

## Translation of the original installation instructions

### Oil mist separator

### LGA 1201 FU / FUW

Mat. No. of original installation instructions  
72444791



# 1 Contents

<b>1</b>	<b>Contents</b>	<b>2</b>
<b>2</b>	<b>General safety instructions</b>	<b>3</b>
2.1	Safety instructions for installation and operating personnel	3
2.2	Warning structure	3
2.3	Warning symbols used	3
2.4	Other symbols used	3
<b>3</b>	<b>Glossary</b>	<b>4</b>
<b>4</b>	<b>General information</b>	<b>4</b>
4.1	Manufacturer	4
4.2	Information about the original installation instructions	4
<b>5</b>	<b>Intended use</b>	<b>4</b>
<b>6</b>	<b>Product description</b>	<b>4</b>
6.1	General	4
6.2	Principle of the process	4
6.2.1	General functional description	4
6.2.2	LGA 1201 FU / FUW	4
6.3	Operating principle	5
6.3.1	LGA 1201 FU	5
6.3.2	LGA 1201 FUW	5
6.3.3	Protection against fire and explosion	5
6.4	Main components	6
<b>7</b>	<b>Technical data</b>	<b>6</b>
7.1	Technical data	7
<b>8</b>	<b>Transport and storage</b>	<b>7</b>
8.1	Delivery and acceptance	7
<b>9</b>	<b>Installation</b>	<b>7</b>
9.1	Installing the oil mist separator	7
9.2	Installation	8
9.3	Signal meanings	8
<b>10</b>	<b>Start-up</b>	<b>8</b>
10.1	Control options for the LGA 1201	8
10.1.1	Control via the main circuit	8
10.1.2	Control via the control circuit	8
10.1.3	Alternative control option	8
<b>11</b>	<b>Normal operation</b>	<b>9</b>
<b>12</b>	<b>Removal from service</b>	<b>9</b>
<b>13</b>	<b>Troubleshooting</b>	<b>9</b>
<b>14</b>	<b>Maintenance</b>	<b>10</b>
14.1	Inspection and maintenance schedule	10
14.2	Information on the fan / frequency inverter	10
14.3	Replacing the oil separator elements	11
14.3.1	Removing the oil separator elements	11
14.3.2	Installing the oil separator elements	12
14.4	Replacing the membrane	13
14.4.1	Removing the membrane	13
14.4.2	Inserting the membrane	13
<b>15</b>	<b>Dimension drawing</b>	<b>14</b>
<b>16</b>	<b>List of spare parts</b>	<b>14</b>
<b>17</b>	<b>Circuit diagram</b>	<b>15</b>
<b>18</b>	<b>Accessories and optional equipment</b>	<b>16</b>
18.1	HEPA after-filter	16
18.2	Frame	17
18.4	External preseparation with an impact separator (Miofilter panel)	18
18.4.1	Installation in the machine tool	18
18.4.3	Installation outside the machine tool	19
18.5	Keypad for frequency inverter	19
<b>19</b>	<b>Declaration of incorporation</b>	<b>20</b>
<b>20</b>	<b>Index</b>	<b>23</b>

## 2 General safety instructions

### 2.1 Safety instructions for installation and operating personnel

This translation of the original installation instructions contains important safety information which must be heeded at all times during installation, normal operation and maintenance.

Non-observance can result in the following risks to persons and the environment as well as in damage to the machine or system:

- ⇒ Failure of critical functions of the machine or plant or of its component parts.
- ⇒ Danger to persons from electrical or mechanical effects as well as from chemical reactions.
- ⇒ Danger to the environment owing to the leakage of hazardous substances.

#### Before installation / start-up:

- Read this translation of the original installation instructions carefully.
- Make sure that installation and operating personnel are adequately trained.
- Make sure the contents of the original installation instructions are fully understood by the responsible persons.
- Define areas of responsibility and competence.
- Prepare a maintenance schedule.

#### During operation of the system:

- Keep this translation of the original installation instructions handy at the place of use.
- Heed the safety instructions. Always operate the machine or system in accordance with its ratings.

#### If in doubt:

- Consult the manufacturer.

### 2.2 Warning structure

Where possible, warnings are structured according to the following system:

Signal word	
Possibly with symbol	<b>Nature and source of the danger</b> ⇒ Potential consequences of non-observance • Action to avert the danger.

### 2.3 Warning symbols used

 <b>DANGER!</b>
<b>Immediate danger!</b> ⇒ Non-observance will result in serious or fatal injury.
 <b>WARNING</b>
<b>Potentially dangerous situation!</b> ⇒ Non-observance can result in serious or fatal injury.
 <b>CAUTION!</b>
<b>Potentially dangerous situation!</b> ⇒ Non-observance can result in minor or moderate injuries.
<b>CAUTION! (without a symbol)</b>
<b>Potentially dangerous situation!</b> ⇒ Non-observance can result in property damage.

### 2.4 Other symbols used

	Danger: High voltage!
	Danger information about explosion protection
	Information about environmental protection
	Protective clothing must be worn!
	Eye protection must be worn!
	Hand symbol: Indicates general information and recommendations
•	Bullet: Indicates the order in which actions are to be carried out
⇒	Arrow: Indicates responses to actions

### 3 Glossary

**Initial differential pressure:**

Differential pressure at the start of the filtration process (when the oil separator elements are “new”).

**Differential pressure ( $\Delta p$ ):**

Pressure difference between the dirty air side and the clean air side.

**Oil mist:**

Minute oil droplets distributed in air.

**Oil separator element:**

Filter element with star-pleated coalescer material. The medium flows from the inside to the outside. Oil droplets “coalesce” to form larger drops.

**Volume flow:**

Airflow conveyed by the unit in m<sup>3</sup>/h.

**Preseparating element**

Filter element with special fibre fleece.

### 4 General information

#### 4.1 Manufacturer

Filtration Group GmbH  
 Schleifbachweg 45  
 D-74613 Öhringen  
 Phone +49 7941 6466-0  
 Fax +49 7941 6466-429  
 fm.de.sales@filtrationgroup.com  
 www.fluid.filtrationgroup.com

#### 4.2 Information about the original installation instructions

FG Mat. No. .... 72444791  
 Date: ..... 10.10.19  
 Version..... 00

### 5 Intended use

<b>⚠ DANGER!</b>	
	<p><b>Danger of explosion!</b></p> <p>⇒ Risk of injury to persons or damage to property.</p> <ul style="list-style-type: none"> <li>• The oil mist separator must not be installed in potentially explosive atmosphere.</li> <li>• The unit must not be used to extract explosive aerosols.</li> <li>• Provide suitable fire protection devices.</li> </ul>
	<b>⚠ CAUTION!</b>
<p>This FG oil mist separator is only allowed to be used in accordance with the operating conditions specified in the contract documentation and in the original installation instructions. All forms of use which deviate from or exceed the limits of use described above are considered to be contrary to the intended purpose. The manufacturer is not liable for any damage resulting from such use.</p>	

The FG LGA 1201 FU / FUW oil mist separator is used to extract oil mist locally from machine tools.

The oil mist separator is suitable for non-water-soluble cooling lubricants (cutting oil, grinding oil, drilling oil) as well as for commercially available oil-water emulsions.

### 6 Product description

#### 6.1 General

This translation of the original installation instructions applies to the LGA 1201 FU and LGA 1201 FUW.

#### 6.2 Principle of the process

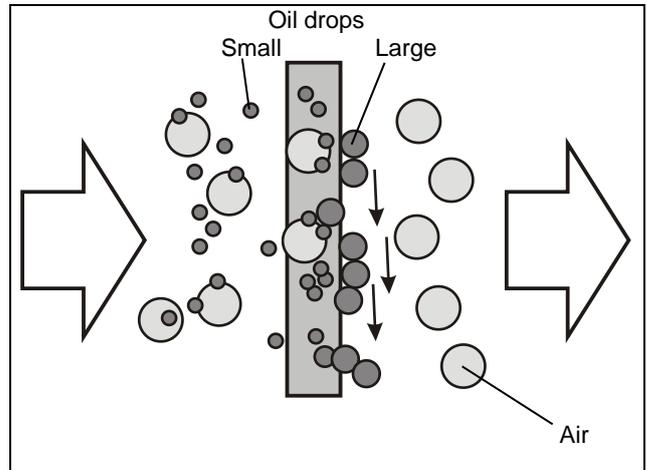


Fig. 1: Operating principle

#### 6.2.1 General functional description

Oil mist is extracted from the work area of machine tools. The oil-laden air flows through the oil separator element from the inside to the outside. The oil attaches itself to the fibre fleece as it passes through the filter. Minute oil droplets coalesce to form larger drops. These large oil drops migrate downwards on the oil separator element due to gravity. The oil accumulates at the bottom of the housing and is returned to the storage tank of the machine tool via the oil drain hose and the membrane valve. The vacuum in the filter housing causes external air to be sealed off by the membrane valve. The valve opens automatically when the oil in the drain hose reaches a level of at least 700 mm. The cleaned airflow is extracted by means of a high-pressure fan and blown out at the top through a silencer.

#### 6.2.2 LGA 1201 FU / FUW

The LGA 1201 FU / FUW is a filtering separator with an oil separator element and optional preseparation (LGA 1201 FUW). The connections are arranged on the underside (clean air) and top (dirty air) to allow direct attachment to machine tools. The main components – the filter housing, fan, silencer and frequency inverter – are installed in a robust sheet metal housing.

