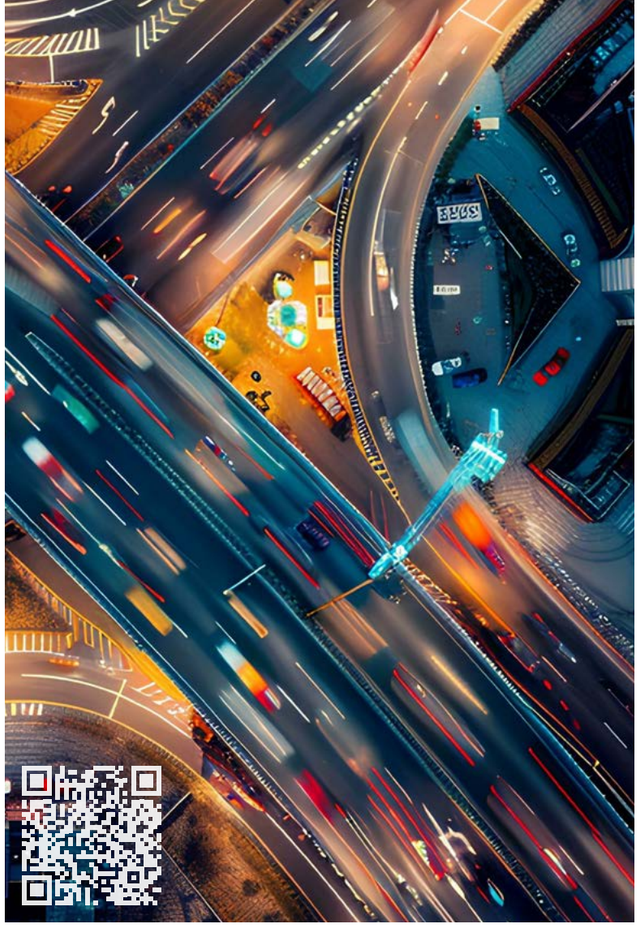
Powerhouse for Demanding Applications

The **MOLL EFB** is specifically designed for vehicles with frequent short trips and start-stop cycles, typical in urban traffic. The specially developed active materials ensure maximum charge acceptance, while the **calcium grid technology** guarantees low water consumption and maintenance-free operation.

In laboratory tests, the MOLL EFB proves its exceptional endurance: it masters up to 78,000 start-stop cycles - an impressive performance for years of reliable use in demanding urban traffic.

Longevity through Robust Construction

The robust gravity casting technique with reinforced grid design and the use of particularly corrosion-resistant alloys make the **MOLL EFB** a long-lasting choice, even at



higher temperatures. The pronounced corrosion resistance of the cast grids in MegaGrid technology additionally contributes to the long service life.

Safety and Environmental Friendliness

The highest leak protection is ensured by the patented double lid with ESD-safe sealing plugs. The **MOLL EFB** is over 99% recyclable, making it an extremely sustainable product.

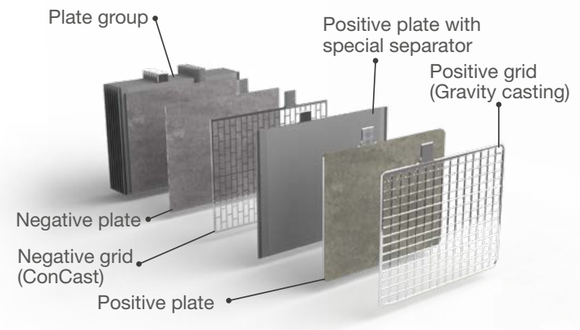
The MOLL EFB is the perfect choice for vehicles with high demands on battery performance. With its extremely high cycle performance in micro-hybrid applications, robust construction, and long service life, it meets the highest standards and offers reliable functionality in all situations.

For questions, our sales team is at your disposal:
service@moll-batterien.de

MOLL BATTERIEN

Why choose MOLL EFB start-stop?

- ✓ **Original Equipment Quality:** The battery is manufactured to original equipment standards and meets the highest demands for reliability and performance.
- ✓ **MegaGrid Technology:** Highest corrosion resistance for a longer lifespan.
- ✓ **Nano-Carbon Technology:** Super-fast charging capability and high cold-start performance.
- ✓ **Maximum Leak Protection: MOLL**'s patented double lid ensures maximum leak protection.
- ✓ **Start-Stop Technology:** Optimally suited for vehicles with start-stop systems.
- ✓ **Highest Cycle Stability:** The battery is characterized by even higher cycle stability.
- ✓ **Quick-Charge Capability:** Thanks to advanced **MOLL** technology, the battery can be charged particularly quickly.
- ✓ **High Load Capacity with Many Consumers:** The **MOLL EFB start-stop** easily handles the demands of modern vehicles with numerous electrical consumers.
- ✓ **Excellent Cold-Start Performance:** Reliable even at extremely low temperatures.
- ✓ **Excellent Thermal Resistance:** The robust construction ensures high resistance to heat.
- ✓ **High Vibration Resistance:** Designed to withstand the most demanding conditions.
- ✓ **Maintenance-Free:** Low water consumption thanks to Ca/Ca technology.
- ✓ **Recyclable:** Over 99% recyclable.
- ✓ **Quality Made in Germany:** Reliable German quality and engineering.



