



OPERATION & MAINTENANCE MANUAL eco-DUOMIX450



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1 Introduction

Dear customer,

We are delighted that you have decided to purchase a ViscoTec product. We have no doubt that this product will meet all your requirements. We wish you trouble-free and successful operation.

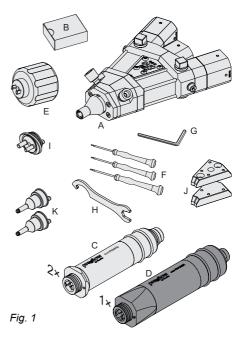
The dosing system consists of the eco-DUOMIX450 dispenser and the eco-CONTROL EC200 DUOMIX dosing control unit.

The eco-DUOMIX450 dispenser is described in this operation manual. A separate operation and maintenance manual is enclosed with the dosing control unit.

1.1 Scope of delivery

The scope of supply includes:

- 1 dosing unit (A)
- 2 stators (B)
- 2 eco-PEN450 drive units (C)
- 1 drive unit for eco-DUOMIX mixer (D)
- 1 assembly aid (E)
- 3 screwdrivers (F)
- 1 Allen wrenches (G)
- 1 combination tool (H)
- 1 calibration adapter (I)
- 1 mounting kit (2 back plates) (J)
- 1 mixer set (2 mixing capsules) (K)
- 1 operation & maintenance manual





1.2 Incoming inspection

Damage in transit can lead to malfunctions, and consequently to personal injury and damage to property. Damaged components must not be put into operation.

Check the delivery immediately on receipt for damage in transit and damage to the packaging. Check that the delivery is complete according to the enclosed delivery note. Make sure you have not left any part of the delivery in the packaging.

Compensation for damage during transport may be claimed only if the carrier is notified immediately.

2 Safety

2.1 Explanation of symbols used

The following symbols are used in this manual:

	Work step
•	List
Fig. 1	Legend number, reference to a figure
*	Reference to a comment
COMMAND	Designations of buttons/switches, menu items and input dialogs

The following notices indicate safety instructions and must be followed:

🚹 DANGER

indicates a hazardous situation which, if not avoided, will result in death or serious injury.

indicates a hazardous situation which, if not avoided, may result in death or serious injury.

indicates a hazardous situation which, if not avoided, may result in minor injury.

NOTE

indicates a technical tip to avoid damage to property or equipment.

This manual is structured so that text and the related figure are on the same page as far as possible. In this way the information can be understood quickly. If reference is made to a component in a figure, the part has a key number.



2.2 Intended Use

The eco-DUOMIX450 dispenser is used to feed and precisely dose viscous materials. The dispenser is controlled by the eco-CONTROL EC200 DUOMIX dosing control unit.

Check the chemical resistance of the materials that are in contact with the material before commissioning. Information on the materials can be found in the order confirmation or in Section 8.3 "Materials used" (Page 34).

No liability can be accepted for damage caused by failure to observe this operation manual or due to a lack of maintenance or checks.

Misuse

Any use other than the stipulated intended use shall be considered as misuse.

This includes

- · Use outside the permissible operating limits
- · Use in explosive environments
- · Use underground
- · Use outdoors

Misuse also includes the following actions carried out without the explicit written approval of the manufacturer:

- · Conversions and/or extensions
- Use of non-original spare parts (e.g. rotor)
- · Repairs carried out by unauthorised companies or persons
- · Use of non-approved materials

Misuse is not permissible, and will result in voiding of guarantee, warranty and liability claims.

2.3 Personnel

The operating organisation shall ensure that only appropriately qualified and authorised personnel work on this machine. It is responsible for ensuring that operators and maintenance staff possess the necessary qualifications. Personnel must be at least 15 years old.

All personnel working with or on the machine must have read and understood this operation manual.

The operating company shall document the operators' and maintenance staff's acknowledgement of this manual, and shall ensure their compliance with it by means of regular training.

2.3.1 Operators

Before starting work, the personnel assigned as operators must be adequately instructed regarding the nature and scope of their duties and the potential risks. Training is to be conducted on a regular basis (at least once a year). Training is to be conducted after any technical modifications.

2.3.2 Maintenance staff

The maintenance and repair staff must be authorised and

- adequately trained for the relevant activities
- familiar with and comply with the applicable technical rules and safety regulations

Competent personnel are persons who, by virtue of their training, experience and knowledge of the relevant requirements, standards and safety regulations, can carry out the necessary activities while recognising and avoiding potential hazards.

2.4 Informal safety precautions

The following documents must be read, understood and followed. They must always be available at the machine's operating location, and must be kept in legible condition:

- · The operation manual for this product
- Generally applicable and local accident prevention and environmental protection regulations
- Safety data sheets for the conveyed materials, as well as for any cleaning products or lubricants being used

2.5 Preventing damage to equipment

In order to prevent damage to equipment and to ensure precision dosing, ensure that

- the dispenser must never be operated without material (the stator will be destroyed)
- the material inlet (feed) and the material outlet must never be closed during operation
- the material outlet (e.g. dosing needle or mixer) must not be damaged or blocked
- the dispenser is operated with a positive feed (inlet pressure)
- · there is adequate inlet pressure when conveying highly viscous material
- when pumping without a positive feed (inlet pressure), no dry running or cavitation of the dispenser occurs
- the direction of rotation of the drive is always the same as the direction of flow of the dispenser
- · the specifications in the product data sheet for the material are observed and adhered to

2.6 Organisational safety measures

The necessary personal protective equipment must be provided by the operating organisation. Personal protective equipment must be worn when carrying out all work and procedures.

To ensure the provision of suitable personal protective equipment, the safety data sheet for the conveyed material must be observed. Specifications for e.g. cleaning products and lubricants must also be checked and observed.

All personal protective equipment must be checked to ensure it is working properly before starting work.



Eye protection



Hand protection



Body protection





2.7 Residual risks

Thorough training, observance of the operation manual and compliance with safety regulations are key to permanently accident-free operation.

The following residual risks may occur when operating this machine:

Material hazardous to health

The conveyed material may contain constituents which are hazardous to health. Such constituents may cause serious acute or chronic harm to health if they come into contact with skin, are inhaled or swallowed.

- · Always wear appropriate protective equipment
- · Observe the specifications in the safety data sheet for the material

🕂 WARNING

Risk of injury from moving components

The machine is driven by an electrical drive unit. These generate very high forces. Touching the components during operation may result in serious injuries.

- Do not operate the machine unless there is unrestricted visual contact with the moving component
- · There must be no persons or foreign objects in the danger area

🕂 WARNING

Pressurised material

Depending on the setting of the machine, the material is conveyed under very high pressure. If the feeding rate is not adapted to the dosing needle being used, unwanted spraying of the material might occur. This may result in serious injury. Defective components can also cause spraying.

- Shut down the machine immediately
- · The leak must be repaired by qualified maintenance staff before operation is re-started

Splashing material

During initial commissioning and after being refilled, air bubbles in the material could cause an uncontrollable spraying from the conveying area. This may result in injury.

- Always wear appropriate protective equipment
- Fully bleed the system before start of production

Pointed dosing needle

Depending on its size, the dosing needle can be very thin and pointed. Carelessness during assembly work can lead to needle stick injuries.

· Carry out assembly work with appropriate care.