The dirty air enters the filter housing at the bottom, then flows through the preseparating element (LGA 601 FUW) from the inside to the outside.

The preseparating element (LGA 1201 FUW) separates any entrained solid particles. It also relieves the load on the oil separator element in case of high aerosol concentrations. Oil is separated when the separator element is saturated (approx. 8 l).

The separated oil migrates to the bottom of the filter housing due to gravity and is returned to the machine via the fluid connections.

### 6.3 Operating principle

#### 6.3.1 LGA 1201 FU

The LGA 1201 FU is driven by a frequency controlled motor. A volumetric flow rate sensor supplies the actual value required to achieve a constant volume flow of approximately 1200 m<sup>3</sup>/h.

If the volume flow falls below the setpoint, an electrical signal is output at approximately 900 m<sup>3</sup>/h.

Maintenance procedures can then be implemented in a timely manner based on the evaluation of this signal (refer to the electrical connection diagram).

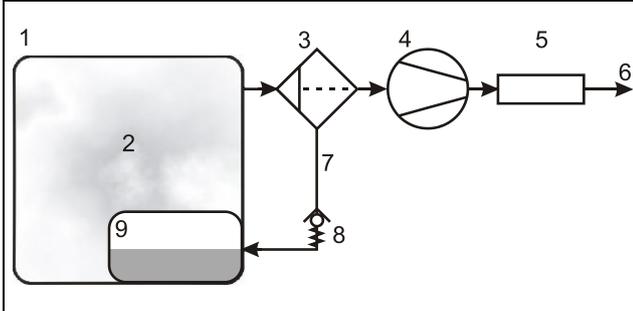


Fig. 2: Operating principle of the LGA 1201 FU

1	Machine tool
2	Oil mist
3	Oil separator element
4	Fan
5	Silencer
6	Clean air
7	Oil drain hose
8	Membrane valve
9	Oil storage tank

#### 6.3.2 LGA 1201 FUW

The LGA 1201 FU is driven by a frequency controlled motor. A volumetric flow rate sensor supplies the actual value required to achieve a constant volume flow of approximately 1200 m<sup>3</sup>/h.

If the volume flow falls below the setpoint, an electrical signal is output at approximately 900 m<sup>3</sup>/h.

Maintenance procedures can then be implemented in a timely manner based on the evaluation of this signal (refer to the electrical connection diagram).

If the volume flow falls to 900 m<sup>3</sup>/h, we recommend replacing the filter element.

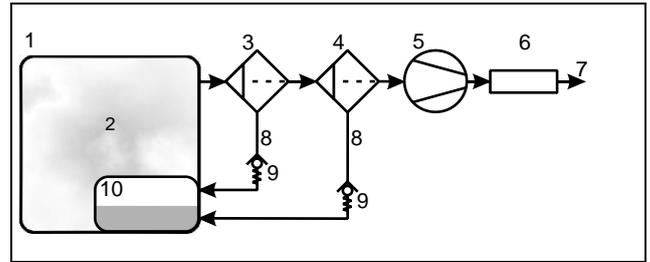


Fig. 3: Operating principle of the LGA 1201 FUW

1	Machine tool
2	Oil mist
3	Preseparating element
4	Oil separator elements
5	Fan
6	Silencer
7	Clean air
8	Oil drain hose (2x)
9	Membrane valve (2x)
10	Oil storage tank

#### 6.3.3 Protection against fire and explosion

During machining operations where oil is used as cooling lubricant, air generally has to be extracted from the work area to prevent the atomised oil from dispersing.

The concentrations that often occur in the cooling lubricant jet itself could result in ignition in case of tool breakage, for example.

If the machining operation involves flammable cooling lubricants or flammable materials, safe operation must therefore be ensured by providing suitable fire and explosion protection devices in conformity with statutory regulations.

## 6.4 Main components

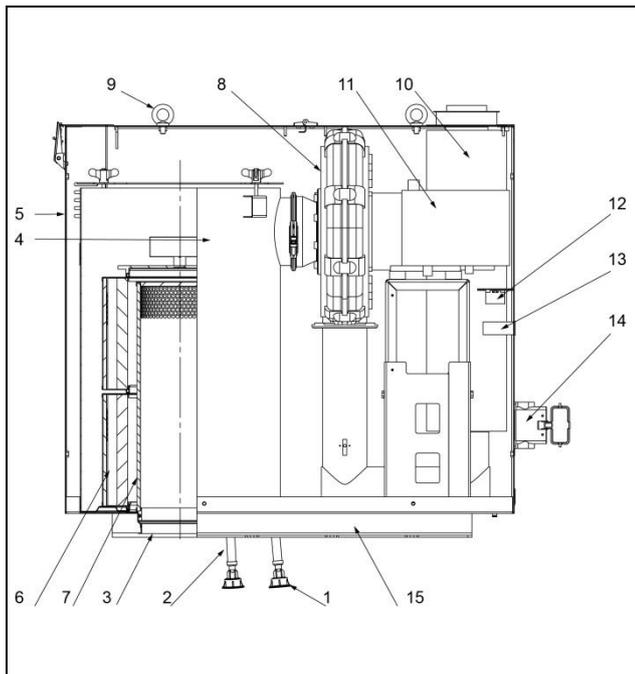


Fig. 4: Diagram of the main components

1	Membrane valve (FUW: 2x)
2	Oil drain hose 15 x 2 mm (5.5 m) (FUW: 2x)
3	Dirty air connection Ø 200 mm
4	Filter housing
5	Housing
6	Oil separator elements
7	Preseparating element
8	Fan
9	Eyebolt for transport
10	Silencer
11	Frequency inverter
12	Differential pressure transmitter
13	Flow rate display
14	Harting HAN 16B plug
15	Mounting profile

	For dimensions, refer to section 15.
--	--------------------------------------

## 7 Technical data

# FGC.com

TYP TYPE	<input style="width: 60%;" type="text"/>
MATERIALNUMMER PART NO.	<input style="width: 60%;" type="text"/>
AUFTRAGS NRUMMER JOB NO.	<input style="width: 60%;" type="text"/>
BAUJAHR YEAR	MM/YYYY <input style="width: 15%;" type="text"/> <input style="width: 15%;" type="text"/>
MOTORLEISTUNG MOTOR OUTPUT	<input style="width: 15%;" type="text"/> <input style="width: 15%;" type="text"/>
VOLUMENSTROM VOLUME FLOW	<input style="width: 60%;" type="text"/>
MEDIEN TEMPERATUR MEDIUM TEMPERATURE	<input style="width: 60%;" type="text"/>
BETRIEBSTEMPERATUR OPERATING TEMPERATURE	<input style="width: 60%;" type="text"/>
FILTERSTUFE1/VORABSCHIEDER FILTERSTAGE1/PRESEP. ELEMENT	<input style="width: 60%;" type="text"/>
FILTERELEMENT FILTER	<input style="width: 60%;" type="text"/>

The order-specific data can be taken from the name-plate.

(Space for name-plate)

## 7.1 Technical data

Product version	LGA 1201 FU	LGA 1201 FUW
Volume flow	Approx. 1200 m <sup>3</sup> /h	
Fluid temperature	+10°C to +80°C	
Operating temperature	+10°C to +50 °C	
Filter	1 preseparating element	
	2 oil separator elements	
Motor output	4.0 kW	
Power supply	3 AC 380 ... 480 V/PE +/-10%, 50 to 60 Hz	
Motor speed	Max. 5920 rpm	
Rated current consumption	9.7 A	
Motor protection class	IP54	
Sound level L <sub>eq</sub>	72 dB(A)	
Clean air connection	150 mm	
Dirty air connection	200 mm	
Dimensions L x W x H	1124 x 604 x 1089 mm	
Weight	240 kg	
Oil drain hose	2x 15x2 mm PVC transparent (5.5 m)	2x 15x2 mm PVC transparent (5.5 m)

## 8 Transport and storage

### Transport

- Always transport upright in the original packaging.
- Avoid vibration.

### Storage

- Always store upright in the original packaging.
- Always store in a dry, frost-free room.



Seaworthy packaging is specified in the contract documentation as an option.

### 8.1 Delivery and acceptance

The oil mist separator is normally delivered by truck completely assembled.

- Please check it for damage in transit as soon as it arrives.
- Check all parts in the consignment against the packing list.

### If any parts are missing or damaged:

- Notify the forwarding agent immediately.
- Notify your local FG field service representative immediately.

## 9 Installation

### **⚠ DANGER!**



#### Danger of explosion!

- ⇒ Risk of injury to persons or damage to property.
- The oil mist separator must not be installed in potentially explosive atmosphere.

### **⚠ WARNING**

#### If the system is installed by unauthorised persons:

- ⇒ Risk of injury.
- ⇒ All warranty claims are rendered invalid.
- The system must be installed by a suitably trained person!

### 9.1 Installing the oil mist separator

- Attach ropes with clevis pins to the lifting eyebolts.
- Make sure the load is evenly distributed.
- Use spacers if necessary.



For dimensions, refer to section 15.

### If a fork-lift truck is used:

- Fasten the oil mist separator to the fork-lift truck with a sling.
- Place the oil mist separator in an upright position. Maximum inclination 5% in all directions.
- Install the oil mist separator so that the clean air connection is at least 700 mm higher than the storage tank of the machine tool.
- Install the oil mist separator so that it is protected from the elements.

## 9.2 Installation

### ⚠ CAUTION!

Avoid oil spillage:

- All tubing and seals must be oil-tight.

