OPERATING INSTRUCTIONS

EN

Original

KAS 025/040/063/100

Condensate separator

PFEIFFER VACUUM

PK 0116 BEN/E (1701)

Index

1. Safety Instructions

☞ Read and follow all instructions in this manual.
☞ Inform yourself regarding:
  – Hazards which can be caused by the pump;
  – Hazards which can be caused by your system.
☞ Observe the safety and accident prevention regulations.
☞ Regularly check that all accident prevention measures are being complied with.
☞ Do not carry out any unauthorised conversions on or alterations to the unit.
☞ When returning units, take note of shipping instructions in the Section "Service".

1.1. For Your Orientation

Instructions in the text
➡ Operating instructions: Here you have to do something!

Symbols used
The following symbols are used throughout in the illustrations:

Ⓥ Vacuum flange

Ⓧ Outlet flange

Position numbers
Identical components and accessories parts have the same position numbers in all illustrations.

1.2. Pictogram definitions

Danger of damage to the unit or to the system.

Danger of burns from touching hot parts.

Danger of personal injury.

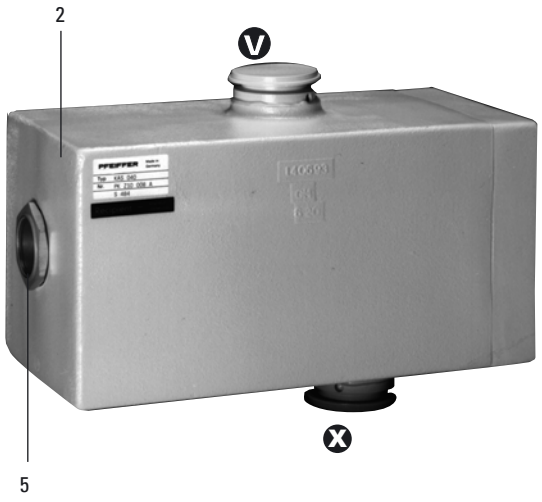
Modifications reserved.

2. Understanding The Condensate Separator

2.1 Main Features

Condensate Separators KAS 040

Ⓥ Vacuum flange
Ⓧ Outlet flange
2 Housing
5 Sight glass



To protect the pump against the damaging effects of condensates, the fitting of a condensate separator in the intake line of a vacuum pump is recommended.
This keeps the lubricating efficiency of the operating fluid and ensure the attainable final pressure.
The KAS is provided with a sight glass to show the condensate level.

Proper Use:
- Condensate separators cannot be cooled and cannot therefore be used as condensers.
- As a rule, condensate separators are installed in the intake line of a vacuum system or a vacuum pump.
- Where certain applications are involved it is also recommended to fit a condensate separator in the exhaust line.

2.2. Versions

Condensate Separators KAS 025 ... KAS 100 are manufactured in corrosion proof aluminium and sealed with seals of elastomer.
Condensate Separators are available in the following versions:

Standard model

Helium tight model
- Leak rate of the housing (tested): $< 1 \cdot 10^{-5}$ mbar l/s

Corrosive gas model
- Leak rate of the housing (tested): $< 1 \cdot 10^{-5}$ mbar l/s
- Sight glass manufactured in PTCFE
- Operating fluid drain screw manufactured in stainless steel

3. Installation

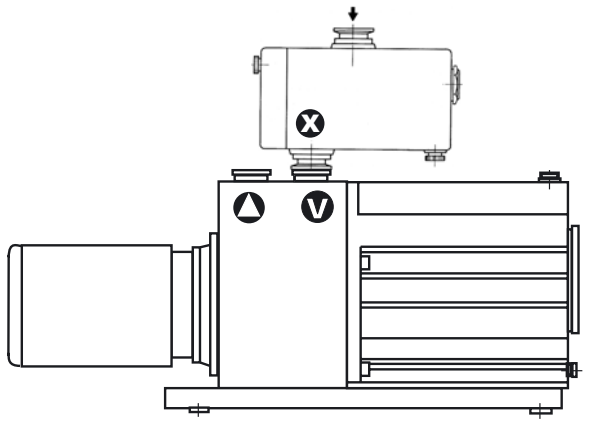
3.1. Fitting The Condensate Separator

The condensate separator must be fitted to the intake or exhaust side of the rotary vane pump and always be connected to the pump with flange Ⓧ . The connections are designed for ISO small or ISO clamping flanges.
This permits the use of pre-fabricated standard components in the installation; please see Pfeiffer Vacuum catalog.

Mounting on the intake side

➡ Position the KAS on the flange on the intake side of the rotary vane pump and fit using the tension ring (accessory); take care with the centering ring on the rotary vane pump.

Mounting on the intake side



If gases are being pumped which should not be allowed to escape into the atmosphere an exhaust line must be fitted.
The exhaust line should be laid so that no excess pressure can build up in it.

