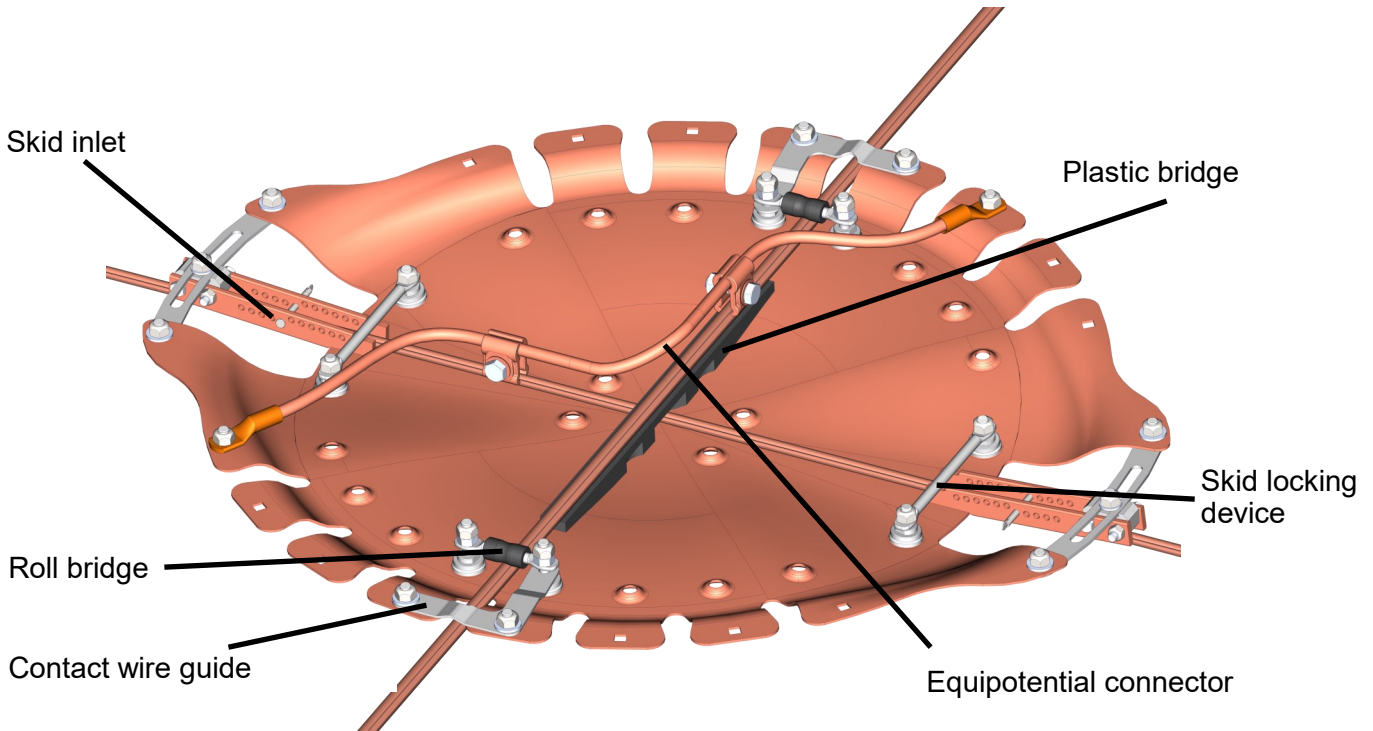


Contact wire crossing FDX 2.0

V 2022/02



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
- Eye suspension:art. no. 690.103.202
- Flexible cable dropper:art. no. 690.103.201
- Can Foodlube®:art. no. 690.103.204

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RISK OF DEATH

Before start working in the overhead line: Make sure that the overhead line is switched off and correctly grounded on both sides and the lifting platform is insulated.

