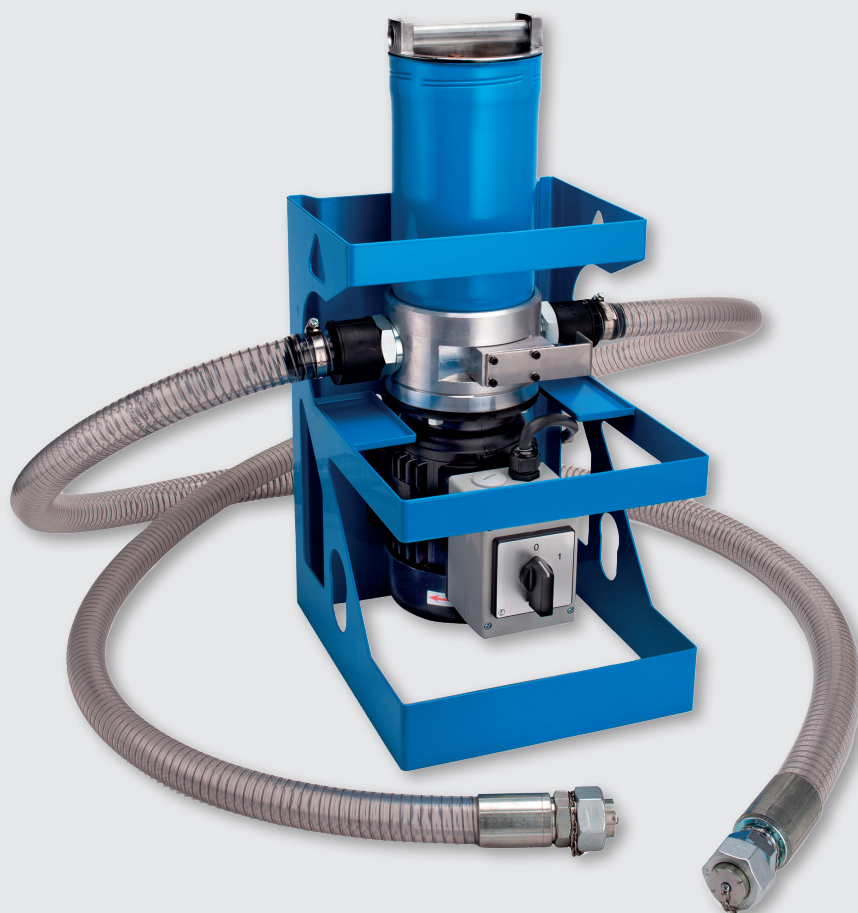


Oil Service Unit

FA 003-2341



Safety and operating instructions

Read safety and operating instructions before use.

Note: The indicated data only serve to describe the product. Specifications regarding the use of this product are only examples and suggestions. Catalog specifications are no guaranteed features. The information given does not release the user from his / her own assessments and inspection.

Our products are subject to a process of natural wear and aging.

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The picture on the title page shows a configuration example. The delivered product may thus differ from the illustration.

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1. About this documentation

1.1 Applicability of this documentation

This documentation is applicable for the following product:


- › Filter Unit FA 003-2341

This documentation is written for technicians, operators, service engineers and system operators.

This document contains important information for safe and appropriate assembly, transport, activation, operation, usage, servicing, dismantling and simple troubleshooting.

- › Read this document completely and in particular Chapter 2, "Safety Instructions", before you work with the product.

1.2 Required and supplementary documentation

Do not commission the product until you have received the documentation marked with the book icon  and before you have understood and complied with the information therein.


| | Title | Number of document | Document type |
|---|------------|--------------------|---------------|
|  | Data sheet | 80.55-xd | |

Table 1: Required and supplementary documentation

1.3 Presentation of information

So that this document can help you to work quickly and safely with your product, we use standardized safety instructions, symbols, terms and abbreviations. For better understanding, these are explained in the following sections.

1.3.1 Safety instructions

In this documentation, safety instructions are faced with a sequence of actions which would result in the danger of personal injury or damage to equipment. The measures described to avoid these hazards must be observed.

|  DANGER | |
|--|--|
| Type and source of danger | |
| <ul style="list-style-type: none">› Averting of a danger› <listing> | |

- › Warning signal: draws attention to the danger
- › Signal word: indicates the severity of the danger
- › Type and source of danger: specifies the type and source of danger
- › Consequences: describes the consequences in the event of non-compliance
- › Action: indicates how the danger can be avoided




| Warning sign, signal word | Meaning |
|--|--|
|  DANGER | Indicates a dangerous situation which results in death or serious injury if not avoided. |
|  WARNING | Indicates a dangerous situation which may result in death or serious bodily injury if not avoided. |
|  CAUTION | Indicates a dangerous situation which may result in light to moderate injury if not avoided. |
| NOTE | Indicates property damage: The product or surrounding could be damaged. |

Table 2: Meaning of the warning signs

1.3.2 Symbols

The following symbols indicate notes which are not safety-relevant but increase the intelligibility of the documentation.





| Symbol | Meaning |
|---|---|
|  | If this information is not observed, the product cannot optimally be used or operated |
| > | Singular, independent action step / instruction |
|  | This symbol specifies that protective gloves should be worn. |
|  | This symbol specifies that safety shoes should be worn. |
|  | This symbol specifies that protective goggles should be worn. |

Table 3: Meaning of symbols

1.3.3 Terms

In this documentation the following terms are used:

| Term | Meaning |
|------|---------|
| | |
| | |

Table 4: Terms

1.3.4 Abbreviations

In this documentation the following abbreviations are used:

| Term | Meaning |
|------|-------------|
| FA | Filter Unit |

Table 5: Abbreviations

2.1 About this chapter

This product was manufactured according to the generally recognized standards of engineering. Nevertheless, there is a danger of injury or damage if you do not observe this chapter and the safety instructions in this documentation.

