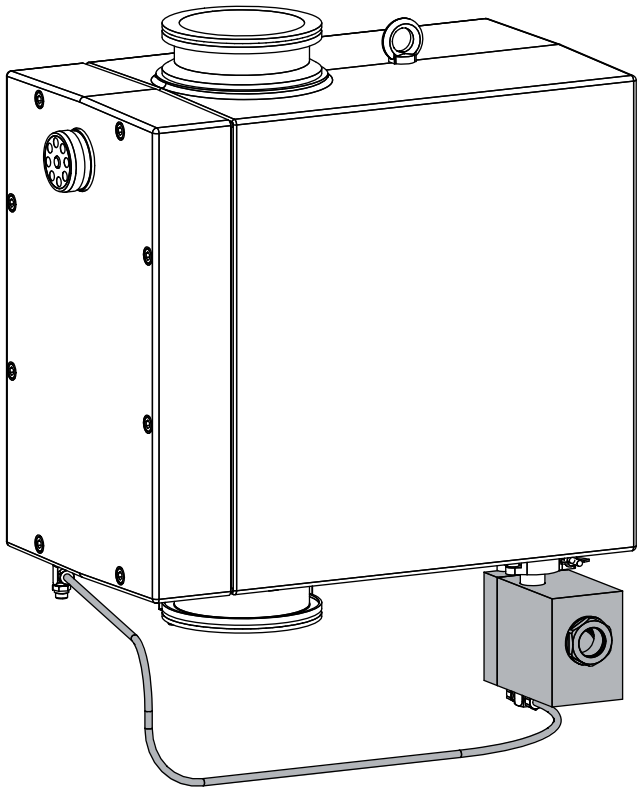


OPERATING INSTRUCTIONS

EN

Translation of the original instructions

OME 63/100/160 M/C, ODK 005

Oil Mist Eliminator

PFEIFFER VACUUM

PD 0052 BEN/D (1612)

Table of contents

1 About this manual

1.1 Validity

This operating manual is for customers of Pfeiffer Vacuum. It describes the functioning of the designated product and provides the most important information for safe use of the unit. The description follows applicable EU guidelines. All information provided in this operating manual refers to the current state of the product's development. The documentation remains valid as long as the customer does not make any changes to the product.

Up-to-date operating instructions can also be downloaded from www.pfeiffer-vacuum.com.

1.2 Conventions

Safety instructions

The safety instructions in Pfeiffer Vacuum operating instructions are the result of risk evaluations and hazard analyses and are oriented on international certification standards as specified by UL, CSA, ANSI Z-535, SEMI S1, ISO 3864 and DIN 4844. In this document, the following hazard levels and information are considered:

DANGER
Imminent danger Indicates an imminent hazardous situation that will result in death or serious injury.

WARNING
Possibly imminent danger Indicates an imminent hazardous situation that can result in death or serious injury.

CAUTION
Possibly imminent danger Indicates an imminent hazardous situation that can result in minor or moderate injury.

NOTICE
Command or note Command to perform an action or information about properties, the disregarding of which may result in damage to the product.

Pictographs

Prohibition of an action to avoid any risk of accidents, the disregarding of which may result in serious accidents

Warning of a displayed source of danger in connection with operation of the unit or equipment

Command to perform an action or task associated with a source of danger, the disregarding of which may result in serious accidents

Important information about the product or this document

Instructions in the text

➔ Work instruction: here you have to do something.

Abbreviations

OME: Oil mist eliminator
ODK: Oil drain kit with return unit
KAS: Condensate separator
C version: Corrosive gas version

Symbols used

The following symbols are used consistently throughout in all illustrations:

- Ⓥ Vacuum flange
- Ⓐ Exhaust flange
- Ⓧ Connection flange OME

2 Safety

2.1 Safety precautions

Duty to inform

Each person involved in the installation or operation of the unit must read and observe the safety-related parts of these operating instuctions.

➔ The operator is obligated to make operating personnel aware of dangers originating from the unit or the entire system.

➔ Before carrying out any work read and observe the operating and safety instructions of the pumping station and the individual components.

➔ Observe the safety and accident prevention regulations.

➔ Check regularly that all safety precautions are being complied with.

➔ When returning the components to us please note the instructions in the Service section.

2.2 Proper use

➔ Only use the oil mist eliminator to filter oil mist from the gas flow of rotary vane pumps.

➔ Simply mount the OME onto the exhaust port of rotary vane pumps.

➔ Use the OME in accordance with the corresponding approved pumping speed.

2.3 Improper use

Improper use will cause all claims for liability and warranties to be forfeited. Improper use is defined as usage for purposes deviating from those mentioned above, especially:

➔ connection to pumps or units which are not suitable for this purpose according to their operating instructions

➔ connection to units which have exposed voltage-carrying parts

➔ use of accessories or spare parts, which are not named in this manual

➔ pumping-off of gases and vapors that may be prone to polymerization or may resinify the filter inserts

3 Transport and storage

3.1 Storage

The OME should be stored dry and protected from moisture. The filter elements can absorb moisture, and the lubrication properties of the oil and hence the end pressure can be negatively influenced in pumps with an oil return unit.

4 Product description

4.1 Product identification

To correctly identify the product when communicating with Pfeiffer Vacuum, always have the information from the rating plate available.

- Model and model number
- Date of manufacture

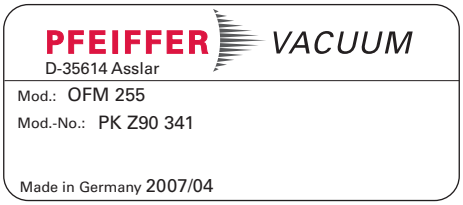


Fig. 1: Product identification on the rating plate (example)

Variants

Type	Connection nominal diameter	Versions	Characteristics
OME 63 M	DN 63 ISO-K	Standard model	OME as standard model
OME 100 M	DN 100 ISO-K		
OME 160 M	DN 100 ISO-K		
ONF 63 C	DN 63 ISO-K	Corrosive gas model	Differences to the standard model: • Leak rate of housing $p_L < 1 \bullet 10^{-7}$ Pa m^3/s • Sight glass 16 of PCTFE • Operating fluid drain screw 15 of stainless steel • Seals 9 of elastomer • Filter elements 12 of other materials • Relief pressure valve with small flange connection
ONF 100 C	DN 100 ISO-K		

Range of application

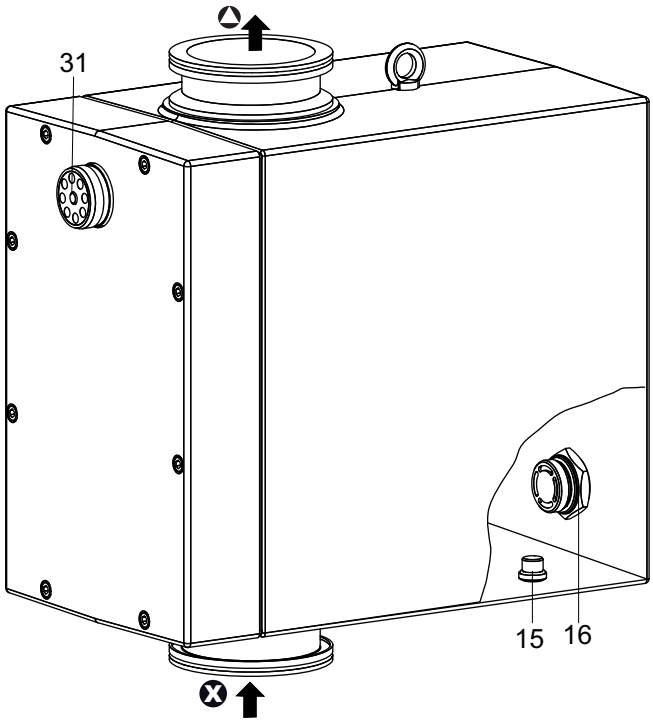
The oil return unit operates without auxiliary power and is capable of operating in the final vacuum range of 800 hPa intake pressure (at 1000 hPa air pressure). Moreover, its operation is not affected by rotational speed, gas ballast application or built-up exhaust-side pressure. During dynamic pump-down cycles such as load lock applications involving small volumes extended pump-down times are to be expected for intake pressures < $5 \cdot 10^{-2}$ hPa.