A Tools

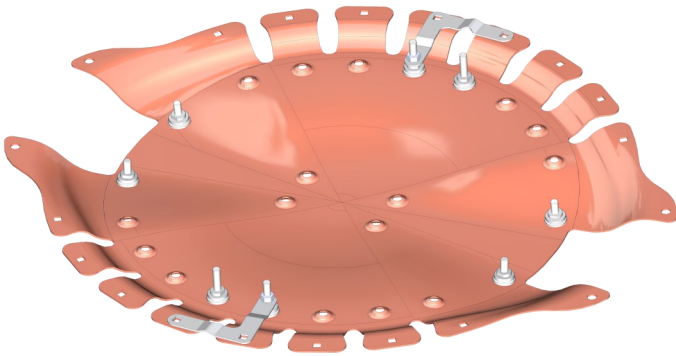
- Torque wrench 17 mm and 19 mm
- Ring / open end wrench 17 mm and 19 mm each
- Hexagon socket wrench 6 mm

B Preparation

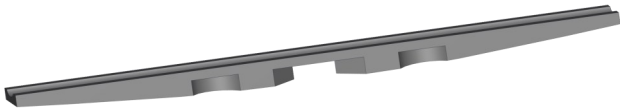
1. Check components

Before installation, check all parts for completeness.

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 
- 1x can Foodlube® 

2x plastic bag no. 4: Skids inlet kit

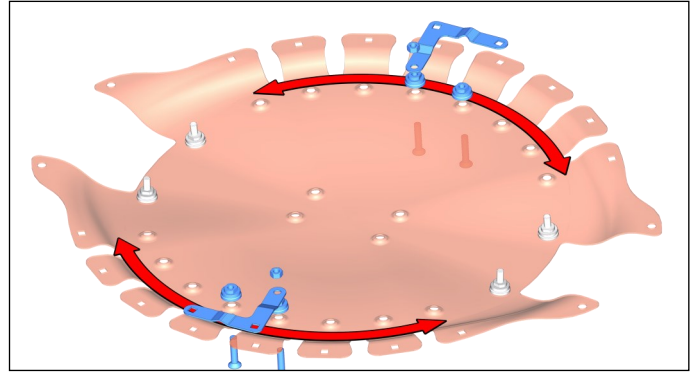
- 1x skid inlet A4 
- 2x cup square bolt M10x10 A4 
- 4x hexagon lock nut M10 A4 
- 2x washer M12 A4 M10 A4 
- 1x bolt M10 A4 
- 1x eye shaft (skid locking device) 

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 

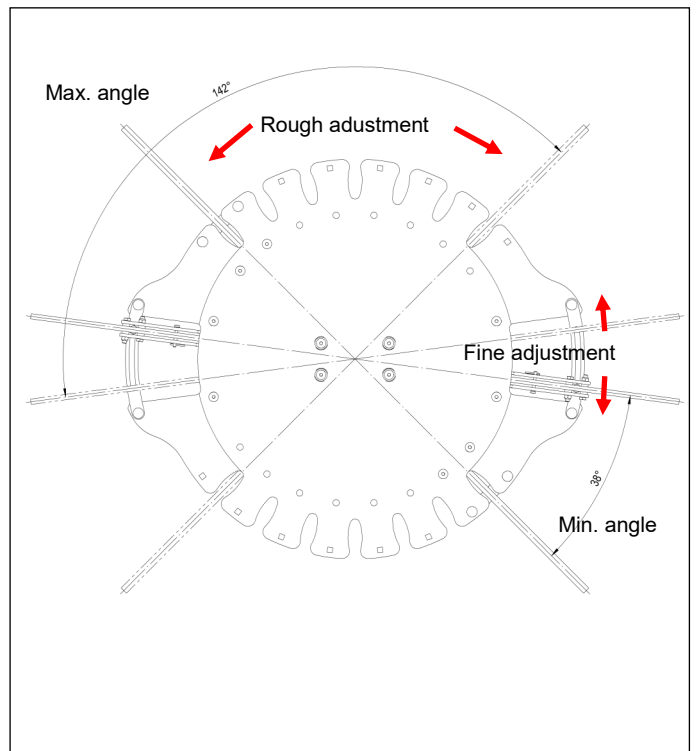
2. Transferring the contact wire crossing angle onto FDX 2.0

The FDX 2.0 is delivered in the basic configuration for $90^\circ \pm 7.5^\circ$ crossings.