2.8 Transport and storage

The following ambient conditions must be observed for transportation and storage:

- Temperature within the range -10 °C to +40 °C (263 K to 313 K)
- Relative air humidity less than 60 % (non-condensing)
- Uniform room climate
- Dry and free of dust
- No exposure to direct sunlight
- No aggressive, corrosive substances (solvents, acids, alkalis, salts, etc.) in the environment

For storage always remove the stator and store separately (at 15–20 $^{\circ}$ C).



3 Product description

The dispenser has been developed and tested for precision dosing of materials ranging from low to high viscosity with extremely high repeat accuracy.

preeflow dispensers are positive displacement pumps. The conveying elements comprise a rotating part, the rotor, and a stationary part, the stator. The rotor, which is in the form of a type of knuckle thread, rotates inside the stator, which has one more thread turn and twice the pitch length of the rotor. As a result, conveying areas are produced between the stator and the rotor rotating inside the stator. The rotor also moves radially within the stator. The conveying spaces move forward continuously due to the movement. The flexible shaft used to drive the rotor compensates for the eccentric movement of the rotor and is completely maintenance-free.

The sealing effect of the conveying elements of the dispenser is dependent on the viscosity and pressure.

Since the direction of flow is reversible, the material can be sucked back to allow a clean thread breakage.

The dispenser can be dismantled very quickly.

Together with the eco-CONTROL EC200 DUOMIX dosing control unit, the dispenser forms a dosing system which is typically installed in a dosing station. The dosing control unit controls the required parameters (e.g. dosing quantity, dosing speed, etc.).

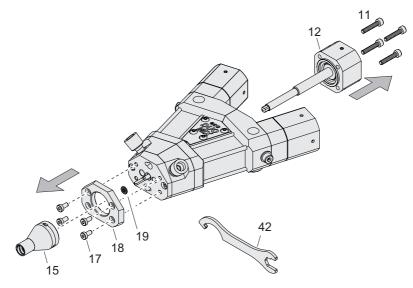
4 Operation

4.1 Initial commissioning

All activities described below may only be carried out by qualified staff. When delivered, the stator is not installed so as to avoid bearing damage to the elastomer of the stator.

4.1.1 Dismantling the dispenser

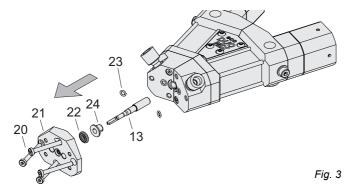
- Unscrew clamping sleeve (15) with combination tool (42).
- Remove the 4 screws (17).
- Remove the locking plate (18) and O-ring (19).
- Remove the 4 screws (11).
- Remove the bearing unit for mixer (12).







- Remove the 4 screws (20).
- Remove the mix housing (21).
- Remove the shaft seal (22). During assembly, grease seal with suitable lubricant*. Do not use silicone.
- Removing the O-rings (23).
- Pull out sliding bushing (24) and mixer shaft (13).



- Remove the 4 screws (27).
- Remove the mounting plate (25, 26).
- Separate the dispenser halves.

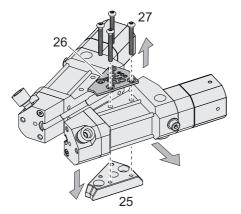


Fig. 4

* Recommendation: ViscoTec plastic and elastomer grease (Art.no. 166701 - 80 ml)



On both dispenser halves perform

- Remove screw (7).
- Remove end piece (6B / 6A).

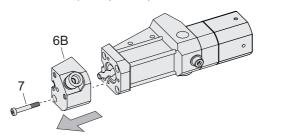
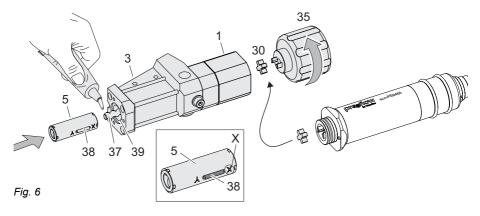


Fig. 5

4.1.2 Installing the stator

On both dispenser halves perform

- Plug the star-shaped coupling (30) into the rotor assembly seal housing (1).
- Plug the assembly aid (35) into the rotor assembly seal housing (1).
- Coat the rotor (37) with material or a suitable lubricant.
- Turn the stator (5) in the correct position (see detailed view) on the rotor (37) until the dowel pin (38) begins to dip into the keyway (39).
- Lightly press the stator towards the pump housing (3) and turn the assembly aid (35) in the direction of the arrow until the stator (5) has been guided into the pump housing (3).
- Uncouple the assembly aid (35).



4.1.3 Reassembling the dispenser

For reassembly, the work steps outlined in Section 4.1.1 (page 13) are carried out in reverse order.

When doing this, observe the following

Only tighten up the screw (7) very slightly.

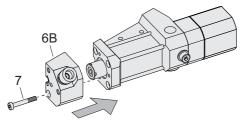
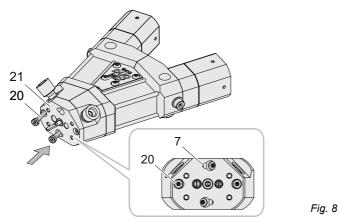


Fig. 7

- Assemble the halves of the dispenser.
- Mount the mix housing (21) with screws (20).
- Tighten screws (7) using the holes in the mix housing (21).

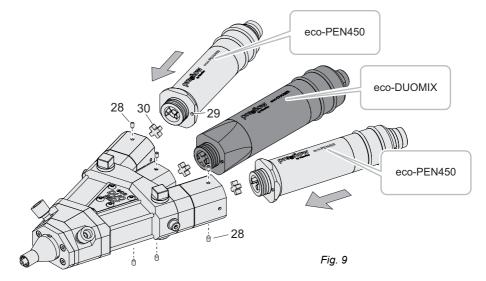


NOTE

Do not exceed a tightening torque of 0.35 Nm when mounting the screws.

4.1.4 Connecting the dosing unit to the drive unit

- Screw the set screws (28) into the thread so that they do not protrude into the coupling area. Danger of damage to the fit.
- > Attach the star-shaped coupling (30) onto the coupling of the drive unit.
- > Set the anti-rotation device (29) in the correct position relative to the dispenser.
- Join dispenser and the drive unit together completely. Observe the respective engraving on the drive unit (eco-PEN450 / eco-DUOMIX).
- Lightly screw in the set screws (28) the drive unit is centred in the correct position.



4.1.5 Mounting sensors for monitoring dosing pressure

On both dispenser halves perform

Unscrew the sealing plug (40).

NOTE

Operation of the dispenser with the sealing plugs (40) is not permitted. The sealing plugs (40) are used only as transport protection. The mounting of the sensors (41) is absolutely necessary.

Mount sensors (41) together with the seal (max. Tightening torque: 3 Nm).

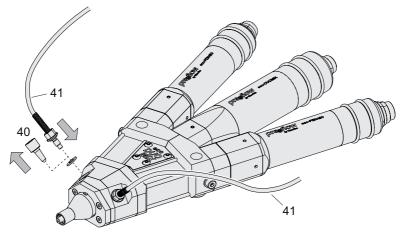


Fig. 10

NOTE

The sensor cables must not be twisted during assembly!

The surface of the sensors (41) is extremely sensitive. Do not bring into contact with sharp objects!

4.1.6 Feeding material and bleeding the dispenser for the first time

- Connect the material supply (feed line, cartridge) to the material inlet (1A and 1B) of the dispenser.
- Place the eco-DUOMIX in a vertical position.
- Mount the calibration adapter (36).