4.2 Function

The oil mist filter is mounted on the exhaust port of rotary vane pumps. It filters oil mist particles from the conveyed gas flow and thus reduces the escape of operating fluid mist.

The filter elements are installed in a corrosion-resistant aluminum casing and consist of a cylindrical filter made from glass/polyester fleece in the standard and helium-tight versions, or from sintered carbon in the corrosive gas version. A baffle is also fitted over the filter insert. An integrated pressure relief valve opens when the filter elements are excessively contaminated, so that the maximum operating pressure of 1500 hPa (absolute) is not exceeded. The volume of filtered operating fluid can be viewed through a sight glass and drained via a drain screw.

To return the filtered operating fluid from the OME into the pump without interrupting the pump operation, an operating fluid return (optional) can be used.



15 Operating fluid drain screw
16 Sight glass
31 Pressure relief valve
X Connection flange (exhaust flange of rotary vane pump)

Fig. 2: OME

Mode of operation of the OME with an ODK 005 (optional)

When using the ODK 005 operating fluid recirculation system, the fluid is moved from the OME into an additional container. If the accumulated operating fluid reaches a specified level in that container, a float valve opens and the operating fluid is channeled via intake pressure back into the rotary vane pump. To avoid impairing the function of the pump, any process-related condensate in the oil sump, must be drained as necessary.

The use of the operating fluid return (ODK) increases the operational safety of the pump and reduces the maintenance requirements.

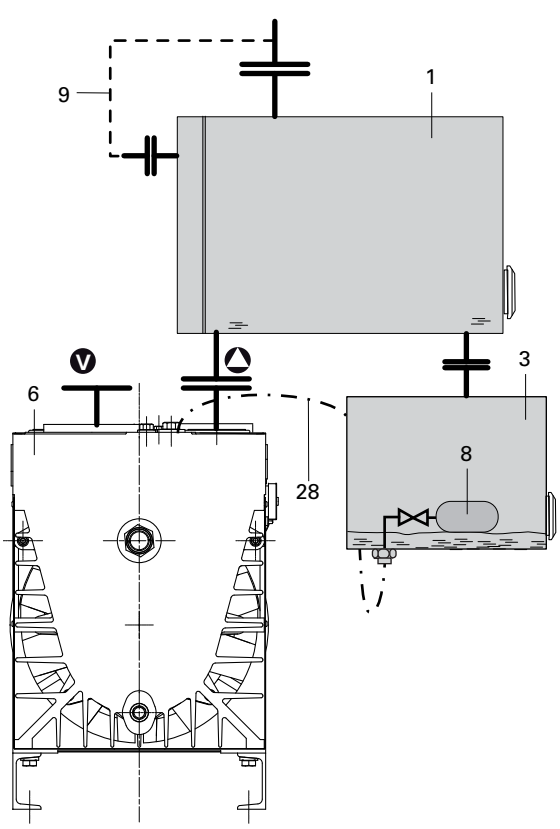


Fig. 3: Connection diagram of the OME with ODK 005 oil return unit

5 Installation

5.1 Assembly

To install the OME in a vacuum system, ISO clamp flanges are provided on the input side and output side. The flanges are fitted with protective caps for shipment to protect the seals.

If gases are being pumped that are not permitted to enter the atmosphere, a pressure-less exhaust line must be connected to the exhaust flange.

If gases are being pumped that are not permitted to enter the atmosphere, a bypass line must be connected to the small flange on the overpressure valve.

If large amounts of vapour arise during operation, it is advisable to install a condensate separator between the rotary vane pump and OME so that condensate is removed in the KAS, and only oil mist enters the OME.

The OME can also be mounted beside the pump. When doing this, the position of the installation must be maintained and the connecting and return drainage pipes going down towards the pump be moved.

WARNING

Poisonous substances exit from the exhaust!

There is a poisoning hazard from discharged gases or vapors that can be hazardous and/or polluting during use.

➔ Install and run the exhaust line so that overpressure cannot build up inside it.

➔ Follow the vacuum pump installation instructions in the respective operating instructions.

NOTICE

Vacuum component

Dirt and damage impair the function of the vacuum component.

➔ When handling vacuum components, ensure that they are kept clean and are protected against damage.

➔ Ensure that the connection flange is clean, dry and free of grease.

➔ Turn off the vacuum pump, vent to atmospheric pressure and allow to cool.

➔ Remove the protective caps from the connection flanges.

➔ Place the OME on the exhaust side of the rotary vane pump with the sight glass facing downward onto the flange, and fasten it with the clamping ring (accessory) or bracket screws (accessory), if clamp flanges are used; observe centering ring (accessory).

➔ Lay exhaust line from the OME sloping downward so that no condensate can flow back.

– If an air trap is created in the system, then a device for draining condensation water must be provided at the lowest point.

➔ In case of corrosive gas models, connect an additional bypass line to the flange of the overpressure valve to safely discharge the exhaust gas.

5.2 Installing the operating fluid return line

Prior to conversion work check the pump's ultimate pressure to get a reference value. For this purpose, measure the ultimate pressure at the intake side with a vacuum gauge (e.g. Pirani).

NOTICE

Make sure that the return for the operating fluid is working properly.

The operating fluid can only be sucked out and returned when there is a minimum about of operating fluid in the oil mist eliminator.

➔ If necessary, top up with operating fluid in order to ensure the return of operating fluid at the start of the evacuation phase.

➔ Pour the operating fluid slowly into the outlet flange of the oil mist eliminator until it can be seen in the sight-glass.

➔ Turn off the vacuum pump, vent to atmospheric pressure and allow to cool.

➔ Unscrew operating fluid drain screw 15.

➔ Drain off operating fluid.

➔ Separate the operating fluid from the condensate.

– If the drained operating fluid is free of contamination, it can be reused.

Installing the ODK 005

CAUTION

Escaping operating fluid!

Slip hazard and workplace contamination from spilled operating fluid.

➔ Place suitable container underneath and collect escaping operating fluid.

