

Instruction card Storage and charging of 80V batteries

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PREFACE

This instruction card is a supplement to the user manuals for cranes that use the 80V battery. This instruction card provides information on storing and charging the 80V batteries.

Read this document carefully to familiarise yourself with the correct handling of the batteries.

This instruction card is subject to the same conditions as the associated user manuals.

SAFETY

It is of paramount importance that personnel closely observe these warnings and precautions to prevent injury to themselves and others and damage to the equipment.

**DANGER**

Do not open or disassemble the batteries or charger.

**DANGER**

Disconnect the battery when replacing electrical components.

**WARNING**

Do not use the crane with the battery charger connected to the mains.

**WARNING**

Use an extension lead with a cross-sectional diameter of at least 2.5 mm² and measuring no more than 25 m in length.

**REMARK**

Charge the batteries at the end of each day to keep them balanced and in good condition.


STORAGE

If the battery pack remains connected to mains voltage, it will keep the batteries charged. The batteries will not be damaged if they are left on the charger for a long time. However, if the crane is stored without a charger, make sure the state of charge (SOC) is between 30% and 50%. Check the battery voltage monthly; the battery voltage must not drop below 72V while the batteries are in storage.

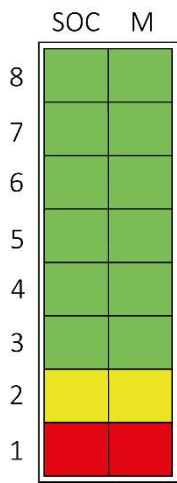
After a long period of disuse, it is important that the batteries are fully charged before use. In the process, the SOC is also reset and calibrated. For earlier versions of cranes, we recommend removing the battery and storing it safely during the time the crane is in storage. The 24V battery is a separate battery. Disconnect the 24V battery by unplugging the plug (see photo) and connecting it to a trickle charger.



CHARGING

Pictogram	Explanation	Location
	Charge indicator	On the right side of the column

The crane is fitted with an indicator bar that shows the state of charge (SOC) and charging mode (M) of the battery packs. Note: On previous versions of the crane, the indicator bar only shows the charging status.



The state of charge is only shown for the number of configured batteries that are available. The following LEDs light up to indicate the corresponding state of charge:

LED 8	88%
LED 7	76%
LED 6	65%
LED 5	53%
LED 4	42%
LED 3	30%
LED 2	19%
LED 1	7%

Figure 1: Indicator bar with SOC (state of charge, left) and M (charging mode, right)

The following table shows the different charging modes:

Mode	Indicator bar
Fast charging (>2A per battery)	The indicator bar fills every 4 seconds
Slow charging/balancing	The indicator bar fills every 16 seconds
If all the batteries have been fully charged since the charging plug was connected	All the LED segments are on

When the crane is switched off, the indicator bar shows the status and mode as long as the charging plug is connected to the mains.



REMARK

On cranes where the charging mode is not shown, it is possible to see when the battery packs are being charged: LEDs 7 and 8 will flash as long as the battery packs are being charged.

To charge the batteries:

1. Set the key switch on the electrical cabinet to position '0'.
2. Check that the charging cable plug is clean and dry.
3. Insert the plug into the mains socket. Charging starts automatically.
4. During charging, the indicator bar fills and the SOC is shown (not for older cranes).
5. When the batteries are fully charged, all the SOC LEDs light up.
6. Disconnect the charging cable from the mains supply and store it in the crane again.



REMARK

Charge the batteries at the end of each day to keep them balanced and in good condition.



REMARK

When the crane's key switch is off, the priority is on charging.

It is possible to charge while the key switch is on – to lift at the same time, for example – but the priority will be on lifting and the batteries will not fully charge.