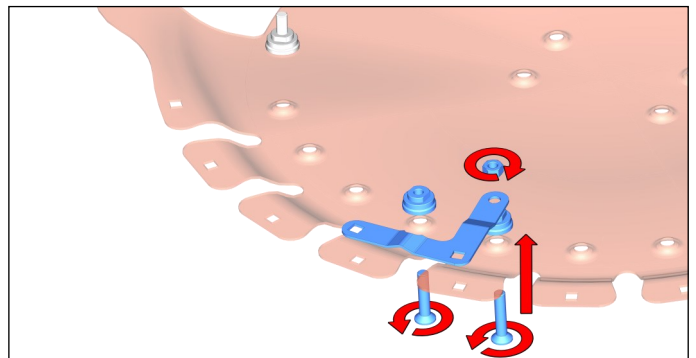
If a different angle is required, loosen the contact wire guide and move it to the correct slot.

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



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

Then attach the contact wire guides and tighten the nuts hand-tigh. The contact wire guides must remain rotatable.



3. Grease the screws

Grease all loose screws (10 pcs.) with Foodlube®.

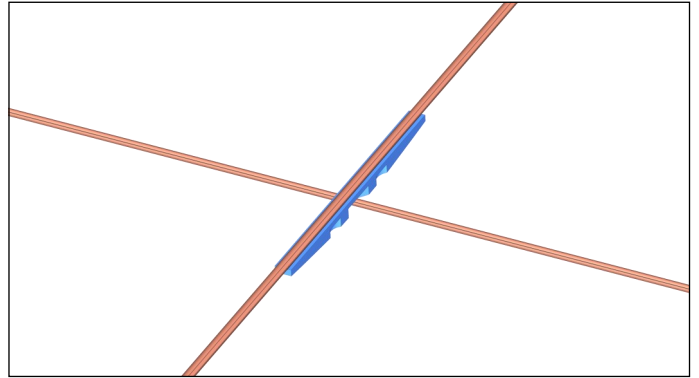
Safety data sheet attached to these instructions.



C Installation

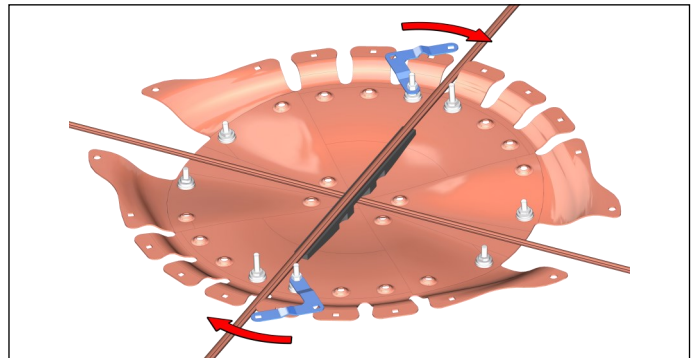
4. Clamp the plastic bridge between the contact wires

Clamp the plastic bridge between the contact wires.

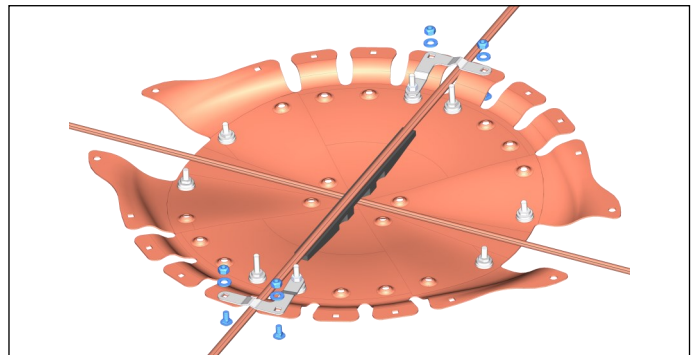


5. Install the base plate provisionally on the contact wire

Install the base plate provisionally on the cross contact wire or upper contact wire.



The FDX 2.0 now automatically hangs on the contact wire and can be used as a storage area for the remaining parts.

