

BIOCAT KS 8000
BIOCAT KS 11000
BIOCAT KS 14000
BIOCAT KS 3.5D
BIOCAT KS 5D



Assembly instructions

EN



In general, a specialist must carry out the installation in accordance with WATERCryst's documentation and the additional documentation provided by the manufacturer and in compliance with the locally applicable regulations.

It is essential to observe the following before mounting!

DIN 1988-200 point 12.2:

The system may only be installed in frost-free rooms where the ambient temperature does not exceed 25°C!

Shut-off valves must be arranged for maintenance work!

System pressure of 8 bar must not be exceeded!

Stable, preferably horizontal substrate
→ **Observe the operating weight!**

Observe maintenance and wall clearances (installation dimensions)!

Have a specialist install a properly grounded socket (CEE - 16A)!

Requirements for system insulation according to **DIN 1988-200 point 14.2**

Secure the mounting area properly!

Observe the operating instructions!



Danger of scalding!

Hot water escaping into the drain funnel during backwashing.

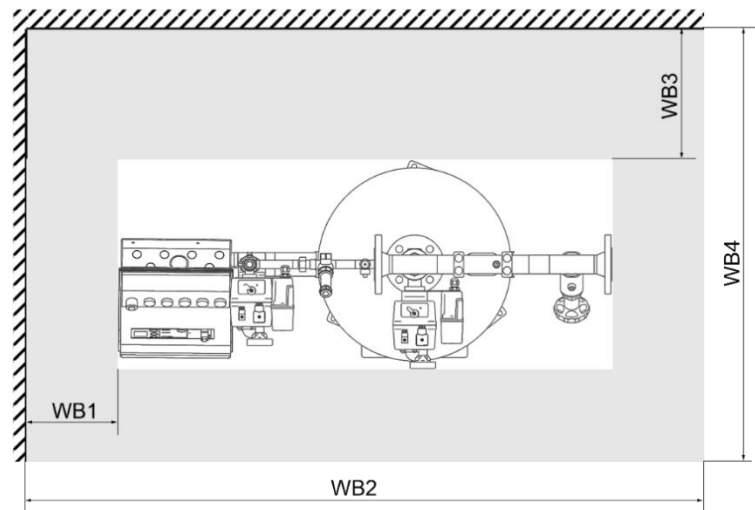
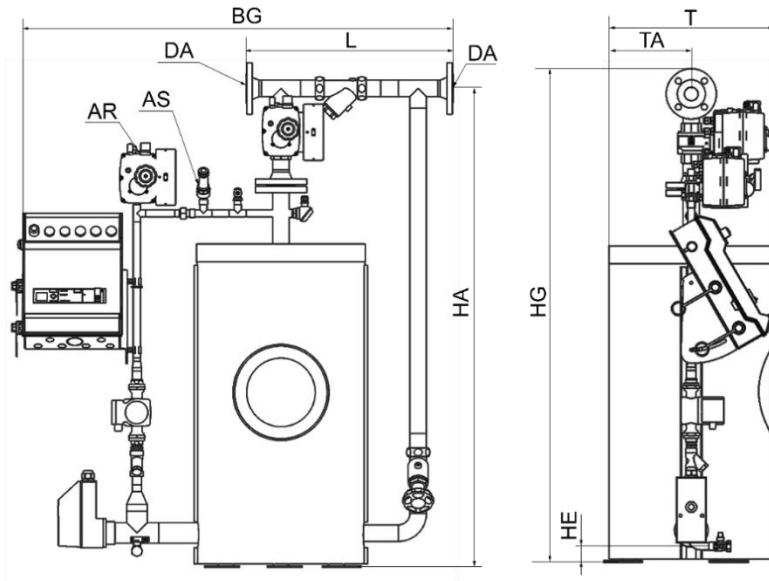
1 Scope of delivery



- 1: BMS connector
- 2: Control unit
- 3: Container including catalyst granulate, piping, valves, heater and pump
- 4: Thermal insulation

The units are delivered ready for installation. The BIOCAT KS 8000, KS 11000 and KS 14000 are delivered already filled with catalyst granulate. For the BIOCAT KS 3.5D and KS 5D, filling takes place on-site after the unit's installation.