- › Read this document thoroughly and completely before working with the product.
- › Retain this document and ensure that it is available for all users at all times.
- › Always include the necessary documentation when passing the equipment along to a third party.

2.2 Intended use

This product is a hydraulic component.

You may use the product for the following:

- › exclusively for filtering oil and environmentally compatible hydraulic fluids HEES und HETG.
- › for filtration of hydraulic fluids in the bypass flow on machines and systems, taking the technical data into account.
- › for filtration of hydraulic fluids during filling of machines and systems, taking the technical data into account.

This product is intended for professional use only, and not for private use.

"Intended use" also includes that you have completely read and understood this documentation, in particular Chapter 2 "Safety Instructions".

2.3 Improper use

Any other use than the intended use described in Chapter 2.2 "Intended use", is improper and inadmissible.

If unsuitable products are installed or used in safety-related applications, unintended operating states may occur in the application, which may cause personal injury and / or property damage. Therefore only use this product in safety-related applications if this use is explicitly specified and permitted in the product documentation, e.g. in explosion protection areas or in safety-related parts of a control system (functional safety).

ARGO-HYTOS GMBH assumes no liability for damages resulting from improper use. The risks associated with improper use are solely with the user.

2.4 Reasonably foreseeable misuse

The delivery of the following media is forbidden:

- › flammable liquids such as petrol or thinner (explosion hazard)
- › foodstuffs

The device is not suitable for sucking sludge and sediment.

The operator alone is liable for damages resulting from improper use.

2.5 Qualification of personnel

The operations described in this document require fundamental knowledge of mechanics and hydraulics as well as knowledge of the appropriate technical terms. In order to ensure safe use, these operations may therefore only be carried out by a correspondingly skilled worker or an instructed person under the guidance of a skilled worker.

A skilled worker is someone who can - based on his / her technical education, knowledge and experience as well as knowledge of the respective regulations of the jobs assigned to him / her - recognize possible dangers and ensure appropriate safety measures.

A skilled worker must observe the relevant technical regulations.

2.6 General safety instructions

- › Observe the valid regulations for accident prevention and environmental protection.
- › Observe the safety regulations and requirements of the country in which the product is used / applied.
- › Only use ARGO-HYTOS products that are in technically perfect condition.
- › Observe all instructions on the product.
- › People who assemble, operate, disassemble or maintain ARGO-HYTOS products may not do so under the influence of alcohol, other drugs or medications that affect the responsiveness.
- › Only use manufacturer-approved accessories and spare parts, in order to prevent personal danger due to unsuitable spare parts.
- › Observe the technical data and ambient specifications specified in the product documentation.
- › If unsuitable products are used or installed in safety-relevant applications, unintended operating states may occur in the application, which can cause personal injury and / or material damage. Therefore only use the product in safety-relevant applications if this use is explicitly specified and permitted in the product documentation.
- › You may only put the product into operation, when it has been established that the final product (e.g. a machine or system), into which the ARGO-HYTOS products have been installed, complies with the country-specific regulations, safety regulations and standards of the application.

2.7 Product and technology related safety instructions



CAUTION

Leaked hydraulic oil

Environmental hazard / risk of slipping.

- › In case of spills, cover the oil-covered surface immediately with an oil-binding medium.
- › Then immediately dispose of the oil-binding medium according to the national environmental regulations.

Ignition hazard

Risk of electrostatic charge by poorly conducting hydraulic fluid.

- › If the electrical conductivity of the hydraulic fluid is not known, please contact the manufacturer of the hydraulic fluid.

Risk of burns

Contact temperatures according to DIN EN563 (3) and DIN EN13202 (4) may be exceeded during operation.

- › Allow the filter unit to cool down before touching it.

3.1 To prevent damage to property and products



CAUTION

Danger due to improper handling

Property damage

- › The filter unit may only be used in accordance with Section 2.2, "Intended use".

Leakage or spillage of hydraulic fluid

Environmental pollution and ground water contamination.

- › Use oil binding agents in order to bind leaked hydraulic oil.

Risk of burns

Contact temperatures according to DIN EN563 (3) and DIN EN13202 (4) may be exceed during operation.

- › Allow the filter unit to cool down before touching it.

Contamination due to fluids and foreign bodies

Premature wear - malfunction - risk of damage - property damage.

- › Ensure cleanliness during installation in order to prevent foreign bodies, such as welding beads or metal chips, from entering the hydraulic lines, leading to premature wear or malfunction.
- › Make sure that connections, hydraulic lines and attachment parts (e.g. gauges) are free of dirt and chips.
- › Prior to commissioning, check that all hydraulic and mechanical connections are connected and tight, and that all gaskets and seals of the plug connectors are correctly assembled and undamaged.
- › For removal of lubricants and other contaminants, use residue-free industrial wipes.
- › Make sure that all connections, hydraulic lines and attachment parts are clean.
- › Ensure that no contaminants enter when closing the connections.
- › Make sure that no detergents enter the hydraulic system.
- › Do not use cotton waste or faying cleaning rags for cleaning.
- › Do not use hemp as sealing agent.