MOLL Type no	Capacity Ah (20h)	Cold-cranking current A (EN)	Terminal position	Terminal type	Box	Max. outer dimensions [mm]		
						Length	Width	Height
82052	52	520	0	1	H4/L1	207	175	190
82064	64	620	0	1	H5/L2	242	175	190
82068	68	660	0	1	T6/Lb3	278	175	175
82074	74	720	0	1	H6/L3	278	175	190
82078	78	740	0	1	T7/Lb4	315	175	175
82084	84	800	0	1	H7/L4	315	175	190
82094	94	860	0	1	H8/L5	353	175	190

All specifications according to EN 50342

As of 2 | 2025

MOLL SLI classic

Reliable Quality for Standard Applications

The **MOLL SLI classic** is the perfect choice for standard applications that don‘t require exceptionally high cold-start performance. As an affordable alternative to the **MOLL XTRA charge,** the **SLI classic** still offers the familiar original equipment quality and reliability that **MOLL** is known for.

Fast Charging with Nano-Carbon

Thanks to the innovative Nano-Carbon technology, the **MOLL SLI classic** charges particularly quickly, making it ideal for older vehicles or those frequently used for short trips. The MegaGrid technology combined with Nano-Carbon technology ensures low internal resistance and outstanding charge acceptance, even at low charging voltages.

Robust Construction and Long Lifespan

The **MOLL SLI classic** is characterized by its robust construction. The use of gravity casting technique for the positive grid, corrosion-resistant alloys, and specially developed active masses ensures a long lifespan. Thanks to the calcium grid technology, the battery is maintenance-free and has low water consumption.

Safety and Environmental Friendliness

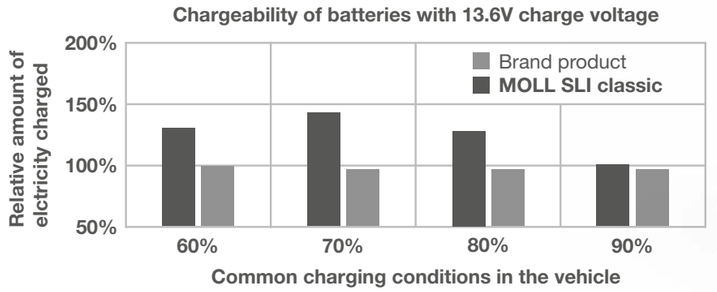
The highest leak protection is ensured by the patented double lid with ESD-safe sealing plugs. The **MOLL SLI classic** is over 99% recyclable, making it an extremely sustainable product.

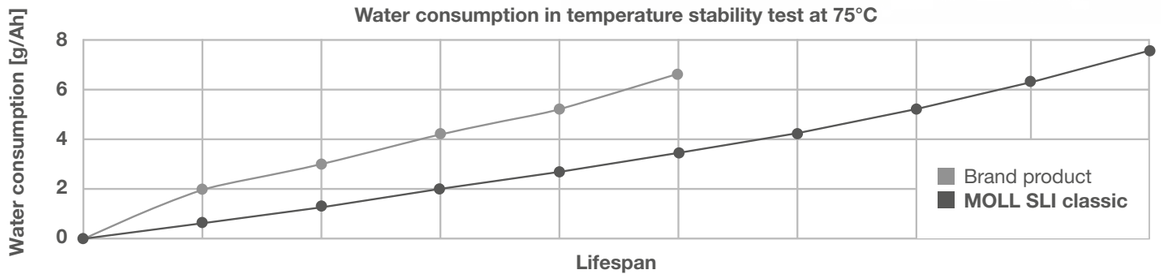
The combination of demand-oriented capacity and strong cold-start performance makes the MOLL SLI classic a robust workhorse for all standard applications where start-stop functionality is not required. With the MOLL SLI classic, you get original equipment quality and maximum lifespan for your vehicle.

For questions, our sales team is at your disposal:
✉ **service@moll-batterien.de**

Why choose MOLL SLI classic?

- ✓ **Original Equipment Quality:** The battery is manufactured to original equipment standards and meets the highest demands for reliability and performance.
- ✓ **Quick-Charge Technology:** Thanks to innovative Nano-Carbon technology, the battery enables fast charging, ideal for vehicles with frequent short trips.
- ✓ **Maintenance-Free:** Low water consumption thanks to Ca/Ca technology.
- ✓ **Solid cold-cranking power:** Reliable even at low temperatures.
- ✓ **MegaGrid Technology:** Highest corrosion resistance for a longer lifespan.
- ✓ **Maximum Leak Protection: MOLL**‘s patented double lid ensures maximum leak protection.
- ✓ **High Vibration Resistance:** Designed to withstand the most demanding conditions.
- ✓ **Recyclable:** Over 99% recyclable.
- ✓ **Quality Made in Germany:** Reliable German quality and engineering.