2 Installation dimensions

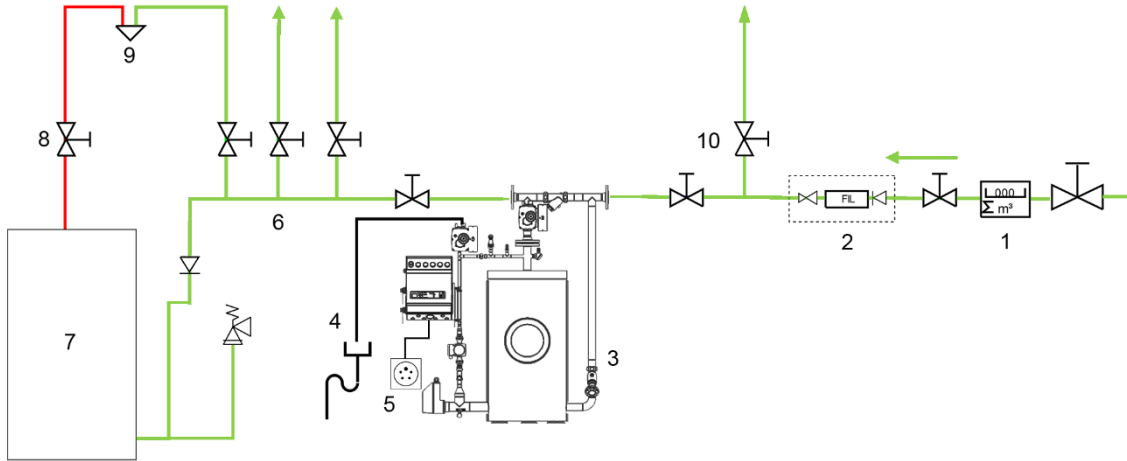


Dimensions		Unit	KS 8000	KS 11000	KS 14000	KS 3.5D	KS 5D
HG	Total height	[mm]	1.500	1.630	1.900	2.200	2.400
BG	Total width	[mm]	1.250	1.330		1.500	
HA	Height supply/drain	[mm]	1.435	1.550	1.820	2.120	2.320
HE	Height tapping valve	[mm]	70	40	43	90	
L	Length of piping	[mm]	610	680		825	
T	Depth	[mm]	520	700	790		
TA	Depth piping	[mm]	245	350		390	
WB1	Maintenance area 1	[mm]	min. 400				
WB2	Maintenance area 2	[mm]	min. 2.200			min. 2.400	
WB3	Maintenance area 3	[mm]	min. 250				
WB4	Maintenance area 4	[mm]	min. 1.700			min. 1.950	
DA	Diameter connection	DN	40 (1 1/2")	50 (2")			
AS	Connection pressure relief valve	DN	15 (1/2")	15 (1/2")			
AR	Connection backflush line	DN	15 (1/2")	15 (1/2")			