On both dispenser halves perform

- Pressurise the material.
- Connect the drive unit to the power supply and run it slowly until material escapes from the calibration adapter (36) without bubbles.*
- Unscrew the bleed screw (10) and washer (9) to bleed.
- Tighten the bleed screw (10) and the washer
 (9) again.
- Remove leaking material with a cloth.

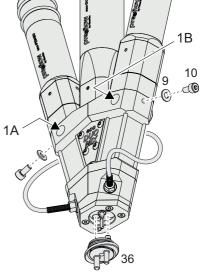


Fig. 11

Tip: Connecting a hose to the calibration adapter can protect the eco-DUOMIX450 from being wetted with the material.

NOTE

When cleaning the dispenser, never use the same cloth for both materials, as the components will react.

* When filling for the first time, the blocking material is first removed from inside the dispenser (stator).



4.1.7 Calibration

To obtain a precise dosing result, the dosing quantity must be calibrated. This is performed using the eco-CONTROL EC200 DUOMIX dosing control unit. The exact procedure can be found in the dosing control unit manual.

A calibration adapter (36) is available for calibrating the dispenser. It is mounted on the outlet openings.

- Mount the calibration adapter (36).
- Carry out calibration according to the calibration programme.
- Dismantle the calibration adapter (36).
- Attach mixing capsule (16).
- Secure clamping sleeve (15).

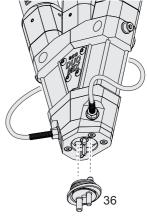


Fig. 12

4.2 Switching on, starting dosing process

Daily at the start of the shift/when starting work, perform the activities as described in Section 5.1 "Maintenance intervals" (Page 24).

NOTE

The supply of material to the dispenser must be ensured before dosing starts. Dry running may destroy the stator.

- Start supply of material to the dispenser.
- If present, remove cover.
- Switch on the dosing control unit.
- Dose the individual components (in manual operation) from the mixing head without mixing capsule. Use the calibration adapter (36) for this.
- Check whether both components escape bubble-free and that the outlet openings are not blocked or stuck together.
- Check the dosing quantity of each of the two components in order to guarantee a consistent dosing result. If there are deviations, dosing must be recalibrated. The exact procedure can be found in the dosing control unit manual. The result of the check must be recorded together with the name of the tester, date and time.
- Mount mixing capsule.



- Carry out at least one purge shot.
- Start dosing process via the dosing control unit.

4.3 Recommendations for problem-free operation

These experience values apply for a wide variety of dual-component materials. Always follow the manufacturer recommendations for your material in addition to these.

Mixing ratio for very short dosing times

2-component materials display mostly varying properties (viscosity). They therefore emerge from the outlet openings with different pressures. This means that deviations in the mixing ratio can usually be noted at the start of dosing. The choice of the appropriate mixing capsule (1:1-4:1/4:1-10:1) is a crucial factor in the result.

Suck-back with 2-component materials

Suck-back ensures a clean thread breakage. If it is set too large, material that is already mixed will enter the dosing pumps, causing the components to react with each other in there. The max. suck-back quantity is saved in the dosing control unit.

Note the pot life

During breaks in work, purge shots prevent the mixed materials from hardening in the mixing capsule. In the mixing capsule, the mixed materials are completely replaced by the purge shot. A purge shot interval can be stored in the dosing control unit. The purge shot interval must be set to be shorter than the pot life. This measure is not suitable for longer interruptions to production.

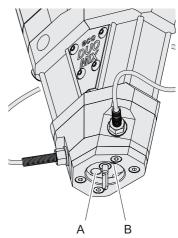
Setting the mixer speed

In order to ensure clean mixing of the two materials, the mixer speed must be set using the eco-CONTROL EC200 DUOMIX dosing control unit. Speeds of 10 to 1000 rpm (\pm 10 %) are possible.

4.4 Switching off, ending dosing process

If the dosing process for a 2-component system has to be terminated, the outlet openings (A and B) have to be cleaned.

- Place dosing control unit in manual operation.
- Release mixing capsule from mixing head and dispose of in accordance with the material manufacturer's regulations. The mixing capsule must not be cleaned and reused.
- Clean connection thread for mixing capsule and holes (outlet openings). Ensure that the two components don't get mixed.
- Hold the mixing head downwards and purge bores (A and B) individually. Catch any material leakage and clean the mixing head again. Ensure that the two components don't get mixed. Use separate cloths.
- Switch off material supply to the dosing pump.
- Switch off dosing control unit and secure it against unauthorised restarting.
- Protect the connection thread and outlets against drying out and soiling, where necessary (e.g. with a cap and/or by applying lubricant* on the relevant areas. Follow the material manufacturer's instructions).





* Recommendation: ViscoTec plastic and elastomer grease (Art.no. 166701 - 80 ml)

4.5 Decommissioning

All activities described below may only be carried out by authorised maintenance staff.

- Switch off the drive to the dispenser and lock it to prevent it from being switched on again.
- Shut down material supply to the dispenser (depressurise).
- Relieve inlet pressure via bleed screw.
- Remove material supply and seal openings with suitable plug.
- Disconnect the power supply to the drive units.
- Disconnect the dispenser and drive unit.
- Remove dispenser from holder or system.
- Remove the stator, clean and store separately.
- Disassemble and clean dispenser.
- Store dispenser according to the storage conditions as described in Section 2.8 "Transport and storage" (Page 11).

4.6 Re-commissioning

Re-commissioning is the same as initial commissioning. The same specifications and work steps apply as described in Section 4.1 "Initial commissioning" (Page 13). It must be ensured that the dispenser is free of material residues, dust and dirt.

The stator must be installed before recommissioning (see Section 4.1.2 (page 15)).





5 Maintenance

In the event of a fault, or if there is any doubt that the machine/system is not completely ready for operation, it must be shut down immediately and inspected by competent maintenance staff before operation continues.

Maintenance and cleaning work may only be carried out when the machine has been shut down safely and secured against unauthorised restarting. Otherwise, serious injuries may result.

- Switch off the dosing control unit.
- · Disconnect the dosing control unit's power cable from the power supply

5.1 Maintenance intervals

In order to ensure problem-free operation, we recommend complying with the following maintenance intervals.

When	Activity	Who
Start of shift / daily	• Visual check for leaks / contamination / damage.	1
End of shift	 Clean connection thread for mixing capsule and outlets (A and B). 	1
Every month	Dismount mix housing (21) and clean it.	2
Every year	• Disassemble the dispenser and clean all parts that come into contact with the medium. Components such as e.g. the stator, rotor assembly, seals, bearings and housing for signs of wear and replace if necessary.	2

1 = Operating staff, 2 = Maintenance staff

Depending on the medium and the use of the dispenser (e.g. Three-shift operation), a shorter cleaning interval may be necessary. This must be specified by the machine operator.

The recommended change cycles are based on empirical values for dosing applications. The empirical values are based on different material properties, pressure conditions and dosing settings. Depending on the material used, the required change cycles may differ from the recommended cycles.

Ambient conditions, such as temperature and humidity, may affect the change cycles.



