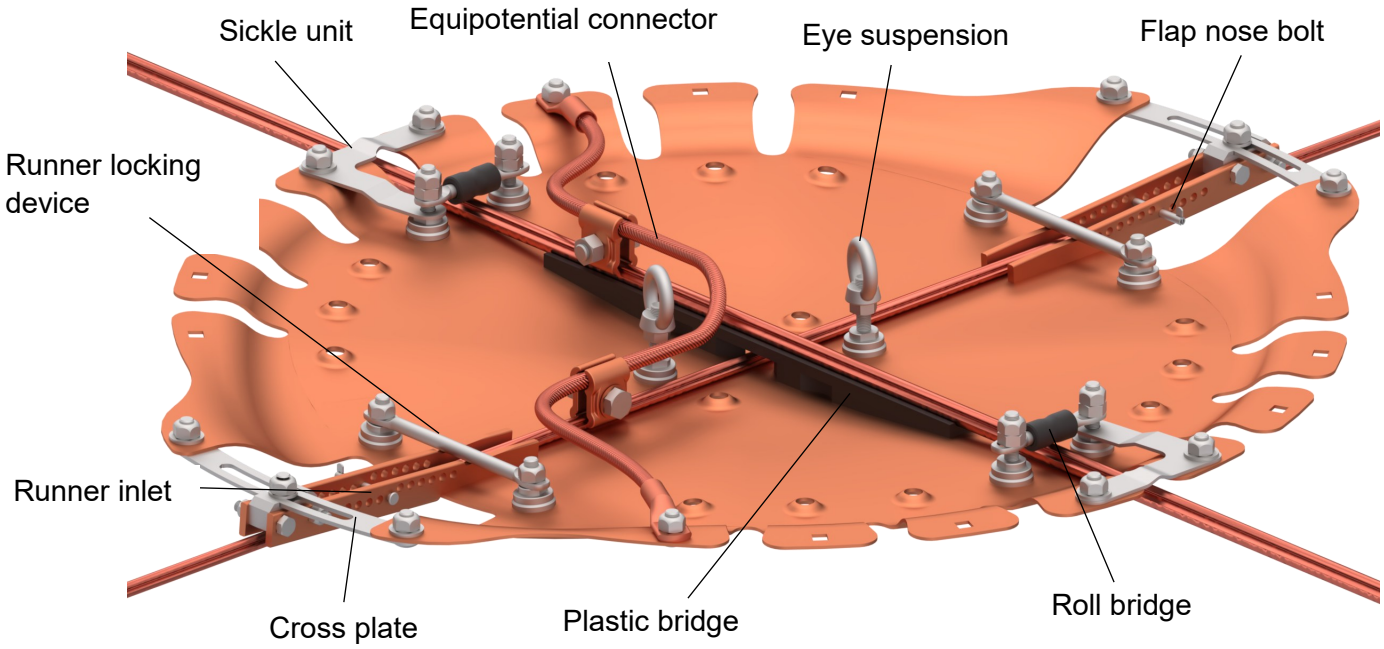
Contact wire crossing FDX 2.0

V 2025/08



The FDX 2.0 contact wire crossing has an adjustment range for angles 38° - 142°.

Optional accessories

Contact wire fixation: .....art. no. 690.103.203
Flexible cable dropper: .....art. no. 690.103.201

Index

RISK OF DEATH
Before working on the overhead line: Ensure that the overhead line is de-energized and properly grounded according to the regulations.