### ⚠ WARNING

Avoid danger due to overvoltage and lightning strikes by observing guidelines and standards.

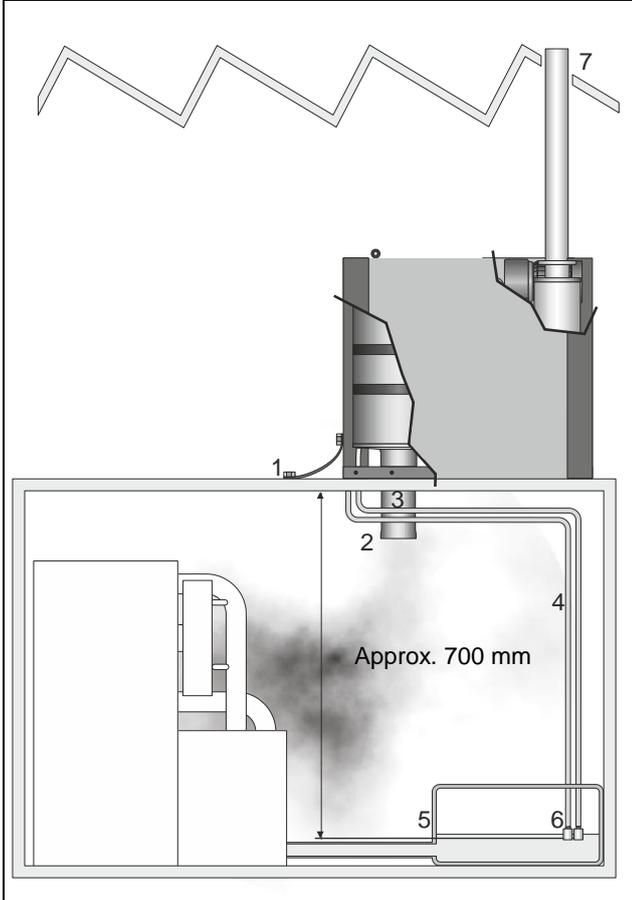


Fig. 5: Installing the oil mist separator

- Note the minimum clearance of 600 mm required to replace the element!
- Bolt the housing of the oil mist separator so that it is rigid.
- Provide equipotential bonding between the machine tool and the grounding lug (1) on the oil mist separator.
- Connect the extraction point to the dirty air connection (3) of the oil mist separator using a tube section (2) that is as short as possible.
- Lay the oil drain hoses (4) into the storage tank of the machine tool (5).
- ⇒ The oil drain hoses can be shortened to a length of 700 mm; they must not be joined together.
- Ensure a height difference of 700 mm between the clean air connection and the storage tank of the machine tool (5).



A minimum height difference of 700 mm must be observed to ensure proper working.

- Attach the membrane valves (6) to the oil drain hoses.
- FG recommendation: Discharge cleaned exhaust air into the atmosphere (7) and ensure a sufficient supply of fresh air.
- Additional airflow devices can be provided if required owing to the tube length or arrangement.

## 9.3 Signal meanings

- ⇒ COM1NC1 signal: Unit is ready for operation
- ⇒ COM2NC2 signal:  $\leq 900 \text{ m}^3/\text{h}$  (the element should be replaced) (see circuit diagram in section 17)

## 10 Start-up

### ⚠ CAUTION!

- Only aerosols from approved cooling lubricants should be extracted (refer to section 5).
- Observe the specific safety precautions (fire hazard!) when working with hazardous materials (e.g. Mg).
- The system should only be connected to the designated mains voltage.
- The oil mist separator must not be started up if damaged.

- Either switch on the oil mist separator using an electrical switching device to be provided by the customer or start it up via the machine controller.
- Refer to the circuit diagram in section 17 for the terminal assignment.

### 10.1 Control options for the LGA 1201

#### 10.1.1 Control via the main circuit

If you only want to control the LGA via the power supply, you must insert a jumper between plug contacts 7 and 8 (release signal). In this case, the unit is switched on and off by means of the power supply at contacts 1 to 3.

#### 10.1.2 Control via the control circuit

The unit is connected to the power supply and activated when there is a connection between plug contacts 7 and 8 (release signal).

In an emergency (emergency stop, fire), the power supply must be switched off by means of an external device.

#### 10.1.3 Alternative control option



If you select this operating mode, the volume flow is reduced to  $700 \text{ m}^3/\text{h}$ , so that the signal at contacts 5 and 6 is tripped (element replacement).

If plug contact 11 is connected to contact 12, the unit is operated at reduced power ( $700 \text{ m}^3/\text{h}$ ) assuming the power supply is switched on and there is a connection between contacts 7 and 8 (release signal).

## 11 Normal operation

### WARNING

#### The membrane valve opens automatically!

⇒ Risk of injury.

- Never operate the oil mist separator unattended.

### CAUTION!

- Make sure the membrane valve for the oil drain hose is working correctly at all times.
- The oil drain hose must not be kinked.
- No hearing protection is required if the system is installed as a standalone unit. It may be necessary to wear ear protectors if several different noise sources are present simultaneously at the place of use.

The extraction volume flow is approximately 1200 m<sup>3</sup>/h in normal operation.

The oil mist which has been separated is drained via the transparent oil drain hose and can be returned to the oil storage tank.

## 12 Removal from service

- Either switch off the oil mist separator using an electrical switching device or shut it down via the machine controller.



- Dispose of all components in an environmentally responsible way.

### Emergency shut-down

- Interrupt the electrical power supply.

## 13 Troubleshooting

Fault	Possible cause	Remedy
Oil mist separator cannot be switched on	System not connected to power supply	Connect the system to the power supply
	Fault in frequency inverter	Ask an electrician to test the frequency inverter and repair it if necessary
	Motor temperature too high	
Oil mist separator switches off suddenly	Fault in electrical system	Ask an electrician to test the system and repair it if necessary
Extraction capacity too low	Oil separator elements are dirty	Replace the oil separator elements Recommended order: 1. Preseparating element (FUW) 2. HEPA after-filter (if installed) 3. Oil separator element
	Leak in tubing on suction side	Repair the leak
	Incorrect design	Check the design and consult the manufacturer if necessary
Oil exits on clean air side	Membrane valves for oil drain hoses are missing, faulty or incorrectly attached	Attach the membrane valves correctly and replace them if necessary (refer to section 14.4)

## 14 Maintenance

### WARNING

#### If the system is maintained by unauthorised persons:

- ⇒ Risk of injury.
- ⇒ All warranty claims are rendered invalid.
- The system must be maintained by a suitably trained person!

#### Before all maintenance work:

- Take steps to prevent the oil mist separator from being switched on by unauthorised persons.
- Disconnect the oil mist separator from the power supply.
- Take steps to prevent the oil mist separator from being switched on again by unauthorised persons.



- Take any necessary safety precautions (protective clothing, eye protection, etc.).



- Carry out the maintenance work.
- Start up the oil mist separator again.
- Observe the oil mist separator.  
Does it operate normally (refer to section 11)?

### 14.1 Inspection and maintenance schedule

Interval	Component	Activity
Daily	Oil mist separator	Check for leakage. The transparent oil drain hose must not be completely filled with oil
		Check the volume flow through the oil separator elements
Monthly	Oil mist separator	Check for damage to mechanical components. Check the electrical devices, and in particular the protective devices, of the oil mist separator for visible damage and perform a functional test
	Membrane valves	Check for damage, perform a functional test and if necessary replace
Yearly	Oil mist separator	Clean the housing. Replace the elements: Preseparating element (FUW), oil separator element, HEPA after-filter (optional). Replace the membrane valves
		The necessary inspection and maintenance work is dependent on the particular application. Please consult the manufacturer if necessary. All maintenance work can also be carried out by the manufacturer on request.

Customer Service contact:

Filtration Group GmbH  
Schleifbachweg 45  
D-74613 Öhringen  
Phone: +49 7941 6466-392  
service.industriefiltration@filtrationgroup.com

### 14.2 Information on the fan / frequency inverter

	All repairs to the fan / frequency inverter must be carried out by the manufacturer. No liability will be accepted by Filtration Group GmbH for repairs by third parties.
---	---

All wearing parts must be replaced in accordance with the maintenance intervals recommended by the manufacturer. Such parts do **not** provide grounds for warranty claims. The service life of wearing parts depends on the runtime, the operational load and various other influences such as temperature, etc.

### 14.3 Replacing the oil separator elements

**⚠ WARNING**

**Element replacement**

- ⇒ Danger of overturning
- Ensure that the unit is sufficiently stable prior to replacing the elements!

**⚠ CAUTION!**

- Do not use damaged filter elements.
- Make sure the seals are correctly fitted to the filter element and the cover.



Note the minimum clearance of 600 mm required to replace the elements!

#### 14.3.1 Removing the oil separator elements



- Provide a suitable vessel for the dirty oil separator elements.
- Provide wipes to mop up leaked oil.
- Use only original FG oil separator elements.
- Dispose of all dirty oil separator elements and wipes in accordance with the applicable statutory requirements and regulations.

- Loosen the wing nuts (1), then turn the cover of the element housing (2) and remove it.

