



OME 25C

Oil mist eliminator

Operating instructions

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II. CHEMICAL OIL MIST ELIMINATOR

II.1. OPERATING PRINCIPLE OF THE ELIMINATOR

The oil mist eliminator is mounted at the exhaust of a chemical rotary vane pump and separate oil droplets and vapours gases emitted at the exhaust. Stopped by the cartridge, they are transformed into liquid.

The chemical oil mist eliminator is used for pumping with corrosive gases. Moreover, it is also recommended for applications involving heavy fluids (PFPE, A113, etc.) in order to reduce losses at the exhaust.

When the eliminator is mounted vertically above the pump, the condensed oil is recovered by flowing back through the cartridge into the oil case, if the inlet pressure is less than 1 hPa for a sufficiently long time.

The eliminator has a safety valve set to 500 hPa relative pressure which prevents overpressure in the pump oil case when the cartridge is saturated. Do not allow solid or pasty deposits issuing of pumped vapours to stick the valve to the filter cartridge.

II.2. CHARACTERISTICS

- Part number: 066849 (**Model OME 25C**)
- Weight: 0.350 kg
- Connection: DN25 ISO-KF
- Material: Stainless steel body
Cartridge: glass microfibers + fluorocarbon resin
- Tightness: $\leq 1 \cdot 10^{-6}$ hPa l/s
- Connection on pump: Nipple marked with «**Pump ↓**» label (Pump port)
- Dimensions: **see Figure 2**
- Filtration level: Original cartridge from manufacturer:
trapping: 99.99% of vapor droplets greater than 0.6 microns in diameter.

SUPPLIED WITH	REFERENCE	PART NUMBER
1 centering ring with O'ring DN25 ISO-KF	B C	068229
1 O-ring DN25 ISO-KF	C	079292
1 quick connect clamp DN25 ISO-KF	D	083264

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II.3. INSTALLATION

CAUTION

These operations should be performed when the pump is stopped.

There are two possible installation configurations, depending on the pump location and nipple accessibility.

Case 1: the oil mist eliminator is mounted on the exhaust port located vertically on the pump. Proceed as follows:

- Assemble as shown in **Figure 1a)** using the connection accessories provided with the eliminator.

Case 2: the oil mist eliminator is mounted on the exhaust port located on the lateral side of the pump (see **Figure 1b)**. Proceed as follows:

- Remove the lateral flange **140**.
- Reverse the positions of the nipple **120** and the flange **140**. Reinstall screws **110**.
- Assemble as shown in **Figure 1b)** using the connection accessories provided with the eliminator or ordered separately (see **adixen product catalog**).

In both cases :

- The oil mist eliminator can be located away from the pump.
- Use a suitable diameter of pipe between pump and oil mist eliminator.

Installation on pump:

- Install the oil mist eliminator at the pump exhaust by connecting it by the marked side «**Pump ↓**» (Pump Port). Check that the other side of the oil mist eliminator where the valve is visible (black valve) is connected to the exhaust pipe line.

II.4 OPERATION

Turn the pump on. During operation, oil and vapors are trapped by the filter cartridge until it becomes clogged. In this case, the relief valve should open when the internal pressure exceeds atmospheric pressure by 500 hPa (7 PSI).

CAUTION

Do not reuse an oil eliminator that has been stored for a long period (> 1 year) without first performing maintenance on it and replacing its cartridge.

WARNING

- At the pump exhaust, the discharge circuit must be such that the resulting overpressure in the oil case is as low as possible. The maximum overpressure recommended for correct pump operation is 500 hPa (7 PSI). A slight negative pressure in the oil case (100 to 200 hPa / 1.5 PSI), at the exhaust, will prevent gases from accumulating and reduce pump corrosion and pollution.
- When the oil mist eliminator is installed, check periodically at the exhaust orifice that:
 - the exhaust valve can move, so the exhaust is not blocked,
 - the exhaust valve can move, no overpressure in the oil case.

II.5. MAINTENANCE

DANGER

During pump removal, draining or oil mist eliminator maintenance, the operator may come in contact with process residues which could cause severe injury or death. Ask your safety department for instructions according to the local regulations.