Improper cleaning

Premature wear, malfunctions - risk of damage - property damage.

- › Close all openings with appropriate protective fittings to prevent penetration of detergents.
- › Do not use aggressive cleaning agents for cleaning. Clean the product with a suitable cleaning fluid.
- › Do not use a high pressure cleaner.
- › Do not use compressed air to clean function interfaces such as seal areas.

4. Scope of delivery

The package includes:

- › 1 Filter Unit FA 003-2431
- › 1 Operating manual
- › 1 Suction hose DN32 mm x 1,5 m long CEL28
(Connection M36x2 male thread with sealing cone 24°)
- › 1 Pressure hose DN25 mm x 1,5 m long CEL28
(Connection M36x2 male thread with sealing cone 24°)

5.1 Performance specification

The filter unit FA 003 is a mobile filter system for filtration of hydraulic fluids and lubricants with a viscosity of 15 mm²/s (min. in continuous operation) - 5.000 mm²/s (max. in continuous operation) in the bypass flow.

A separate installation in the bypass or cooling circuit for fine filtration and discharge of the full flow filter is just as possible as the filtration of fresh oil and the cleaning (flushing) of polluted systems for wear protection of components and systems.

The volume flow is 3 l/min.

The operating temperature is in the range of 10° C to 65° C. Here, the viscosity of the lubricant has to be observed.

5.1.1 Device description

The filter unit FA 003 consists of a support frame in which a filter pump unit is integrated. This consists of an electrically operated filter pump with exchangeable suction strainer.

The on / off switch is located in the control box of the pump motor. The suction hose is connected to the suction port of the pump and the pressure hose to the outlet of the main filter.

5.2 Component overview

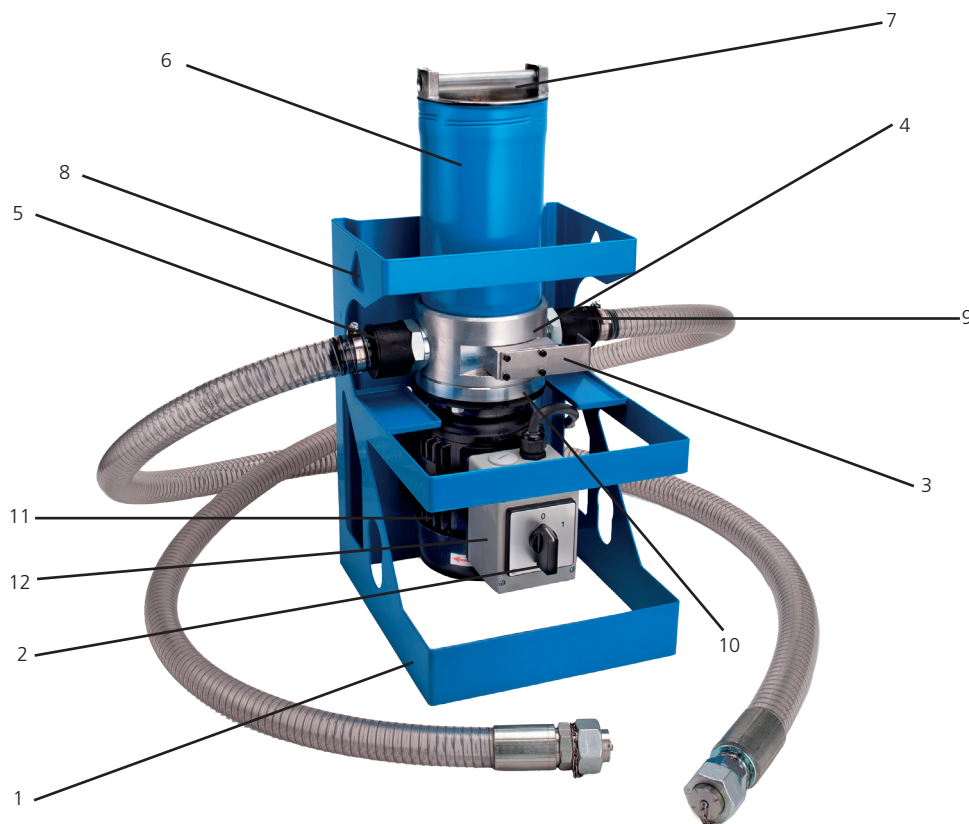


Fig.1: Component overview

- | | |
|-------------------------------|--------------------------------|
| 1 Support frame | 7 Filter cover |
| 2 On / off switch | 8 Crane eyelet |
| 3 Clogging indicator | 9 Quick coupling pressure side |
| 4 Filter housing sump | 10 Pump unit |
| 5 Quick coupling suction side | 11 Electric motor |
| 6 Filter housing | 12 Control box |