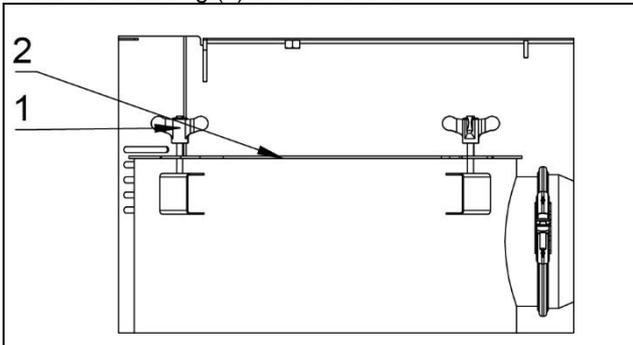


Fig. 6: Loosening the star handle and opening the snap locks

- Loosen the wing nut (3.1) of the hold-down clamp (3).
- Pull the hook (3.2) towards the middle.
- Lift off the hold-down clamp (3).

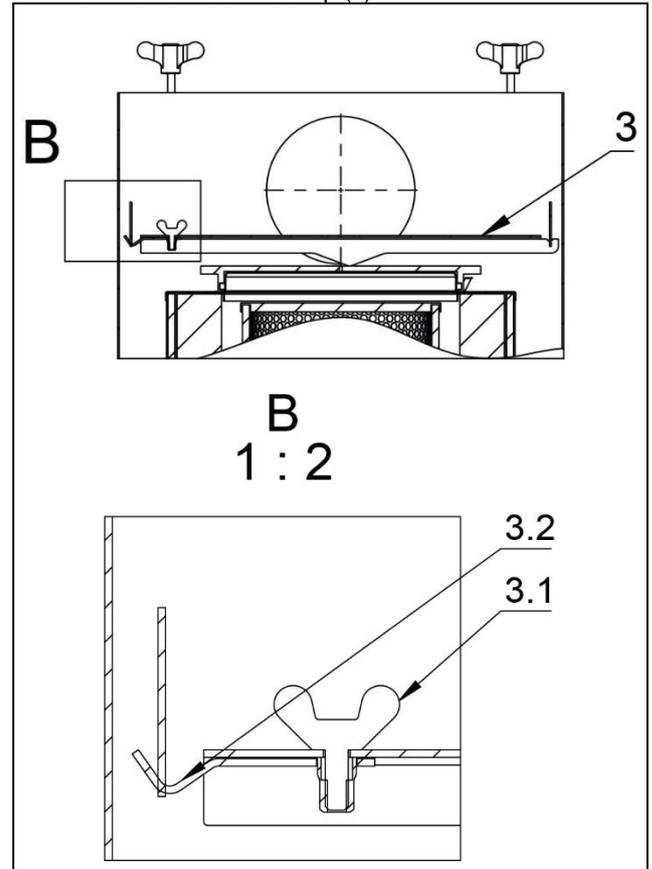


Fig. 7: Removing the housing cover

- Remove the element cover (5).

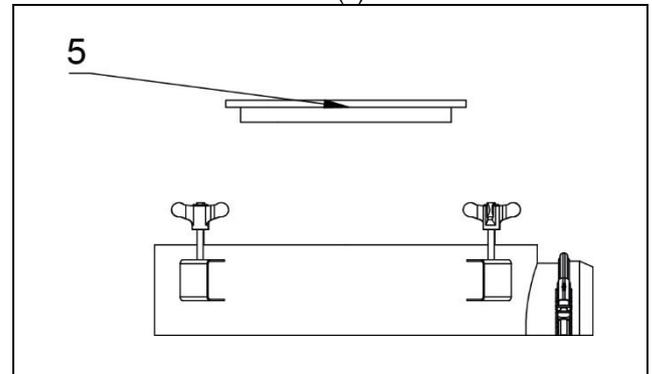


Fig. 8: Removing the element cover

- Lift off the preseparator (6).

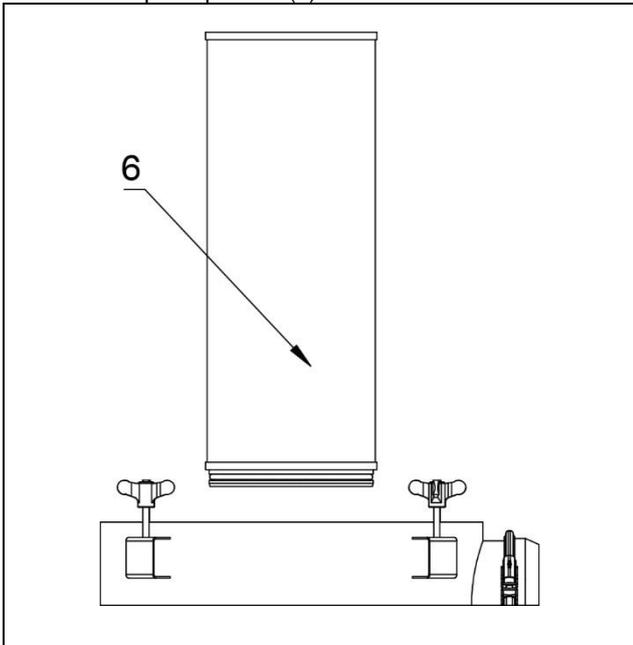


Fig. 9: Removing the preseparator

- Unscrew main elements 1 (6) and 2 (7), then lift them off.

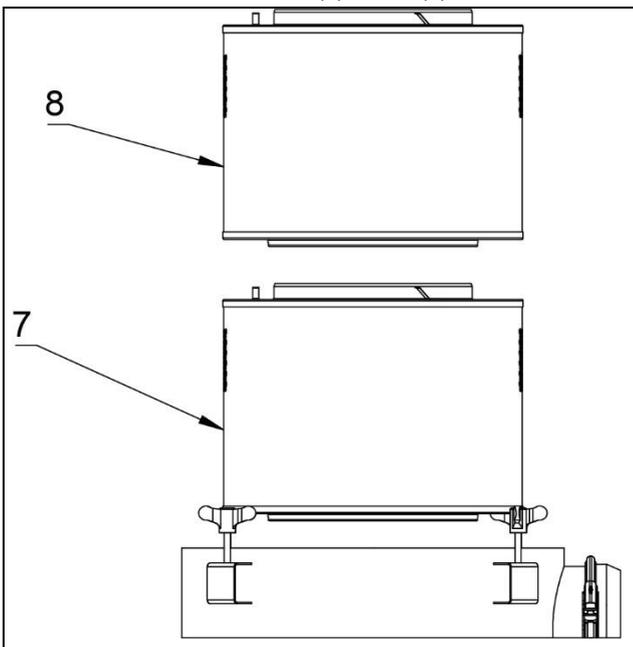


Fig. 10: Removing main elements 1 and 2

### 14.3.2 Installing the oil separator elements

- Check that the O-ring (1) is in the correct position on the elements.

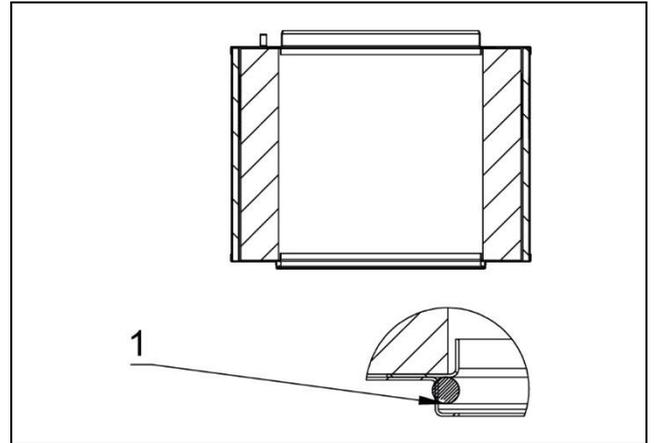


Fig. 11: Checking the O-ring

- Press main element 2 (2) into the seat in the housing.

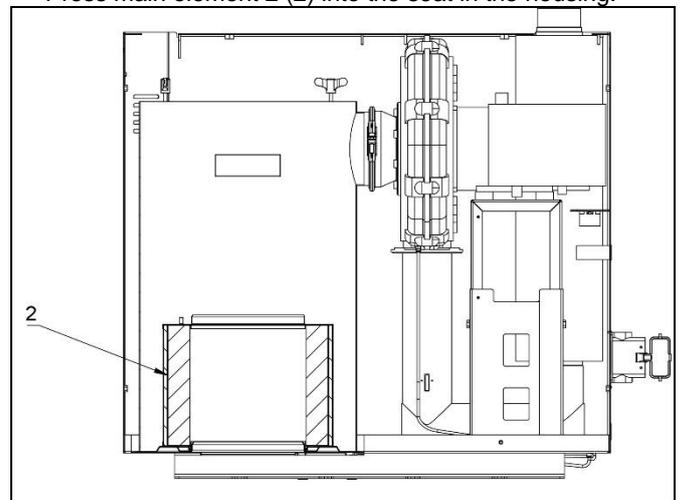


Fig. 12: Inserting main element 2

- Press main element 1 (3) into the seat on main element 2 (2).

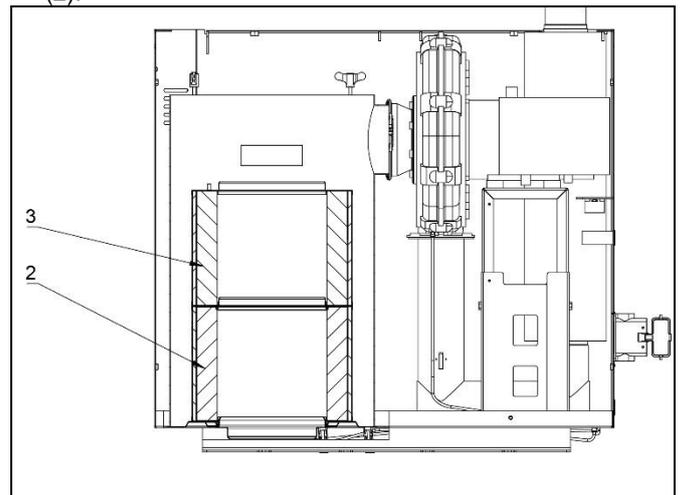


Fig. 13: Inserting main element 1

- Press the prepreparing element (4) into the seat in the housing.