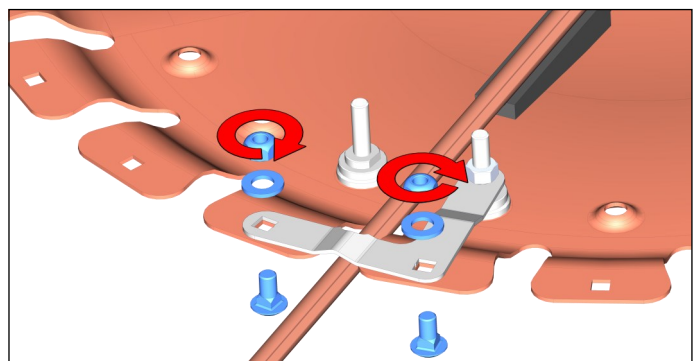


Caution: Do not support the body on the base plate, otherwise the sickles may bend.

6. Attach the contact wire guides

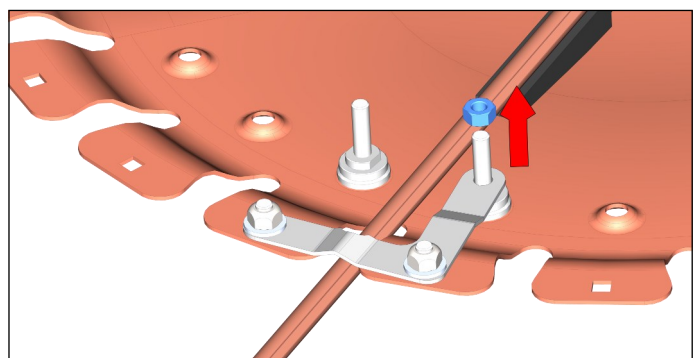
Insert the round-head screws, washers and lock nuts from plastic bag no. 3.

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



7. Fitting and adjusting the roll bridges

Remove the inner nuts and keep them safe. These will be reused in the next step.



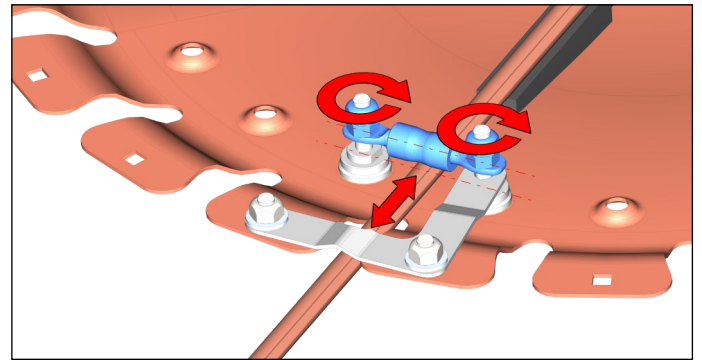
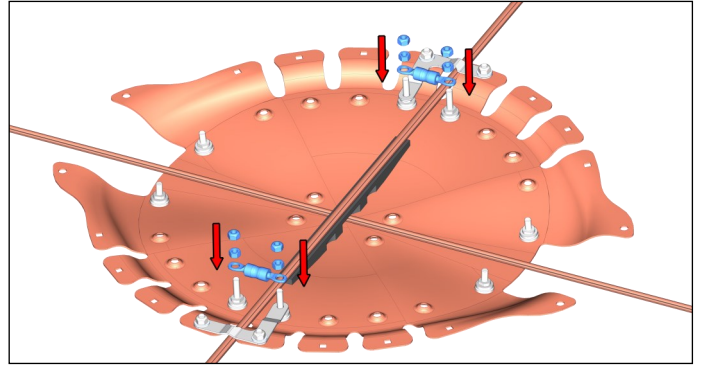
Attach the roll bridges, nuts and locknuts to the threaded bolt.

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 with **35 Nm**, locking the lower nuts.

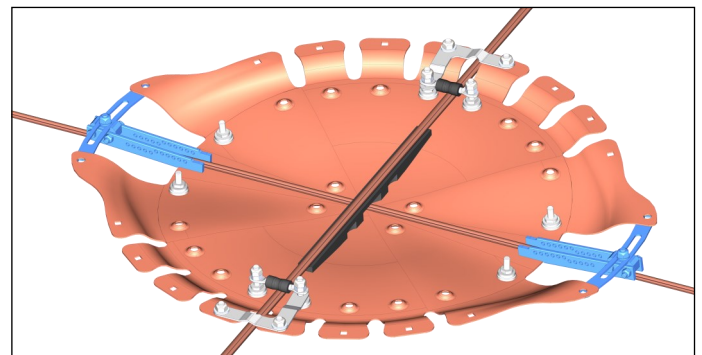
The contact wire must no longer touch the contact wire guide



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 pantographs.