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80060	60	540	0	1	H5/L2	242	175	190
80072	72	640	0	1	H6/L3	278	175	190
80080	80	720	0	1	H7/L4	315	175	190
80095	95	800	0	1	H8/L5	353	175	190

As of 10 | 2024

MOLL XTRA charge

Quick Charging Capability for Maximum Performance

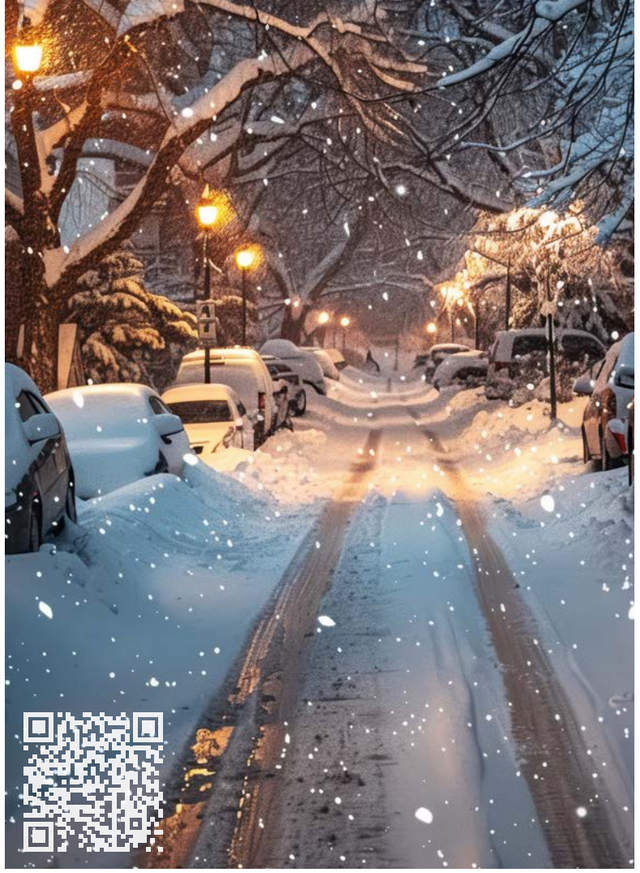
The **MOLL XTRA Charge** is a powerful battery that charges particularly quickly thanks to innovative Nano-Carbon technology, even at low charge levels. Compared to conventional batteries, it achieves almost twice the charging speed, which has a significantly positive effect on its lifespan.

Superior Charge Acceptance and Low Internal Resistance

The combination of MegaGrid technology and Nano-Carbon technology gives the **MOLL XTRA Charge** low internal resistance and superior charge acceptance, even at low charging voltages. This makes it ideal for older vehicles and those with frequent short trips.

High Capacity and Excellent Cold Start Performance

The high capacity combined with the highest cold start performance makes the **MOLL XTRA Charge** a robust workhorse for all areas where start-stop functionality is not required. Even in winter, it ensures reliable starts and driving pleasure.



Robust Construction and Long Lifespan

The robust gravity casting technique, the use of particularly corrosion-resistant alloys, and specially developed active materials contribute to the long lifespan of the **MOLL XTRA Charge**. Thanks to calcium grid technology, it is maintenance-free and has low water consumption.

Safety and Environmental Friendliness

The highest leak protection is ensured by the patented double lid with ESD-safe sealing plugs. The **MOLL XTRA Charge** is over 99% recyclable, making it an extremely sustainable product.

The MOLL XTRA Charge is the perfect choice for vehicles that need a powerful and quick-charging battery. With its high capacity, excellent cold start performance, and robust construction, it offers top performance in all situations.

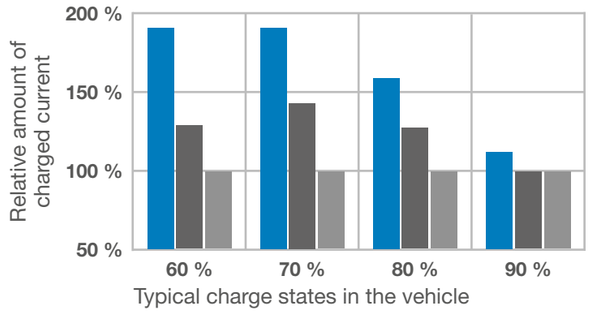
For questions, our sales team is at your disposal:
service@moll-batterien.de

MOLL BATTERIEN

Why choose XTRA charge?