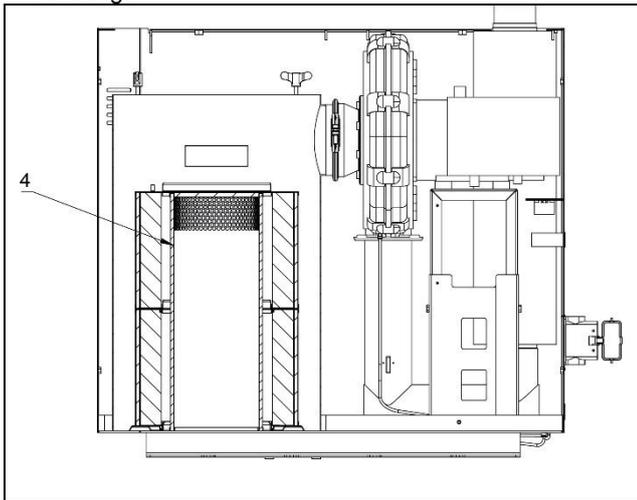


Fig. 14: Inserting the prepreparing element

- Press the element cover (5) firmly onto the upper end cap. Attach the hold-down clamp (6) on both sides and tighten the wing nut hand-tight.

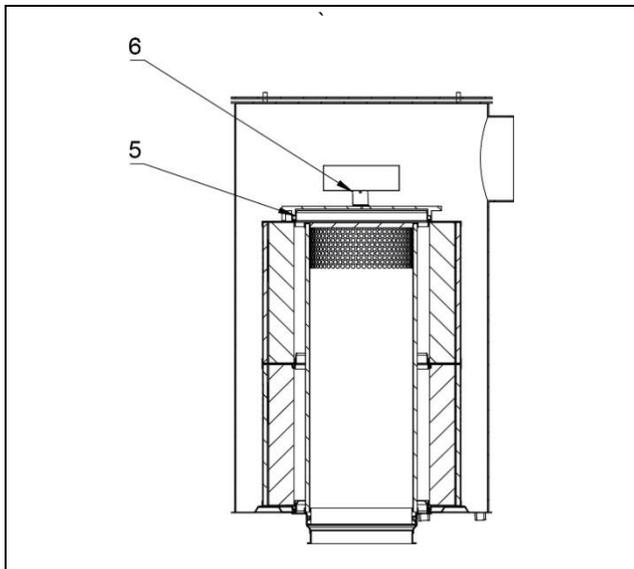


Fig. 15: Placing the element cover in position

- Attach the cover of the filter housing (7) and tighten the wing nuts (8) hand-tight.

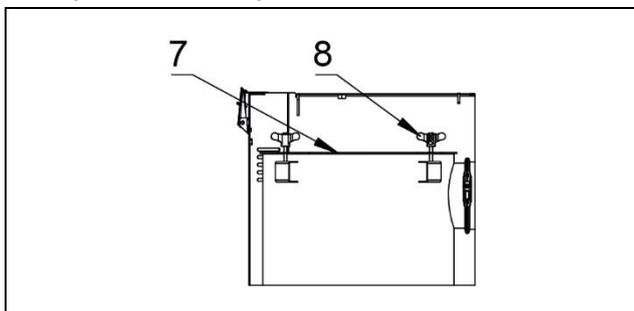


Fig. 16: Placing the housing cover in position

## 14.4 Replacing the membrane

### 14.4.1 Removing the membrane

- Insert a blunt object into the narrow orifice of the valve (1).
  - Press the membrane (2) out carefully through one of the valve orifices (1).
- ⇒ The membrane has now been removed from the valve.

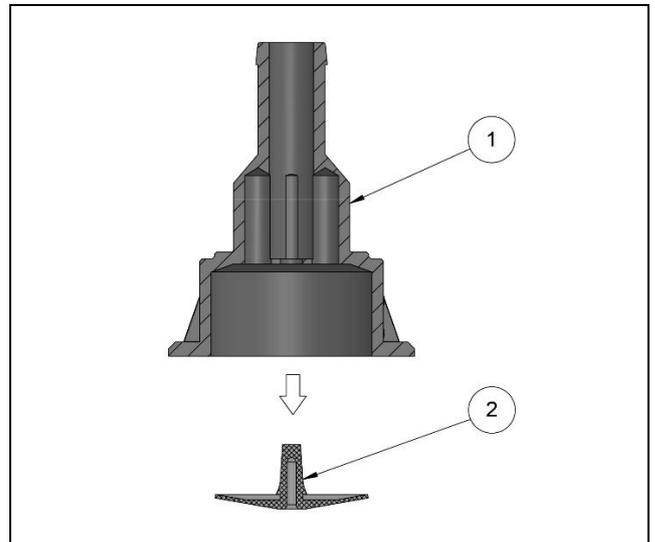


Fig. 17: Removing the membrane

### 14.4.2 Inserting the membrane

- Insert the membrane (2) into the valve (1) centrally with the nipple (3) first.
  - Insert the nipple (3) into the middle orifice of the valve (2).
  - A thin, blunt object (such as a 2 mm Allen key) can be inserted into the orifice on the underside of the membrane as an aid.
  - Press the membrane (2) into the valve (1) as far as it will go.
- ⇒ The membrane (2) has now been inserted into the valve (1).