5.2 Troubleshooting

Fault	Possible cause	Action
	Motor not connected	Connect the motor
	Fault with mains supply	Check electrical installation
	Material hardened/set	Dismantle and clean the
		dispenser
No or too little material	Mixing capsule blocked	Replace mixing capsule
feeding	Stator/rotor worn	Replace stator/rotor
locality	Stator swollen	Check resistance of the stator to
		the material and replace stator
	Speed too low	Correct speed
	Inadequate supply of material	Feed material, check inlet
		pressure and correct if required
Material not mixed	Mixer not switched on	Switch on mixer
sufficiently (e.g.	Speed of the mixer too low	Increase speed
streaks)	Mixing capsule has hardened	Replace mixing capsule
Drinning of munical of	Suck-back not set correctly	Adjust the suck-back
Dripping or running on of material	Air bubbles in the material	Bleed dispenser / material pipes
ormaterial	Material compressible	Degas the material
	Dispenser speed too high	Reduce speed
	Pump speed too high depending	Reduce speed
Pressure too high,	on the material or mixing	
pressure sensor	capsule	
triggers	Material hardened/set	Dismantle and clean the
1.99010		dispenser
	Dosing needle blocked / too	Replace dosing needle / use
	narrow	another size

If you have any questions about commissioning, maintenance, repairs or ways to optimise your processes, our service employees will be happy to help.

You can reach us at: support@preeflow.com

We will respond to your service enquiry in German or English.

5.3 Changing the stator

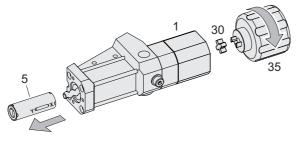
All activities described below may only be carried out by authorised maintenance staff.

Preparation

- Disconnect the dosing control unit from the power supply.
- Disconnect the power supply to the drive units.
- Disconnect cable from the pressure monitor (if available).
- Shut down material supply (depressurise).
- Relieve inlet pressure via bleed screw.
- Remove material supply and seal openings with suitable plug.
- Disconnect the dispenser and drive unit.
- Remove dispenser from holder or system.
- Disassemble the dispenser as described in Section 4.1.1 (page 13).

On both dispenser halves perform

- Plug the star-shaped coupling (30) into the rotor assembly seal housing (1).
- Plug the assembly aid (35) into the rotor assembly seal housing (1).
- Unscrew stator (5) with assembly aid (35).





Assembly

- Install the stator as described in Section 4.1.2 (page 15).
- Assemble the dispenser as described in Section 4.1.3 (page 16).



5.4 Dismantling before cleaning

When cleaning the dispenser, attention must be paid to the chemical properties and chemical reactions of the material. In doing so, observe and comply with the corresponding specifications of the product data sheet. If you have any queries, contact the manufacturer of the material.

All activities described below may only be carried out by authorised maintenance staff.

Preparation

• Remove the stator as described in Section 5.3 (page 26).

Remove the rotor assembly

- Unscrew the bleed screw (10) with washer (9).
- Remove the 4 screws (4).
- Remove the pump housing (3) and O-ring (2).

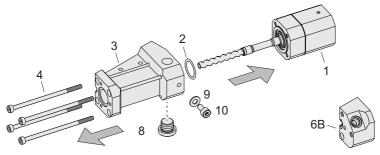


Fig. 15

NOTE

Do not purge the rotor assembly seal housing (1). This can damage the bearings! Clean it only with a cloth and brush.

Do not immerse the end piece (6B / 6A) in cleaning agent, rather simply wipe it clean. Only blunt, non-abrasive, soft implements should be used to clean the dosing channel, such as cloths/brushes.

Assembly

After cleaning, the dispenser is assembled in reverse order.

6 Cleaning

🕂 WARNING

Cleaning work may only be carried out when the machine has been shut down safely and secured against unauthorised restarting. Otherwise, serious injuries may result.

- Switch off the dosing control unit.
- · Disconnect the dosing control unit's power cable from the power supply

If the dispenser is soiled with material or if the dispenser is disassembled and cleaned, use a cleaning agent which matches the material. The information in the safety data sheet must be complied with.

Recommended cleaning agents, e.g. cellulose thinner, cleaner's solvent or alcohol.

Note the following points regarding the use of cleaning agents and the performance of cleaning work:

- · Observe the specifications in the safety data sheet for the cleaning agent
- · Personal protective equipment must be worn
- · Compatibility with the materials installed in the pump must be checked before use
- The cleaning agent must be used according to the manufacturer's specifications (e. g. application time)
- · Cleaning agents must not penetrate electrical or mechanical system components
- · Do not use high-pressure cleaners for cleaning
- · Completely remove cleaning agent
- · Dispose cleaning agent properly
- Re-attach any protective and safety devices or cladding removed and check that they function correctly
- Use a metal-free tool (do not use steel wool or a screwdriver)



7 Spare parts

Every time you order spare parts, please state the type identifier, serial number and order number.

The serial number is engraved on the bearing housing (33).

7.1 Item list of the spare parts

Items that are <u>not</u> shown in the overview drawing (Page 31)

Item	Description	Х	pcs	Art.no.	Material
	eco-DUOMIX450 complete, with drive			22059	
	Drive unit (eco-PEN450)		2	20081	
	Drive unit for mixer (eco-DUO MIX)		1	22582	
	O-ring 17 x 1,25 (between drive unit and bearing unit (33))		3	20041	NBR
	eco-PEN connection cable, complete (1.5 m)		2	20784	
	Mixer connection cable, complete (1.5 m)		1	22263	
	eco-DUOMIX450			21972	
40	Sealing plugs		2	22590	
43	Sensor flowplus-SPT M6		2	173364	
44	Allen wrench size 1.5		1	20203	
45	Screw driver size 2.0 (hexagon socket head)		1	22119	
46	Screw driver size 2.5 (hexagon socket head)		1	20204	
47	Screw driver size 3.0 (hexagon socket head)		1	20205	

