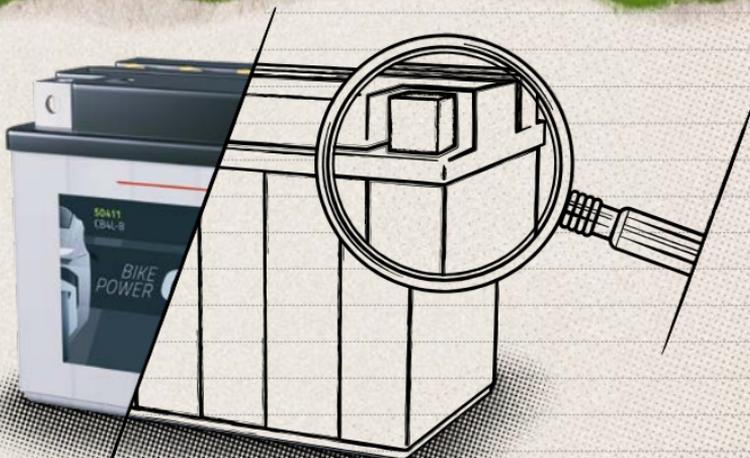




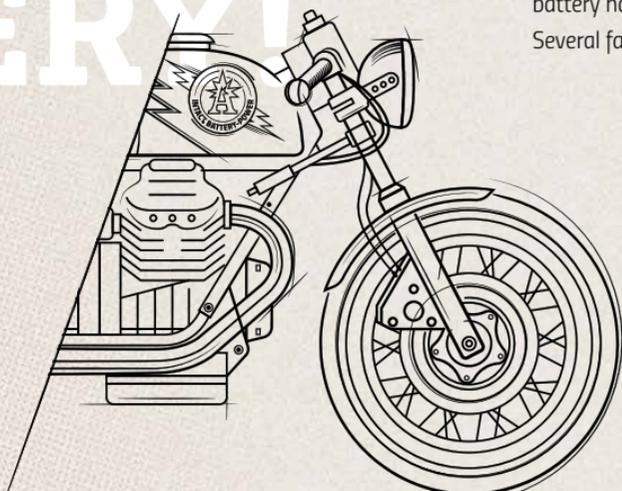
# MOTORCYCLE BATTERIES

CHECK AND MAINTAIN!



# CONGRATS ON YOUR NEW BATTERY!

LET'S SEE TO IT THAT  
YOU CAN BENEFIT  
FOR A LONG TIME.



## *EVERY BATTERY AGES.*

With each charge/discharge cycle, active material is inevitably lost, and the performance of the battery drops. If it has fallen so far that it can no longer fulfil its purpose, e.g., starting the machine, the battery has reached the end of its life. Several factors can accelerate early aging.

WITH SOME ATTENTION,  
CARE AND, IF NECESSARY,  
MAINTENANCE, YOU CAN

**COUNTERACT THE  
AGING PROCESS.**

On the following pages you find some recommendations to that effect. Because we want you to enjoy your intAct battery for a long time.



ACTIVATION

# PATIENCE PAYS OFF

1/3

» Tip:

YOUR BATTERY WAS INSTALLED BY A  
WORKSHOP?  
THEN YOU CAN SKIP THIS STEP.

Fill the **dry-  
charged battery**  
before the first charge!

**Dry-charged battery**

= a battery, that is not filled with acid yet, with vent caps (Classic) or cap strip (AGM) on the top.

» Tip:

BATTERY ACID IS HIGHLY CORROSIVE. AVOID CONTACT WITH SKIN AND SURFACES. IN CASE OF CONTACT: **WASH OFF IMMEDIATELY.**

- » Fill the battery with the supplied acid pack.
- » Do not close it yet!
- » Leave it open for **at least 30 minutes.**
- » **Flooded battery only (Classic):**  
After 30 minutes, tilt the battery slightly, check the acid level and, if it is below the **MAX mark**, top up with the rest of the acid.



## ACTIVATION

2/3

### » Tip:

CHOOSE A WELL-VENTILATED  
AREA AND AVOID SPARKS!  
EXPLOSIVE GASES MAY BE GIVEN  
OFF DURING CHARGING.



## Get full performance:

Charge before installation!

### FIRST CHARGE WITH CHARGER.

- » Leave the dry-charged battery **open while charging!**
- » Charge the lead-acid battery 3 to 4 hours (lithium 1 hour) **with a suitable charger.**
- » **Close** the dry-charged battery **with the vent caps or cap strip** provided.
- » **Install the battery.**

ACTIVATION

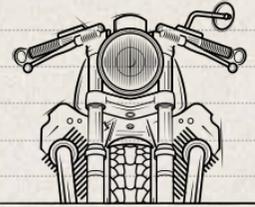
3/3

## Why charge before the installation?

A battery that is not fully charged at the time of installation **will not reach its full power** in the future either, and **will have a significantly shortened service life.**

Directly after the initial filling with acid, **dry-charged batteries reach only 75-80% of their nominal capacity.** They must therefore be charged before installation.