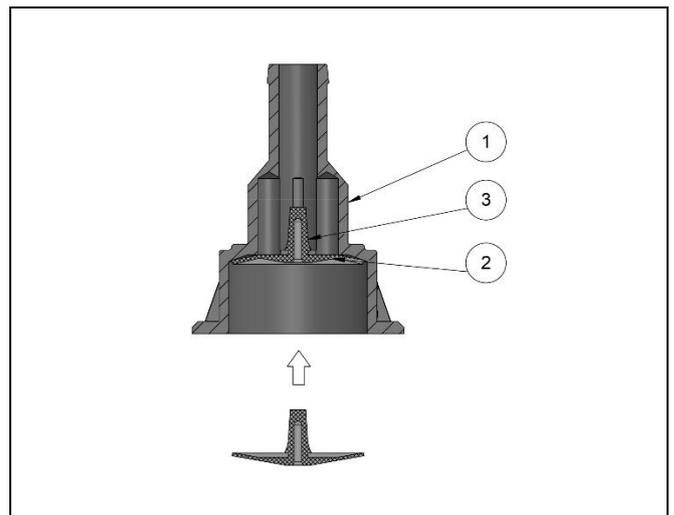


Fig. 18: Inserting the membrane

## 15 Dimension drawing

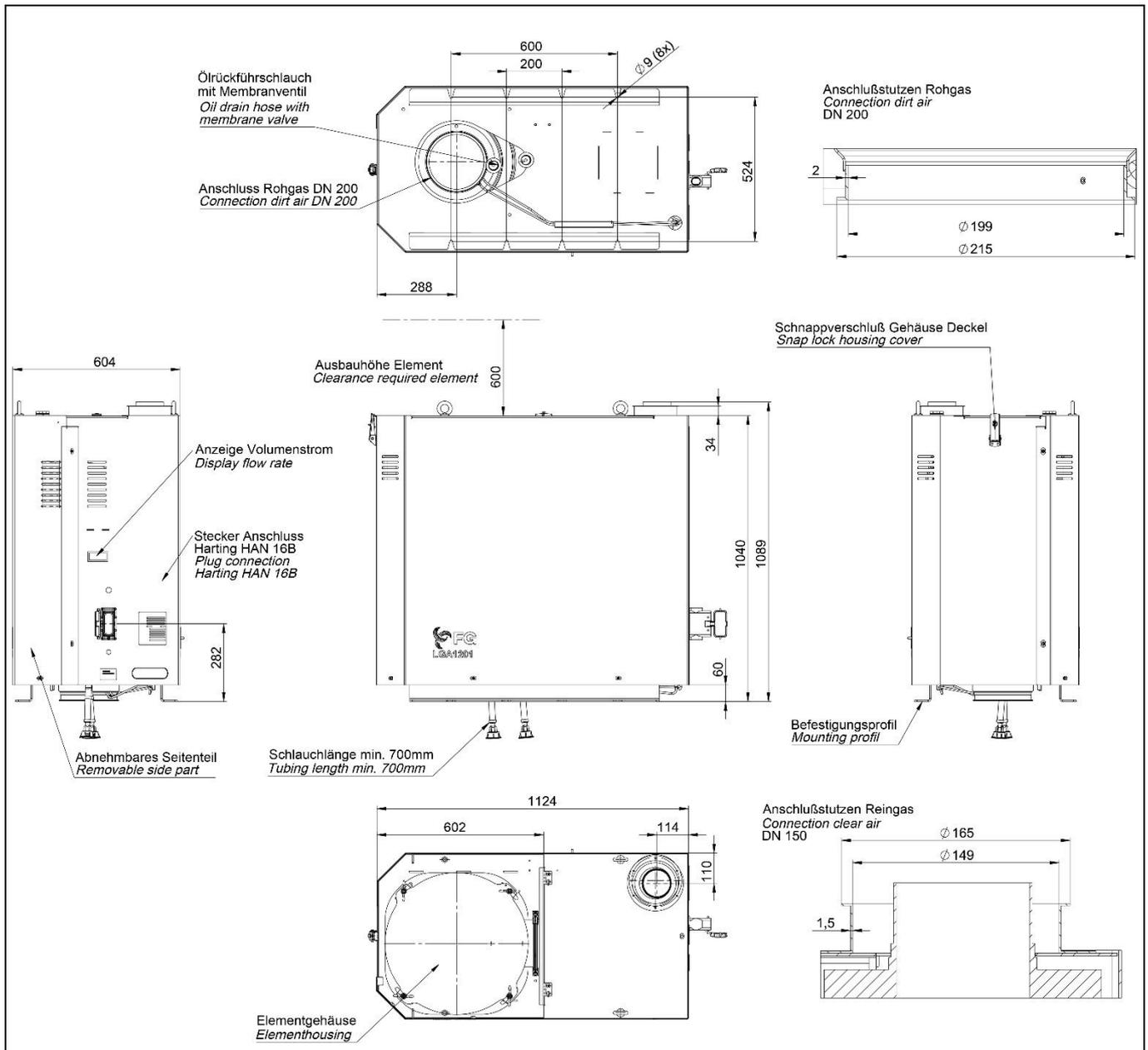


Fig. 19: Dimension drawing of the LGA 1201 FU / FUW

## 16 List of spare parts

No.	Benennung	Material no.	Designation
1	Vorabscheideelement (nur LGA 1201 FUW)	70518319	Preseparating element (LGA 1201 FUW only)
2	Ölabscheideelement	70373631	Oil separator element
3	Niederhalter Elementgehäuse	72378616	Hold-down clamp element housing
4	Schalldämpfer	70386730	Silencer
5	Ablauf Komplett Reihe LGA FUW	72405222	Drain complete series LGA FUW
6	Ablauf Komplett Reihe LGA FU	72405215	Drain complete series LGA FU
7	Membranventil NBR	72429488	Membrane valve NBR
8	Differenzdrucktransmitter	72404747	Differential pressure transmitter
9	Prozessanzeige PAD 73S	70593410	Process display PAD 73S
10	Ventilator mit frequenzgeregeltem Motor	72357099	Fan with frequency controlled motor



## 18 Accessories and optional equipment

### 18.1 HEPA after-filter

An FG HEPA after-filter can be additionally installed in order to meet particularly high air purity requirements in recirculating systems.

HEPA after-filters have a very long service life owing to the excellent filtration efficiency of the LGA unit. FG HEPA after-filters (class H13) are supplied with a filter surface of 7 m<sup>2</sup> as standard.

**Material no. 72381953**

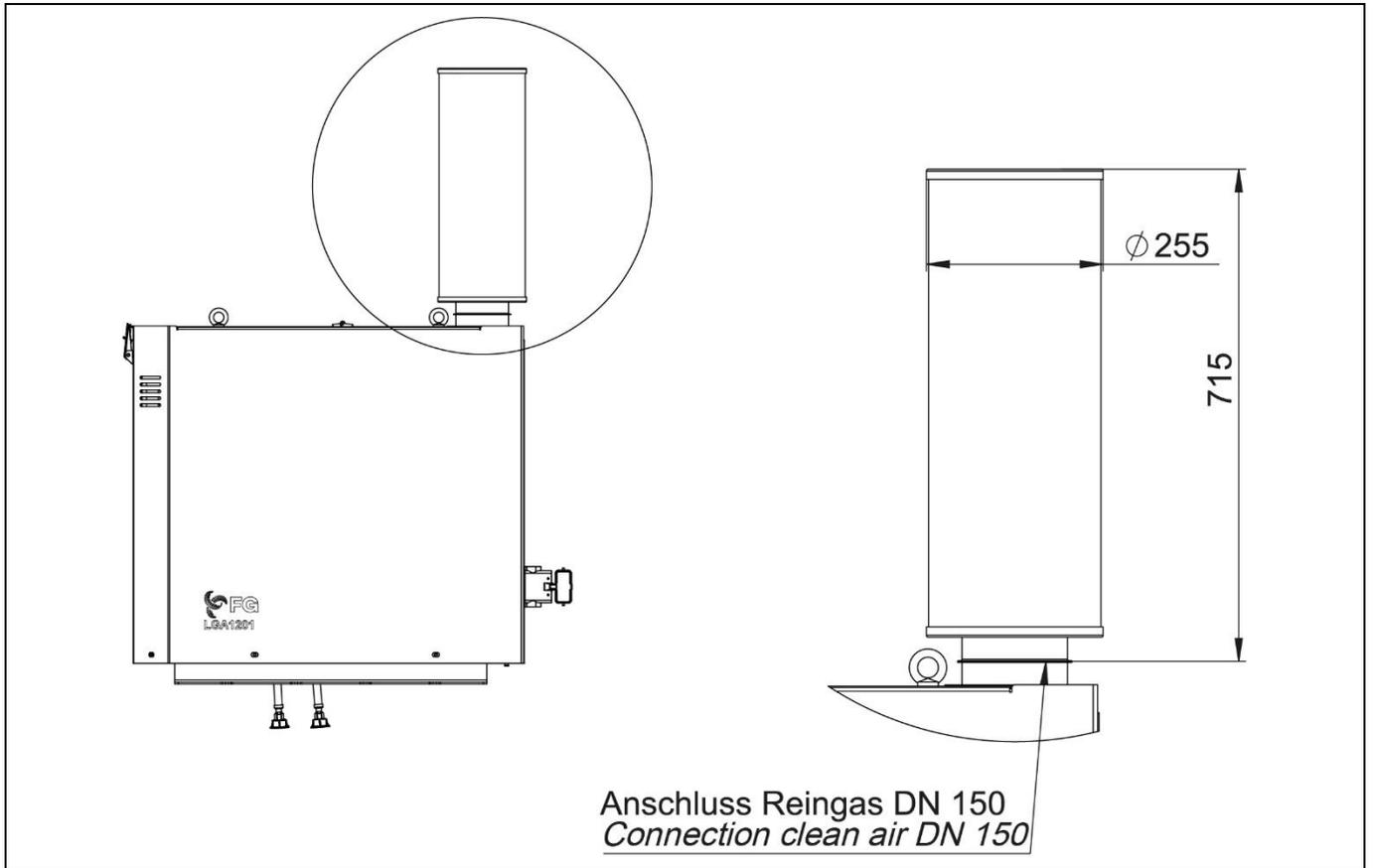


Fig. 20: HEPA after-filter

## 18.2 Frame

For installing the LGA unit next to a machine tool.

**Material no. 70539323**

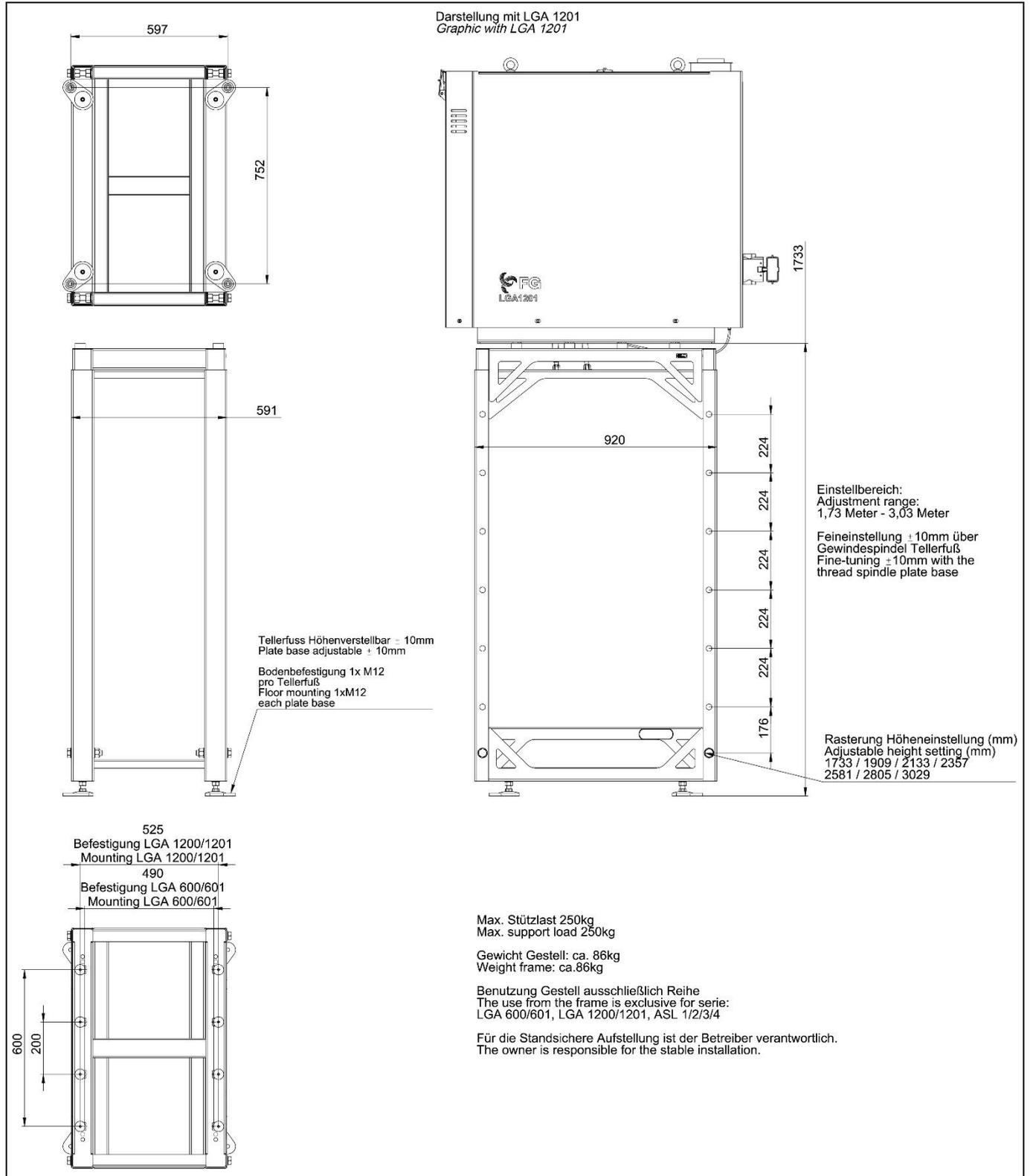


Fig. 21: Schematic diagram of the frame

### 18.4 External preseparation with an impact separator (Miofilter panel)

Protects the prefilter and main filter installed in the unit from impurities such as entrained metal parts, dust particles or macro emulsions.