A) Tools

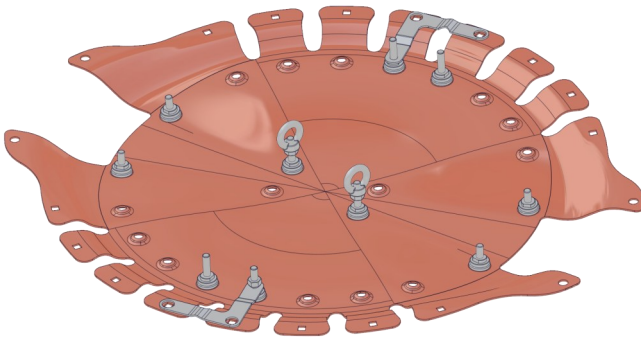
- Torque wrench 17 mm and 19 mm
- Ring / open end wrench 17 mm and 19 mm each
- Hexagon socket wrench 6 mm

B) Preparation

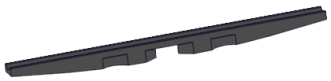
1. Check components

Before installation, check all parts for completeness.

Pre-assembled base plate FDX 2.0



Plastic bag no. 2: Plastic bridge



Plastic bag no. 3: Cross wire fixing kit

- 2x roll bridge 
- 2x hexagon nut M10 A4 
- 8x hexagon lock nut M10 A4 
- 4x round head screw M10x20 A4 
- 4x washer M12 A4 

2x plastic bag no. 4: Runner inlet kit

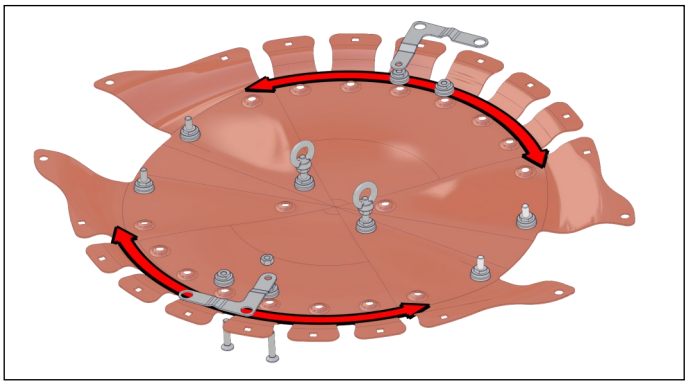
- 1x runner inlet A4 
- 2x cup square bolt M10x10 A4 
- 4x hexagon lock nutM10 A4 
- 2x washer M12 A4 M10 A4 
- 1x flap nose bolt M10 A4 
- 1x runner locking device 

Plastic bag no. 5: Compensating and connection-kit

- 2x hexagon lock nut M10 A4 
- 2x cup square bolt M10x10 A4 
- 2x parallel feeder clamp 
- 1x equipotential connector 

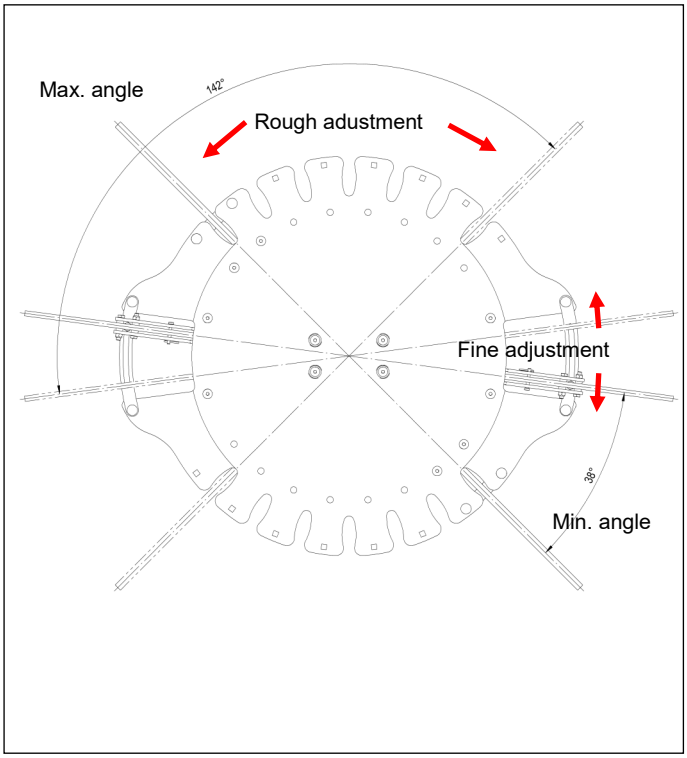
2. Transferring the contact wire crossing angle onto FDX 2.0

The FDX 2.0 is delivered in the basic configuration for 90° +/- 7.5° crossings.