5.3 Identification of the product

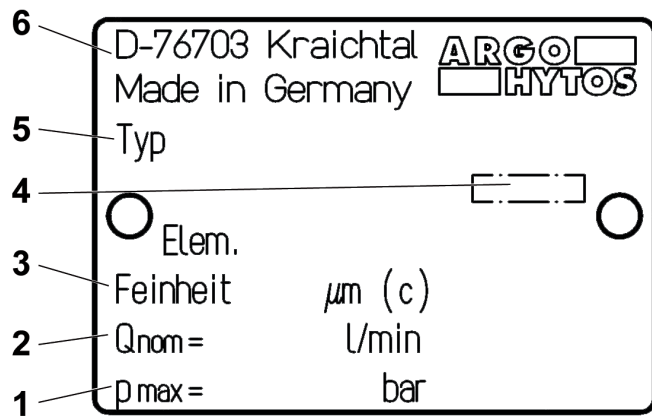


Fig. 2: Nameplate

- | | | | |
|---|---------------------|---|---------------------|
| 1 | Max. pressure | 4 | Year of manufacture |
| 2 | Nominal volume flow | 5 | Type designation |
| 3 | Filter fineness | 6 | Address |

6. Transport and storage

6.1 Transport



CAUTION



Falling unit caused by incorrect transport

Injury and property damage

- › The unit must be carried manually by two persons due to its own weight of 22 kg.
- › Wear safety shoes when transporting the filter unit.

The filter unit FA 003 must be transported horizontally, because within the filter unit there is always a certain amount of oil (in the filter and in the pump), which would escape if not being transported horizontally, subsequently leading to contamination. Observe the notes in Chapter 2 "General safety instructions".

- › When using mobile transport aids, ensure a secure position of the unit (danger of tipping).
- › To prevent leakage of residual oil, separate the hoses from the unit at the quick couplings before transportation and seal them with the provided plugs.
- › Close the connections at the unit with plugs.

6.2 Storage

The filter unit FA 003 should be stored in an enclosed area to protect it from humidity and condensation.



DANGER

Risks of injury

Risks related to chemical reactions

- › Chemical substances in the immediate vicinity of the filter unit may react and lead to destruction of the device and to injuries of persons who are in the immediate vicinity of the device
- › Storage in the immediate vicinity of chemically active substances such as acids, alkalis, salts, organic solvents and rechargeable batteries is prohibited.

The ambient temperature during storage of the filter unit FA 003 should be between +5 °C and +30 °C at a humidity of max. 80 %. Before storage over a period of more than 6 months, the unit should be filled with oil in order to preserve it against corrosion.

CAUTION

Danger caused by unhealthy posture of the operator

- › Set up the machine on a flat surface and ensure sufficient stability of the machine.

WARNING

Pressurized device

Danger to life, risk of injury, serious injury while working on a not decommissioned filter unit - property damage

- › Do not loosen any line connections, connectors and components, as long as the filter unit is under pressure.
- › Turn off the electric pump in accordance with the manufacturer's instructions and secure it against being switched on again.
If possible, remove the main fuse of the system.

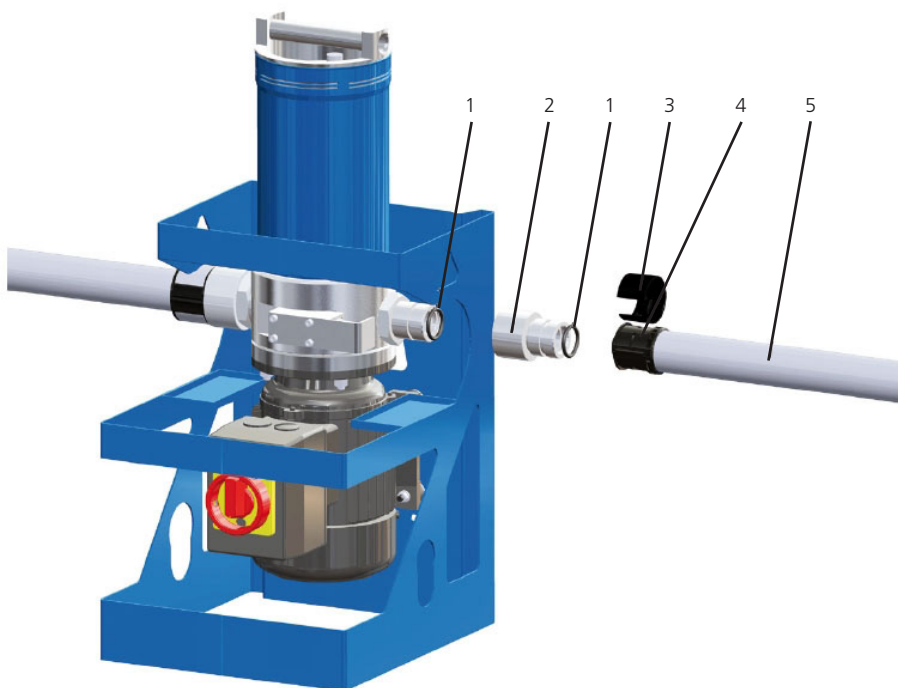


Fig. 3: Hydraulic connection

- | | |
|----------------|------------------|
| 1 O-ring | 4 Quick coupling |
| 2 Plugs | 5 Pressure hose |
| 3 Locking ring | |

7.1 Hydraulic connection

1. Open the locking ring (3) at the quick coupling (4) and pull out the plugs (2).
2. Place the pressure hose (5) together with the quick coupling (4) onto the filter unit.
 - › With mounting, ensure the correct position of the O-ring (1).
3. Install the locking ring (3) of the quick coupling (4)
4. Assemble the suction hose analogously.