Miofilter panels are cleanable coarse filters which can achieve class G4 (EN 779) depending on the inflow velocity.

#### 18.4.1 Installation in the machine tool

The Miofilter panel (material no. 70569965) can be installed in the machine tool directly in front of the dirty air connection of the LGA 1201 using the fixing set (material no. 70571759).

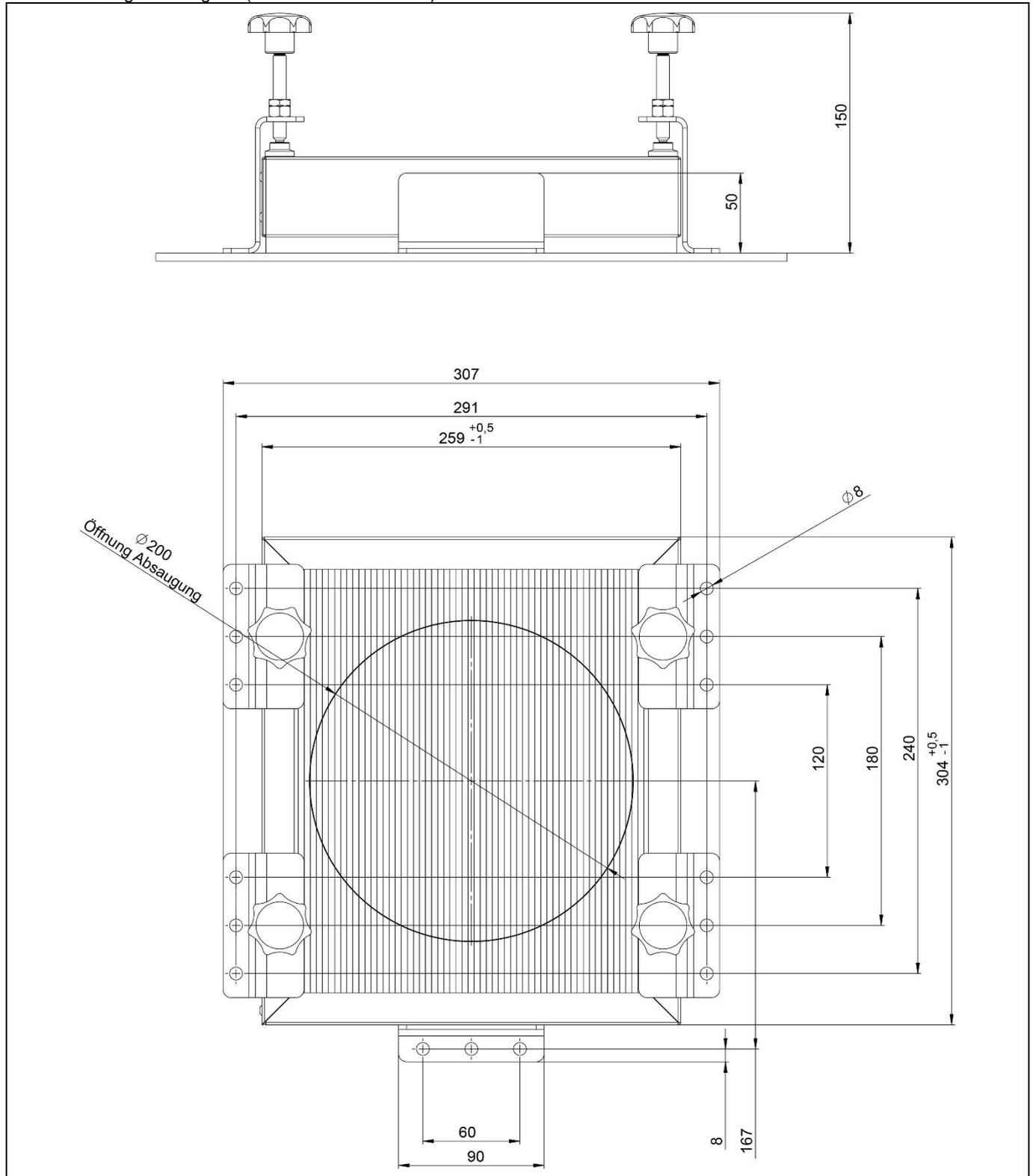


Fig. 22: Installing a Miofilter panel in the machine tool

### 18.4.3 Installation outside the machine tool

The Miofilter panel (material no. 70569965) can be installed outside the machine tool in the sheet metal housing (material no. 70579167) in front of the oil mist separator.

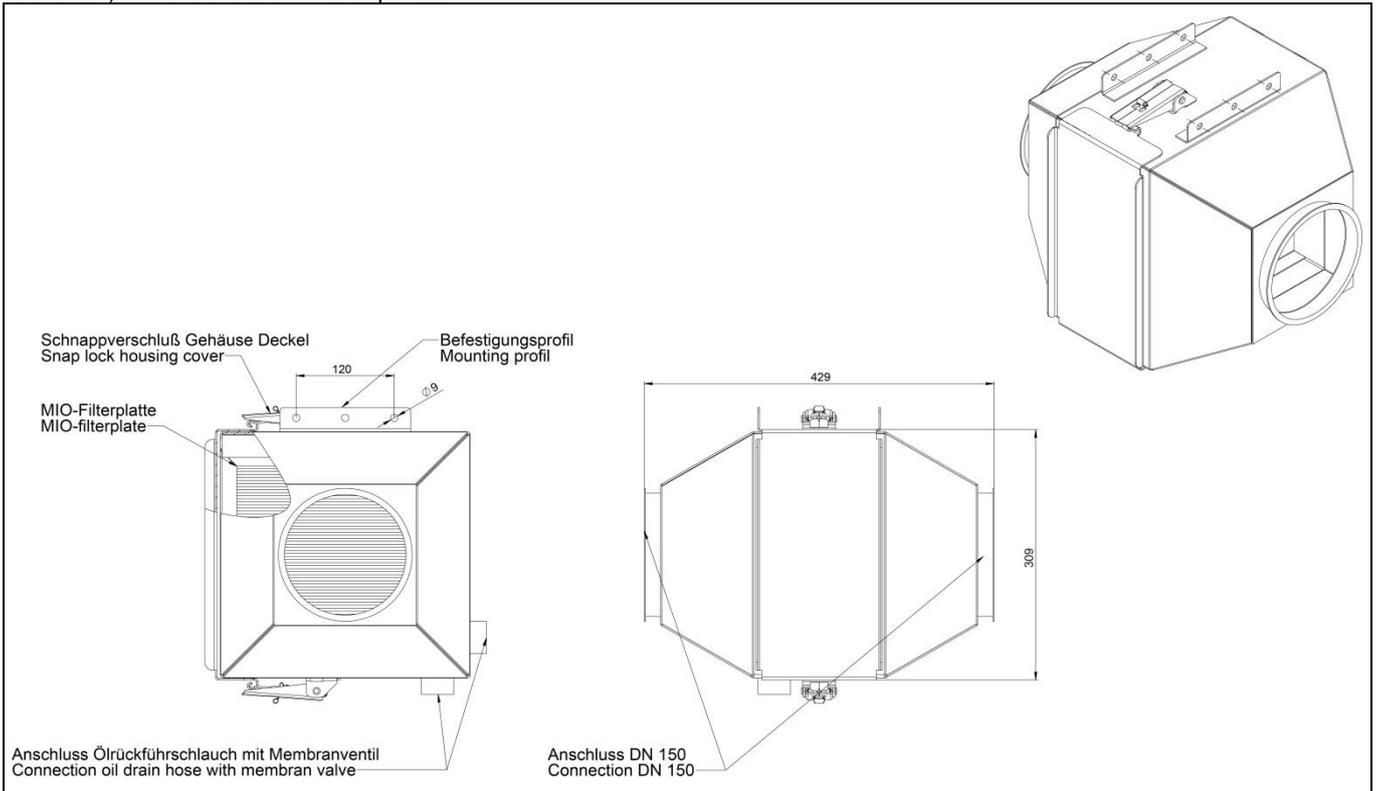


Fig. 23: Installing a Miofilter panel outside the machine tool

### 18.5 Keypad for frequency inverter

The keypad allows the volume flow (800 to 1300 m<sup>3</sup>/h) to be optimally adapted to the operating conditions (it must be installed by a qualified electrician or by FG Customer Service). Energy efficiency is improved as a result.