- ✓ **Original Equipment Quality:** The battery is manufactured to original equipment standards and meets the highest demands for reliability and performance.
- ✓ **MegaGrid Technology:** Highest corrosion resistance for a longer lifespan.
- ✓ **Nano-Carbon Technology:** Super-fast charging capability and high cold start performance.
- ✓ **Maximum leak protection:** The patented double lid ensures maximum leak protection.
- ✓ **High cycle stability:** The battery is characterized by even higher cycle stability, making it perfect for demanding tasks.
- ✓ **Quick-Charge capability:** Thanks to advanced technology, the battery can be charged particularly quickly.
- ✓ **High resilience with many consumers:** The **MOLL XTRA charge** easily handles the demands of modern vehicles with numerous electrical consumers.
- ✓ **High cold-cranking performance:** Reliable even at extremely low temperatures.
- ✓ **High vibration resistance:** Developed to withstand the most demanding conditions.
- ✓ **Maintenance-free:** Low water consumption thanks to Ca/Ca technology.
- ✓ **Recyclable:** Over 99% recyclable.
- ✓ **Quality Made in Germany:** Reliable German quality and engineering.

Chargeability of batteries at 13.6 V charging voltage



Typ-Nr. MOLL	Kapazität Ah (20h)	Kälteprüfstrom A (EN)	Schaltung	Anschlusspole	Kasten	Max. Außenmaße [mm]		
						Länge	Breite	Höhe
84048	48	470	0	1	T4/Lb1	207	175	175
84060	60	600	0	1	T5/Lb2	242	175	175
84064	64	620	0	1	H5/L2	242	175	190
84070	70	700	0	1	T6/Lb3	278	175	175
84075	75	720	0	1	H6/L3	278	175	190
84085	85	800	0	1	H7/L4	315	175	190
84100	100	900	0	1	H8/L5	353	175	190
84110	110	960	0	1	H9/L6	394	175	190
84110	110	960	0	1	H9/L6	394	175	190

All specifications according to EN 50342

As of 2 | 2024

MOLL HOT climate

Long-lasting Battery for Hot Climate Zones

Heat is the battery‘s greatest enemy. Compared to an outside temperature of 20°C, the stress factors for the battery at 60°C are 16 times higher. Only through a special battery design (grid structure, lead alloy, and active mass formula) can these extreme temperatures be withstood. The **MOLL HOT climate** is specially developed for use in super-hot climate zones and, thanks to its unique construction, offers an unrivaled longer lifespan compared to standard batteries. With the lowest lifecycle costs, it is the best choice for demanding conditions.

Robust Construction for Extreme Conditions

Highest corrosion resistance, especially at high temperatures, is achieved through special lead alloys and the proven, robust gravity casting technique with reinforced grid design. The use of particularly corrosion-resistant alloys together with specially developed active masses makes the **MOLL HOT climate** the ideal product for hot climate zones.

Maintenance-Free Due to Low Water Consumption

Thanks to the calcium grid technology and a special formulation of the active masses, the **MOLL HOT climate** is characterized by very low water consumption and is also maintenance-free. The low self-discharge at hot temperatures additionally contributes to the battery‘s longevity and reliability.

Gitter Schnellkorrosionstest (75°C)

Herkömmliche Stanzgitter anderer Hersteller

Korrosionsschicht ~ 300µm

HOT climate Fallguss Gitter

Korrosionsschicht ~ 100µm

Safety and Environmental Friendliness

Highest leak protection is ensured by the use of the patented double lid with ESD-safe sealing plugs. The **MOLL HOT climate** is over 99% recyclable, making it an extremely sustainable product.

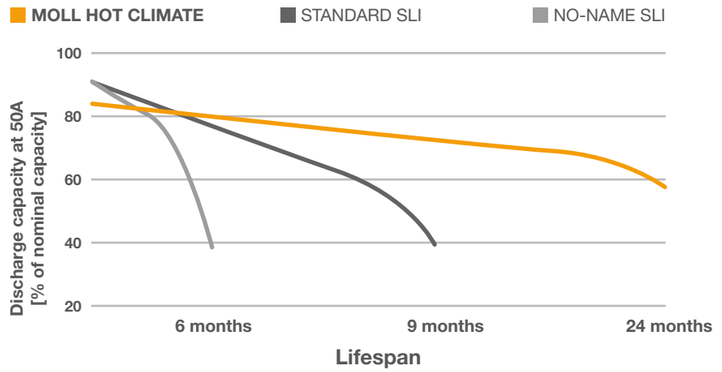
For questions, our sales team is at your disposal:
✉ **service@moll-batterien.de**

MOLL BATTERIEN

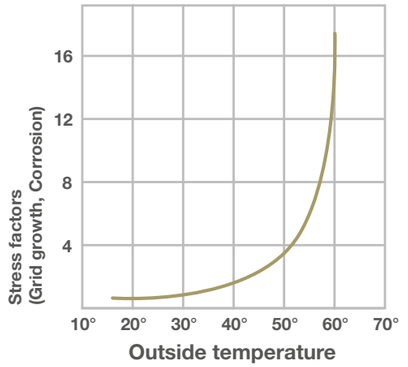
Why choose MOLL HOT climate?

