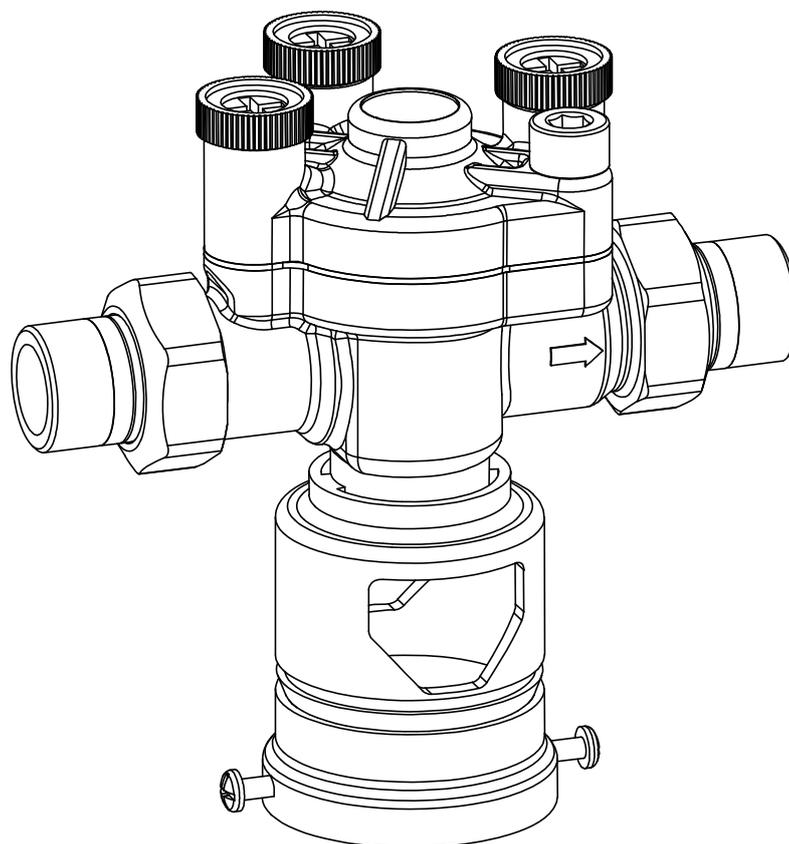


Operation manual

Euro-system separator GENO DK 2-Mini



Euro system separator GENO -DK 2 mini Nominal diameter DN 15

Edition: July 2017
Order no. 085 133 944-inter

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DIN EN ISO 14001 and SCC

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Publisher's information

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Printed in Germany

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A General

1 | Preface

Thank you for opting for a Grünbeck product. Backed by decades of experience in the area of water treatment, we provide solutions for all kind of processes.

All Grünbeck systems and devices are made of high-quality materials. This ensures reliable operation over many years, provided you treat your water treatment system with the required care. This operation manual assists you with important information. Therefore, please read the entire operation manual before installing, operating or maintaining the system.

Customer satisfaction is our prime objective and providing customers with qualified advice is crucial. If you have any questions concerning this device, possible extensions or general water and waste water treatment, our field staff, as well as the experts at our headquarters in Hoechststedt, are available to help you.

Advice and assistance For advice and assistance please contact your local representative (see www.gruenbeck.de) or get in touch with our service centre which can be reached during office hours:

Phone: +49 9074 41-333

Fax: +49 9074 41-120

Email: service@gruenbeck.de

We can connect you with the appropriate expert more quickly if you provide the required system data. In order to have the required data handy at all times, please copy it from the type designation plate to the overview in chapter C-1.

2 | Warranty

All devices and systems supplied by Grünbeck Wasseraufbereitung GmbH are manufactured according to the most recent technical standards and subjected to a comprehensive quality assurance system. All warranty claims are subject to our General Terms and Conditions of Sale and Delivery.