OME with oil return unit ODK005 on DuoLine™

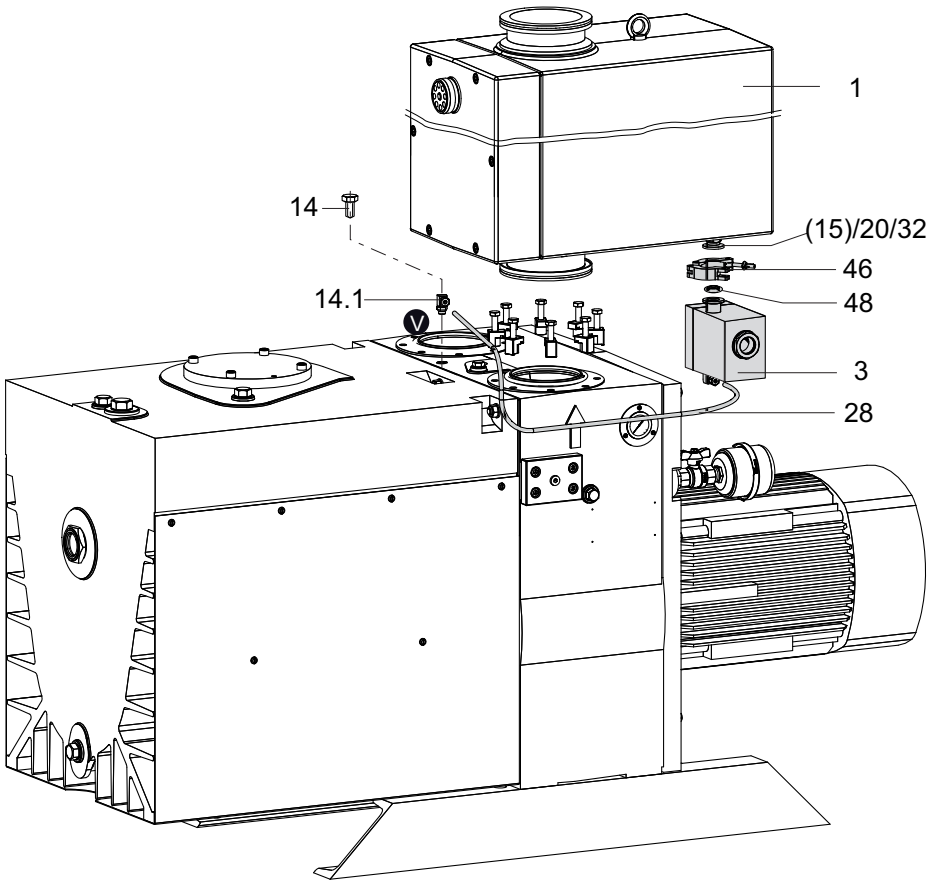


Fig. 4: OME with oil return unit ODK 005 on a DUO 255

1	OME	15	Operating fluid drain screw	46	Clamping ring
3	ODK 005	20	Small flange	48	Centering ring, DN 16 ISO-KF
14	Screw plug	28	Operating fluid return line		
14.1	Banjo fitting	32	O-ring		

➔ Screw in small flange 20 (DN 10) inplace of the operating fluid drain screw 15; take care with O-ring 32.

➔ Fit ODK 005 on the small flange 20 using the tension ring 46; take care with the centering ring 48.

➔ Unscrew locking screw 14.

➔ Screw in banjo fitting 14.1 at the support stand (G 1/8"), (near by the intake side).

➔ Mount operating fluid return hose 28 between ODK 005 and the pump's 14.1 banjo fitting.

– Install the hose as short as possible and fasten if necessary.

➔ Check the pump's ultimate pressure to ensure a leakproof assembly;

– compare the measurement result with the previously determined ultimate pressure.

OME with ODK 005 at UnoLine™ Plus

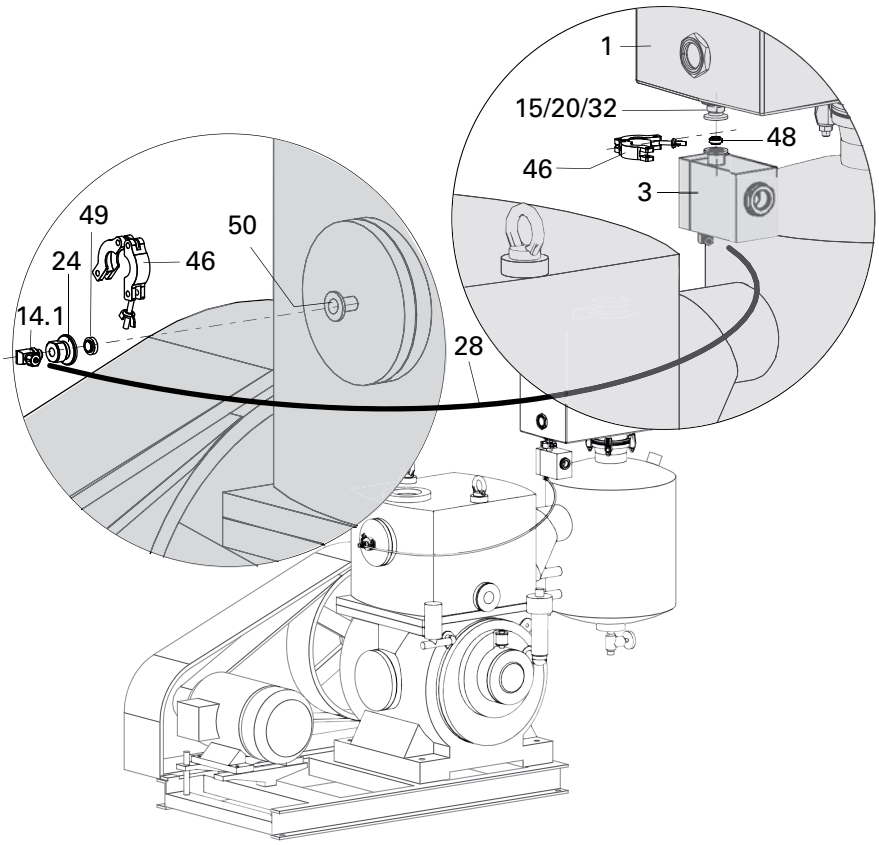


Fig. 5: OME with oil return unit ODK 005 on a UnoLine™ Plus

1	OME	20	Small flange	46	Clamping ring
3	ODK 005	24	Small flange, G 1/8"	48	Centering ring, DN 16 ISO-KF
14.1	Banjo fitting	28	Operating fluid return line	49	Centering ring, DN 16-10 ISO-KF
15	Operating fluid drain screw	32	O-ring	50	Venting connection

➔ Screw in small flange 20 (DN 10) inplace of the operating fluid drain screw 15; take care with O-ring 32.

➔ Fit ODK 005 on the small flange 20 using the tension ring 46; take care with the centering ring 48.

➔ Remove the blank flange and centering ring on the pump's ventilation connection 50.

➔ Mount small flange 24 and banjo fitting 14.1 on the pump's ventilation connection 50; pay attention to centering ring 49.

– If a venting valve is already mounted on ventilation connection 50, use a tee to mount the operating fluid return hose.
– Connect the operating fluid return hose horizontal to the tee; adjust the venting valve upward.

➔ Mount operating fluid return hose 28 between ODK 005 and the pump's 14.1 banjo fitting.

– Install the hose as short as possible and fasten if necessary.

➔ Check the pump's ultimate pressure to ensure a leakproof assembly;

– compare the measurement result with the previously determined ultimate pressure.

6 Operation

CAUTION

Watch out for excess pressure in the exhaust line.

There is a risk of damage to the seals, and a risk of rupture or overloading of the pump.

➔ Ensure that there is no excess pressure at the OME exit point.

➔ Open the inlet valves either before or at same time as starting the pump.

NOTICE

Damage to the pump due to condensate in the operating fluid!

Returned condensate generated by vapors or by temperature differences between the oil mist eliminator and pump impairs the quality of the operating fluid and negatively impacts the pump's final vacuum.

➔ Drain operating fluid built up with condensate in a time manner.

NOTICE

Risk of the filter elements becoming blocked with resin!

When pumping gases and vapors with a tendency towards polymerization, the OME filter elements can become resinified.

➔ Observe the corresponding safety devices such as the saturation indicator or pressure relief valve.

NOTICE

Make sure that the return for the operating fluid works.

Operating fluid is only sucked in and returned from an operating pressure of < 800 hPa and starting from a minimum quantity of operating fluid in the OME.

➔ Long evacuation phases with a high intake pressure should always be followed by operating phases with a lower operating pressure.

Please note that the smallest oil particles can only be separated to a limited extent.

The degree of separation of the filter elements depends upon the gas flow rate and the distribution of particles in the gas flow.

➔ An increased leakage of oil mist at the exhaust flange of the OME as well as a functional decline in the operating fluid return serve as an indicator of the saturation level fo the the filter element.

7 Maintenance

7.1 Draining the operating fluid

If the accumulated operating fluid in the OME is above the top edge of the sight glass 16, the operating fluid must be drained.

The intervals, at which the operating fluid is drained, depend on the operating conditions.

WARNING

Operating fluid may contain toxic substances from the pumped media!

Danger of poisoning from the emission of harmful substances from the operating fluid.

➔ Wear suitable protective clothing and respirators.

➔ Dispose of operating fluid according to the local regulations

WARNING

Toxic vapours!

Danger of poisoning when igniting and heating synthetic operating fluids (e.g. F4/F5) above 300 °C.