- ✓ **Extreme Heat Resistance:** Up to twice the lifespan at high temperatures compared to standard batteries.
- ✓ **Original Equipment Quality:** The battery is manufactured to original equipment standards and meets the highest demands for reliability and performance.
- ✓ **MegaGrid Technology:** Highest corrosion resistance for a longer lifespan.
- ✓ **Maximum Leak Protection: MOLL**‘s patented double lid ensures maximum leak protection.
- ✓ **Lowest Lifecycle Costs.**
- ✓ **Maintenance-free:** lowest water consumption thanks to calcium grid technology.
- ✓ **Temperature Stability:** Low self-discharge even at high temperatures.
- ✓ **Performance Optimization:** Specially developed active masses for improved performance.
- ✓ **Robust design:** Advanced vibration resistance for consistent performance in demanding environments.
- ✓ **Recyclable:** Over 99% recyclable.
- ✓ **Quality Made in Germany:** Reliable German quality and engineering.

Lifespan in thermal stability test at 75°C



Stress factors by outside temperature



MOLL Type no	Capacity Ah (20h)	Cold-cranking current A (EN)	Terminal position	Terminal type	Box	Max. outer dimensions [mm]		
						Length	Width	Height
85063	63	540	0	1	H5/L2	242	175	190
85073	73	620	0	1	H6/L3	278	175	190
85083	83	700	0	1	H7/L4	315	175	190
85093	93	750	0	1	H8/L5	353	175	190
85103	103	830	0	1	H9/L6	394	175	190

All specifications according to EN 50342

As of 10 | 2024

MOLL EFB
Super Heavy Duty

The Battery Professionals Trust

The new innovative **MOLL** product line for commercial vehicles combines cutting-edge technologies with over 78 years of experience in battery development and manufacturing. Through the use of special alloys, improved active materials, and modern manufacturing methods, the **MOLL EFB Super Heavy Duty** (**E**nhanced **F**looded **B**attery) offers an unprecedented combination of performance, longevity, and reliability.

Positive Grid in Robust Gravity Cast Technology

The use of a special lead-calcium-tin-silver alloy instead of lead-antimony for the positive grid brings several decisive advantages. This alloy with MegaGrid technology significantly reduces standby corrosion, further lowers water consumption, and gives the grid exceptionally high corrosion resistance. Especially in hot environments, this innovation brings a massively increased lifespan.

Negative Grid in Modern Concast Technology

The negative grid is produced with the highest precision using the modern ConCast process. In addition to lower energy consumption and CO^2 emissions, the production tolerances for grid weight and thickness are significantly reduced. This leads to further increased product quality while simultaneously reducing the battery‘s weight.

MOLL Offers More

The Nano-Carbon technology enables super-fast charging capability, while the proven MegaGrid technology ensures extremely high corrosion resistance. Special separators, optimized cell design, and improved active materials give the battery outstanding cycle stability - ideal for demanding applications with many charge and discharge cycles.

Whether as a starter battery or as a supply battery in truck electrical systems, in construction machinery or other special vehicles - thanks to its robust construction, the MOLL EFB Super Heavy Duty masters every challenge under the harshest conditions.

For questions, our sales team is at your disposal:
service@moll-batterien.de

MOLL BATTERIEN

Why choose MOLL EFB Super Heavy Duty?

- ✓ **OEM Quality:** The battery is manufactured to original equipment standards and meets the highest demands for reliability and performance.
- ✓ **MegaGrid Technology:** Superior corrosion resistance for extended battery life.
- ✓ **Nano-Carbon Technology:** Ultra-fast charging capability and high cold cranking power.
- ✓ **Maximum Leak Protection: MOLL**‘s patented double lid ensures maximum protection against leakage.
- ✓ **start-stop Technology:** Optimally suited for vehicles with start-stop systems.
- ✓ **Highest Cycle Stability:** The battery features even higher cycle stability, making it perfect for demanding tasks.
- ✓ **Quick-Charge Capability:** Thanks to advanced **MOLL** technology, the battery can be charged exceptionally fast.
- ✓ **Regenerative Braking Compatible:** Efficient energy recovery from braking processes.
- ✓ **Outstanding Cold Start Performance:** Reliable even at extremely low temperatures.
- ✓ **High Load Capacity with Multiple Consumers:** The **MOLL EFB Super Heavy Duty** easily handles the demands of modern vehicles with numerous electrical consumers.
- ✓ **Excellent Thermal Resistance:** The robust construction ensures a longer lifespan under hot conditions.
- ✓ **High Vibration Resistance:** Specially developed for use in trucks, construction and agricultural machinery, the battery offers extremely high vibration resistance and withstands the harshest conditions.
- ✓ **Extended Shelf Life:** Ca/Ca technology allows for longer storage time due to reduced corrosion.
- ✓ **Maintenance-Free:** Low water consumption thanks to Ca/Ca technology.
- ✓ **Recyclable:** Over 99% recyclable.
- ✓ **Quality Made in Germany:** Reliable German quality and engineering expertise.