3 | General safety information

Operating personnel

Only persons who have read and understood this operation manual are permitted to work with our systems and devices. The safety guidelines are to be strictly adhered to.

Symbols and notes

Important information in this operation manual is characterised by symbols. Please pay particular attention to this information to ensure the hazard-free, safe and efficient handling of the system.



Danger! Failure to adhere to this information will cause serious or life-threatening injuries, extreme damage to property or inadmissible contamination of the drinking water.



Warning! Failure to adhere to this information may cause injuries, damage to property or contamination of the drinking water.



Attention! Failure to adhere to this information may result in damage to the system or other objects.



Note: This symbol characterises information and tips to make your work easier.



Tasks with this symbol may only be performed by Grünbeck's technical service/authorised service company or by persons expressly authorised by Grünbeck.



Tasks with this symbol may only be performed by trained and qualified electrical experts according to the VDE guidelines or according to the guidelines of a similar local institution.



Tasks with this symbol may only be performed by water supply companies or approved installation companies. In Germany, the installation company must be registered in an installation directory of a water company as per §12(2) AVBWasserV (German Ordinance on General Conditions for the Supply of Water).

4 | Shipping and storage



Attention! The systems and devices may be damaged by frost or high temperatures. Protect from frost during transportation and storage! Do not install or store the systems or devices next to objects, which radiate a lot of heat.

The system may only be transported and stored in its original packing. Ensure that it is handled with care and placed the right side up (as indicated on the packing).

5 | Disposal of used parts and materials

Used parts and materials are to be disposed of, or made available for recycling purposes, according to the applicable local guidelines.

If a material is subject to specific regulations, adhere to the instructions indicated on the packing.

If in doubt, contact your local waste disposal authority or the manufacturer for more information.

B Basic information (system separators)

1 | Laws, regulations, standards

In the interest of good health, rules cannot be ignored when it comes to the processing of drinking water. This operation manual takes into consideration the current regulations and stipulates information that you will need for the safe operation of your system separator.

Among other things, the regulations stipulate that only approved companies are permitted to make major modifications to water supply facilities

and that tests, inspections and maintenance on installed devices are to be performed at regular intervals.

2 | Classification of liquid categories

Liquid category 1 Water for human consumption that is withdrawn directly from a drinking water installation.

Examples:
Temporary turbidity due to air bubbles.

Liquid category 2 Liquids that do not represent a health risk to human beings.

Liquids that are suitable for human consumption - including water originating from a drinking water installation - that may exhibit modifications with regard to taste, smell, colour or temperature (heating up or cooling down).

Examples:
Coffee, heated drinking water.

Liquid category 3 Liquids that represent a health risk to human beings due to the presence of one or several poisonous or highly poisonous substances.

Examples:
Ethylene glycol, copper sulphate solution, heating water without additives or with additives as per liquid category 3.

Liquid category 4 Liquids that represent a health risk to human beings due to the presence of one or several poisonous or highly poisonous substances or one or several radioactive, mutagenic or carcinogenic substances.

Examples:
Lindane, phosalone, parathion (insecticides), hydrazine, heating water with additives as per liquid category 4.

Liquid category 5 Liquids that represent a health risk to human beings due to the presence of microbial or viral pathogens of communicable diseases.

Examples:
Hepatitis viruses, salmonellae

(excerpt of DIN EN 1717, part 5.2)



Attention! System separators are safety devices. They protect the drinking water from modified drinking water. They can only work reliably provided inspections and maintenance are carried out at regular intervals.