➔ Observe the application instructions.

➔ Do not allow operating fluid to make contact with tobacco products; observe safety precautions when handling chemicals.

➔ Check the operating fluid level in the sight glass.

➔ Turn off the vacuum pump, vent to atmospheric pressure and allow to cool.

➔ Ensure that the exhaust line is depressurized.

➔ Unscrew operating fluid drain screw 15.

➔ Drain off operating fluid.

➔ Screw in operating fluid drain screw 15; pay attention to O-ring.

➔ Separate the operating fluid from the condensate.

– If the drained operating fluid is free of contamination, it can be reused.

➔ Dispose of condensate according to the respectively valid legal requirements.

Operating fluid return line

Due to the automatic operating fluid return, it is not necessary to drain the operating fluid manually.

In order to prevent condensate that may have settled in the oilpan from eventually reaching the pump via the operating fluid return line, the oil mist eliminator and oil feedback unit should be drained occasionally.

NOTICE

Make sure that the return for the operating fluid is working properly.

The operating fluid can only be sucked out and returned when there is a minimum about of operating fluid in the oil mist eliminator.

➔ If necessary, top up with operating fluid in order to ensure the return of operating fluid at the start of the evacuation phase.

➔ Pour the operating fluid slowly into the outlet flange of the oil mist eliminator until it can be seen in the sight-glass.

➔ Turn off the vacuum pump, vent to atmospheric pressure and allow to cool.

➔ Dismantle the oil return unit ODK 005 and empty the operating fluid via the inlet flange.

– Condensate-free operating fluid can be reused.

➔ Unscrew the small flange 20 on the OME and drain the operating fluid.

– Condensate-free operating fluid can be can be reused.

➔ Dispose of condensate according to the respectively valid legal requirements.

7.2 Changing the filter element

The filter elements must be exchanged when the exhaust pressure increases until the pressure relief valve 31 inside the OME opens and oil mist exits.

NOTICE

Disclaimer of liability

Pfeiffer Vacuum accepts no liability for personal injury or material damage, losses or operating malfunctions due to improperly performed maintenance. The liability and warranty entitlement expires.

DANGER

Danger to health by hazardous substances during maintenance or installation

Depending on the process vacuum pumps, components or operating fluids can be contaminated by toxic, reactive or radioactive substances.

➔ Wear adequate protective equipment during maintenance and repairs or in case of reinstallation.

WARNING

Contamination of parts and operating fluid by pumped media is possible.

Poisoning hazard through contact with materials that damage health.

➔ In the case of contamination, carry out appropriate safety precautions in order to prevent danger to health through dangerous substances.

➔ Decontaminate affected parts before carrying out maintenance work.

➔ Safely dispose of the materials according to the locally applicable regulations.

OME 63 M

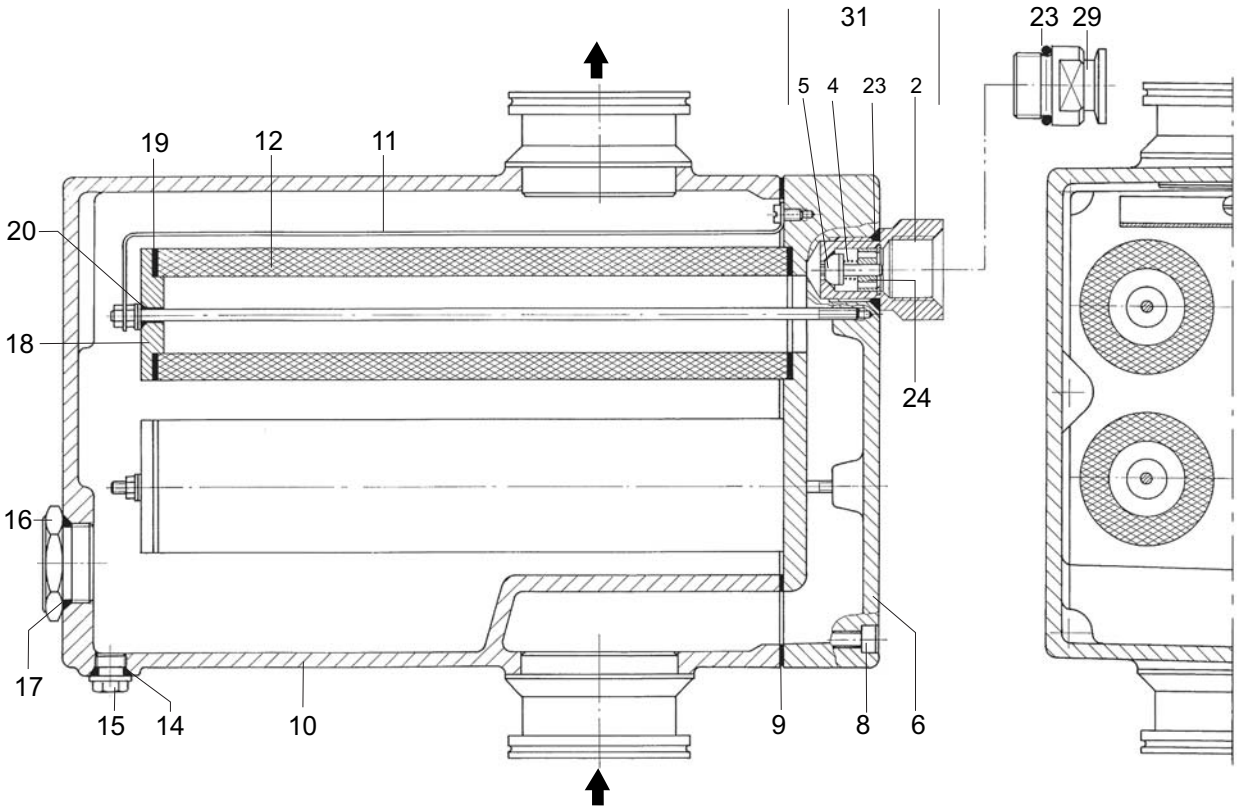


Fig. 6: OME 63 M

2	Valve housing	11	Baffle sheet	19	Seal
4	Compression spring	12	Filter element	20	O-ring
5	Sealing element	14	O-ring	23	O-ring
6	Cover	15	Drain screw	24	Guide cone
8	Screw	16	Sight glass	29	Small flange R 3/4"/DN 16 ISO-KF
9	Cover seal	17	O-ring	31	Pressure relief valve
10	Housing	18	Washer		

Dismantling

➔ Carry out preliminary work as described before.
➔ Unscrew screws 8.
➔ Carefully loosen cover 6 from the housing 1.
➔ Remove cover 6 along with filter elements 12 from the housing.
➔ Replace cover seal 9, mind that the sealing surfaces are not damaged.
➔ Loosen deflector 11 if required.
➔ Remove washer 18, pay attention to seal 19.
➔ Replace seals 19 and O-rings 20.
➔ Replace filter elements 12; cleaning is not recommended in most cases.

Do not change the setting of the pressure relief valve 31!
The pressure relief valve 31 is set at 1500 hPa (absolute pressure) in the factory.
➔ Do not change the setting of the adjusting at OME 100 M / OME 160 M. It is locked with Loctite!

Cleaning

Only the filter elements in the C version can be cleaned; the elements in the standard version must be replaced. The success of the cleaning process depends on the process medium being used, and should be tested by the user for the specific situation.

WARNING

Explosion hazard

The use of volatile or combustible cleaning agents in vacuum systems can lead to explosive vapour-air mixtures.

➔ After cleaning ventilate and let dry completely.

➔ Clean the filter insert in a solvent bath.

➔ Use blasts of compressed air to expel the cleaning agent from the filter element, and then dry them.

Assembling

➔ **Assembling** is carried out in reverse order.

➔ Tighten the filter elements at a torque of 3 ... 5 Nm.

– Ensure the correct seating of the seal 9/19.