3 Installation diagram

Variant A: Protection of the complete drinking water installation

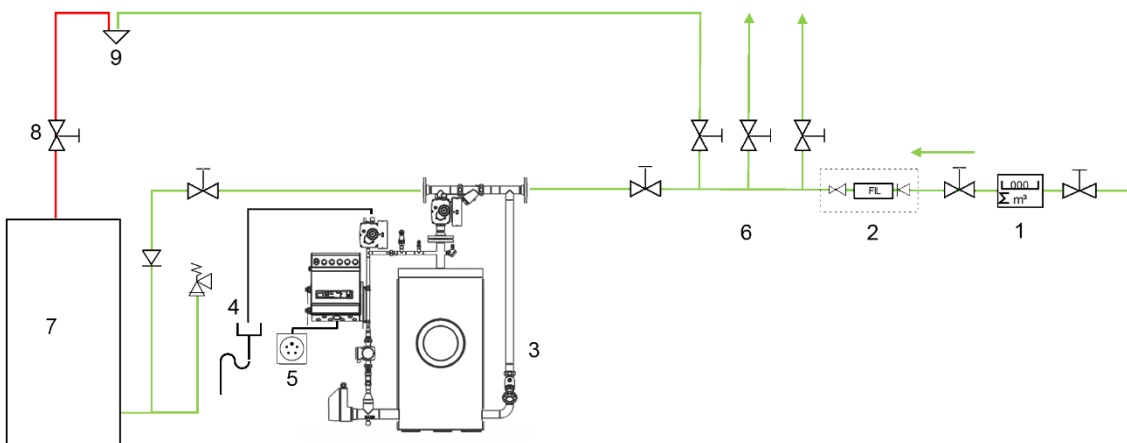
Install the BIOCAT KS device in the house water connection directly after the water meter, RV, filter and pressure regulator!



(1) Water meter; (2) Domestic water station; (3) BIOCAT KS limescale protection device; (4) Free outlet in drain; (5) Three-phase socket; (6) Cold water manifold with cold water risers; (7) Drinking water heater; (8) Hot water manifold with hot water riser; (9) Mixer tap

Variant B: Protection of the entire hot water installation

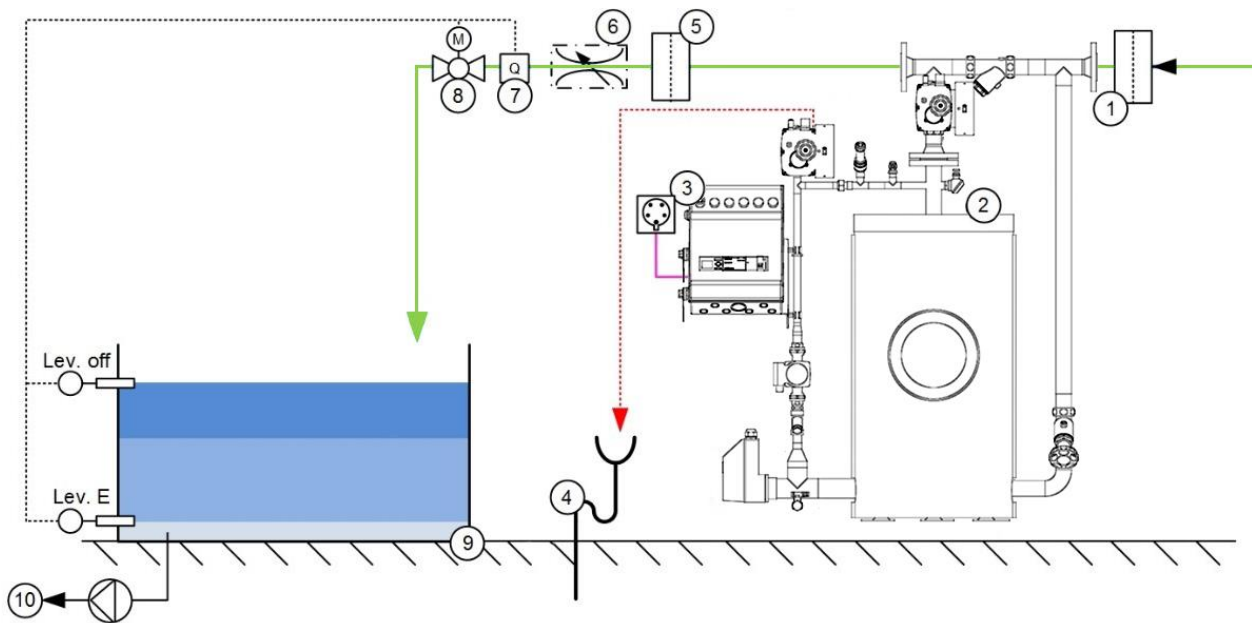
Install the BIOCAT KS device directly in the cold water inlet to the drinking water heater or to the hot water tank!