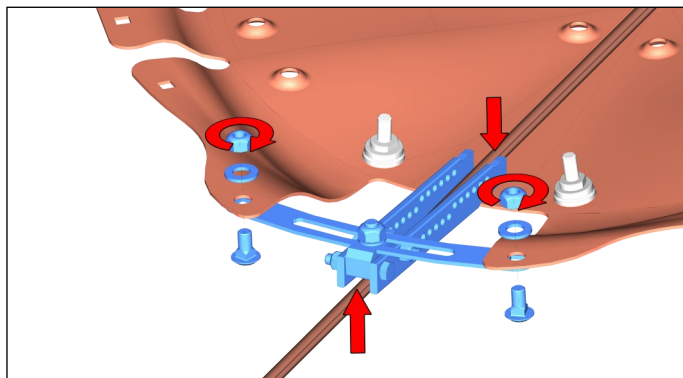
8. Mount the skids for main contact wire

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



Place the skids of the skid inlet on the base plate and install the cross plate under the base plate.

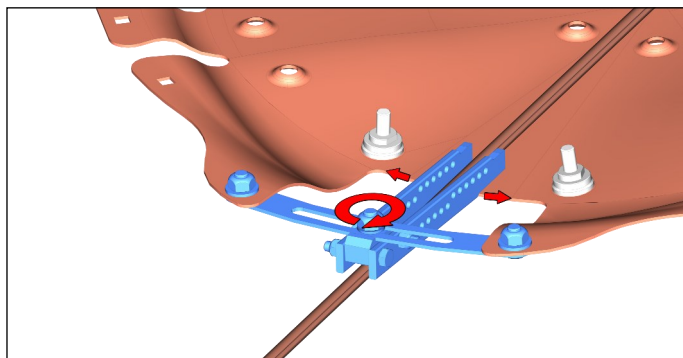
Place the washers on the protruding round-head screws and tighten with lock nuts with **35 Nm**.



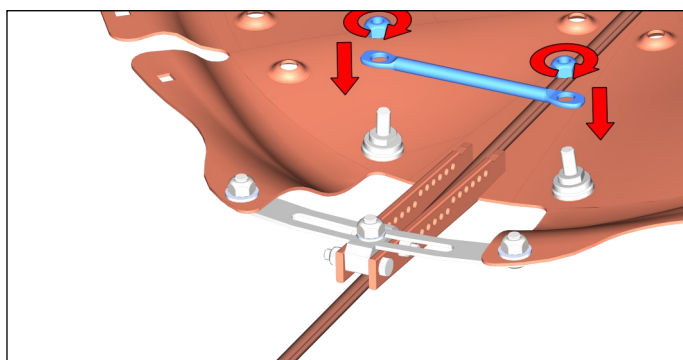
Align the skid inlet with the contact wire and then tighten the lock nut with **35 Nm**.

Attention: The skid inlet must be centered.

The contact wire must not touch the skid inlet.

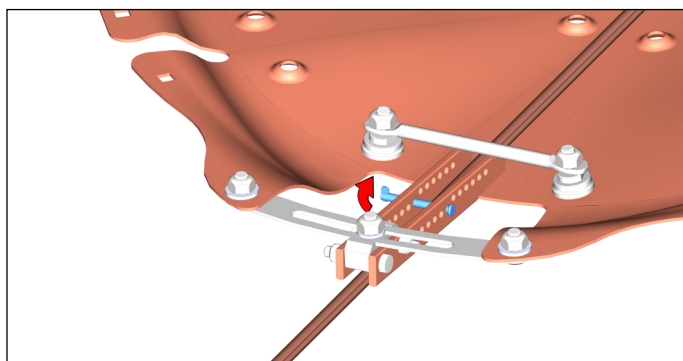


Install the skid locking device from the plastic bag no. 4 on the thread and tighten the locking nuts with **35 Nm**.