4. Maintenance

4.1. Draining Off Condensate

Condensate must be drained when the level has risen to the middle of the sight glass 5; this represents the maximum level.

Toxic gases and vapours can escape from the condensate which may also become enriched with substances harmful to health (radioactive, chemical etc.) during the pumping of certain media.
Condensate which has been enriched with toxic or aggressive substances must be treated carefully. Compliance with all relevant handling regulations for such media is essential.

4.1.1 Intake Side Condensate Draining

To empty a condensate separator fitted on the intake side, the valve between separator and recipient must be closed and the vacuum pump switched off.

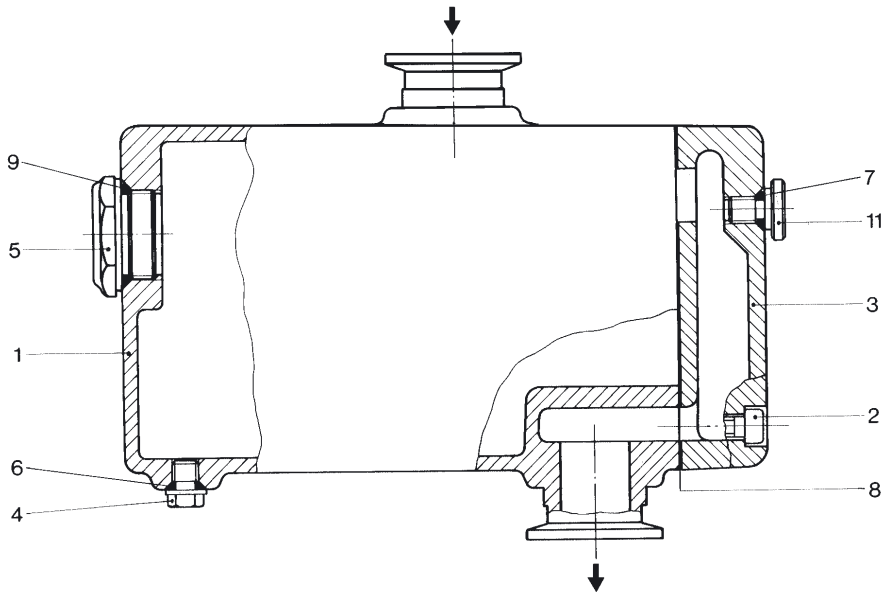
- ➡ Ventilate condensate separator via ventilation screw 11.
- ➡ Screw out drain screw 4 and allow condensate to drain off.
- ➡ Screw drain screw 4 and ventilation screw 11 back in; keep an eye on O-rings 6 and 7.
- ➡ Switch vacuum pump back on (if necessary, allow sufficient time for the pressure in the condensate separator to adjust to the pressure in the recipient).
- ➡ Open valve to the recipient.

4.1.2 Exhaust Side Condensate Draining

Emptying a condensate separator fitted on the exhaust side can proceed without switching off the vacuum pump. Draining the condensate is executed as described in section 4.1.1.

Drain Condensate

1 Housing
2 Screw
3 Cover
4 Condensate drain screw
5 Sight glass
6 O-ring
7 O-ring
8 Cover seal
9 O-ring
10 Pipe
11 Venting screw



5. Service

Do Make Use Of Our Service Facilities

In the event that repairs are necessary to your unit, a number of options are available to you to ensure any system down time is kept to a minimum:

– Have the unit repaired on the spot by our Pfeiffer Vacuum Service Engineers;
– Return the individual components to the manufacturer for repairs;
– Replace individual components with a new value exchange units.

Local Pfeiffer Vacuum representatives can provide full details.

Before Returning:

➡ When returning the pump please use original factory packing.
➡ Dismantle all accessories.
➡ Drain condensate.
➡ If the pump is free of harmful substances, please attach a clearly visible notice: “Free of contamination” (to the unit being returned, the delivery note and accompanying paperwork).

Harmful substances" are substances and preparations as defined in current legislation. Pfeiffer Vacuum will carry out the decontamination and invoice this work to you if you have not attached this note. This also applies where the operator does not have the facilities to carry out the decontamination work. Units which are contaminated microbiologically, explosively or radioactively cannot be accepted as a matter of principle.

Fill Out The Contamination Declaration

➡ In every case the "Contamination Declaration" must be completed diligently and truthfully.
➡ A copy of the completed declaration must accompany the unit; any additional copies must be sent to your local Pfeiffer Vacuum Service Center.

Please get in touch with your local Pfeiffer Vacuum representatives if there are any questions regarding contamination.

Decontaminate units before returning or possible disposal. Do not return any units which are microbiologically, explosively or radioactively contaminated.

Returning Contaminated Units

If contaminated units have to be returned for maintenance/repair, the following instructions concerning shipping must be followed without fail:

➡ Neutralise the unit by flushing with nitrogen or dry air.
➡ Seal all openings to the air.
➡ Seal pump or unit in suitable protective foil.
➡ Ship units only in appropriate transport containers.