We recommend:

- Wearing gloves, safety glasses, respirator mask, or any appropriated safety equipment.
- Ventilating the premises well or working under an extracted hood.
- Not disposing of maintenance waste through standard disposal channels. Have it destroyed by a qualified company if necessary .
- Not disposing of the used cartridge through standard disposal channels; have it destroyed by a qualified company if necessary .
- Install the inlet and exhaust backing plates; these accessories are shipped with the pump.

a) Cartridge saturation

The following may be signs of a saturated cartridge:

- excessive smoke or droplets, or puffs of steam appear at the oil mist eliminator exhaust,
- a rapid or significant drop in the oil level,
- an increase in the pump oil case temperature.

The time taken to reach saturation point depends on the number of pumping operations, their frequency, the volume of pumped gas and the kind of the oil used. When the cartridge is saturated, replace as follows:

b) Disassembly (Figure 3)

CAUTION

These operations should be performed when the pump is stopped.

- Disassemble the eliminator from the pump and dismount on a workbench and under an exhaust system.
- Unscrew the 4 screws **8**, while at the same time manually pressing each nipple of the eliminator (**to avoid sudden release of the spring**), and remove it.
- Remove successively and in the following order, the cover **7** and its O-ring **6**, the spring **5**, the valve **4**, the flat ring **2**, the cartridge **3** and the second flat ring **2**.

c) Cleaning

WARNING

Never clean the filter cartridge: always install a new one.

During disassembly, if the cartridge appears very clogged, filled with condensable products or gels, or is filled with very blackish, strong-smelling oil, it is then necessary to check the quality of the pump oil. It probably needs to be changed. In this case, drain the pump, replace the oil before installing an oil mist eliminator equipped with a new cartridge.

Elastomer seals **2** and **6** must always be replaced by new seals.

After use in mineral or synthetic oil, clean the components with a mineral-based solvent such a **AXAREL** ⁽¹⁾ , **CARECLEAN** ⁽²⁾ , **PREMACLEAN** ⁽³⁾ , **NAPHTESOL** ⁽⁴⁾ .

Proceed as follows:

- Clean when cold or hot (max. 45 °C) by dipping or using a cloth.
- Vacuum dry in a ventilated oven and.
- **The component must be cleaned a second time with alcohol.**

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After use in (perfluorinate) synthetic oil, clean the components in a solvent such as **GALDEN S 90™** (5) and proceed as follows:

- Clean when cold by dipping or using a cloth.
- Dry the components in the air or with compressed air.

After use in (non-perfluorinate) synthetic or mineral oil, clean the metal components with a solvent such as alcohol and proceed as follows:

- Clean when cold by dipping or using a cloth.
- Dry the components in the air.
- Industrial washing solutions can also be used. The cleaning operation should be followed by vacuum drying.

d) Reassembly

- Insert a flat ring **2** on the centering piece in the base of the body **1**.
- Assemble a new O-ring **6** on the cover **7**.
- Install the other flat ring **2** on the valve **4** and position on the cartridge **3**.
- Install the cartridge **3** on its centering piece so that it rests on the flat ring **2**.
- Position the spring **5** on the valve **4**.
- Mount the body **1** on the cover **7** and assemble using mounting screws **8** and **9** and apply a clamping torque of 2.7 N·m.
- Connect the eliminator to the pump exhaust port (**see paragraph II.3.**).

(1) DUPONT DE NEMOURS registered trademark

(2) CASTROL registered trademark

(3) DOW registered trademark

(4) NIPPON OIL CORPORATION registered trademark

(5) MONTEDISON registered trademark

II.6. APPLICATIONS NOT RECOMMENDED

CAUTION

Chemical oil mist eliminators should not be used for the following applications:

- **Certain microelectronics, LPCVD, LTO applications as the cartridges may clog up very rapidly.**
- **Impregnation with polymerizable resins.**

The cartridge is composed of glass microfibers and a fluorocarbon binder: it is therefore not suitable for use with gases which attack these products (**notable fluoric gases**).

II.7. SPARE PARTS

Parts which must be replaced each time the cartridge is changed:

REFERENCE	NUMBER	PART NAME	PART NUMBER
2	2	Flat ring	052117
3	1	Filter cartridge *	066800
6	1	O-ring C 2.5 D 52	082037

* Cartridges can be supplied by set of 5 : P/N 066806

DECLARATION OF INCORPORATION OF PARTLY COMPLETED MACHINERY

We, **adixen Vacuum Products**
98, avenue de Brogny · BP2069
74009 Annecy cedex – France

ISO 9001 CERTIFIED

declare under our sole responsibility that the following products:

**DFT 25, OME 25S, OME 25C/H, OME 25HP, OME 25HP+, ODK 1,
OME 40HP+, ODK 136, OME 40S, OME 40C1, OME 40C2, LNT 25S, LNT
25C, LNT 25P1, ST 25S, ST 25C, ST 40, CT 25**

to which this declaration relates are in conformity with the relevant provisions of the following European Directives:

2006/042/EC : Machinery directive

2002/095/EC : Restriction of Hazardous Substances

when used in accordance with the instruction manual of the product.
The relevant operating instructions are in compliance with appendix VII, part B.