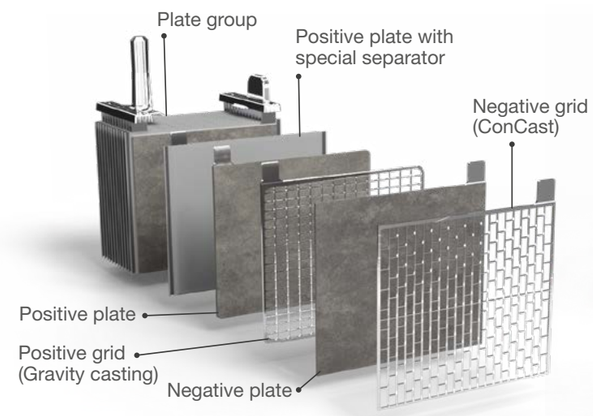
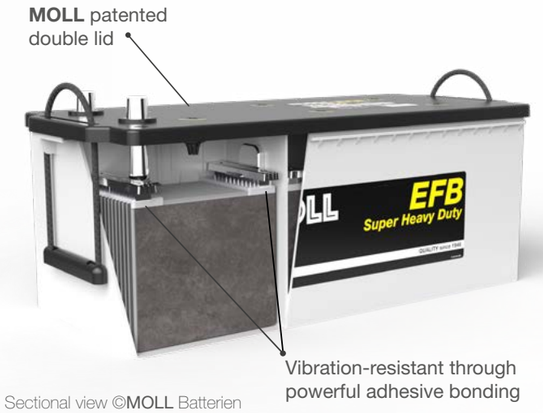


Plate group ©MOLL Batterien



Sectional view ©MOLL Batterien

New Type no	Old Type no	Terminal position/ Terminal type	Box	Capacity Ah (20h)	Cold-cranking current A (EN)	Central degassing	Double lid	Max. outer dimensions [mm]		
								Length	Width	Height
93 110	610 040 076	3/1	MAC110	110	760	x		514	175	210
93 125	625 023 000	2/1	NATO	125	1000			286	269	230
93 135	635 043 100	3/1	MAC110	135	1000	x		514	175	210
93 140	640 020 076	3/1	DIN A	140	760	x	x	513	189	223
93 180	680 032 100	3/1	DIN B	180	1000	x	x	513	223	223
93 225	725 012 115	3/1	DIN C	225	1150	x	x	518	276	242

All specifications according to EN 50342

As of 2 | 2024

MOLL EVR

extreme vibration resistance

Special Development for Extreme Vibration Resistance

The **MOLL EVR** (**E**xtreme **V**ibration **R**esistance) is a special battery developed for applications with extremely high demands on vibration resistance. Created based on specifications from a renowned manufacturer of vibrating plates, the **MOLL EVR** offers exceptional resistance to vibrations and shocks.

Robust Construction for Maximum Stability

The enormously high vibration resistance of the **MOLL EVR** is achieved through several constructive features:

- Extremely stable gravity cast grids for the positive and negative electrode
- Particularly robust separator with fleece layer for vibration damping
- Extra strong bonding of the electrode pack at the top and bottom

These components ensure unmatched stability and resistance, even under the harshest conditions. The **MOLL EVR** meets the highest vibration resistance level V4 according to the EN standard - proof of its exceptional durability in extreme situations.

High-Grade Materials and OE Quality

The **MOLL EVR** uses particularly corrosion-resistant alloys and specially developed active materials to ensure a long service life and reliable performance. The battery is manufactured to original equipment grade and thus meets the highest standards, even for standard applications.

Safety and Environmental Friendliness

The highest leak protection is ensured by the patented double lid with ESD-safe sealing plugs. The **MOLL EVR** is over 99% recyclable, making it an extremely sustainable product.

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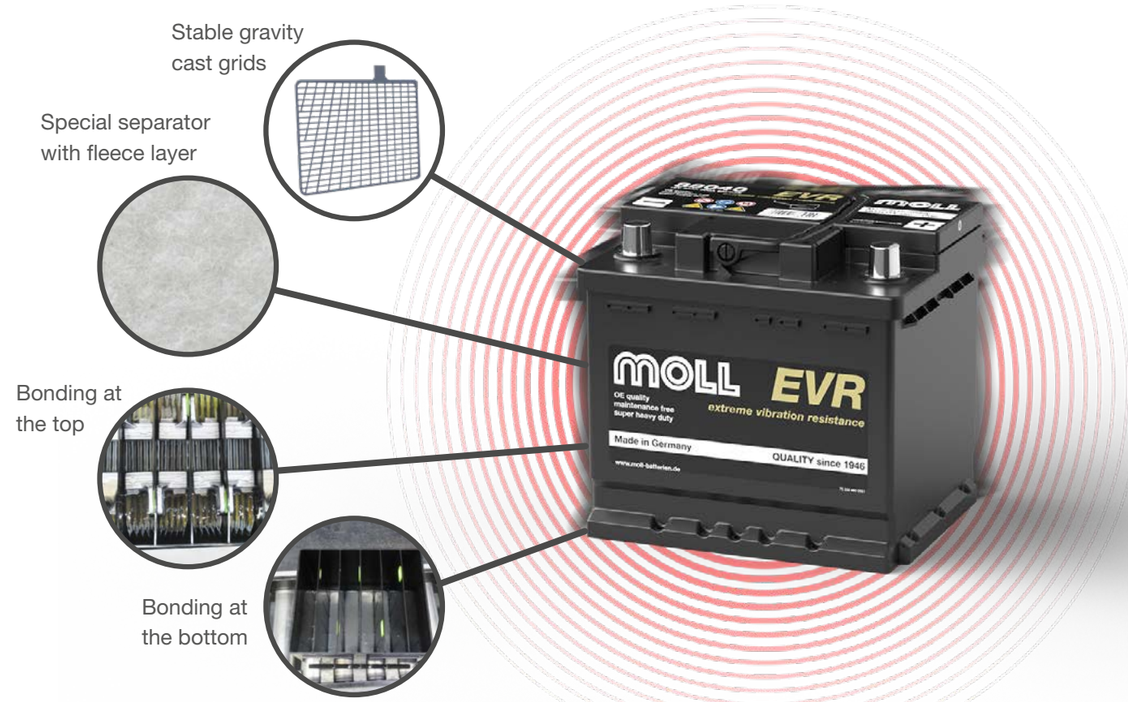
The MOLL EVR is the ideal choice for applications requiring an extremely vibration-resistant battery. With its robust construction, high-grade materials, and OE quality, it offers reliable performance and longevity under the harshest conditions.