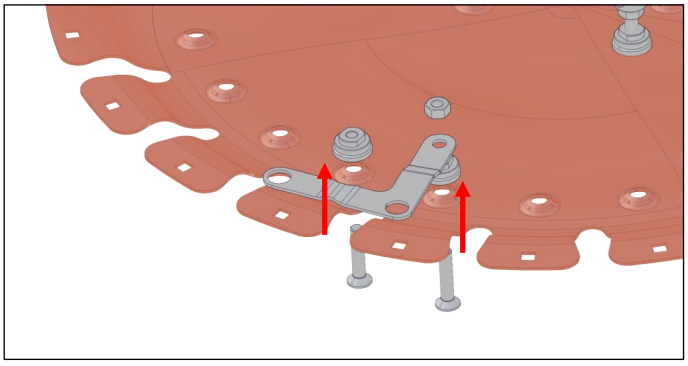
If a different angle is required, remove the pre-assembled sickle units and move them to the correct slot for the rough adjustment.

The fine adjustment is made later with the runner inlet units.



Counter the special nut with a open end wrench and tighten the screws with a torque wrench, hexagon socket 6 mm to **35 Nm**.

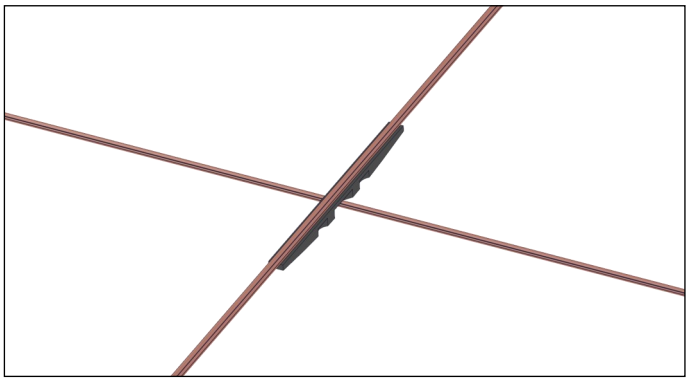
Attach the sickle units and tighten the nuts securely by hand . The contact wire guides must remain rotatable.



C) Installation

3. Clamp the plastic bridge between the contact wires

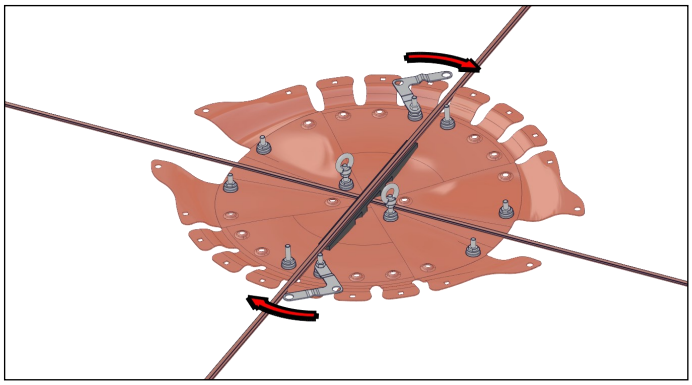
Clamp the plastic bridge between the contact wires.



4. Attach the base plate to the contact wire

Temporarily attach the base plate to the cross contact wire or upper contact wire by turning the sickles.