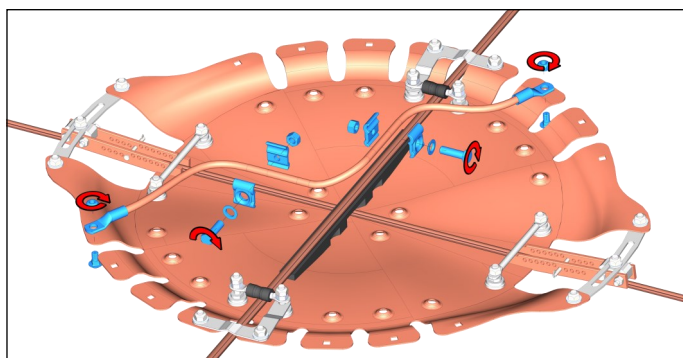
The contact wire must be braced against the base plate by using a bolt. Insert the bolt in a suitable hole and fold down the flap nose.

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



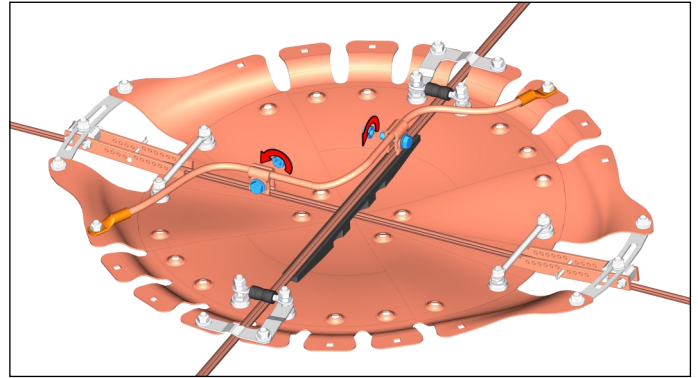
9. Attach the equipotential connector

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



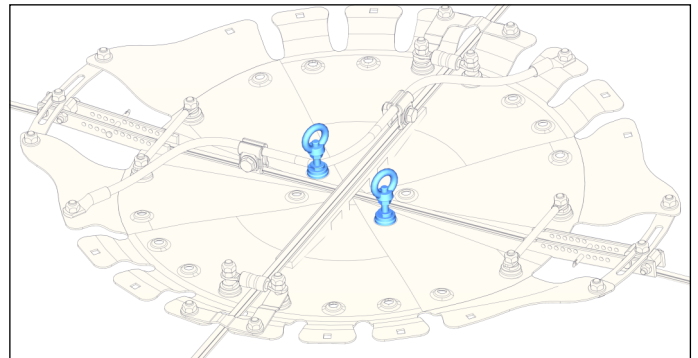
Attach the copper cable with the current clamp from the plastic bag no. 5 in the main driving direction in the center (between the eye shaft and the plastic bridge).

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 with **35 Nm**.



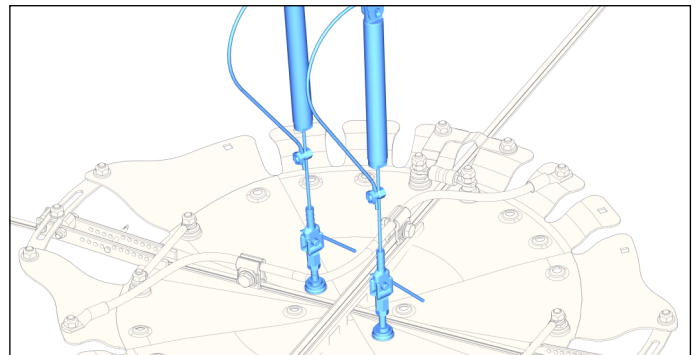
10a. Attach the suspension (optional)

Attach the eye suspension (separately available) to the base plate at the indicated holes.