NOTE

Damage to the filter unit by mounting under pressure

Property damage

- › Depressurize the relevant part of the system before installing the product.

Damage to the hydraulic lines and hoses by mounting under pressure

Property damage

- › Install pipes and hoses free of tension.

Installation of undersized components (among others hoses)

Property damage

- › Before pressurization, check that all hoses, micro-sleeves, tubings and fittings are rated for the maximum operating pressure of the fluid system.

7.2 Electrical connection



WARNING

Faulty power supply

Danger to life - risk of injury

- › Always consider the country-specific regulations.

Prior to commissioning, let an electrician check whether:

- › the mains voltage matches with the voltage specified on the motor nameplate,
- › the power source is appropriately secured,
- › the cross-section is of sufficient size,
- › the cable and connection to the power source are in good order and condition.

With 3-phase AC motors, please check after connecting that:

- › with switching on, the direction of rotation of the motor matches with the direction arrow on the motor, if required have it changed by an electrician.

Specifically, proceed with the following steps:

- › Connect the 400-V voltage plug to the local power supply.

8.1 Before commissioning

- › Be sure to read and understand the operating manual before putting the device into operation.
- › The information for intended use, the operating conditions and the technical specifications must be adhered to.
- › The unit must be positioned so that there is no danger of tipping.
- › Cables and hoses must be outside of the movement range of the operating personnel (tripping hazard).
- › If no hydraulic oil is sucked in during commissioning, switch off the unit, open the cover at the filter housing and fill in approx. 0.3 l hydraulic oil.
- › The oil to be filtered must be compatible with the previously filtered hydraulic oil. If this is not the case, the filter unit must be cleaned and the filter element is to be replaced (see filter element change).

8.2 After switching on

- › With 3-phase AC motors check after connecting if the direction of rotation matches with the direction arrow on the motor. If not, have it changed by an electrician.
- › Check the filter unit for leaks.

8.3 In case of power failure

In order to prevent unintentional starting of the unit, always switch off and unplug the unit.

9.1 Filtering liquids in the bypass flow

- › Connect the filter unit to a power source (with 3-phase AC motor observe rotation direction).
- › Connect the suction and pressure hose to the respective quick couplings.

NOTE

- › In order to prevent a short circuit of the oil flow, the distance between the suction and pressure connection should be kept as large as possible.

- › Turn

NOTE

- › At the beginning of the filtration, filling of the filter unit may take a few seconds.

- › Using the clogging indicator, check the element for clogging at operating temperature of the medium used.
- › At the end of filtration, pull the suction strainer out of the hydraulic tank of the machine or unit and draw in air for max. 30 seconds. Residual oil from the filter housing will be returned via the discharge pipe into the tank of the machine or unit.
- › Turn off the filter unit by using the on / off switch.
- › Remove the suction and pressure hose from the corresponding connectors and seal the connections and hoses with plugs.



DANGER

Danger to life

Risk of electric shock

- › During repair work, turn off the unit and pull the mains plug.

NOTE

Impaired function by dirt ingress into the pump.

Dirt entering the pump

The function of the filter unit is no longer guaranteed.

- › During repair work, all parts coming in contact with the hydraulic medium, must be kept free of dirt and chips.

10.1 Maintenance overview

Except from the filter element and the suction strainer, the filter unit is maintenance-free.

| Maintenance work | Order No. | Maintenance interval |
|--|-------------------|--|
| Checking / changing the filter element | V7.1200-13 (5 µm) | › Once the clogging indicator changes to the red range at a permissible viscosity |
| Checking / changing the suction strainer | FA 016.0110 | › quarterly or › with corresponding problems (lower volume flow with clean filter element, too loud noise level). |

10.2 Removing / attaching the covering caps

NOTE

Property damage

Dirt entering the pump

The function of the filter unit is no longer guaranteed.

- › The suction strainer must be regularly checked according to the maintenance intervals and replaced if necessary.
- › To service the suction strainer, the covering cap on the suction side must be removed i.e. the suction hose must be loosened and removed.
- › For assembly / disassembly of the suction strainer, the quick coupling on the suction side must be dismantled.

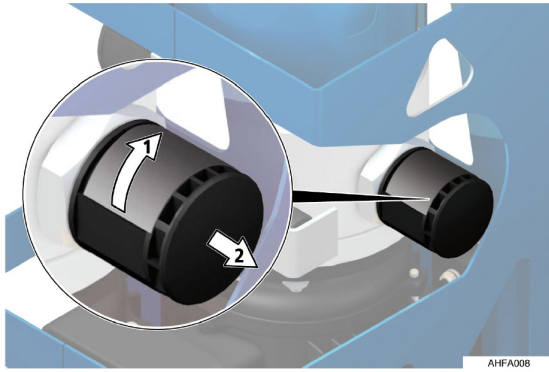


Fig. 4: Removing the covering cap

- › For this purpose, spring out the locking (1) from the covering cap (2) / quick coupling.
- › Remove the covering cap (2) / quick coupling and store it safely for further use.

Assembly takes place in reverse order.

NOTE

Deterioration of sealability

Property damage

The function of the filter unit is no longer guaranteed.