Wet charged batteries that are **factory activated** can lose charge. We recommend that you also fully charge them before installation.



**100%**



**Charging in normal use – for example, by the alternator while driving – does not make up for a neglected first charging process with a charger.**

# MAINTENANCE

Good maintenance is half the battle

During maintenance, the status of the battery fluid is checked and topped up with distilled water as necessary.

## » LOW-MAINTENANCE BATTERY:

Check every 3 months and top up as necessary.

### » Tip:

#### IN CASE OF EXCESSIVE WATER CONSUMPTION:

1. Check battery case for leakage,
2. Ask your workshop to check the charge controller.



## » MAINTENANCE-FREE BATTERY:

After the initial filling with the acid pack no maintenance is possible and necessary.



## » SEALED MAINTENANCE-FREE BATTERIES:

No maintenance is possible and necessary.



WHY IS THAT IMPORTANT?



If batteries are insufficiently filled, the plates are not completely covered by battery acid. This can lead to **corrosion, loss of output** and **early battery failure**.

# MOUNTING ANGLES

Closed does not equal spill-proof.

The angle indication on your battery tells you how to install it without battery acid leaking.

## WHY IS THAT IMPORTANT?

This way, you protect your battery, your motorcycle and yourself. Battery acid is highly corrosive and can damage a vehicle, including metal parts or electronics.



**ONLY INSTALL UPRIGHT.**  
FLOODED BATTERY WITH VENT CAPS.



**MOUNTABLE IN TILTED POSITION.**  
ACID IS HELD IN GLASS FIBRE SEPARATORS.



**MOUNTABLE IN TILTED POSITION.**  
ACID IS HELD IN GLASS FIBRE SEPARATORS &  
**BATTERY IS FACTORY SEALED.**



**MOUNTABLE IN TILTED POSITION.**  
ACID IMMOBILIZED BY GEL ADDITIVE &  
**BATTERY IS FACTORY SEALED.**



**MOUNTABLE IN TILTED POSITION.**  
ACID IS HELD IN GLASS FIBRE SEPARATORS &  
**BATTERY IS FACTORY SEALED.**



**MOUNTABLE UPSIDE DOWN.**  
DOES NOT CONTAIN LIQUID ELECTROLYTE &  
**BATTERY IS FACTORY SEALED.**



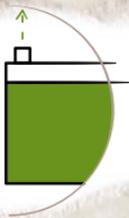
# A SIMPLE EQUATION

Lots out, lots in.

Every battery loses power over time. If it is often overloaded, however, this can happen even faster:

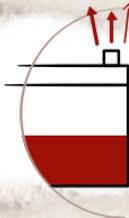
Normal load +  
Always full charge

*CAPACITY DECLINES SLOWLY.*



High load +  
Insufficient charge

*CAPACITY DROPS RAPIDLY.*



*THAT'S WHY:*

# 1

## ALWAYS SELECT A BATTERY THAT MATCHES THE LOAD

» If the demands for your battery change,

e.g., by connecting additional or more powerful loads: Check nominal capacity of the battery and replace with a stronger battery if possible.

» If the battery becomes weak:

Investigate with an ammeter for current leaks or silent loads, that are draining the battery constantly.

# 2.

## PAY ATTENTION TO THE STATE OF CHARGE

» Check the charge level every 2-3 months if...

- ... the vehicle is often left standing around unused.
- ... a lot of short-distance travels are taken.
- ... a lot of electric loads are installed.

» Check at the latest when ...

- ... the vehicle only starts sluggishly,
- ... or the output of the battery decreases noticeably.

## WE RECOMMEND

*FOR BATTERIES IN SEASONALLY-USED MOTORCYCLES:*

Before the winter break, it is best to remove the battery or at least disconnect it and store it in a cool (ideally at 10 to 15 °C) and dry place. Charge every 4 to 6 weeks for 24 to 48 hours with a suitable charger.

At the latest, check the charge level at the start of the season and ideally charge overnight.

# CHARGE SMART

Only if it is really  
necessary.

Each charging process represents one  
charging cycle. Some batteries tolerate  
more cycles than others.



## Nevertheless:

*UNNECESSARY CHARGING  
ALWAYS SHORTENS BATTERY  
LIFE, EVEN IF YOU USE A  
DEDICATED CHARGER FOR  
TRICKLE CHARGING.*

# VOLTAGE MEASUREMENT AND EVALUATION

To find out if your battery should be charged, determine the open-circuit voltage with a voltmeter.

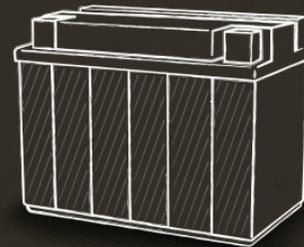
\*Measure the **open-circuit voltage** when the battery has been disconnected from any charge for around at least 4 hours, and no current has been drawn for at least 1 hour.