(1) Water meter; (2) Domestic water station; (3) BIOCAT KS limescale protection device; (4) Free outlet in drain; (5) Three-phase socket; (6) Cold water manifold with cold water risers; (7) Drinking water heater; (8) Hot water manifold with hot water riser; (9) Mixer tap

Variant C: Protection of a drinking water reservoir and subsequent drinking water installation

Install the BIOCAT KS unit directly into the cold water inlet of a drinking water reservoir!



(1) Pre-filter; (2) BIOCAT KS limescale protection device; (3) Power socket; (4) Free outlet in the drain;- adequately dimensioned and temperature resistant; (5) Fine filter; (6) Flow limiter; (7) Flow measurement; (8) Shut-off unit; (9) Drinking water reservoir; (10) Consumer



The components and fittings 1, 3, 4, 5, 6, 7 and 8 are not included in the scope of delivery and **MUST** be provided by the customer during installation!



The unit size selection is chosen according to the refill volume flow of the drinking water storage basin.

BIOCAT Continuous flow rate $Q_D \geq$ Refill volume flow Q_{Refill}

The set value of the flow limiter must not exceed the continuous flow rate of the BIOCAT.

Adjusting the flow restrictor (6)

BIOCAT KS 8000	Max. 650l/h
BIOCAT KS 11000	Max. 1.500 l/h
BIOCAT KS 14000	Max. 2.500 l/h
BIOCAT KS 3.5D	Max. 3.500 l/h
BIOCAT KS 5D	Max. 5.000 l/h

4 Mounting

Note before mounting:

Provide properly installed CEE 16A,
400V 50Hz, 3L+N+PE, socket!
Distance: max. 1.5m



Provide drain dimension
min. DN100 on site!