7.3 Inspecting and cleaning ODK 005

Maintenance intervals depend on the respective process and are recommended as follows.

➔ Check oil for condensate and clean the housing;
  – each time the filter of the OME is changed.

➔ Clean and replace possibly the sealing nipple.
  – when there is a functional decline in the operating fluid return unit caused by wear of the sealing nipple.

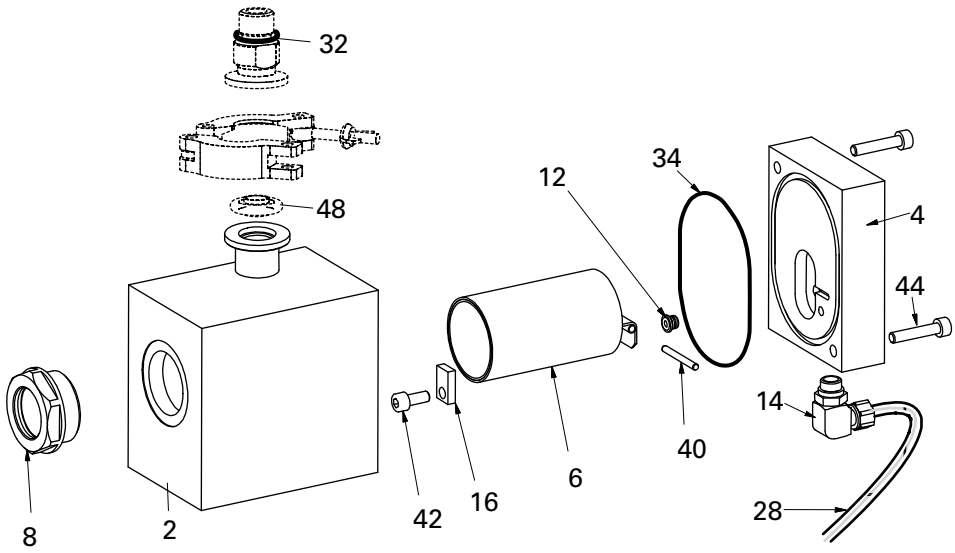


Fig. 7: ODK 005 inspecting and cleaning

2	Housing	14	Banjo fitting	40	Cylinder bolt
4	Cover	16	Clamping plate	42	Cylinder head screw
6	Floater	28	Operating fluid return line	44	Cylinder head screw
8	Sight glass	32	O-ring	48	Centering ring, DN 16 ISO-KF
12	Sealing nipple	34	O-ring		

➔ Unscrew screws 44 from the casing 4.

➔ Remove cover 4, be careful with O-ring 34;
  – collect leaking oil and dispose of in accordance with local regulations.

➔ Check the sealed surface of sealing nipple 12; replace if necessary.
  – When assembling lightly oil sealing nipple 12 and ensure the correct seating in the housing 4.

➔ Clean all parts and inspect for wear.

➔ **Assembling** is carried out in reverse order.

➔ Fill in additional operating fluid in order to ensure the return of operating fluid.

➔ Check the pump's ultimate pressure to ensure a leakproof assembly;
  – compare the measurement result with the previously determined ultimate pressure.

8 Service

Pfeiffer Vacuum offers first-class service!

- Maintenance/repairs on site by Pfeiffer Vacuum field service
- Maintenance/repairs in a nearby service center or service point
- Fast replacement with exchange products in mint condition
- Advice on the most cost-efficient and quickest solution

Detailed information and addresses at: **www.pfeiffer-vacuum.com (Service)**.

Maintenance and repairs in Pfeiffer Vacuum ServiceCenter

The following steps are necessary to ensure a fast, smooth servicing process:

➔ Download the forms "Service Request" and "Declaration on Contamination".[1)]
➔ Fill out the "Service Request" form and send it by fax or e-mail to your Pfeiffer Vacuum service address.
➔ Include the confirmation on the service request from Pfeiffer Vacuum with your shipment.
➔ Fill in the contamination declaration and enclose it in the shipment (required!).
➔ Dismantle all accessories.
➔ Drain operating fluid/lubricant.
➔ Drain cooling medium, if used.
➔ Send the pump or unit in its original packaging if possible.

Sending of contaminated pumps or devices

No units will be accepted if they are contaminated with micro-biological, explosive or radioactive substances. “Hazardous substances” are substances and compounds in accordance with the hazardous goods directive (current version). If pumps are contaminated or the declaration on contamination is missing, Pfeiffer Vacuum performs decontamination at the shipper's expense.

➔ Neutralise the pump by flushing it with nitrogen or dry air.
➔ Close all openings airtight.
➔ Seal the pump or unit in suitable protective film.
➔ Return the pump/unit only in a suitable and sturdy transport container and send it in while following applicable transport conditions.

Service orders

All service orders are carried out exclusively according to our repair conditions for vacuum units and components.

9 Accessories

Designation	OME 63 M/C	OME 100 M/C	OME 160 M/C
Oil return unit, ORF 005, standard version	PK Z90 065	PK Z90 065	PK Z90 065
Adapter for bypass line with DN 16 ISO-KF	PK 002 552 -T		
Adapter for bypass line with DN 25 ISO-KF		PK 002 551 -T	PK 002 551 -T

1) Forms under www.pfeiffer-vacuum.com

10 Technical data and dimensions

10.1 Technical data

Parameter	OME 63 M	OME 100 M	OME 160 M
Degree of separation	99.98 %	99.98 %	99.98 %
Flange (in)	DN 63 ISO-K	DN 100 ISO-K	DN 160 ISO-K
Flange (out)	DN 63 ISO-K	DN 100 ISO-K	DN 160 ISO-K
Auspuffdruck, max.	Atmosphäre	Atmosphäre	Atmosphäre
Pressure max. (absolute)	1500 hPa	1500 hPa	1500 hPa
For pumping speed	135 m^3/h	300 m^3/h	500 m^3/h
Capacity	1.7 l	2.3 l	7.0 l
Capacity OME with ODK 005	1.7 l	2.2 l	3.7 l
Weight	13.5 kg	27 kg	41 kg

Parameter	OME 63 C	OME 100 C
Degree of separation	99.98 %	99.98 %
Flange (in)	DN 63 ISO-K	DN 100 ISO-K
Flange (out)	DN 63 ISO-K	DN 100 ISO-K
Auspuffdruck, max.	Atmosphäre	Atmosphäre
Pressure max. (absolute)	1500 hPa	1500 hPa
For pumping speed	135 m^3/h	300 m^3/h
Capacity	1.7 l	2.3 l
Capacity OME with ODK 005	1.7 l	2.2 l
Weight	13.5 kg	27 kg