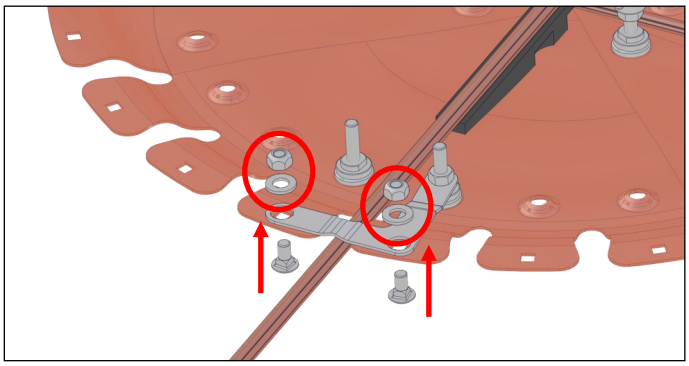
Caution: Do not lean on the base plate. Otherwise the sickles may bend.



5. Attach the sickle units

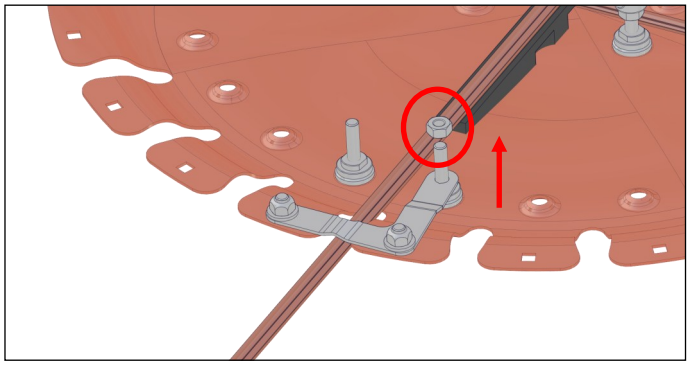
Insert the round-head screws, washers and lock nuts from plastic bag no. 3.

Place the washers on the protruding round-head screws and tighten with lock nuts to **35 Nm**.



6. Install and adjust the roll bridges

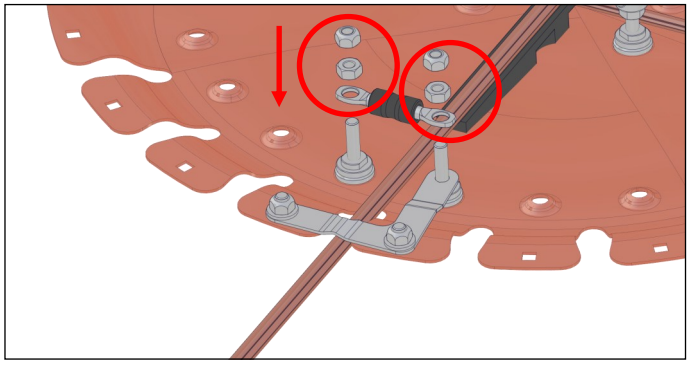
Remove the inner nuts and keep them safe.



Attach the roll bridges, nuts and locknuts to the threaded bolt.

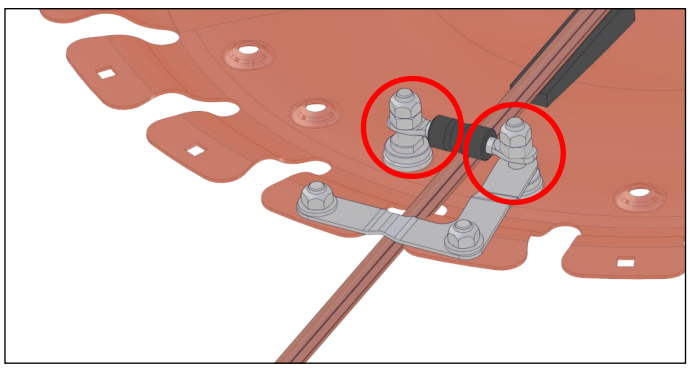
The roll bridges must be fixed parallel to the plate, rest on the contact wire and be able to turn easily on the contact wire.

Adjust the height of the roll bridges with the nuts so that the contact wire touches the plate.