Mounting

BIOCAT KS 8000

BIOCAT KS 11000

BIOCAT KS 14000

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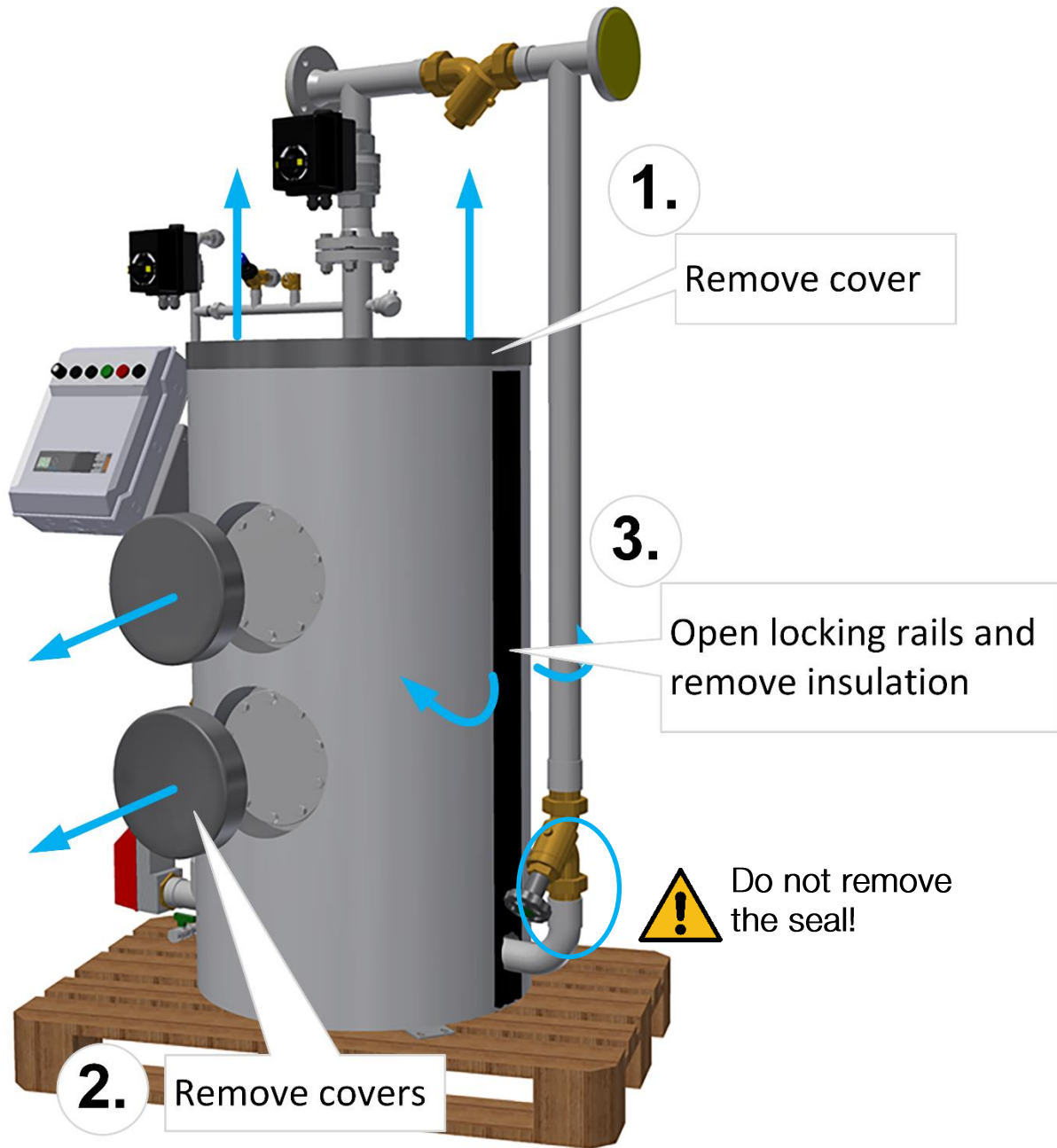
Mounting