## » Tip:

A VOLTAGE TEST WITH A VOLTMETER ALSO MAKES SENSE IF YOU SUSPECT A MALFUNCTION OF YOUR BATTERY, AND THE PROBLEM IS NOT IMMEDIATELY VISIBLE FROM THE OUTSIDE.

EXCEPT FOR LITHIUM-BATTERIES. HERE THE VOLTAGE DOES NOT PROVIDE VALID INFORMATION ABOUT THE FUNCTIONALITY OF THE BATTERY.

A 12-volt battery consists of 6 cells of 2.12 volts each. When fully charged, this results in 12.72 volts voltage.



## OPEN-CIRCUIT VOLTAGE\*

## OUR RECOMMENDATION

< 12,5V

» Must be charged.

< 12,6V

» Charging recommended.

≥ 12,6V

» No charging necessary.

We recommend measuring the open-circuit voltage\* again after charging (and waiting at least 4 hours). If it is then still below 12.6 volts, the battery is worn out and no longer starts reliably.

## » Attention:

A LITHIUM BATTERY WITH 10.7 VOLTS OR LESS MUST NEVER BE CHARGED!

# CORRECT CHARGING

STEP BY STEP

## 1. CHECK CHARGER.

Match the technical characteristics of the charger with the battery. Chargers with 1 to 4 amps are ideal for motorcycle batteries.

## 2. REMOVE THE BATTERY.

## 3. CHECK BATTERY FROM OUTSIDE.

- » If the battery case is damaged or deformed, replace the battery.
- » Clean dirty connection poles with a wire brush.
- » Remove oils, liquids or other deposits.
- » For flooded batteries with vent caps check the liquid level and, if necessary, top up to MAX with distilled water.

### » Tip:

*THE VISUAL INSPECTION OF THE BATTERY CASE ALSO MAKES SENSE IF YOUR BATTERY IS NOT DESIGNED FOR STRONG VIBRATIONS OR SHOCKS, AND YET YOU HAVE SUBJECTED IT TO THOSE CONDITIONS.*



**4. CHOOSE A SUITABLE LOCATION WITH SUFFICIENT VENTILATION.**

Explosive gases may be produced during charging.  
Avoid sparks.

**5. ATTACH CLAMPS TO THE BATTERY.**

**IMPORTANT:** Always attach the red cable/clamp to the positive pole first, then attach the black cable/clamp to the negative pole. A short circuit with sparking or arcing can be life-threatening. It also causes lasting damage to the battery.

**6. CONNECT THE CHARGER TO THE SOCKET.**

**7. SWITCH ON THE CHARGER.**

and if necessary adjust the voltage.

**8. CHARGE THE BATTERY.**

Observe the LED, display or other indication.

**9. SWITCH OFF THE CHARGER.**

**10. DISCONNECT THE CHARGER FROM THE POWER SUPPLY.**

**11. DISCONNECT THE CHARGER FROM THE BATTERY:**

In reverse order, i.e., first, disconnect the black cable/clamp from the negative pole, then remove the red cable/clamp from the positive pole.

**12. REINSTALL THE BATTERY**

# BROKEN?

## TROUBLESHOOTING AND ANALYSIS

### ONLY FOR BATTERIES WITH VENT CAPS:

*SIMPLY OPEN AND  
HAVE A LOOK.*

Low-maintenance batteries have a decisive advantage: If something is wrong, you can open them and look inside. What you see will give you some clues.

#### » FLUID LEVEL.

If the battery has too little fluid overall, it has not been adequately maintained. If no obvious damage to the battery case is visible, fill it with distilled water and try to charge it. If the battery still does not supply sufficient power after charging, the plates are probably already corroded, and the battery needs to be replaced.



#### » SINGLE DRY CELL.

If only one cell is dry and possibly already dead, this indicates a cell short-circuit.

#### » COLOUR OF THE ACID.

If the acid is cloudy grey to black, brown or light grey, this indicates overloading, incorrect charging or damage due to long downtimes. The battery should be replaced.

#### » Tip:

*ONLY CONNECT THE CHARGER IF  
EVERYTHING IS OKAY.*

WHEN  
ALL  
ELSE  
FAILS:

GET IN  
TOUCH  
WITH  
YOUR  
DEALER



We'd like you to try to enjoy your battery for a long time and assume that you have maintained it well.

Sometimes, however, problems occur that only become noticeable after a longer period of use.

Your dealer can use a testing device to find out more about the condition of your battery, and give you tips on suitable replacement and future care.

[www.intact-batterien.de](http://www.intact-batterien.de)



*VISIT US!*

What we do and decide is based upon more than 45 years of experience in the battery industry. We have decided to bundle this knowledge and pass it on to you. To make it as easy as possible for you to use, we focus on rapid implementation, a continuous improvement process and simplification. Errors are possible and inevitable, which we will certainly correct in the next run of materials. After all, nobody is perfect from the get-go.

DEALER:

ALWAYS THE  
**BATTERY**  
**THAT FITS!**

**intact**  
**BATTERY - POWER**