10.2 Dimensions

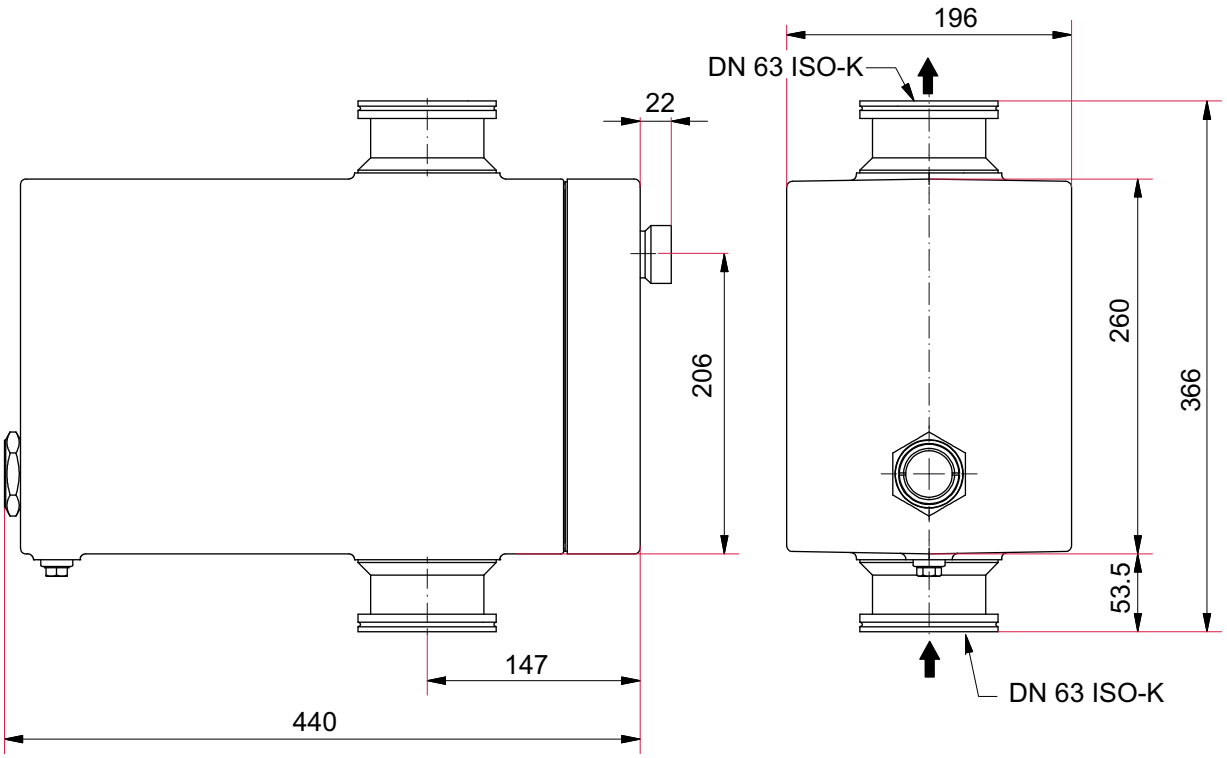


Fig. 8: OME 63 M

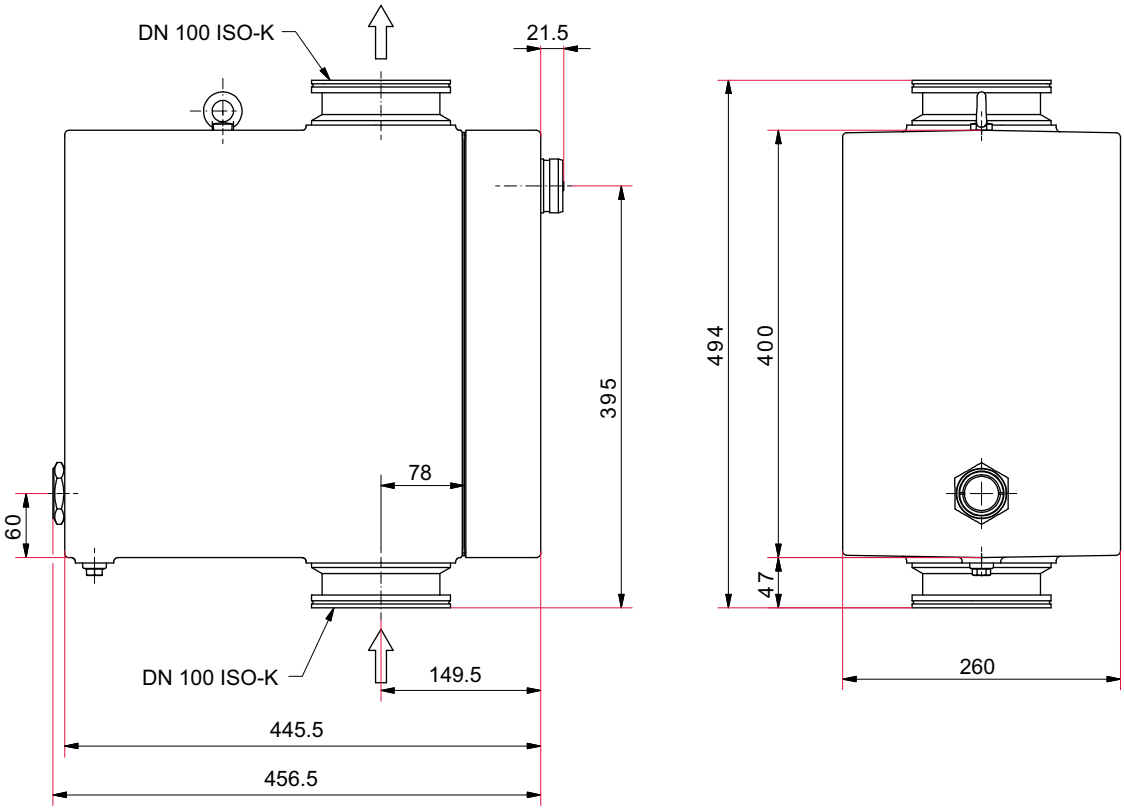


Fig. 9: OME 100 M

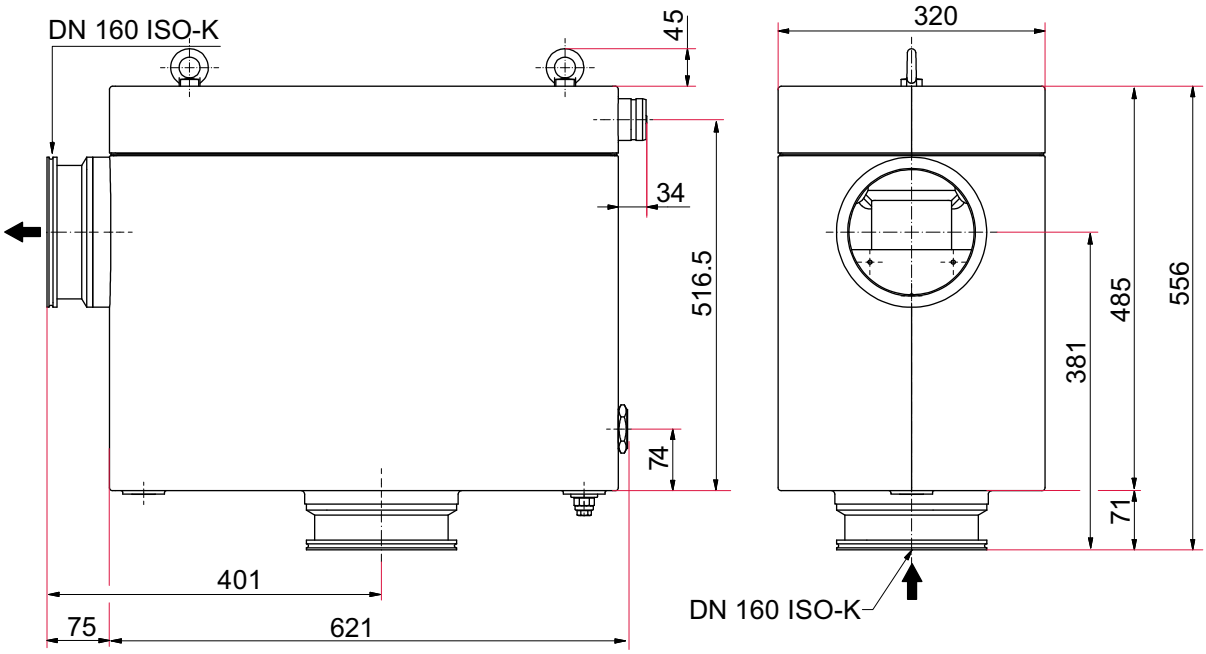


Fig. 10: OME 160 M

ODK 005

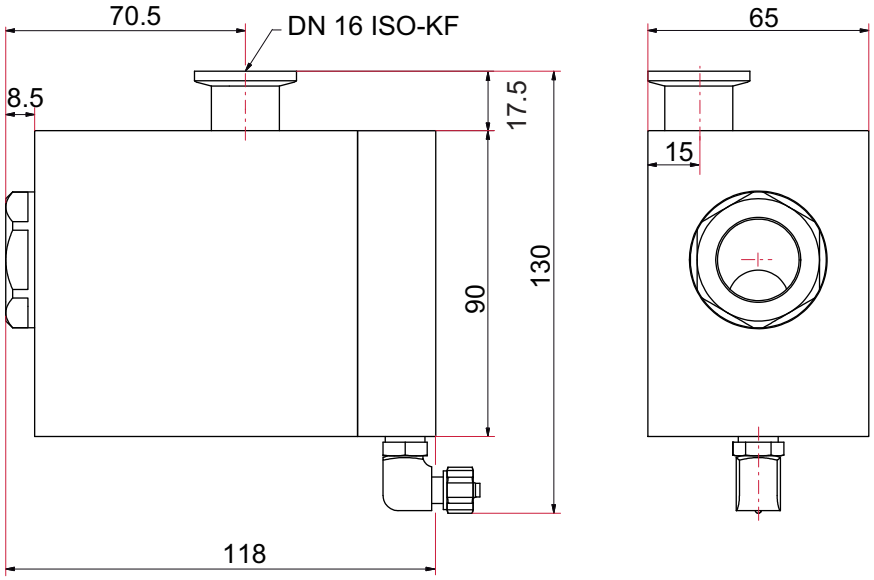


Fig. 11: ODK 005

11 Spare parts

The spare parts packages listed here are only applicable for standard models.

Please state all information on the rating plate when ordering spare parts. Other spare parts than those described in this manual must not be used without the agreement of Pfeiffer Vacuum.

11.1 Spare parts packages

Spare parts package	Model	No.	Consisting of
Maintenance kit	OME 63 M	PK E07 010 -T	9, 12, 19, 20
	OME 100 M	PK E47 001 -T	9, 12, 19, 20
	OME 160 M	PK E47 007 -T	9, 12, 19, 20
	OME 63 C	PK E07 012 -T	9, 12, 19, 20
	OME 100 C	PK E47 003 -T	9, 12, 19, 20