Those products comply with the relevant provisions of the above Directives and carry the CE marking.

This partly completed machinery must not be put into service until the machinery into which it is to be incorporated has been declared in conformity with the provisions of the 2006/42/EC Directive.

We, authorized representatives undertake to transmit, in response to a reasoned request by national authorities, relevant information on the partly completed machinery

Signatures:

Annecy, April 24th, 2012

Authorized person to compile the relevant technical documentation:



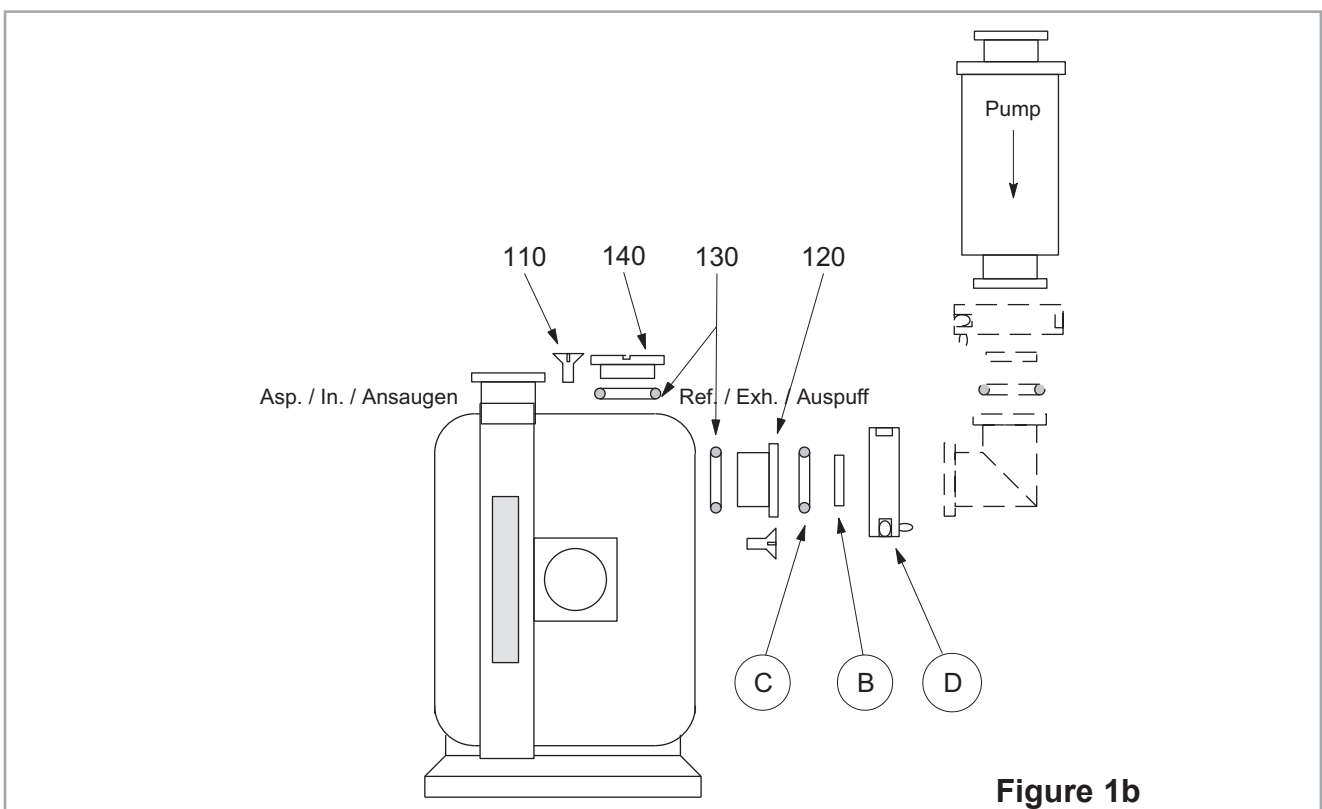
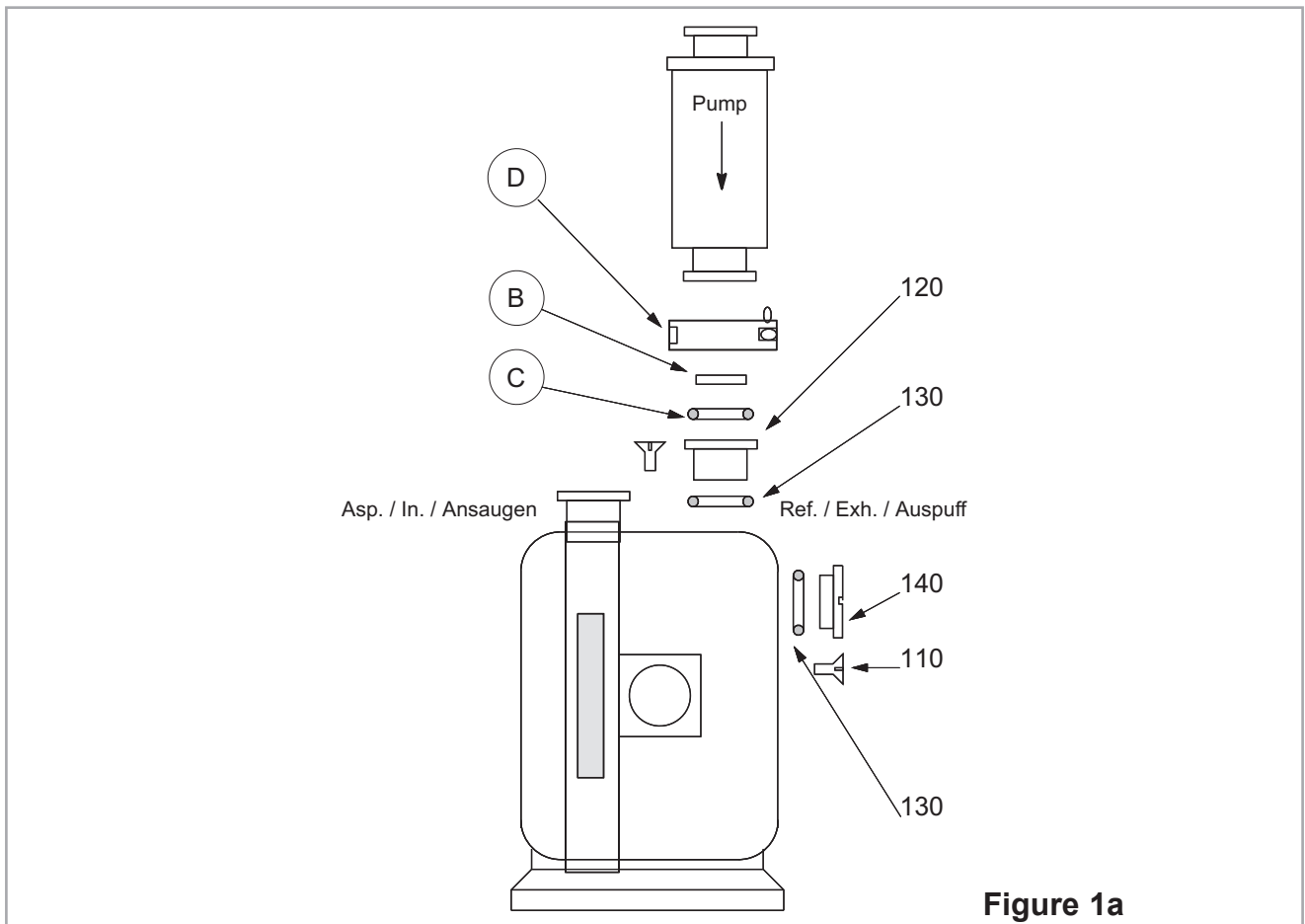
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LANGUAGE : ENGLISH