Tighten the lock nuts to **35 Nm**, locking the lower nuts.

The contact wire must no longer touch the sickle unit.



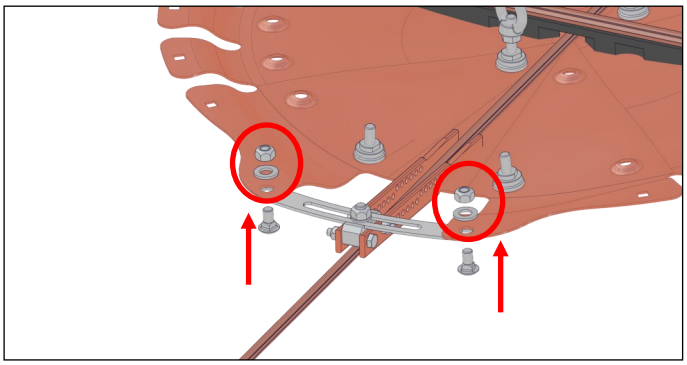
If the roll bridges are tightened too much, the contact wire crossing cannot move when the contact wire expands in length (temperature difference summer-winter) and may possibly leave the centre of the crossing. This can cause damage to the FDX 2.0 and the panto-graphs.

7. Mount the runner inlet for main contact wire

Prepare the runner inlets from plastic bag no. 4 for assembly.

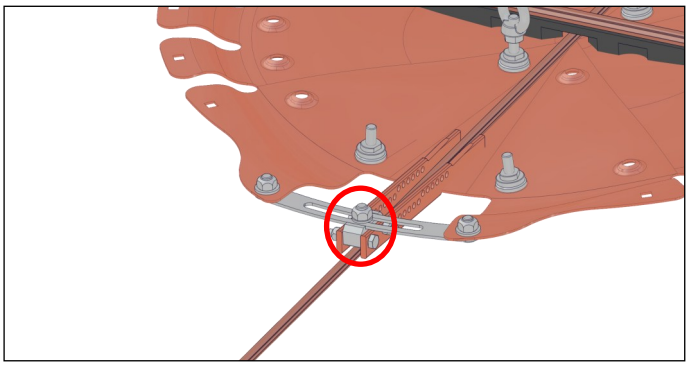
Attach the runner inlet to the base plate and install the cross plate under the base plate.

Place the washers on the protruding round-head screws and tighten with lock nuts to **35 Nm**.

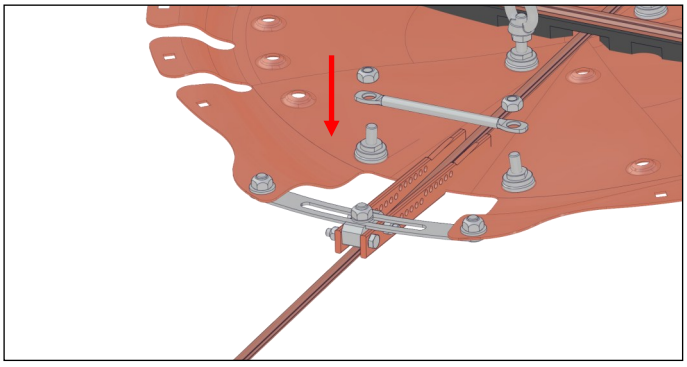


Align the runner inlet with the contact wire and tighten the lock nut to **35 Nm**.

Attention: The runner inlet must be centered to the contact wire.
The contact wire must not touch the runner inlet sideways.