- › Oil the seat of the O-ring to prevent damage.

10.3 Replacing the filter element

10.3.1 Preparation:

- › Disconnect the suction hose from the suction connection of the hydraulic tank of the machine or unit and draw in air for max. 30 seconds. Residual oil from the filter unit will be returned via the discharge pipe into the tank of the machine or unit.
- › Switch off the machine and unplug it.
- › If possible, let the unit cool down.

10.3.2 Removing the filter element

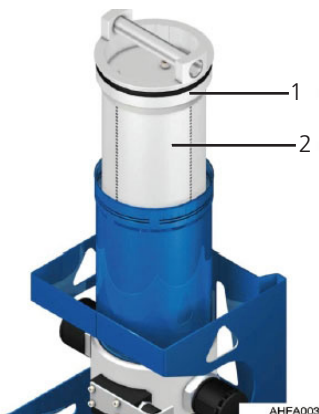


Fig. 5: Removing the filter element

1. Turn the housing cover (1) counterclockwise.
2. Carefully remove the cover (1) with the filter element (2) from the filter tube. (The filter element is attached to the cover. Let the draining oil drip off into the housing.)

10.3.3 Removing the filter element from the cover



Fig. 6 Removing the filter element from the cover

1. Push the filter element at the cover in arrow direction 1 and remove it in arrow direction 2.
2. Dispose of the filter element according to the national environmental legislation (Waste code: Oil filter 16 01 07).

10.3.4 Attaching the filter element

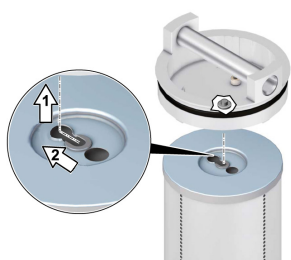


Fig. 7: Attaching the filter element

1. Check the filter element type number.
Does the load inscription on the filter element match with the indications on the type plate or in the operating manual?
2. Attach the filter element in arrow direction 2 and lock it in arrow direction 1.

10.3.5 Installing the filter element

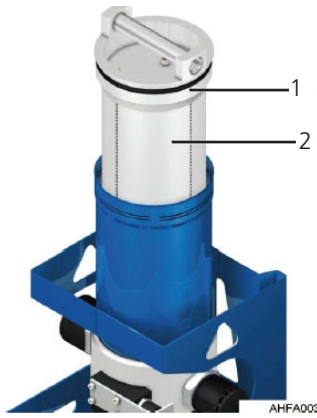


Fig. 8: Installing the filter element

1. Always replace the O-ring in the cover, when changing the filter element (part of the scope of delivery of the filter element).
2. Carefully insert the cover (1) with the filter element (2) into the filter tube.
3. Screw in the cover manually until it stops.
A gap between cover and filter pipe may remain visible

10.3.6 Venting the filter element

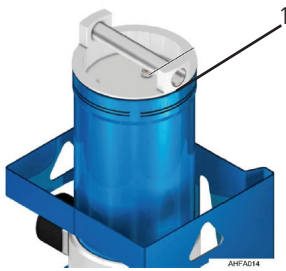


Fig. 9: Venting the filter element

1. Open the vent screw (1).
2. Insert the mains plug and recommission the filter unit.
With commencing oil leakage from the vent, close the vent by tightening the vent screw (1).



DANGER

Danger to life

Risk of electric shock

- › Before uninstalling, pull the mains plug. Uninstalling may only be carried out by qualified electricians.

Risk of injury

Risk of injury by incorrect handling

- › Uninstalling may only be carried out by instructed persons.

The final decommissioning and disposal requires complete uninstallation of the total energy supply, the mechanical components and the disposal of the hydraulic media remaining in the device.

With disassembly and disposal, all national safety and environmental regulations must be observed.

The filter unit is a device which does not have to be dismantled.

- › Careless disposal of the filter unit FA 003 and the hydraulic fluid can lead to environmental pollution.
- › Therefore, dispose of the filter unit and the hydraulic fluid in accordance with the national regulations of your country.
- › Dispose of hydraulic fluid residues according to the applicable safety data sheets for these hydraulic fluids.

14.1 How to proceed

- › Get an overview on the function of the product in connection with the overall system.
- › Try to find out whether the product had provided the required function in the overall system before the error occurred.
- › Try to detect changes in the overall system, into which the product has been installed:
 - » Have the operating conditions or the operating range of the product changed?
 - » Have modifications (e.g. conversions) or repairs been carried out at the overall system (device / unit, electrics, control) or at the product? If so, which modifications?
 - » Has the product or the device been operated correctly?
 - » How does the fault tend to show?
- › Get a clear impression about the cause of trouble. Possibly consult the direct operator or machine operator.