4 | Technical specifications

Table C-1: Technical specifications		Euro system separator GENO-DK 2-Mini
Connection data		
Nominal connection diameter	[DN]	15
Threaded connection (male thread)	[R]	½" (red. ¾")
Performance data		
Nominal pressure	[bar]	PN 10
Min. flow pressure	[bar]	1
Max. flow	[m³/h]	3.5
KV value ($\Delta p = 1$ bar)	[m³/h]	2
Dimensions and weights		
A Installation length with screw connections	[mm]	130
B Installation length without screw connections	[mm]	83
C Drain connection HT pipe	[mm]	40
D Height above centre of pipe connection	[mm]	47
E Height below centre of pipe connection	[mm]	80
F Total height	[mm]	127
G Total width	[mm]	54
H Distance to wall	[mm]	35
H Space required above centre of pipe connection (e. g. for maintenance)	[mm]	200
L Clearance for the drain connection has to be provided in accordance with the planned running of the pipes	[mm]	Observe installation requirements!
Empty weight	[kg]	0.9
Operating weight	[kg]	1.2
Consumption data		
Dripping water volume per opening and closing process, approx.	[ml]	10
Max. waste water volume at drain connection	[m³/h]	1.5
Test certificate/Certification mark		
DVGW registration number		NW-6305BR0345
Ambient data		
Max. water temperature	[°C]	60
Max. ambient temperature	[°C]	60
Order no.		133 100

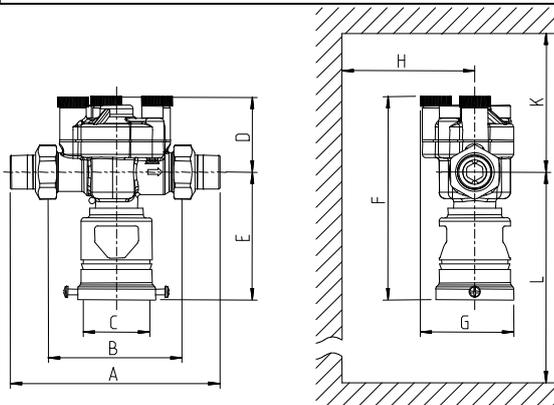


Fig. C-2: Dimensional drawing of Euro system separator GENO-DK 2-Mini

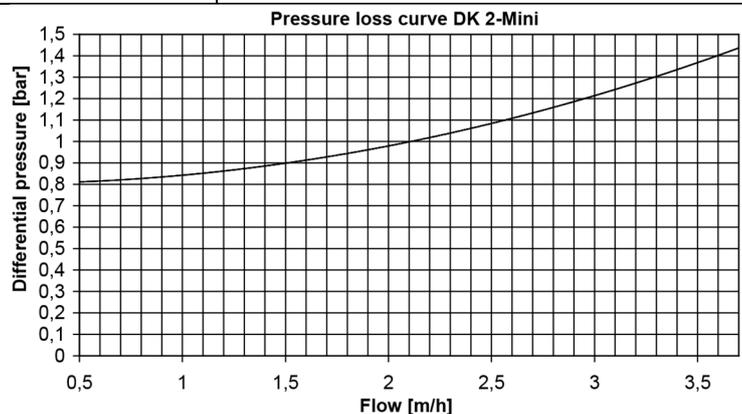


Fig. C-3: Pressure loss curve of Euro system separator GENO-DK 2-Mini

5 | Scope of supply

- Euro system separator GENO DK 2-Mini
- Strainer for coarse dirt on inlet side
- 2 screw connections R ½"
- 2 reduction pieces R ¾" male thread – R ½" female thread
- Flat seals
- Operation manual

D Installation and start-up

1 | General installation instructions

- Please observe the local installation guidelines and the general regulations.
- The installation site must be accessible for maintenance work, flood- and frost-proof and ensure the system's protection from chemicals, dyes, solvents and vapours.
- Installation according to its nominal width in pipes of similar dimensions.
- According to DIN EN 806-2, quick-closing shut-off fittings that might cause positive or negative water hammer may only be used for continuous actuation in water installations if the max. admissible water hammer pressure and operating pressure are taken into account. Exceptions apply for fittings that are used for test purposes only and are operated by experts.



Attention! Dirt and corrosion particles might cause malfunctions or damage the system separator. Prior to start-up, flush the feed pipe at maximum performance.