1 Rotor assembly seal housing 2 20358 2 O-ring 13 x 1.25 2 20011 FFKM 3 Pump housing 2 20360 AlMg3 4 Allen screw M3 x 65 8 20362 A2 5 Stator x 2 20001 VisChem 6A End piece, left 1 22365 AlMgSi 1 6B End piece, right 1 22365 AlMgSi 1 7 Allen screw M3 x 20 2 22078 A2 8 Screw plug G1/8" with O-ring 2 20027 PA 6 10 Allen screw M4 x 8 x 2 20028 A2 11 Allen screw M3 x 16 4 20089 A2 12 Bearing unit for mixer 1 22501 AlMg31 13 Mixer shaft 1 22021 AlMg31 14 Threaded sleeve Luer-Lock 1 20021 AlMg31 15 Clamping sleeve 1 <th>Item</th> <th>Description</th> <th>X</th> <th>pcs</th> <th>Art.no.</th> <th>Material</th>	Item	Description	X	pcs	Art.no.	Material
3 Pump housing 2 20360 Alkg3 4 Allen screw M3 x 65 8 20362 A2 5 Stator x 2 20001 VisChem 6A End piece, left 1 22364 AlkgSi 1 6B End piece, right 1 22365 AlkgSi 1 7 Allen screw M3 x 20 2 20078 A2 8 Screw plug G1/8" with O-ring 2 20021 PA 6 0 Allen screw M4 x 8 x 2 20026 A2 11 Allen screw M3 x 16 4 20089 A2 12 Bearing unit for mixer 1 22374 I 13 Nixer shaft 1 220021 AlkgSi 1 14 Threaded sleeve Luer-Lock 1 20021 AlkgSi 1 16 Mixing capsule - - - 17 Allen screw M3 x 6 4 22077 A2 18 Locking plate 1 </td <td>1</td> <td></td> <td></td> <td>2</td> <td>20358</td> <td></td>	1			2	20358	
4 Allen screw M3 x 65 8 20362 A2 5 Stator x 2 20001 VisChem 6A End piece, left 1 22364 AlMgSi 1 6B End piece, right 1 22365 AlMgSi 1 7 Allen screw M3 x 20 2 20391 A2/FKM 9 Washer A 4.3 x 2 20027 PA 6 10 Allen screw M3 x 16 4 20089 A2 12 Bearing unit for mixer 1 22374 13 Mixer shaft 1 22503 A2 14 Threaded sleeve Luer-Lock 1 20021 AlMg31 15 Clamping sleeve 1 22503 A2 14 Mixing capsule - - Mixing ratio 1:1 to 4:1 x 1 22372 POM / PE-HD Mixing ratio 4:1 to 10:1 x 1 22580 AlMgSi 1 17 Allen screw M3 x 25 4 21125 A2 18 Locking plate 1	2	O-ring 13 x 1.25		2	20011	FFKM
Stator x 2 20001 VisChem 6A End piece, left 1 22364 AlMgSi 1 6B End piece, right 1 22365 AlMgSi 1 7 Allen screw M3 x 20 2 22078 A2 8 Screw plug G1/8" with O-ring 2 20391 A2/FKM 9 Washer A 4.3 x 2 20027 PA 6 10 Allen screw M4 x 8 x 2 20026 A2 11 Allen screw M3 x 16 4 20089 A2 12 Bearing unit for mixer 1 22503 A2 14 Threaded sleeve Luer-Lock 1 20021 AlMg3 15 Clamping sleeve 1 22591 AlMgSi 1 16 Mixing ratio 4:1 to 10:1 x 1 22077 A2 17 Allen screw M3 x 6 4 22077 A2 18 Locking plate 1 22580 AlMgSi 1 19	3	Pump housing		2	20360	AIMg3
6A End piece, left 1 22364 AlMgSi 1 6B End piece, right 1 22365 AlMgSi 1 7 Allen screw M3 x 20 2 22078 A2 8 Screw plug G1/8" with O-ring 2 20027 PA 6 10 Allen screw M4 x 8 x 2 20026 A2 11 Allen screw M3 x 16 4 20089 A2 12 Bearing unit for mixer 1 22374 1 13 Mixer shaft 1 22503 A2 14 Threaded sleeve Luer-Lock 1 20021 AlMg3 15 Clamping sleeve 1 22571 AlMgSi 1 16 Mixing capsule 1 22372 POM / PE-HD Mixing ratio 1:1 to 4:1 x 1 22377 A2 14 D-ring 3 x 1.5 x 1 22579 FFKM 19 O-ring 3 x 1.5 x 1 22579 FFKM 20 Allen screw M3 x 25 4 21125 A2 21 Mix hou	4	Allen screw M3 x 65		8	20362	A2
6B End piece, right 1 22365 AIMgSi 1 7 Allen screw M3 x 20 2 22078 A2 8 Screw plug G1/8" with O-ring 2 20027 PA 6 9 Washer A 4.3 x 2 20027 PA 6 10 Allen screw M4 x 8 x 2 20026 A2 11 Allen screw M3 x 16 4 20089 A2 12 Bearing unit for mixer 1 22503 A2 13 Mixer shaft 1 22503 A2 14 Threaded sleve Luer-Lock 1 20021 AIMg3 15 Clamping sleeve 1 22372 POM / PE-HD Mixing ratio 1:1 to 4:1 x 1 22389 POM / PE-HD Mixing ratio 4:1 to 10:1 x 1 22580 AIMgSi 1 19 O-ring 3 x 1.5 x 1 22579 FFKM 20 Allen screw M3 x 25 4 21125 A2 11 Mixing ratio 4:1 to 10:1 x 1 22553 AIMgSi 1	5	Stator	х	2	20001	VisChem
7 Allen screw M3 x 20 2 22078 A2 8 Screw plug G1/8" with O-ring 2 20391 A2/FKM 9 Washer A 4.3 x 2 20027 PA 6 10 Allen screw M4 x 8 x 2 20026 A2 11 Allen screw M3 x 16 4 20089 A2 12 Bearing unit for mixer 1 22503 A2 14 Allen screw M3 x 16 1 22503 A2 14 Threaded sleeve Luer-Lock 1 20021 AlMg3 15 Clamping sleeve 1 22372 POM / PE-HD Mixing ratio 1:1 to 4:1 x 1 22389 POM / PE-HD Mixing ratio 4:1 to 10:1 x 1 22580 AlMgSi 1 19 O-ring 3 x 1.5 x 1 22580 AlMgSi 1 19 O-ring 3 x 1.5 x 1 22553 AlMgSi 1 22 Shaft seal x 1 20389 PE 23 O-ring 3 x 1.0 x 2 21731 <t< td=""><td>6A</td><td>End piece, left</td><td></td><td>1</td><td>22364</td><td>AlMgSi 1</td></t<>	6A	End piece, left		1	22364	AlMgSi 1
8 Screw plug G1/8" with O-ring 2 20391 A2/FKM 9 Washer A 4.3 x 2 20027 PA 6 10 Allen screw M4 x 8 x 2 20026 A2 11 Allen screw M3 x 16 4 20089 A2 12 Bearing unit for mixer 1 22374 1 13 Mixer shaft 1 22503 A2 14 Threaded sleeve Luer-Lock 1 20021 AlMg3 15 Clamping sleeve 1 22372 POM / PE-HD Mixing ratio 1:1 to 4:1 x 1 22372 POM / PE-HD Mixing ratio 4:1 to 10:1 x 1 22372 POM / PE-HD Mixing ratio 4:1 to 10:1 x 1 22389 POM / PE-HD 17 Allen screw M3 x 6 4 22077 A2 18 Locking plate 1 22580 AlMgSi 1 19 O-ring 3 x 1.5 x 1 20389 PE	6B	End piece, right		1	22365	AlMgSi 1
9 Washer A 4.3 x 2 20027 PA 6 10 Allen screw M4 x 8 x 2 20026 A2 11 Allen screw M3 x 16 4 20089 A2 12 Bearing unit for mixer 1 22374 13 Mixer shaft 1 22033 A2 14 Threaded sleeve Luer-Lock 1 22021 AlMg3 15 Clamping sleeve 1 22591 AlMgSi 1 16 Mixing capsule	7	Allen screw M3 x 20		2	22078	A2