	OME 160 C	PK E47 009 -T	9, 12, 19, 20
Overhaul kit	OME 63 M	PK E07 013 -T	12, 16, 31, set of seals
	OME 100 M	PK E47 004 -T	12, 16, 31, set of seals
	OME 160 M	PK E47 010 -T	12, 16, 31, set of seals
	OME 63 C	PK E07 015 -T	12, 16, 31, set of seals
	OME 100 C	PK E47 006 -T	12, 16, 31, set of seals
	OME 160 C	PK E47 012 -T	12, 16, 31, set of seals

Spare parts package	Model	No.	Consisting of
Maintenance kit	ODK 005	PK E07 024 -T	8, 12, 28, 32, 34

OME 63 M

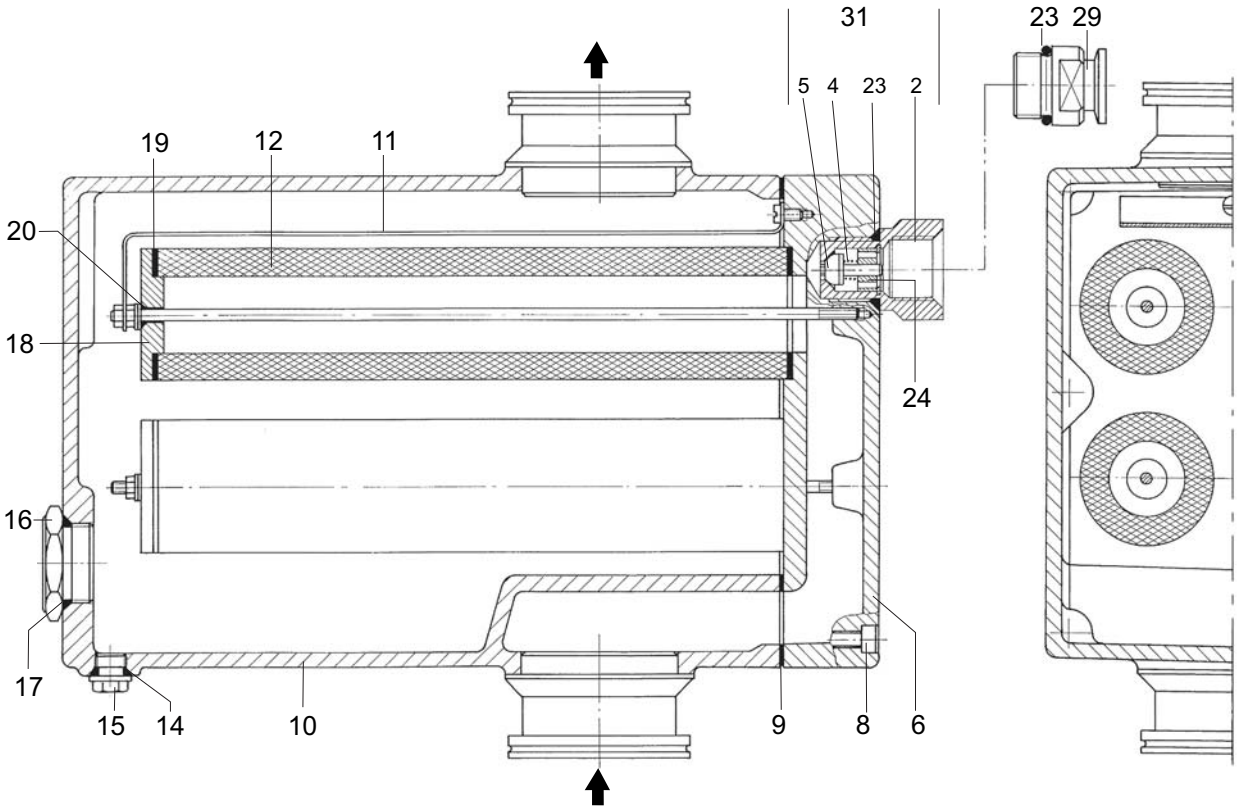


Fig. 12: OME 63 M

2	Valve housing	11	Baffle sheet	19	Seal
4	Compression spring	12	Filter element	20	O-ring
5	Sealing element	14	O-ring	23	O-ring
6	Cover	15	Drain screw	24	Guide cone
8	Screw	16	Sight glass	29	Small flange R 3/4"/DN 16 ISO-KF
9	Cover seal	17	O-ring	31	Pressure relief valve
10	Housing	18	Washer		