2 | Water installation

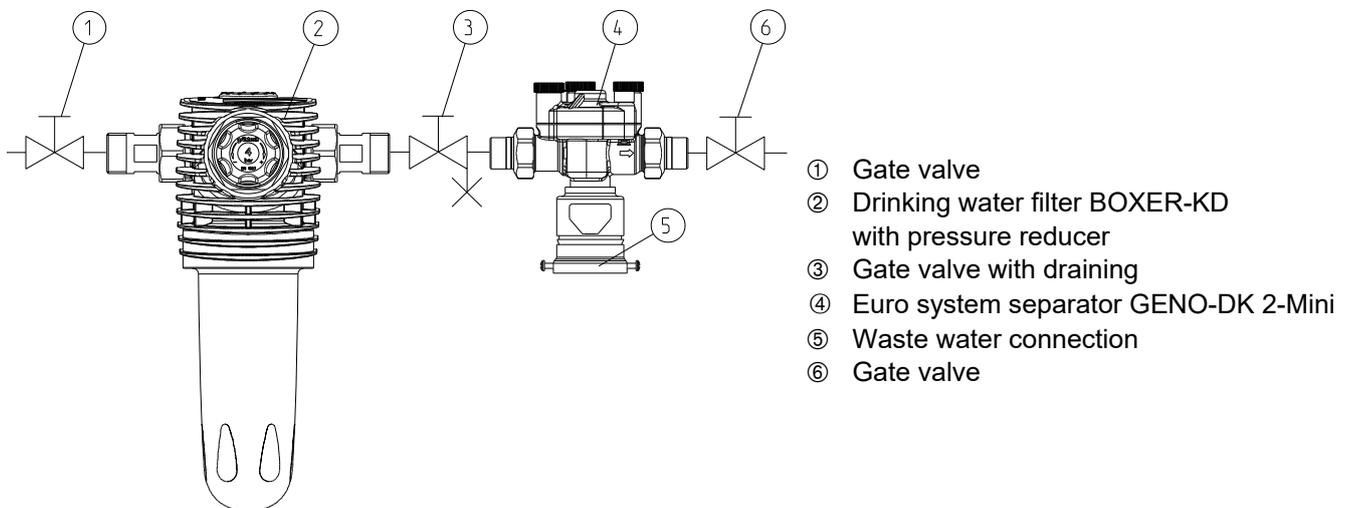


Binding rules

The installation of a system separator represents a major interference with the drinking water system. Therefore, only authorised experts may install such systems.

Preliminary work

1. Unpack all system components.
 2. Check for completeness and soundness.
- Install as per the installation drawing (fig. D-1).
 - Make sure that built-in parts (e. g. EBRO flaps) installed upstream or downstream of the device to not protude into the system separator and damage internal components.
 - Make sure that the system separator's cap sieve is installed with its bulge directing opposite the flow direction (refer to fig. F-1).



- ① Gate valve
- ② Drinking water filter BOXER-KD with pressure reducer
- ③ Gate valve with draining
- ④ Euro system separator GENO-DK 2-Mini
- ⑤ Waste water connection
- ⑥ Gate valve

Fig. D-1: Installation example: filter combination of fine filter BOXER-KD with Euro system separator GENO DK 2



Note: Install strainer/fine filter directly upstream of the system separator, otherwise malfunctions in the system separator may occur.

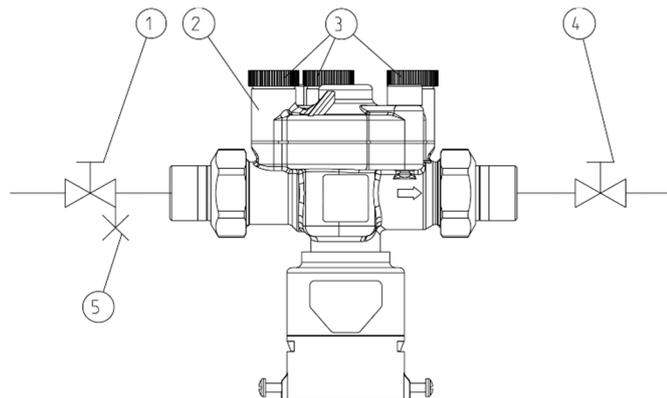


Attention! Observe the flow direction.