14.2 Fault table

| Problem / fault | Possible cause | Elimination |
|---|--|---|
| Electric motor does not turn on during commissioning | › Electrical cable or mains plug defective | ▶ Have the cable replaced by a skilled electrician |
| | › Supply voltage missing | ▶ Establish the power supply or activate the electric fuse |
| | › On / off switch defective | ▶ Replace on / off switch |
| | › Motor defective | ▶ Replace motor (repair at the manufacturer's premises) |
| | › Pump defective | ▶ Replace pump (repair at the manufacturer's premises) |
| | › Viscosity too high (medium) | ▶ Warm up the oil |
| Electric motor switches off during operation | › Electric motor overheated | ▶ Let the motor cool down, clean any contaminated ventilation slits |
| | › Pump blocked | ▶ Replace pump (repair at the manufacturer's premises) |
| Volume flow is clearly too low | › Filter element contaminated | ▶ Replace the filter element |
| | › Suction strainer contaminated | ▶ Replace / clean suction strainer |
| | › Viscosity too high | ▶ Warm up the medium |
| | › Suction height too large | ▶ Adjust suction height |
| | › Leak on the suction side | ▶ Replace suction hose or seal connection points (re-tighten them) |
| | › Wear of the pump | ▶ Replace pump (repair at the manufacturer's premises) |
| Operating noise too loud | › Filter element contaminated | ▶ Replace filter element |
| | › Suction strainer contaminated | ▶ Replace / clean suction strainer |
| | › Viscosity too high | ▶ Warm up the medium |
| | › Suction height too large | ▶ Adjust suction height |
| | › Leak on the suction side | ▶ Replace suction hose or seal connection points (re-tighten them) |
| | › Wear of the pump | ▶ Replace pump |
| | › Filter unit standing on a vibration-sensitive surface (e.g. sheet metal) | ▶ Improve site conditions |
| Pump does not suck | › Leak on the suction side | ▶ Replace suction hose or seal connection points (re-tighten them) |
| | › Unit pumped empty (with refilling) | ▶ Prime the unit (0.3 l) |
| | › Suction strainer clogged | ▶ Clean / replace suction strainer |
| Oil on the fan wheel cover Oil leaking out of terminal box | › Shaft seal leaky | ▶ Replace motor (repair at the manufacturer's premises) |
| | › Residual oil at the housing after filter element change | ▶ Clean filter unit |
| | › Screwing leaky | ▶ Check the screw joints, re-tighten and / or seal them |