Repair orders are carried out according to our general conditions of sale and supply.

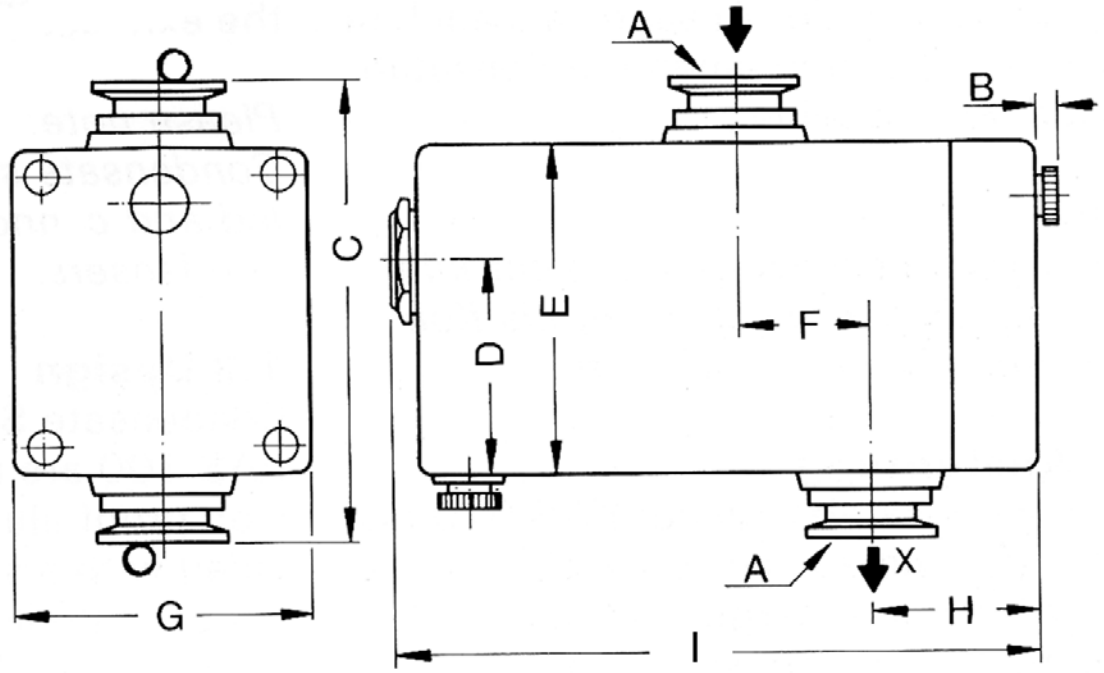
➡ If repairs are necessary, please send the unit together with a short damage description to your nearest Pfeiffer Vacuum Service Center.

6. Technical Data

Condensate Separator		KAS 025	KAS 040	KAS 063	KAS 100
Connection diameter		DN 25 ISO-KF	DN 40 ISO-KF	DN 63 ISO-K	DN 100 ISO-K
Conductance value at					
$1 \cdot 10^{-2}$ mbar	l/s	15	25	50	120
1 mbar	l/s	80	140	260	500
100 mbar	l/s	1000	1500	4500	13500
Capacity for condensate	l	0,5	3	12	19
Permissible working pressure	bar	1,5	1,5	1,5	1,5
Weight	kg	1,6	6,1	13,2	25

6.1. Dimensions

KAS 040, KAS 063, KAS 100



Type	A	B	C	D	E	F	G	H	I
KAS 025	DN 25 ISO-KF	7	140	22	100	40	90	54	200
KAS 040	DN 40 ISO-KF	7	230	90	166	60	160	100	338
KAS 063	DN 63 ISO-K	7	366	208	260	–	196	146	440
KAS 100	DN 100 ISO-K	7	494	270	400	–	260	150	460

7. Spare Parts

7.1. Spare Parts Packages

Type	Art. no.	Overhaul kit	Kind of work
KAS 025	PK Z10 006 A	PK E17 010 -T	Cleaning and sealing up housing (incl. new sight glass)
KAS 025 EPDM	PK Z10 031	PK E17 011 -T	
KAS 025 H	PK Z10 306	PK E17 012 -T	
KAS 025 C	PK Z10 406	PK E17 012 -T	
KAS 040	PK Z10 008 A	PK E07 018 -T	
KAS 040 H	PK Z10 308	PK E07 018 -T	
KAS 040 C	PK Z10 408	PK E07 019 -T	
KAS 063	PK Z10 010	PK E07 020 -T	
KAS 063 H	PK Z10 310	PK E07 020 -T	
KAS 063 C	PK Z10 410	PK E07 021 -T	
KAS 100	PK Z10 012	PK E47 013 -T	
KAS 100 H	PK Z10 312	PK E47 014 -T	
KAS 100 C	PK Z10 412	PK E47 014 -T	

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