10 Allen screw M4 x 8 x 2 20026 A2 11 Allen screw M3 x 16 4 20089 A2 12 Bearing unit for mixer 1 22374 13 Mixer shaft 1 22503 A2 14 Threaded sleeve Luer-Lock 1 20021 AlMg3 15 Clamping sleeve 1 22591 AlMg31 16 Mixing capsule - - - Mixing ratio 1:1 to 4:1 x 1 22389 POM / PE-HD 17 Allen screw M3 x 6 4 22077 A2 18 Locking plate 1 22580 AlMgSi 1 19 O-ring 3 x 1.5 x 1 22579 FFKM 20 Allen screw M3 x 25 4 21125 A2 21 Mix housing 1 22533 AlMgSi 1 22 Shaft seal x 1 20389 PE 23 O-ring 3 x 1.0 x 2 21731 FFKM 24 Sliding bushing x	8			2	20391	A2/FKM
11 Allen screw M3 x 16 4 20089 A2 12 Bearing unit for mixer 1 22374 13 Mixer shaft 1 22503 A2 14 Threaded sleeve Luer-Lock 1 20021 AlMg3 15 Clamping sleeve 1 22591 AlMg3i 1 16 Mixing capsule	9	Washer A 4.3	х	2	20027	PA 6
12 Bearing unit for mixer 1 22374 13 Mixer shaft 1 22503 A2 14 Threaded sleeve Luer-Lock 1 20021 AlMg3 15 Clamping sleeve 1 22591 AlMg3i 1 16 Mixing capsule 1 22372 POM / PE-HD Mixing ratio 1:1 to 4:1 x 1 22389 POM / PE-HD Mixing ratio 4:1 to 10:1 x 1 22389 POM / PE-HD 17 Allen screw M3 x 6 4 22077 A2 18 Locking plate 1 22580 AlMgSi 1 20 Allen screw M3 x 25 4 21125 A2 21 Mix housing 1 22573 FFKM 20 Allen screw M3 x 25 4 21125 A2 21 Mix housing 1 22553 AlMgSi 1 22 Shaft seal x 1 20389 PE 23 O-ring 3 x 1.0 x 2 21731 FFKM 24 Sliding bushing x <td< td=""><td>10</td><td>Allen screw M4 x 8</td><td>Х</td><td>2</td><td>20026</td><td>A2</td></td<>	10	Allen screw M4 x 8	Х	2	20026	A2
13 Mixer shaft 1 22503 A2 14 Threaded sleeve Luer-Lock 1 20021 AlMg3 15 Clamping sleeve 1 22591 AlMg3i 1 16 Mixing capsule 1 22591 AlMg3i 1 16 Mixing ratio 1:1 to 4:1 x 1 22372 POM / PE-HD Mixing ratio 4:1 to 10:1 x 1 22389 POM / PE-HD 17 Allen screw M3 x 6 4 22077 A2 18 Locking plate 1 22580 AlMgSi 1 20 Allen screw M3 x 25 4 21125 A2 21 Mix housing 1 22533 AlMgSi 1 22 Shaft seal x 1 20389 PE 23 O-ring 3 x 1.0 x 2 21731 FFKM 24 Sliding bushing x 1 21965 1 25 Fastening kit (set, with 2 back plates and screws (item 27)) 1 22058 AlMgSi 1 27 Oval head screws M3 x 25 4 20374 A2	11	Allen screw M3 x 16		4	20089	A2
14 Threaded sleeve Luer-Lock 1 20021 AIMg3 15 Clamping sleeve 1 22591 AIMgSi 1 16 Mixing capsule	12	Bearing unit for mixer		1	22374	
15 Clamping sleeve 1 22591 AIMgSi 1 16 Mixing capsule	13	Mixer shaft		1	22503	A2
15 Clamping sleeve 1 22591 AIMgSi 1 16 Mixing capsule	14	Threaded sleeve Luer-Lock		1	20021	AIMg3
Mixing ratio 1:1 to 4:1 to 1:1 to 22372 POM / PE-HD Mixing ratio 4:1 to 10:1 x 1 22389 POM / PE-HD 17 Allen screw M3 x 6 4 22077 A2 18 Locking plate 1 22580 AlMgSi 1 19 O-ring 3 x 1.5 x 1 22579 FFKM 20 Allen screw M3 x 25 4 21125 A2 21 Mix housing 1 22553 AlMgSi 1 22 Shaft seal x 1 20389 PE 23 O-ring 3 x 1.0 x 2 21731 FFKM 24 Sliding bushing x 1 21965 1 25 Fastening kit (set, with 2 back plates and screws (item 27)) 1 22058 AlMgSi 1 27 Oval head screws M3 x 25 4 20374 A2 28 Set screw M3 x 6 6 20366 A2 30 Star-shaped coupling	15	Clamping sleeve		1	22591	
Mixing ratio 1:1 to 4:1 to 1:1 to 22372 POM / PE-HD Mixing ratio 4:1 to 10:1 x 1 22389 POM / PE-HD 17 Allen screw M3 x 6 4 22077 A2 18 Locking plate 1 22580 AlMgSi 1 19 O-ring 3 x 1.5 x 1 22579 FFKM 20 Allen screw M3 x 25 4 21125 A2 21 Mix housing 1 22553 AlMgSi 1 22 Shaft seal x 1 20389 PE 23 O-ring 3 x 1.0 x 2 21731 FFKM 24 Sliding bushing x 1 21965 1 25 Fastening kit (set, with 2 back plates and screws (item 27)) 1 22058 AlMgSi 1 27 Oval head screws M3 x 25 4 20374 A2 28 Set screw M3 x 6 6 20366 A2 30 Star-shaped coupling	16					
Mixing ratio 4:1 to 10:1 x 1 22389 POM / PE-HD 17 Allen screw M3 x 6 4 22077 A2 18 Locking plate 1 22580 AlMgSi 1 19 O-ring 3 x 1.5 x 1 22579 FFKM 20 Allen screw M3 x 25 4 21125 A2 21 Mix housing 1 22553 AlMgSi 1 22 Shaft seal x 1 20389 PE 23 O-ring 3 x 1.0 x 2 21731 FFKM 24 Sliding bushing x 1 21965 2 25 Fastening kit (set, with 2 back plates and screws (item 27)) 1 22058 AlMgSi 1 27 Oval head screws M3 x 25 4 20374 A2 28 Set screw M3 x 6 6 20366 A2 30 Star-shaped coupling x 3 20050 Elastomer 31 Sealing set with housing 2 20485<			х	1	22372	POM / PE-HD
17 Allen screw M3 x 6 4 22077 A2 18 Locking plate 1 22580 AlMgSi 1 19 O-ring 3 x 1.5 x 1 22579 FFKM 20 Allen screw M3 x 25 4 21125 A2 21 Mix housing 1 22553 AlMgSi 1 22 Shaft seal x 1 20389 PE 23 O-ring 3 x 1.0 x 2 21731 FFKM 24 Sliding bushing x 1 21965 1 25 Fastening kit (set, with 2 back plates and screws (item 27)) 1 22058 AlMgSi 1 27 Oval head screws M3 x 25 4 20374 A2 28 Set screw M3 x 6 6 20366 A2 30 Star-shaped coupling x 3 20050 Elastomer 31 Sealing set with housing 2 20485 32 0-ring 16 x 1.25 2 20007 FKM 32 O-ring 16 x 1.25 2 20149 34 Allen screw M3 x 25 <			х	1	22389	POM / PE-HD
19 O-ring 3 x 1.5 x 1 22579 FFKM 20 Allen screw M3 x 25 4 21125 A2 21 Mix housing 1 22553 AlMgSi 1 22 Shaft seal x 1 20389 PE 23 O-ring 3 x 1.0 x 2 21731 FFKM 24 Sliding bushing x 1 21965 1 25 Fastening kit (set, with 2 back plates and screws (item 27)) 1 22058 AlMgSi 1 27 Oval head screws M3 x 25 4 20374 A2 28 Set screw M3 x 6 6 20366 A2 30 Star-shaped coupling x 3 20050 Elastomer 31 Sealing set with housing 2 20485 1 32 O-ring 16 x 1.25 2 20007 FKM 33 Bearing housing with rotor assembly cpl. 2 20149 1 34 Allen screw M3 x 25 8 20090 A2 35 Assembly aid 1 20108 <	17			4	22077	A2