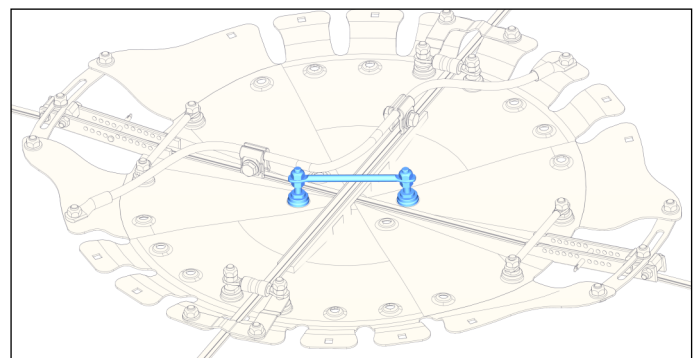
10b. Attach the suspension (optional)

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



11. Attach the contact wire fixation (optional)

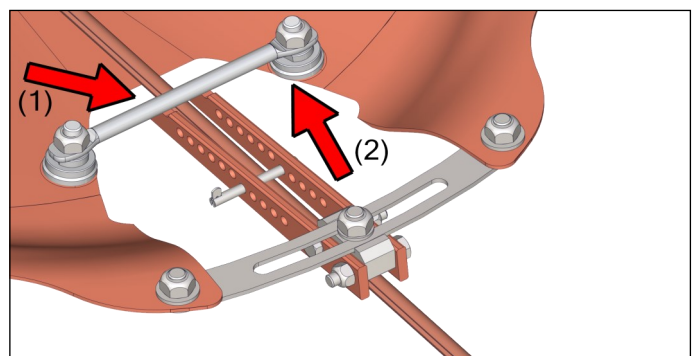
If the contact wires do not touch in the middle of the FDX 2.0, the separately available contact wire fixation can be installed.



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.



FOODLUBE MultiPaste

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Issue date: 04/05/2020 Revision date: 11/02/2021 Version: 8.1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Trade name : FOODLUBE MultiPaste

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Industrial use, Professional use
Industrial/Professional use spec : Industrial
For professional use only
Use of the substance/mixture : Lubricants, Greases and Release Products

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer

ROCOL a division of ITW Ltd
Rocol House
Wakefield Rd, Swillington
LS26 8BS Leeds - United Kingdom
T +44 (0)113 232 2600
customer.service@rocol.com - www.rocol.com

1.4. Emergency telephone number

Emergency number : +44 (0)113 232 2600

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of REACH Annex II

FOODLUBE MultiPaste

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice.
First-aid measures after inhalation	: Allow affected person to breathe fresh air. Allow the victim to rest.
First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects	: Not expected to present a significant hazard under anticipated conditions of normal use.
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4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
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6.1.2. For emergency responders

Protective equipment	: Equip cleanup crew with proper protection.
Emergency procedures	: Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: On land, sweep or shovel into suitable containers. Minimise generation of dust.
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6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

FOODLUBE MultiPaste

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in original container. Keep container closed when not in use.
 Incompatible products : Strong bases. Strong acids.
 Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

2. Recommended monitoring procedures

No additional information available

3. Air contaminants formed

No additional information available

4. DNEL and PNEC

No additional information available

5. Control banding

No additional information available

8.2. Exposure controls

1. Appropriate engineering controls

No additional information available

2. Personal protection equipment

Personal protective equipment:
 Avoid all unnecessary exposure.

1. Eye and face protection

Eye protection:

Chemical goggles or safety glasses

8.2.2.2. Skin protection

Hand protection:

Wear protective gloves. Nitrile-rubber protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:

Not required for normal conditions of use

8.2.2.4. Thermal hazards

No additional information available

FOODLUBE MultiPaste

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

8.2.3. Environmental exposure controls

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: Off-white.
Odour	: odourless.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 200 °C
Auto-ignition temperature	: > 200 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Nonflammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: ≈ 1.29
Solubility	: insoluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

VOC content : 0g/l

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Stable under normal conditions of use.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

FOODLUBE MultiPaste

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Skin corrosion/irritation	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Serious eye damage/irritation	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Respiratory or skin sensitisation	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Reproductive toxicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-single exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-repeated exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Potential adverse human health effects and symptoms	: Based on available data, the classification criteria are not met

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

12.2. Persistence and degradability

FOODLUBE MultiPaste	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

FOODLUBE MultiPaste	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

FOODLUBE MultiPaste

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

12.6. Other adverse effects

Additional information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

FOODLUBE MultiPaste

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

VOC content : 0 g/l

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product