For questions, our sales team is at your disposal:
service@moll-batterien.de

MOLL BATTERIEN

Why choose MOLL EVR?

- ✓ **Original Equipment Quality:** The battery is manufactured to original equipment standards and meets the highest demands for reliability and performance.
- ✓ **MegaGrid Technology:** Robust and stable grids in proven gravity cast technology for positive and negative.
- ✓ **Nano-Carbon Technology:** Super-fast charging capability and high cold start performance.
- ✓ **Maximum leak protection: MOLL**'s patented double lid ensures maximum leak protection.
- ✓ **Maintenance-free:** Low water consumption thanks to Ca/Ca technology.
- ✓ **Maximum vibration security:** Thanks to innovative special separator with fleece layer and reinforced adhesive technology, the battery exceeds the EN standard V4 for highest vibration resistance.
- ✓ **Longer storage time due to calcium grid technology.**
- ✓ **Recyclable:** Over 99% recyclable.
- ✓ **Quality Made in Germany:** Reliable German quality and engineering.



MOLL Type no	Capacity Ah (20h)	Cold-cranking current A (EN)	Terminal position	Terminal type	Box	Max. outer dimensions [mm]		
						Length	Width	Height
88040	40	300	0	1	T4/Lb1	207	175	175

All specifications according to EN 50342

As of 2 | 2024

Specialist for Small Series

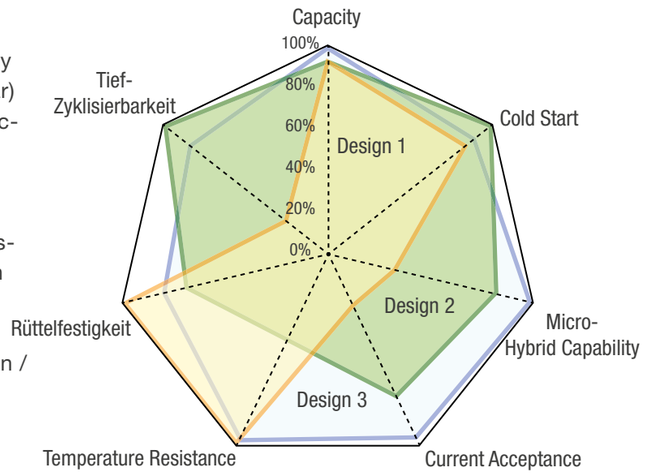
Battery Performance - There is No „Universal Battery“

Need a battery for a special application?
We will develop a perfect, individual solution for you!

Over 80 years of experience as a supplier and development partner to the automobile, construction vehicle, and special machinery industries guarantee the highest know-how, also for your application!

The following examples, from exotic to simple, give you an impression of our capabilities:

- A specially developed battery as an energy source at 10,000 m water depth (1,000 bar) with specially designed waterproof connections and an extra tool for easy handling (charging, filling with acid)
- A battery specially developed for the Paris-Dakar Rally with particularly high vibration and temperature resistance
- Batteries with labels in your desired design / Private Label



Based on the core requirements of your application, we can develop a battery optimized for your specific needs.