19 O-ring 3 x 1.5 x 1 22579 FFKM 20 Allen screw M3 x 25 4 21125 A2 21 Mix housing 1 22553 AlMgSi 1 22 Shaft seal x 1 20389 PE 23 O-ring 3 x 1.0 x 2 21731 FFKM 24 Sliding bushing x 1 21965 1 25 Fastening kit (set, with 2 back plates and screws (item 27)) 1 22058 AlMgSi 1 27 Oval head screws M3 x 25 4 20374 A2 28 Set screw M3 x 6 6 20366 A2 30 Star-shaped coupling x 3 20050 Elastomer 31 Sealing set with housing 2 20485 1 32 O-ring 16 x 1.25 2 20007 FKM 33 Bearing housing with rotor assembly cpl. 2 20149 1 34 Allen screw M3 x 25 8 20090 A2 35 Assembly aid 1 20108 <	18	Locking plate		1	22580	AlMgSi 1
21 Mix housing 1 22553 AIMgSi 1 22 Shaft seal x 1 20389 PE 23 O-ring 3 x 1.0 x 2 21731 FFKM 24 Sliding bushing x 1 21965 1 25 Fastening kit (set, with 2 back plates and screws (item 27)) 1 22058 AIMgSi 1 27 Oval head screws M3 x 25 4 20374 A2 28 Set screw M3 x 6 6 20366 A2 30 Star-shaped coupling x 3 20050 Elastomer 31 Sealing set with housing 2 20485 32 O-ring 16 x 1.25 2 20007 FKM 33 Bearing housing with rotor assembly cpl. 2 20149 34 Allen screw M3 x 25 8 20090 A2 35 Assembly aid 1 20108 PA 6 36 Calibration adapter x 1 21959 PA 11	19	O-ring 3 x 1.5	х	1	22579	
22 Shaft seal x 1 20389 PE 23 O-ring 3 x 1.0 x 2 21731 FFKM 24 Sliding bushing x 1 21965 1 25 Fastening kit (set, with 2 back plates and screws (item 27)) 1 22058 AIMgSi 1 27 Oval head screws M3 x 25 4 20374 A2 28 Set screw M3 x 6 6 20366 A2 30 Star-shaped coupling x 3 20050 Elastomer 31 Sealing set with housing 2 20485 1 20007 FKM 33 Bearing housing with rotor assembly cpl. 2 20149 1 20108 PA 6 34 Allen screw M3 x 25 8 20090 A2 35 Assembly aid 1 20108 PA 6 36 Calibration adapter x 1 21959 PA 11	20	Allen screw M3 x 25		4	21125	A2
23 O-ring 3 x 1.0 x 2 21731 FFKM 24 Sliding bushing x 1 21965 1 25 Fastening kit (set, with 2 back plates and screws (item 27)) 1 22058 AlMgSi 1 27 Oval head screws M3 x 25 4 20374 A2 28 Set screw M3 x 6 6 20366 A2 30 Star-shaped coupling x 3 20050 Elastomer 31 Sealing set with housing 2 20485 1 20007 FKM 33 Bearing housing with rotor assembly cpl. 2 20149 1 20108 A2 34 Allen screw M3 x 25 8 20090 A2 35 Assembly aid 1 20108 PA 6 36 Calibration adapter x 1 21959 PA 11	21	Mix housing		1	22553	AlMgSi 1
24 Sliding bushing x 1 21965 25 Fastening kit (set, with 2 back plates and screws (item 27)) 1 22058 AlMgSi 1 27 Oval head screws M3 x 25 4 20374 A2 28 Set screw M3 x 6 6 20366 A2 30 Star-shaped coupling x 3 20050 Elastomer 31 Sealing set with housing 2 20485 2 20485 32 O-ring 16 x 1.25 2 20007 FKM 33 Bearing housing with rotor assembly cpl. 2 20149 34 Allen screw M3 x 25 8 20090 A2 35 Assembly aid 1 20108 PA 6 36 Calibration adapter x 1 21959 PA 11	22	Shaft seal	х	1	20389	PE
25 Fastening kit (set, with 2 back plates and screws (item 27)) 1 22058 AIMgSi 1 27 Oval head screws M3 x 25 4 20374 A2 28 Set screw M3 x 6 6 20366 A2 30 Star-shaped coupling x 3 20050 Elastomer 31 Sealing set with housing 2 20485 2 20485 32 O-ring 16 x 1.25 2 20007 FKM 33 Bearing housing with rotor assembly cpl. 2 20149 34 Allen screw M3 x 25 8 20090 A2 35 Assembly aid 1 20108 PA 6 36 Calibration adapter x 1 21959 PA 11	23	O-ring 3 x 1.0	х	2	21731	FFKM
25 (item 27)) 1 22038 AlMgS11 27 Oval head screws M3 x 25 4 20374 A2 28 Set screw M3 x 6 6 20366 A2 30 Star-shaped coupling x 3 20050 Elastomer 31 Sealing set with housing 2 20485 2 32 O-ring 16 x 1.25 2 20007 FKM 33 Bearing housing with rotor assembly cpl. 2 20149 34 Allen screw M3 x 25 8 20090 A2 35 Assembly aid 1 20108 PA 6 36 Calibration adapter x 1 21959 PA 11	24	Sliding bushing	х	1	21965	
28 Set screw M3 x 6 6 20366 A2 30 Star-shaped coupling x 3 20050 Elastomer 31 Sealing set with housing 2 20485 2 32 O-ring 16 x 1.25 2 20007 FKM 33 Bearing housing with rotor assembly cpl. 2 20149 34 Allen screw M3 x 25 8 20090 A2 35 Assembly aid 1 20108 PA 6 36 Calibration adapter x 1 21959 PA 11	25			1	22058	AIMgSi 1
30 Star-shaped coupling x 3 20050 Elastomer 31 Sealing set with housing 2 20485 32 O-ring 16 x 1.25 2 20007 FKM 33 Bearing housing with rotor assembly cpl. 2 20149 34 Allen screw M3 x 25 8 20090 A2 35 Assembly aid 1 20108 PA 6 36 Calibration adapter x 1 21959 PA 11	27	Oval head screws M3 x 25		4	20374	A2
31 Sealing set with housing 2 20485 32 O-ring 16 x 1.25 2 20007 FKM 33 Bearing housing with rotor assembly cpl. 2 20149 34 Allen screw M3 x 25 8 20090 A2 35 Assembly aid 1 20108 PA 6 36 Calibration adapter x 1 21959 PA 11	28	Set screw M3 x 6		6	20366	A2
32 O-ring 16 x 1.25 2 20007 FKM 33 Bearing housing with rotor assembly cpl. 2 20149 34 Allen screw M3 x 25 8 20090 A2 35 Assembly aid 1 20108 PA 6 36 Calibration adapter x 1 21959 PA 11	30	Star-shaped coupling	х	3	20050	Elastomer
33 Bearing housing with rotor assembly cpl. 2 20149 34 Allen screw M3 x 25 8 20090 A2 35 Assembly aid 1 20108 PA 6 36 Calibration adapter x 1 21959 PA 11	31	Sealing set with housing		2	20485	
33 Bearing housing with rotor assembly cpl. 2 20149 34 Allen screw M3 x 25 8 20090 A2 35 Assembly aid 1 20108 PA 6 36 Calibration adapter x 1 21959 PA 11	32	O-ring 16 x 1.25		2	20007	FKM
34 Allen screw M3 x 25 8 20090 A2 35 Assembly aid 1 20108 PA 6 36 Calibration adapter x 1 21959 PA 11	33			2	20149	
36 Calibration adapter x 1 21959 PA 11	34			8	20090	A2
36 Calibration adapter x 1 21959 PA 11	35	Assembly aid		1	20108	PA 6
	36		х	1	21959	PA 11
	42	Combination tool		1	20688	A2