FIGURES



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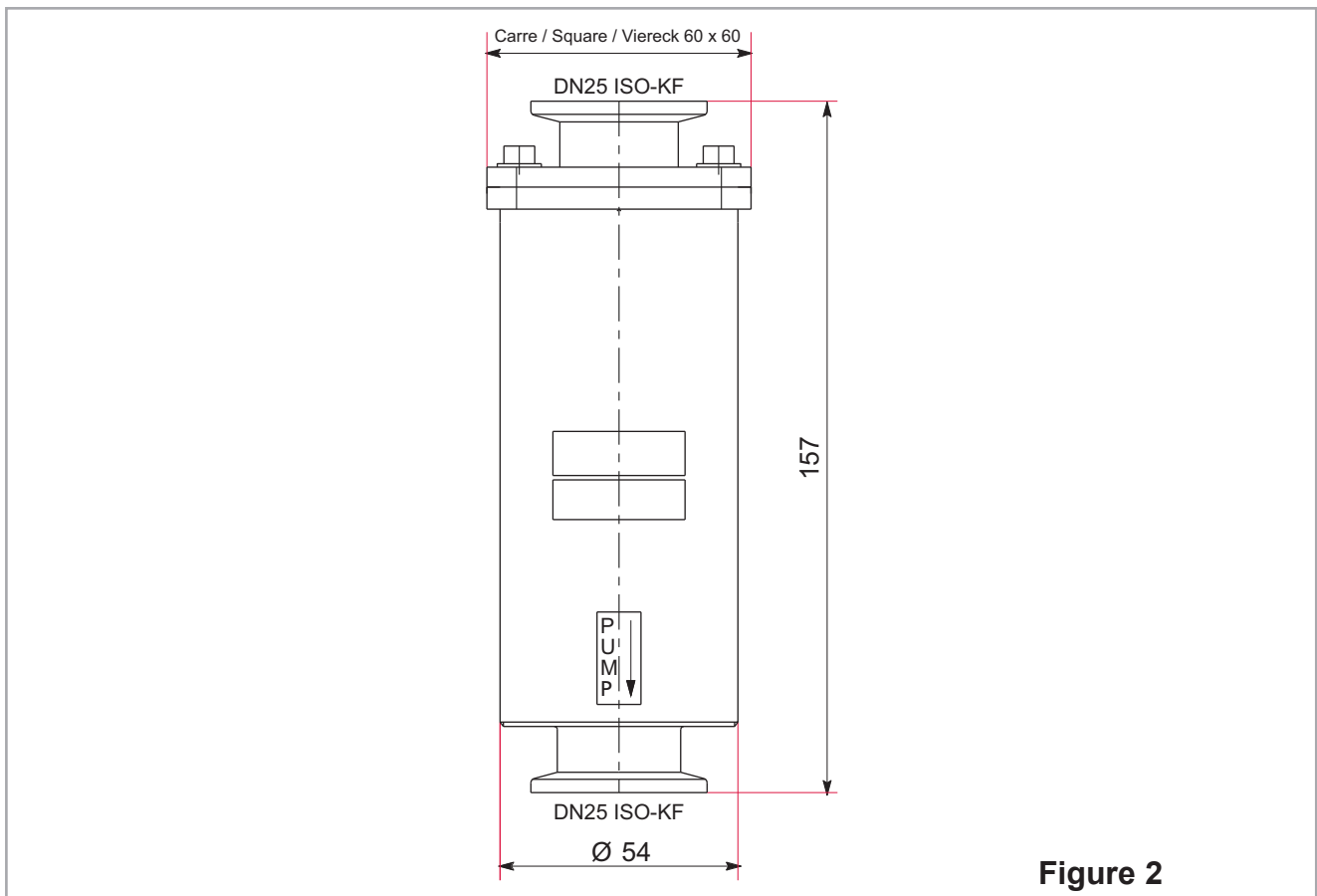