OME 100 M

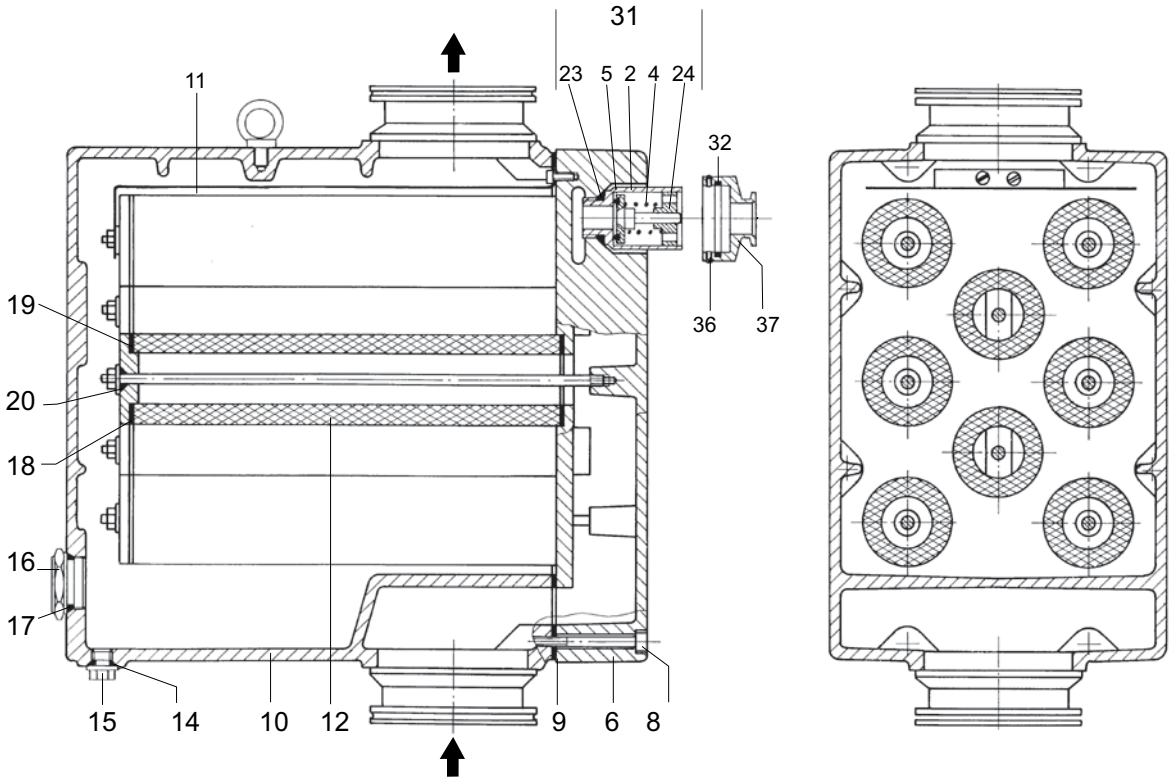


Fig. 13: OME 100 M

2	Valve housing	12	Filter element	20	O-ring
4	Compression spring	14	O-ring	23	O-ring
5	O-ring	15	Drain screw	24	Guide cone
6	Cover	16	Sight glass	31	Pressure relief valve
8	Screw	17	O-ring	32	O-ring
9	Cover seal	18	Washer	36	Set screw
10	Housing	19	Seal	37	Small flange
11	Baffle sheet				

OME 160 M

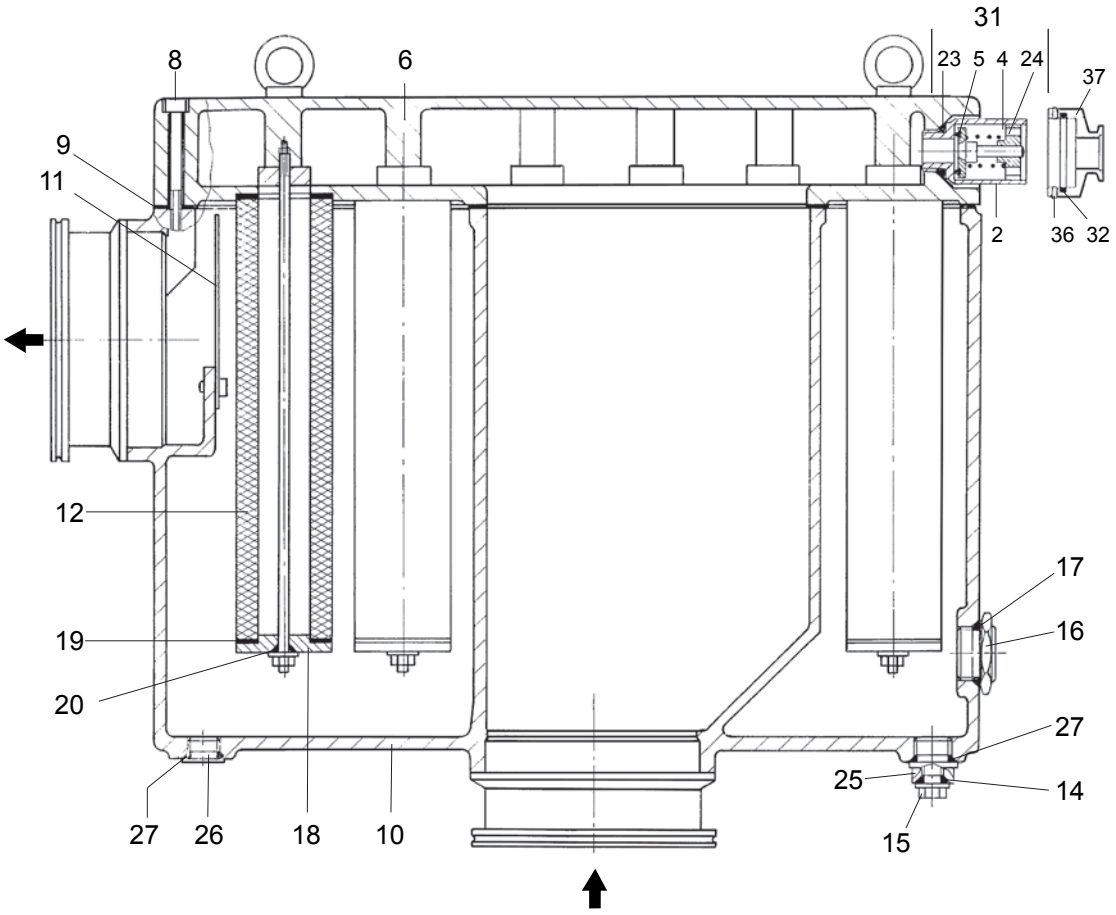


Fig. 14: OME 160 M

2	Valve housing	14	O-ring	24	Guide cone
4	Compression spring	15	Drain screw	25	Intermediate piece
5	O-ring	16	Sight glass	26	Screw plug
6	Cover	17	O-ring	27	O-Ring
8	Screw	18	Washer	31	Pressure relief valve
9	Cover seal	19	Seal	32	O-ring
10	Housing	20	O-ring	36	Set screw
11	Baffle sheet	23	O-ring	37	Small flange
12	Filter element				

ODK 005

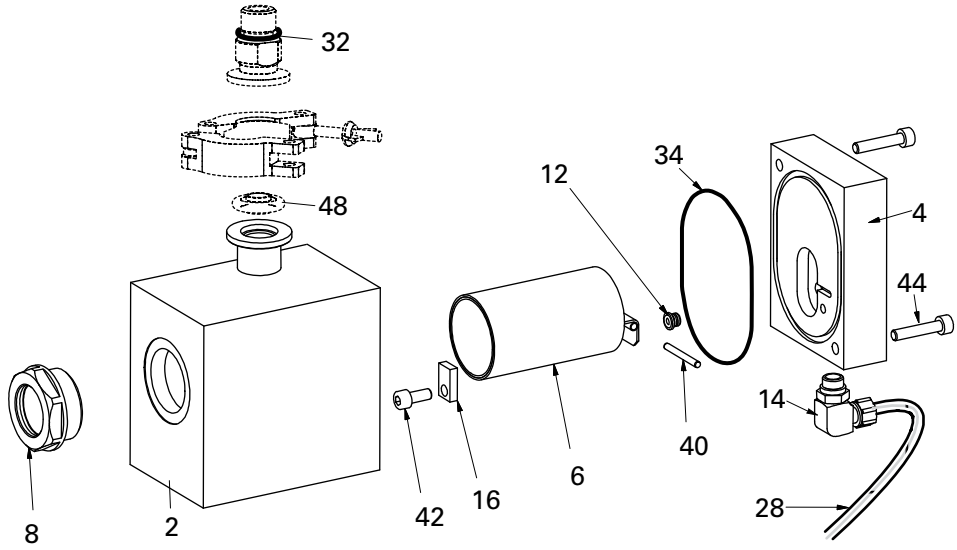


Fig. 15: ODK 005 inspecting and cleaning

2	Housing	14	Banjo fitting	40	Cylinder bolt
4	Cover	16	Clamping plate	42	Cylinder head screw
6	Floater	28	Operating fluid return line	44	Cylinder head screw
8	Sight glass	32	O-ring	48	Centering ring, DN 16 ISO-KF
12	Sealing nipple	34	O-ring		

12 Disposal

Products or parts thereof (mechanical and electrical components, operating fluids, etc.) may cause environmental burden.

➔ Safely dispose of the materials according to the locally applicable regulations.

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