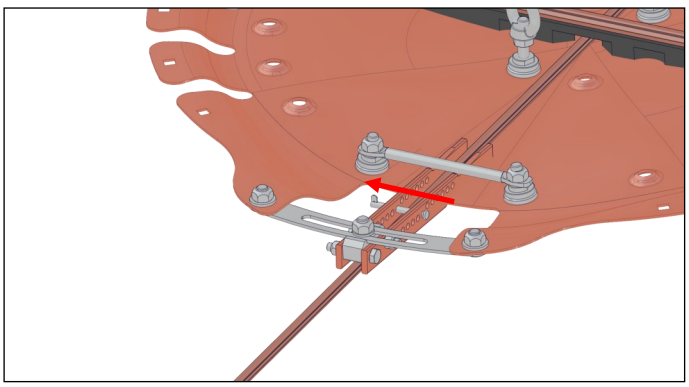


Attach the runner locking device from plastic bag no. 4 onto the thread and tighten the lock nuts to **35 Nm**.



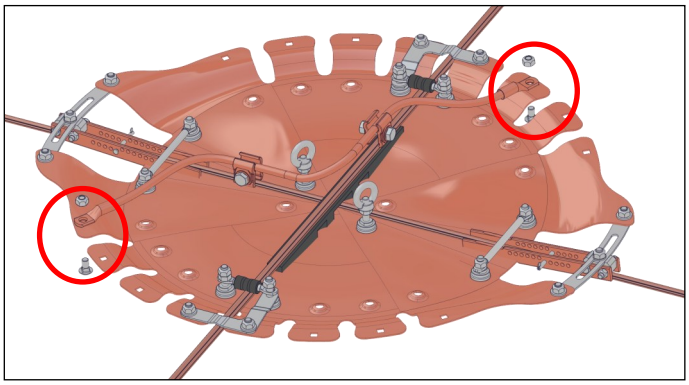
The contact wire must be braced against the base plate by using a flap nose bolt. Insert the flap nose bolt in a suitable hole and fold down the flap nose.

The hole through which the flap nose bolt is inserted depends on the contact wire type and the wear.

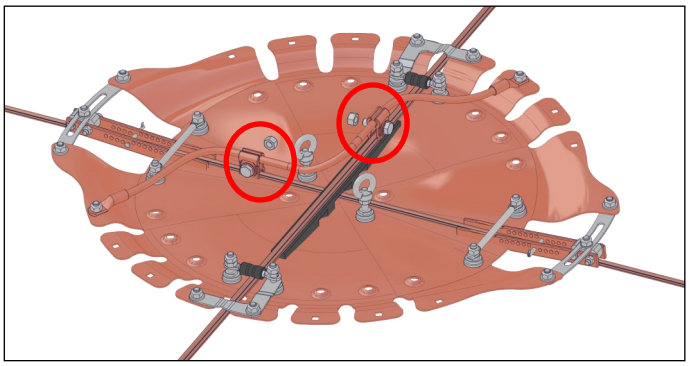


8. Attach the equipotential connector

Attach the ends of the equipotential connector at the free, opposite slots to the edge of the base plate.

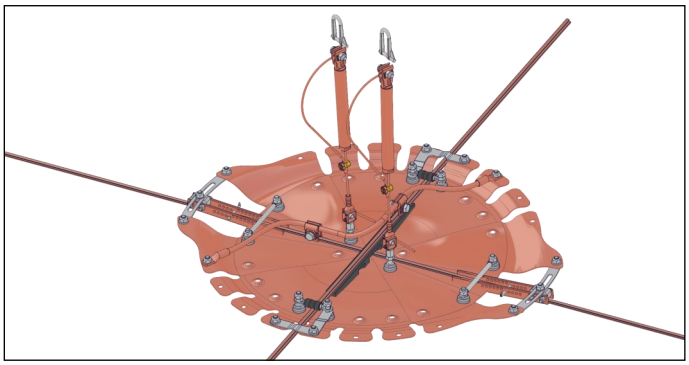


Atttach the copper cable with the current clamp from the plastic bag no. 5 in the main driving direction in the center (between the runner locking device and the plastic bridge).
Attach the copper cable to the contact wire in the other driving direction using the second current clamp, centered between the rolling bridge and the crossing of the two contact wires. This ensures that the FDX 2.0 can move with the contact wire in both directions. Tighten both clamps to **35 Nm**.