Figure 2

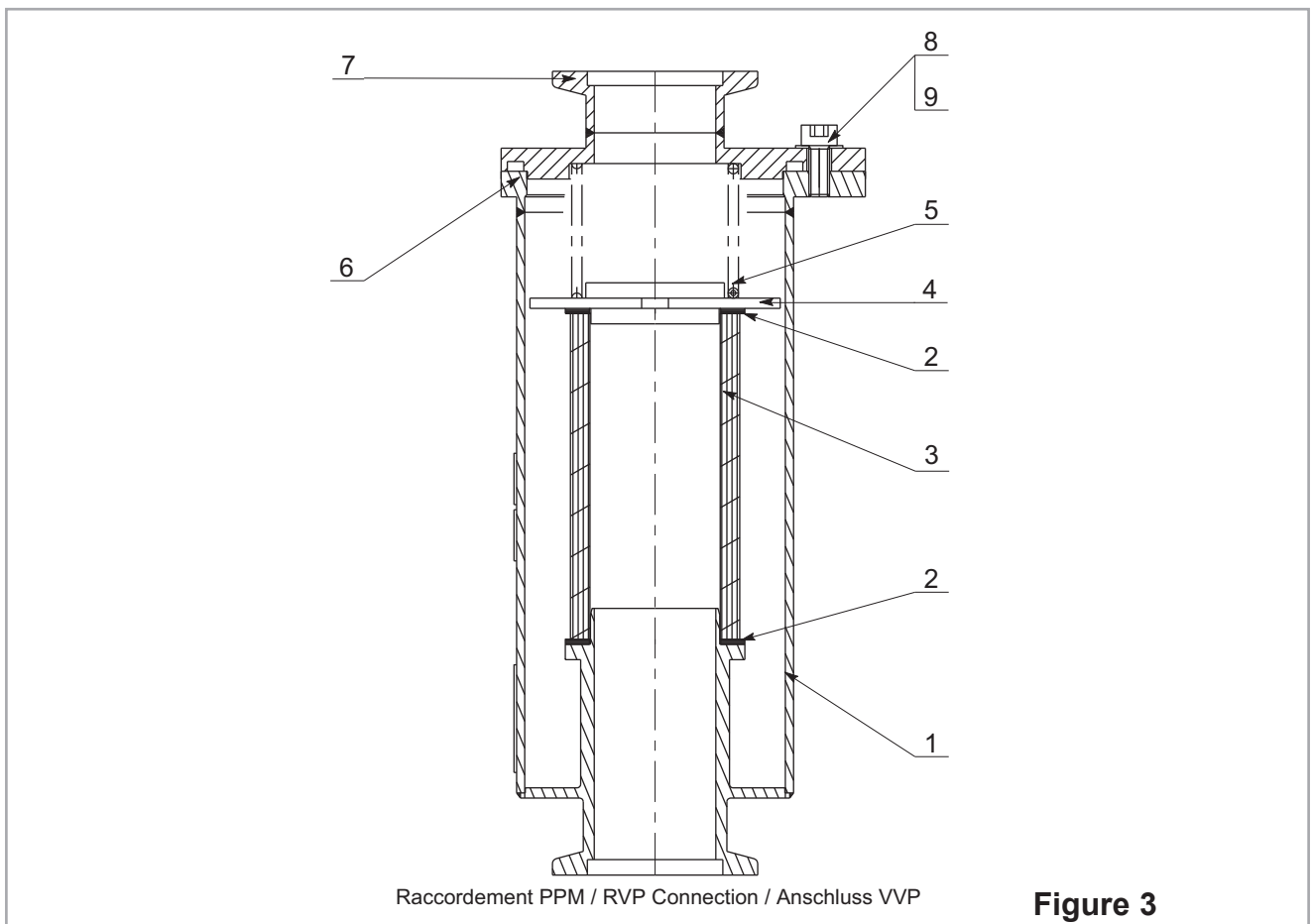


Figure 3

NOMENCLATURE OME 25C

REPERE REF. ITEM	DESIGNATION MATERIAU	DESCRIPTION MATERIAL	BENENNUNG WERKSTOFF	QUANTITE NUMBER ANZAHL
1	Corps <i>acier inoxydable</i>	Body <i>stainless steel</i>	Gehäuse <i>Edelstahl</i>	1
2	Joint plat <i>élastomère FPM*</i>	Flat ring <i>elastomer FPM*</i>	Flachdichtung <i>Elastomer FPM*</i>	2
3	Cartouche filtrante <i>fibres de verre + liant fluorocarbones</i>	Cartridge <i>glass microfiber + fluorocarbon binder</i>	Filtereinsatz <i>Mikroglasfaser + gebunden durch Fluorkohlenstoffe</i>	1
4	Clapet <i>polyamide</i>	Valve <i>polyamid</i>	Klappe <i>Polyamid</i>	1
5	Ressort <i>acier</i>	Spring <i>steel</i>	Feder <i>Stahl</i>	1
6	Joint torique <i>élastomère FPM</i>	O-ring <i>elastomer FPM</i>	Dichtung <i>Elastomer FPM</i>	1
7	Couvercle <i>aluminium</i>	Cover <i>aluminium</i>	Deckel <i>Aluminium</i>	1
8	Vis CHC M4x10 <i>acier</i>	Screw CHC M4x10 <i>steel</i>	Schraube <i>stahl</i>	4
9	Rondelle <i>acier</i>	Washer <i>steel</i>	Unterlegscheibe <i>stahl</i>	4

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