Standard

Base Mountings, Circuit Configurations, Terminal Poles

Base Mountings

B1

Hold-downs with a height of 10.5 mm on the long sides

B5

Hold-downs with a height of 10.5 mm on the long sides and hold-downs with a height of 29 mm on the narrow sides

B3/13

Hold-downs with a height of 10.5 mm on the long and narrow sides

B3: 3 Notches | B13: 5 Notches

B6

Hold-downs with a height of 29 mm on the narrow sides

B4/14

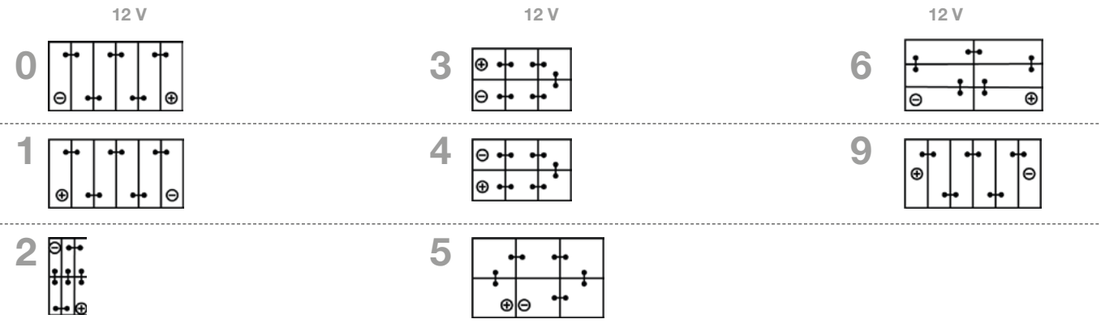
Hold-downs with a height of 19 mm on the long sides

B4: 3 Notches | B14: 5 Notches

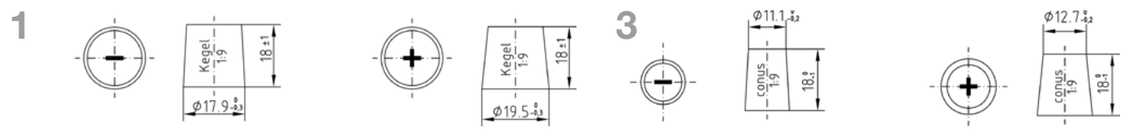
B11

Hold-downs with a height of 10.5 mm on the narrow sides

Circuit Configurations

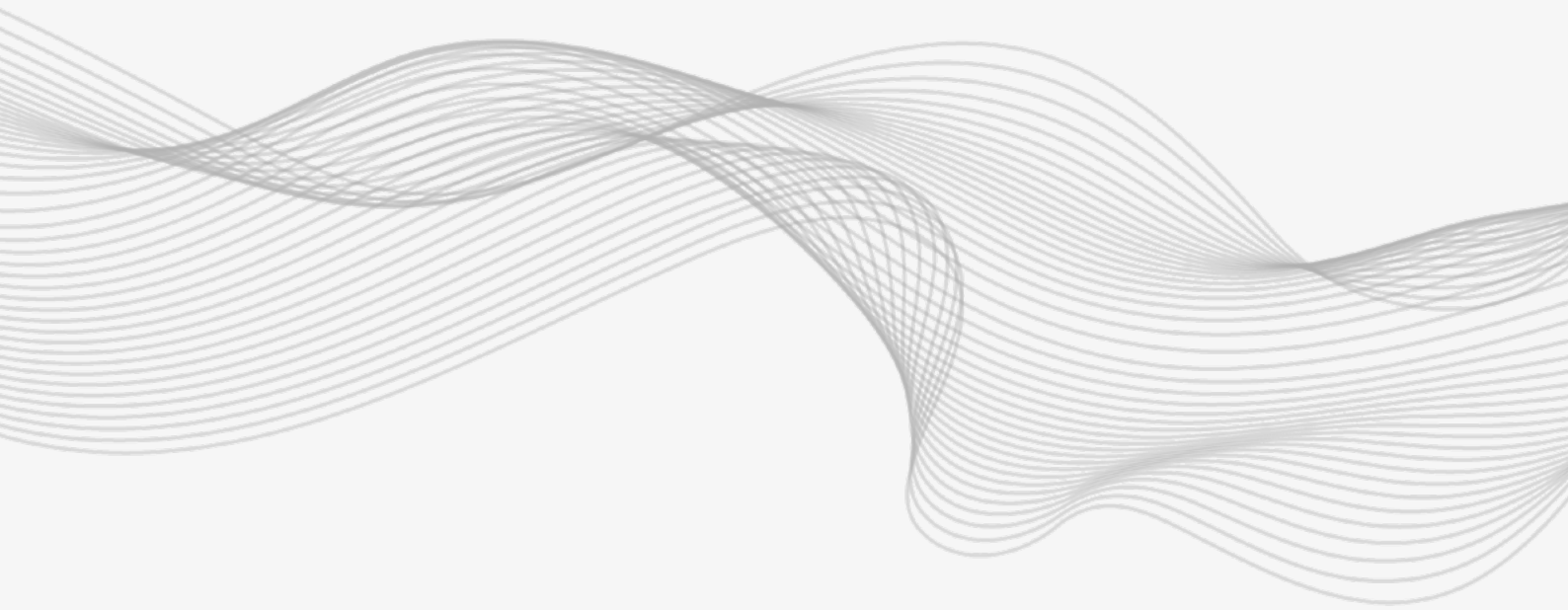


Terminal Poles



1 Terminal pole according to EN 50342

1/3 Terminal poles for Japanese vehicles with adapter for European vehicles



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