- Only install the system separator horizontally and without any loads and stresses.
- Provide a drain connection as per the technical specifications.
- Make sure there is a free outlet and the water is discharged without back-pressure.

3 | Start-up

1. Slowly open the shut-off valves (items 1 and 4) upstream and downstream of the system separator. Afterwards, the system separator moves to its operating position. Make sure that the discharge valve (item 5) is closed.
2. Completely deaerate the system separator by opening the bleeding screws (item 3).
3. Perform a visual check. Make sure that no water leaks from the device anywhere.



- ① Gate valve on inlet side
- ② Euro system separator GENO-DK 2-Mini
- ③ Bleeding screw
- ④ Gate valve on outlet side
- ⑤ Draining of gate valve on inlet side

Fig. D-2: Detailed drawing of Euro system separator GENO-DK 2-Mini

4 | Functional check

After the successful start-up of the system separator, close the shut-off valve (item 1). Pressure relief in the primary pressure zone is initiated by opening the discharge valve (item 5).



Note: Afterwards, the system separator must go into separating position and thereby drain the middle pressure zone.

Afterwards, close the discharge valve (item 5) and slowly open the shut-off valve (item 1). Then the system separator must move into the operating position again, and must be completely tight.

E Troubleshooting

Even carefully designed and manufactured technical systems that are operated properly, may experience malfunctions. The table below provides an overview of possible problems that may occur during the operation of system separators and indicates the causes and their elimination.

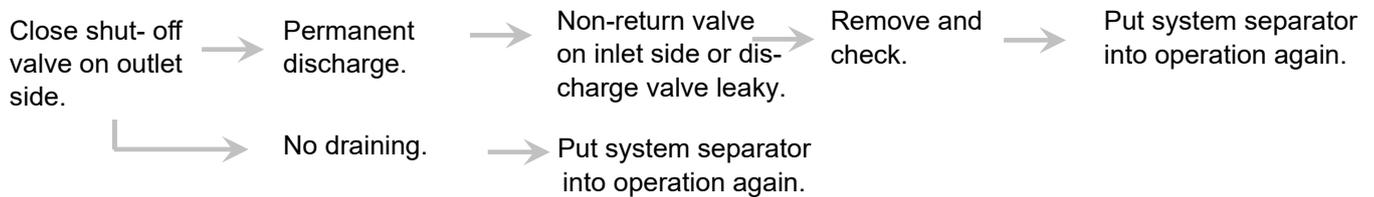


Attention! Short-term, undefined water leakage at the discharge valve of the system separator does not represent a malfunction but is a normal control behaviour of the system separator caused by pressure fluctuations on the inlet side in the water supply system.