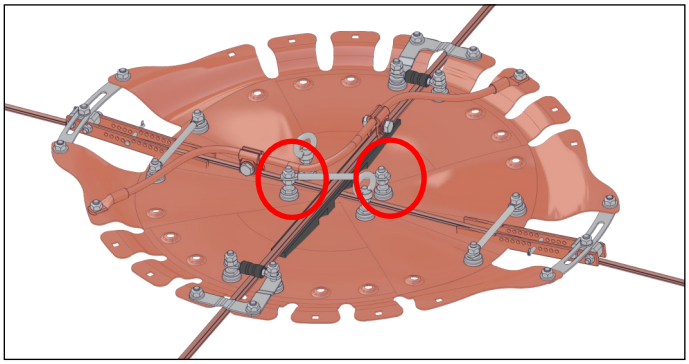
9. Attach the flexible cable droppers (optional)

Attach the flexible droppers (separately available) to the eye suspension.



10 Attach the contact wire fixation (optional)

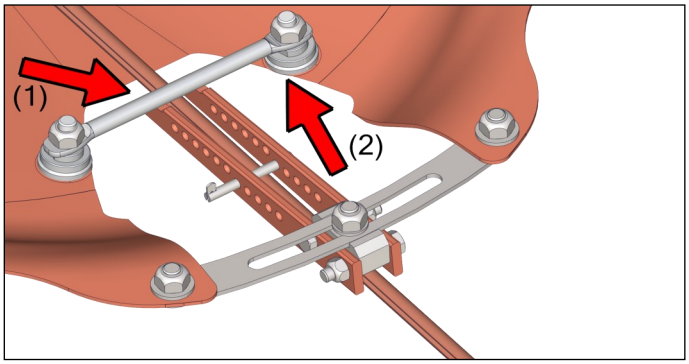
If the contact wires do not touch in the middle of the FDX 2.0, the separately available contact wire fixation can be installed.



D) Maintenance

The contact wire crossing is maintenance-free.

The contact wire crossing must be replaced if
- the runner inlet no longer rests completely on the base plate (1)
- a fastening screw of the skid locking device starts to break out. (2)
- a hole appears on the base plate due to wear.



E) Legal information

The product must only be operated by trained specialists.

The product can be permanently damaged by loads that exceed the maximum values. If the product is exposed to absolute maximum loading for an extended period, it may impair the product's reliability and life. Arthur Flury AG will not accept any liability in this case.

Arthur Flury AG will not accept any liability for incorrect use and use for applications other than those specified in these instructions.

If damage to the product is suspected, any use or operation must be stopped immediately. Arthur Flury AG will not accept any liability in the event of continued use despite suspected damage.

Due to the diverse ways in which this product can be used, the instructions for use represent a general guide only and do not constitute a guarantee of the product's suitability for use in a specific application. The user is responsible for checking the full product data and clarifying the product's suitability for the intended use. The user is responsible for the choice of product and compliance with all the safety regulations and warnings. Please contact Arthur Flury AG if you require additional product information.

Our products comply with the current legal requirements and regulations (including RoHS, REACH, WEEE) in the markets where we operate. Please refer to Arthur Flury AG's Code of Conduct, available on our website, for further information.

These instructions are intended to provide the customer with information and should not be supplied unless accompanied by the product. The products and information in this publication require appropriately trained specialist personnel. Despite the greatest care being taken, the instructions may contain inaccuracies or typographical errors for Arthur Flury AG will not accept any liability. Arthur Flury AG may amend the instructions at any time, without notice, in the interests of technical progress. The customer is responsible for downloading an up-to-date version of the instructions from Arthur Flury AG's website before using the product.

Any brand and product names used in these instructions are registered marks ® or trademarks™ of their respective owners.

Arthur Flury AG will not accept any liability for damage incurred as a result of failure to comply with these instructions.

Arthur Flury AG