Table 6: Fault table

15.1 Device dimensions

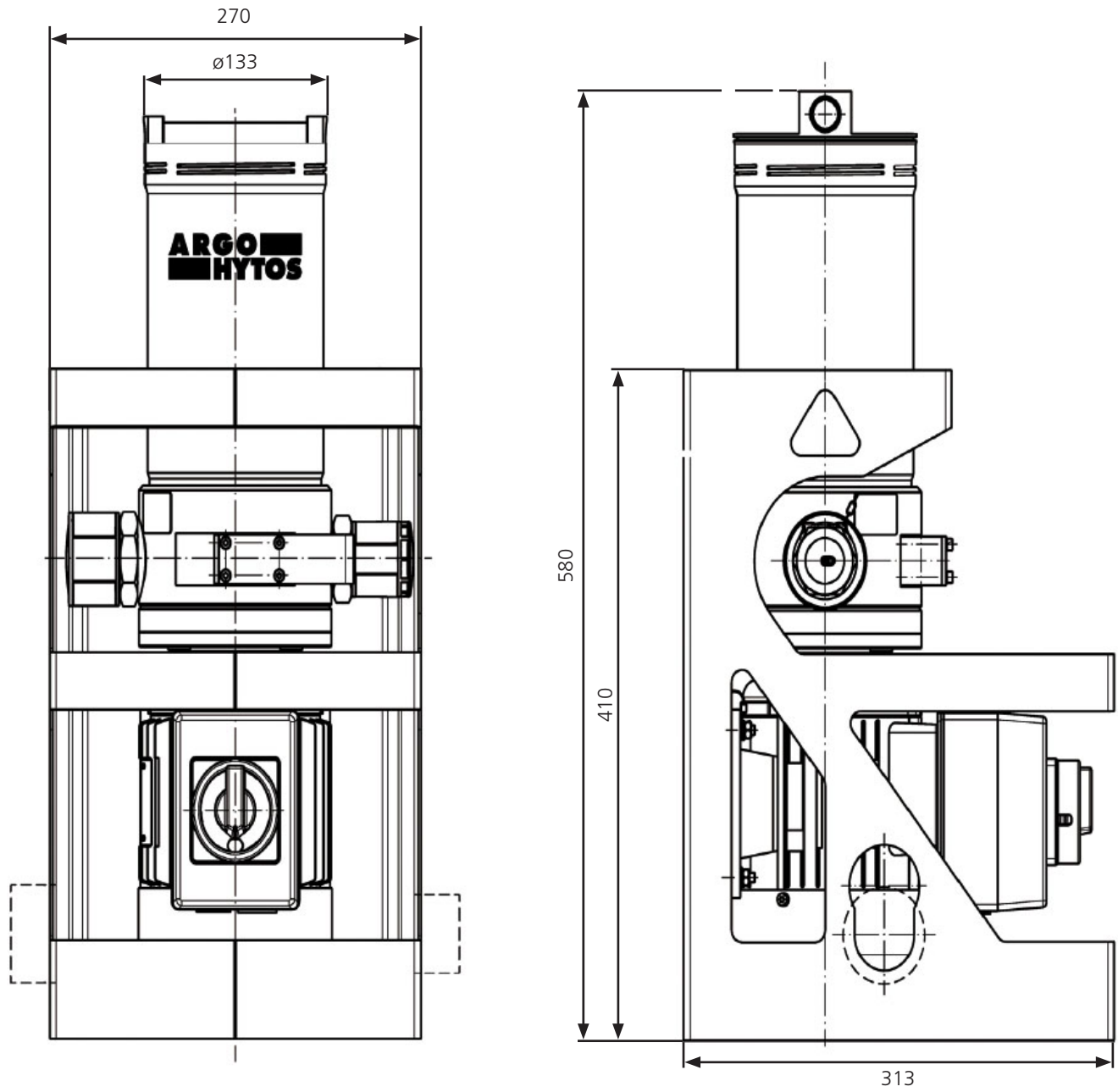


Fig. 10: Device dimensions

15.2 Technical data

| | | |
|-------------------------|--|--|
| Nominal volume flow | l/min (50 Hz) | 3 |
| | l/min (60 Hz) | 3,6 |
| Pressure limiting valve | bar | 5 ± 0,5 |
| Max. operating pressure | bar | 6 |
| Filter element | V7.1220-13 $\beta_{5(c)} \geq 200$ | |
| Clogging indicator | Optical clogging indicator DG 042-04 $\Delta p = 3,5 \pm 0,5$ bar | |
| Suction side | Hose DN 32 with connection M36x2 (24°) When replacing the suction hose, only use a spiral hose | |
| Pressure side | Hose DN 25 with connection M36x2 (24°) | |
| Electric drive | 3-phase AC motor 380-420 V; 50 Hz; 0,25 kW; n = 1000 min ⁻¹ ; BG 71 380-420 V; 60 Hz; 0,30 kW; n = 1200 min ⁻¹ ; BG 71 | |
| Tare weight | kg | approx. 22 |
| Sound power level | db (A) max. | 68 (under operating conditions permitted for continuous operation) 70 (under operating conditions permitted for short-term operation) |

15.3 Operating conditions



WARNING

Risk of burns

Contact temperatures according to DIN EN563 (3) and DIN EN13202 (4) may be exceeded during operation.

- › Allow the filter unit to cool down before touching it.

NOTE

Varying viscosity behavior

- › Viscosities of a medium are always temperature-dependent.

| | | |
|---------------------------------|--|-----------|
| Electric drive 3~400 V 50/60 Hz | mm ² /s (min. continuous operation) | 15 |
| | mm ² /s (max. continuous operation) | 5000 |
| Permissible temperature range | Hydraulic fluid °C | 10 ... 65 |
| | Environment °C | 0 ... 50 |
| Admissible suction heights | m (max.) first use | 0,5 |
| | m (max.) operating status | 1,0 |
| Media resistance | Hydraulic fluids based on mineral oil, rapeseed oils and synthetic esters | |
| Fuse protection | 400 V, 50/60 Hz, 16 A | |
| Working position | arbitrary, preferably standing | |

15.4 Hydraulic circuit diagram

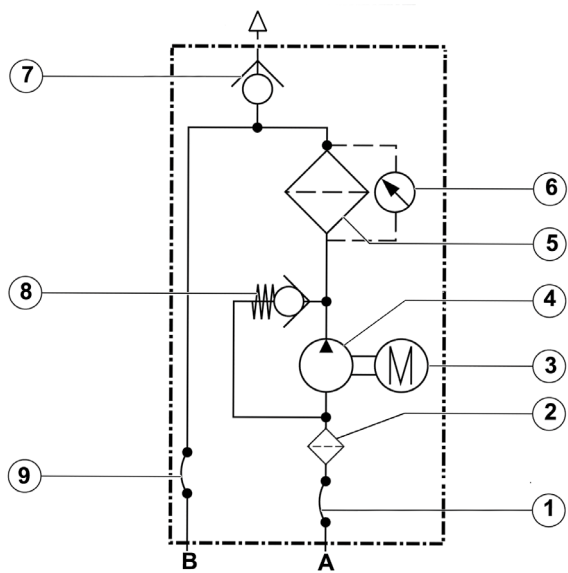


Fig. 11: Hydraulic circuit diagram

- | | |
|--------------------|---------------------------|
| 1 Suction hose | 6 Clogging indicator |
| 2 Suction strainer | 7 Venting valve |
| 3 Motor | 8 Pressure limiting valve |
| 4 Pump | 9 Pressure hose |
| 5 Filter | |

16.1 EG-Konformitätserklärung

EU - Konformitätserklärung

EU - Declaration of Conformity



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Die EU - Konformitätserklärung gilt für folgendes
Gerät:

Filteraggregat

The EU - Declaration of Conformity applies
to the following unit:

Filter Unit

FA 003

Wir bestätigen die Übereinstimmung mit den
wesentlichen Anforderungen der europäischen
Richtlinie(n):

Maschinenrichtlinie 2006-42-EG

EMV Richtlinie 2004/108/EG

We declare the conformity according to the
essential requirements of the European
directive(s):

Machinery Directive 2006/42/EC

EMC Directive 2004/108/EC

Folgende Norm(en) wurde(n) angewandt:

The following standard(s) was (were) applied:

DIN EN 809
DIN EN 60204-1 (VDE 0113-1: 2007-06)

Zator, 22.11.2016

(Ort und Datum der
Ausstellung)

(Place and date of issue)

A handwritten signature in blue ink, reading "A. Noworyta".

(Unterschrift) Arkadiusz Noworyta/
Vorsitzender des Vorstandes

(Signature) Arkadiusz Noworyta/
President of the Board

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