**Material no. 72415282**

## 19 Declaration of incorporation

EU – Einbauerklärung  
EU Declaration of incorporation  
Déclaration relative au montage UE



Der Hersteller  
The manufacturer  
Le producteur

Filtration Group GmbH  
Schleifbachweg 45  
74613 Öhringen  
Telefon 07941 6466-0  
Telefax 07941 6466-429

erklärt hiermit, dass das folgende Produkt  
hereby declares that the following product  
déclare par la présente que le produit suivant

Produktbezeichnung:  
Product designation:  
Désignation du produit :

Ölaerosolabscheidegerät  
Oil mist separation  
Séparation d'aérosols d'huile

Typenbezeichnung:  
Type designation:  
Désignation du type :

LGA 601 FU, LGA 601 FUW,  
LGA 1201 FU, LGA 1201 FUW

Funktionsbeschreibung:  
Machine description:  
Description du fonctionnement :

Abscheidung von Kühlschmierstoffaerosolen  
separation of coolant  
séparer les fluides de coupe

den in der Anlage dargestellten grundlegenden Anforderungen der Richtlinie 2006/42/EU entspricht.  
conforms to the essential requirements of the Machinery Directive 2006/42/EU pursuant to the annex.  
répond aux exigences fondamentales de la directive 2006/42/UE, décrites en annexe.

Die unvollständige Maschine darf erst dann in Betrieb genommen werden, wenn festgestellt wurde, dass die Maschine, in die die unvollständige Maschine eingebaut werden soll, den Bestimmungen der Richtlinie 2006/42/EU über Maschinen, sowie der EMV 2014/30/EU entspricht.

The partly completed machinery must not be put into service until the relevant machinery into which this partly completed machinery is to be incorporated has been declared in conformity with the Machinery Directive 2006/42/EU and EMV 2014/30/EU.

La machine incomplète ne doit être mise en service qu'après avoir déterminé que la machine, dans laquelle la machine incomplète doit être montée, correspond aux dispositions de la directive machines 2006/42/UE, EMV 2014/30/UE.

Folgende harmonisierten Normen wurden angewandt:

The following harmonised standards have been used:  
Les normes harmonisées ci-dessous ont été appliquées :

DIN EN ISO 12100:2011-03, DIN EN ISO 4414:2011-04  
EN 61800-3

Der Hersteller verpflichtet sich, die speziellen Unterlagen zur unvollständigen Maschine, einzelstaatlichen Stellen auf Verlangen schriftlich zu übermitteln. Die zur Maschine gehörenden speziellen technischen Unterlagen nach Anhang VII Teil B wurden erstellt.

The manufacturer undertakes to transmit any specific documentation on the partly completed machinery to the appropriate national authorities in writing on request. All specific technical documentation belonging to the machinery has been compiled pursuant to Annex VII Section B.

Le fabricant s'engage à transmettre les documents spécifiques à la machine incomplète par écrit aux administrations nationales respectives sur leur demande. Les documents techniques spécifiques selon Annexe VII partie B faisant partie de la machine ont été établis.

Dokumentationsverantwortlicher/Abteilung:  
Responsible for documentation/department:  
Responsable de la documentation/Service :

Filtration Group GmbH  
Schleifbachweg 45  
74613 Öhringen

Unterzeichner:  
Signatory:  
Signataire :

Wolfram Zuck  
Dipl.-Ing. (FH) Industrial Engineering  
Managing Director, Plant Manager Öhringen

Öhringen,

28.4.17  
Datum/Date/Date

  
Unterschrift/Signature/Signature

Anlage/Annex/Annexe

2 Seiten/pages/pages

Anlage zur Einbauerklärung gemäß Richtlinie  
2006/42/EU für Ölaerosolabscheidegeräte  
Annex to the Declaration of Incorporation pursuant to  
the Machinery Directive 2006/42/EU for oil mist  
separation



Annexe à la déclaration de montage selon la directive  
2006/42/UE pour les séparations d'aérosols d'huile  
Beschreibung der grundlegenden Sicherheits- und Gesundheits-  
schutzanforderungen (soweit zutreffend) gemäß 2006/42/EU, An-  
hang 1, die zur Anwendung kommen und eingehalten wurden.  
List of the essential health and safety requirements (where applicable)  
pursuant to 2006/42/EU, Annex 1, applied and fulfilled.  
Description des exigences fondamentales relatives à la sécurité et à  
la protection de la santé (si applicables) selon 2006/42/UE, annexe 1,  
appliquées et respectées.

<b>Grundlegende Anforderung</b> <b>Essential requirements</b> <b>Exigence fondamentale</b>	<b>Erfüllt</b> <b>Fulfilled</b> <b>Remplie</b>
Grundsätze für die Integration der Sicherheit Principles of safety integration Principes d'intégration de la sécurité	ja yes oui
Materialien und Produkte Materials and products Matériaux et produits	ja yes oui
Konstruktion der Maschine im Hinblick auf die Handhabung Design of machinery to facilitate its handling Construction de la machine au regard de sa manipulation	ja yes oui
Steuerungen und Befehleinrichtungen Control systems Commandes et dispositifs de commande	nein no non
Risiko des Verlusts der Standsicherheit Risk of loss of stability Risque de perte de la stabilité statique	ja yes oui
Bruchrisiko beim Betrieb Risk of break-up during operation Risque de rupture en fonctionnement	ja yes oui
Risiken durch herabfallende oder herausgeschleuderte Gegenstände Risks due to falling or ejected objects Risques dus à la chute ou à l'éjection d'objets	ja yes oui
Risiken durch Oberflächen, Kanten und Ecken Risks due to surfaces, edges or angles Risques dus aux surfaces, arêtes et angles	ja yes oui
Risiken durch Änderung der Verwendungsbedingungen Risks related to variations in operating conditions Risques dus à la modification des conditions d'utilisation	ja yes oui
Risiken durch bewegliche Teile Risks related to moving parts Risques dus à des parties mobiles	ja yes oui
Wahl der Schutzeinrichtung gegen Risiken durch bewegliche Teile Choice of protection against risks arising from moving parts Choix du dispositif de protection contre les risques dus à des parties mobiles	ja yes oui
Anforderungen an Schutzeinrichtungen Required characteristics of guards and protective devices Exigences relatives aux dispositifs de protection	ja yes oui
Elektrische Energieversorgung Electricity supply Alimentation électrique	ja yes oui
Statische Elektrizität Static electricity Électricité statique	ja yes oui

Montagefehler Errors of fitting Erreurs de montage	ja yes oui
Extreme Temperaturen Extreme temperatures Températures extrêmes	ja yes oui
Brand Fire Incendie	ja yes oui
Explosion Explosion Explosion	ja yes oui
Lärm Noise Bruit	ja yes oui
Vibrationen Vibrations Vibrations	ja yes oui
Strahlung Radiation Rayonnement	ja yes oui
Strahlung von außen External radiation Rayonnement depuis l'extérieur	ja yes oui
Emission gefährlicher Werkstoffe und Substanzen Emissions of hazardous materials and substances Emission de substances et matériaux dangereux	ja yes oui
Blitzschlag Lightning Foudre	nein no non
Wartung der Maschine Machinery maintenance Entretien de la machine	ja yes oui
Zugang zu den Bedienungsständen und den Eingriffspunkten für die Instandhaltung Access to operating positions and servicing points Accès aux postes de commande et aux points d'intervention pour la maintenance	nein no non
Trennung von den Energiequellen Isolation of energy sources Séparation des sources d'énergie	ja yes oui
Eingriffe des Bedienungspersonals Operator intervention Interventions des opérateurs	ja yes oui
Reinigung innen liegender Maschinenteile Cleaning of internal parts Nettoyage de parties internes de la machine	ja yes oui
Informationen und Warnhinweise an der Maschine Information and warnings on the machinery Informations et avertissements sur la machine	nein no non
Warnung vor Restrisiken Warning of residual risks Avertissement quant aux risques résiduels	ja yes oui
Kennzeichnung der Maschinen Marking of machinery Marquage des machines	ja yes oui
Betriebsanleitung Instructions Mode d'emploi	ja yes oui

## 20 Index

<b>C</b>		
Clean air connection .....	6, 7	
Coalescer material .....	4	
Contract documentation .....	4, 8	
<b>D</b>		
Damage .....	8	
Differential pressure .....	4	
Disposal .....	11	
<b>E</b>		
Emergency shut-down .....	9	
Environmental protection .....	3	
<b>I</b>		
Initial differential pressure .....	4	
Installation .....	7	
<b>L</b>		
Leakage .....	3	
<b>M</b>		
Manufacturer .....	3, 4, 8	
Membrane valve .....	5	
<b>N</b>		
Name-plate .....	6	
<b>O</b>		
Oil drain hose .....	5	
Oil mist .....	4, 5	
Oil separator element .....	4	
<b>P</b>		
Preseparating element .....	4, 5	
<b>R</b>		
Risks .....	3	
<b>S</b>		
Safety instructions .....	3	
Safety precautions .....	10	
Seaworthy packaging .....	7, 8	
<b>V</b>		
Volume flow .....	7	
Vorabscheideelement .....	14	
<b>W</b>		
<b>Warning</b> .....	3	
Wearing parts .....	10	