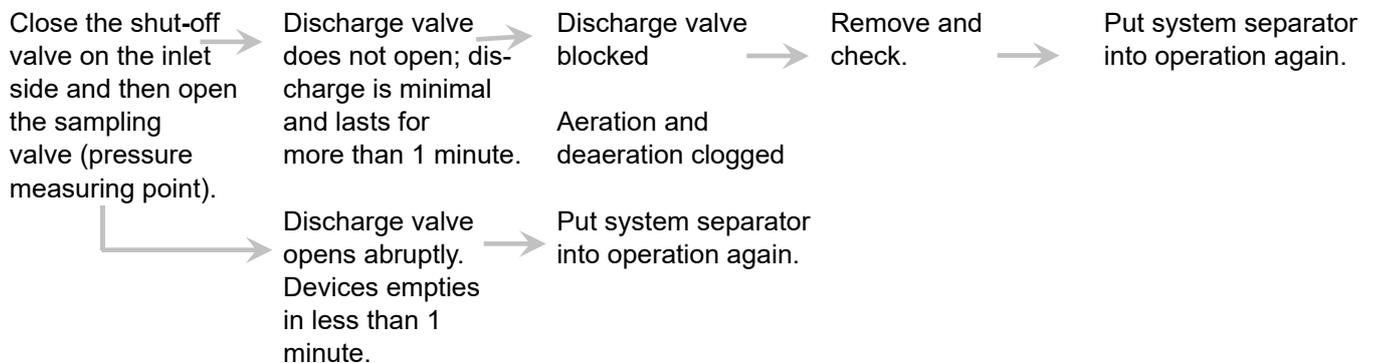


Note: In case of disturbances, e.g. permanent water leakage at the discharge valve, proceed as per the checklist below: Irrespective of the disturbance, you may identify the fault by systematically performing the individual steps.

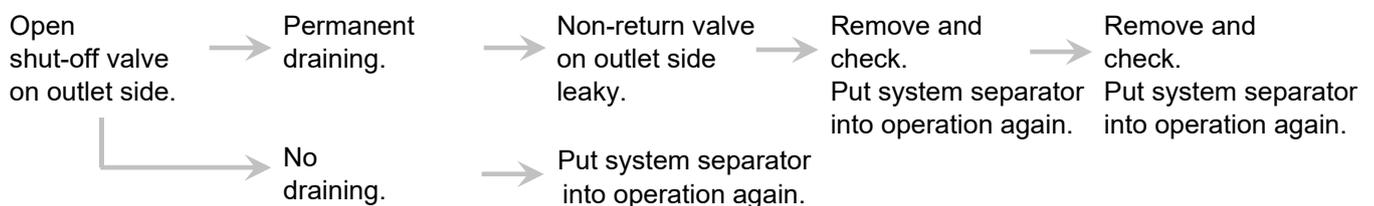
Test step 1



Test step 2



Test step 3



Note: In case of disturbances that you cannot remedy yourself, please contact your local Grünbeck service/Grünbeck's authorised service company (see www.gruenbeck.de).

F Maintenance, care and spare parts

1 | Basic information

In order to guarantee the reliable function of the system separator over a long period of time, some maintenance work has to be performed at regular intervals. This applies in particular to safety fittings for the supply of drinking water where the required measures are defined in the pertinent regulations and guidelines. All regulations and guidelines which apply at the installation site must be strictly adhered to.

Inspection and maintenance based on DIN EN 806-5 and W/TPW 135, appendix I.

- The semi-annual inspection may be performed by the operator or the installation company.
- The yearly maintenance must be carried out by an installation company or by Grünbeck's technical service/authorised service company.



Note: A maintenance contract ensures that all the required maintenance work will be performed in due time.

2 | Inspection

Check for tightness, visual check:

- If no water is withdrawn, no water may leak.
- If a withdrawal point is opened downstream, no leakages must occur.

3 | Maintenance

Check for tightness, visual check:

- If no water is withdrawn, no water may leak.
- If a withdrawal point is opened downstream, no leakages must occur.

Functional check:

- Close the shut-off valves upstream of the system separator. Relieve the pressure from the primary pressure zone between the shut-off valve and the system separator by opening the discharge valve.
- Empty/drain off the inlet pressure zone between the closed shut-off valves and the system separator.
- Afterwards, the system separator must go into separating position, and must completely drain the middle pressure zone.



Note: Should you detect any malfunctions during inspection or maintenance, please refer to chapter E - Troubleshooting - for remedies.



Note: The cap sieve must be cleaned during every maintenance.

4 | Spare parts

For spare parts and consumables please contact your local representative. The parts listed below are considered to be wearing parts.