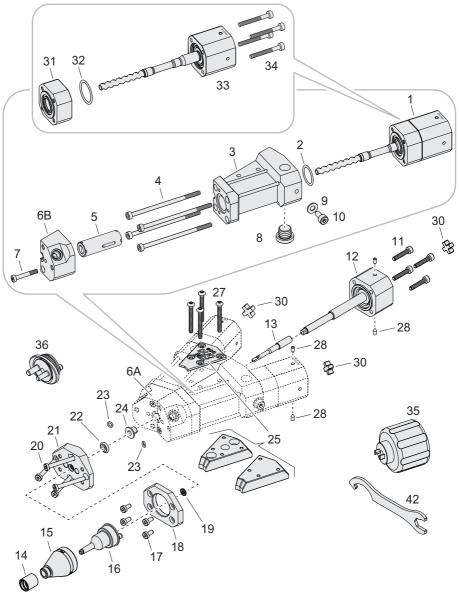
Items that are shown in the overview drawing (Page 31)

X = Recommended spare parts and wearing parts

To avoid costly downtime, we recommend keeping a stock of spare and wearing parts.



7.2 Overview drawing of the spare parts





8 Technical specifications

8.1 Installation declaration

Within the context of EU Directive 2006/42/EU on Machinery Annex II B

We,

ViscoTec Pumpen- u. Dosiertechnik GmbH Amperstraße 13 D-84513 Töging am Inn,

hereby declare that, in the design and manufacture of the incomplete machine described below, the following basic requirements of EU Directive 2006/42/EC have been applied and complied with: 1.1.2, 1.1.3, 1.1.5, 1.3.2, 1.5.4, 1.6.1, 1.6.2, 1.7.4, 1.7.4.1, 1.7.4.2 We declare in addition that the special technical documents were drawn up in accordance with Annex VII part B of this Directive. Where applicable, the incomplete machine corresponds in addition to the stipulations of Directives 2014/35/EC on electrical equipment and 2014/30/EC on electromagnetic compatibility.

Product designation: eco-DUOMIX450

We undertake to convey to the market supervisory authorities, at their justifiable request, the special documents concerning the incomplete machine in electronic form via our documentation department.

The incomplete machine may only be put into operation once it has been determined, as required, that the machine or unit into which the incomplete machine is to be installed complies with the stipulations of Directive 2006/42/EC on machinery and that the EU Declaration of Conformity has been produced in accordance with Annex II A.

Töging am Inn, 22 April 2023

Martin Stadler Managing Director and authorised representative



8.2 Technical data

eco-DUOMIX450	
Weight	approx. 1,800 g
Minimum operating pressure	0 bar, with self-levelling liquid
Maximum operating pressure	20 bar, with non self-levelling liquid
Maximum dosing pressure ¹⁾	20 bar
Self sealing ¹⁾	approx. 2 bar
	(reference material approx. 1000 mPas at 20 °C)
Motor	18 to 24 V DC, incremental encoder, planetary gear
Protection class according to	IP54
DIN EN 60529	
Sound level, (dB(A))	< 70
Operating conditions	+10 ° to +40 °C, air pressure 1 bar,
	relative humidity less than 60%
	(non-condensing)
Material temperature	+10°C to +40°C
Storage conditions	see page 11
Dosing volume, approx.	0.05 ml/U per dispenser
Dosing accuracy ²⁾	± 1%
Repeatability	> 99 %
Mixing ratio	1:1 to 10:1
Minimum dosing quantity	0.008 ml
Volume flow ³⁾	0.2 to 12 ml/min
Speed of the mixer (\pm 10 %) ⁴⁾	10 to 1000 rpm

¹⁾ Max. dosing pressure and self-sealing decrease with decreasing viscosity and increase with increasing viscosity. Consult with the manufacturer.

²⁾ Volumetric dosing as absolute deviation relative to one dispenser rotation. Depends on the viscosity of the dispensing material.

³⁾ Max. volume flow is dependent on the viscosity, inlet pressure and mixing ratio.

⁴⁾ Depending on the viscosity of the mixture

Threads used	
Material inlet	1/8"cylindrical Whitworth pipe thread DIN/ISO 228
Bleed hole	M4 x 5.5
Clamping sleeve	Luer-Lock

8.3 Materials used

Components in contact with the material	Material
Pump housing, end piece, seal housing, bearing housing	Anodised aluminium
Screws, washers, etc.	Stainless steel A2
Stator elastomer, flexible shaft covering	VisChem
Shaft sealing rings	PE
O-rings, flat gaskets	FKM, FFKM
Drive shaft, rotor	Stainless steel A4
Mixer shaft	Stainless steel A2
Mixing capsule	POM / PE-HD

8.4 Dimensions

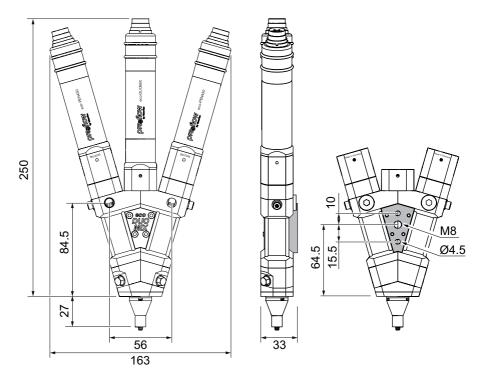


Fig. 17



9 Disposal

The dispenser must be removed by competent maintenance staff. Disposal may only be performed in line with the currently applicable, countryspecific regulations, standards and legislation.

Ensure all materials are recycled in an environmentally appropriate way.

Electrical parts must not be disposed of with household waste (2012/19/EU). They must be taken to the collection points provided for this purpose or disposed of in an environmentally appropriate way.



10 Accessories

In addition to the standard spare parts listed in Section 7.1 (page 29), special solutions are available upon request, for example

- Rotor/stator in alternative materials
- · Fastening elements
- Process connections

Furthermore, we can offer you a comprehensive range of consumables, such as:

- Dispensing needles
- Mixing capsules

	Piece	Art.no.	Material
Mixing ratio 1:1 to 4:1	1	22372	POM / PE-HD
Mixing ratio 1:1 to 4:1	100	22489	POM / PE-HD
Mixing ratio 4:1 to 10:1	1	22389	POM / PE-HD
Mixing ratio 4:1 to 10:1	100	22490	POM / PE-HD

Please contact us if required: info@preeflow.com

Handed over by:



Gewerbepark 13 85402 Kranzberg Germany

www.dosieren.de/en



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ViscoTec Pumpen- u. Dosiertechnik GmbH Amperstraße 13 D-84513 Töging am Inn Germany

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Subject to technical and editorial change.

Translation of original operation manual

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