Note: Although these are wearing parts, we grant a limited warranty period of 6 months.

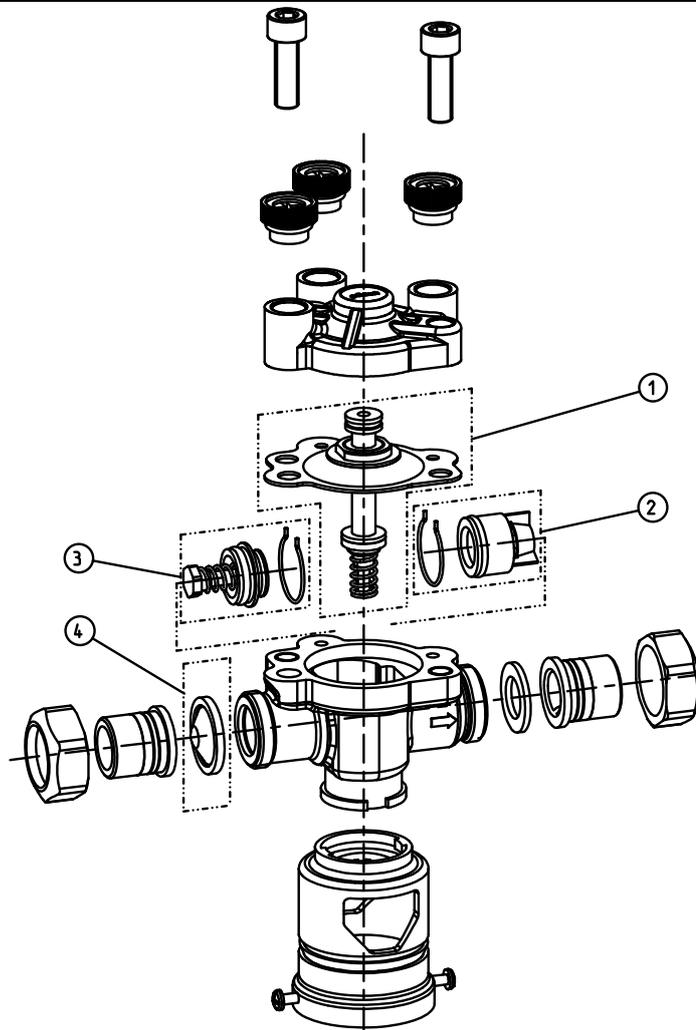


Fig. F-1: Spare parts for Euro system separator GENO-DK 2-Mini

Item	Order no.	Designation	PU	Remarks
1	133 622e	Discharge valve, complete	1	Content: 1 pc
2	133 623e	Non-return valve, outlet, complete	1	Including circlip
3	133 624e	Non-return valve, inlet, complete	1	Including circlip
4	707601e	Cap sieve, complete	1	Please observe installation position (refer to chapter D)

Operation log

Customer

Name:.....

Address:

.....

.....

1/2"

3/4"

1"

1 1/4"

1 1/2"

2"

Euro-system separator GENO-DK

(please check appropriate box)

DN 50

DN 65

DN 80

DN 100

DN 150

DN 200

DN 250

Serial number

Installed by

Connection data:

Drain connection
DIN EN 1717

yes

no

(please check appropriate
box)

Operation log for inspection, maintenance and repair work on Euro system separators GENO-DK	
Work performed	Execution confirmed
<input type="checkbox"/> Inspection Description: _____ <input type="checkbox"/> Maintenance _____ <input type="checkbox"/> Repair _____	Company: Name: Date/ Signature:
<input type="checkbox"/> Inspection Description: _____ <input type="checkbox"/> Maintenance _____ <input type="checkbox"/> Repair _____	Company: Name: Date/ Signature:
<input type="checkbox"/> Inspection Description: _____ <input type="checkbox"/> Maintenance _____ <input type="checkbox"/> Repair _____	Company: Name: Date/ Signature:
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