BIOCAT KS 3.5D

BIOCAT KS 5D

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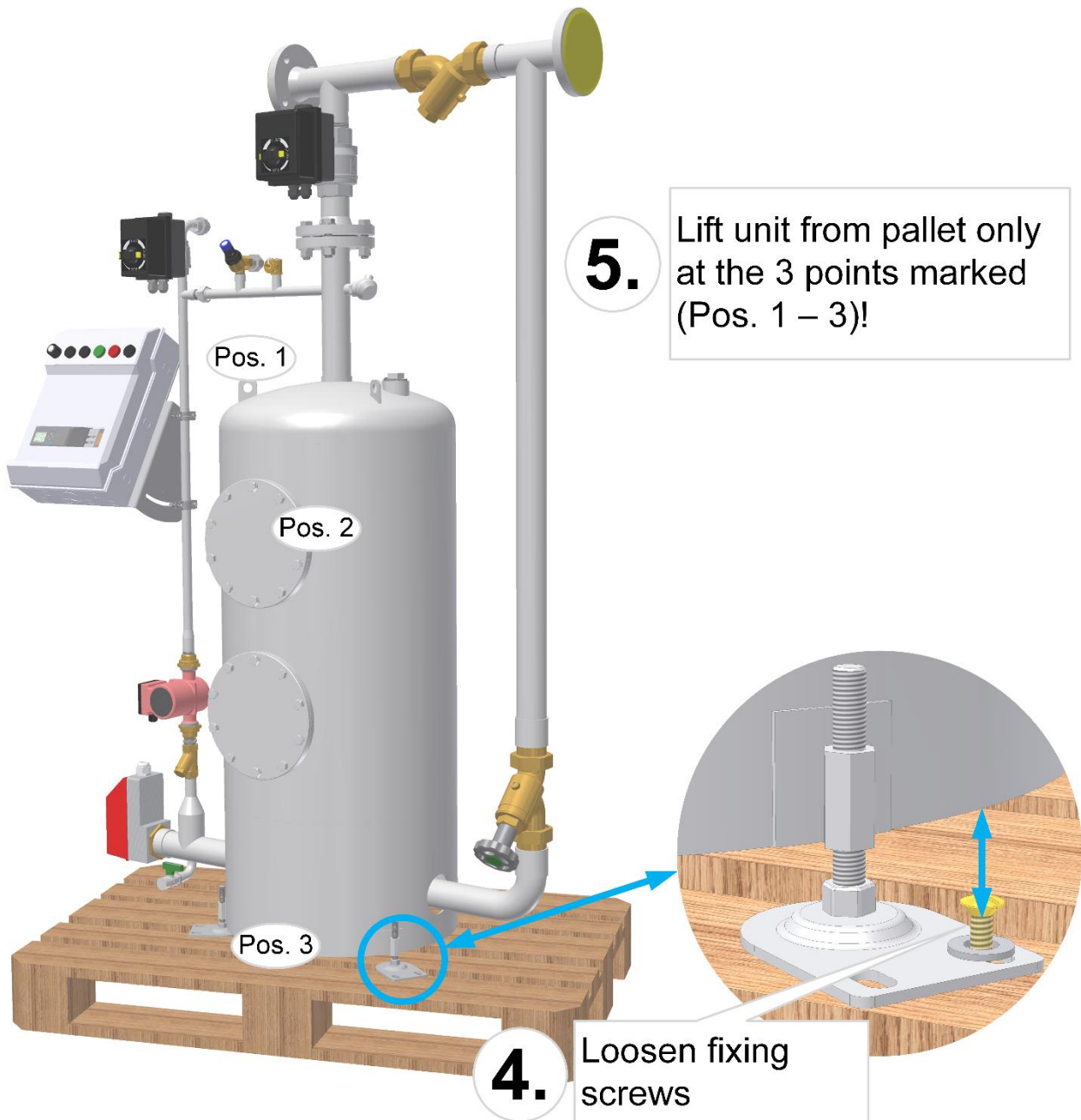
5 Mounting BIOCAT KS 8000, KS 11000, KS 14000





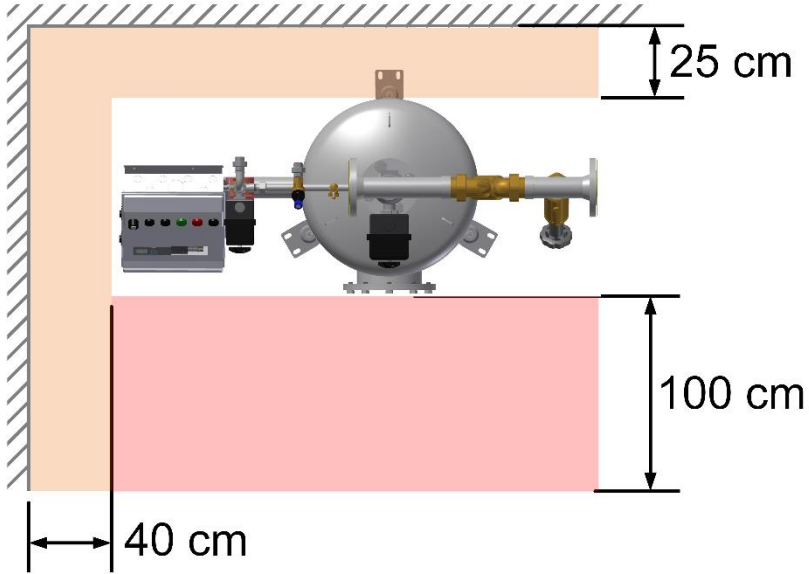
Risk of breakage!

The supply line piping must not be loaded when lifted off the pallet.
Use the eyelets provided for this purpose.

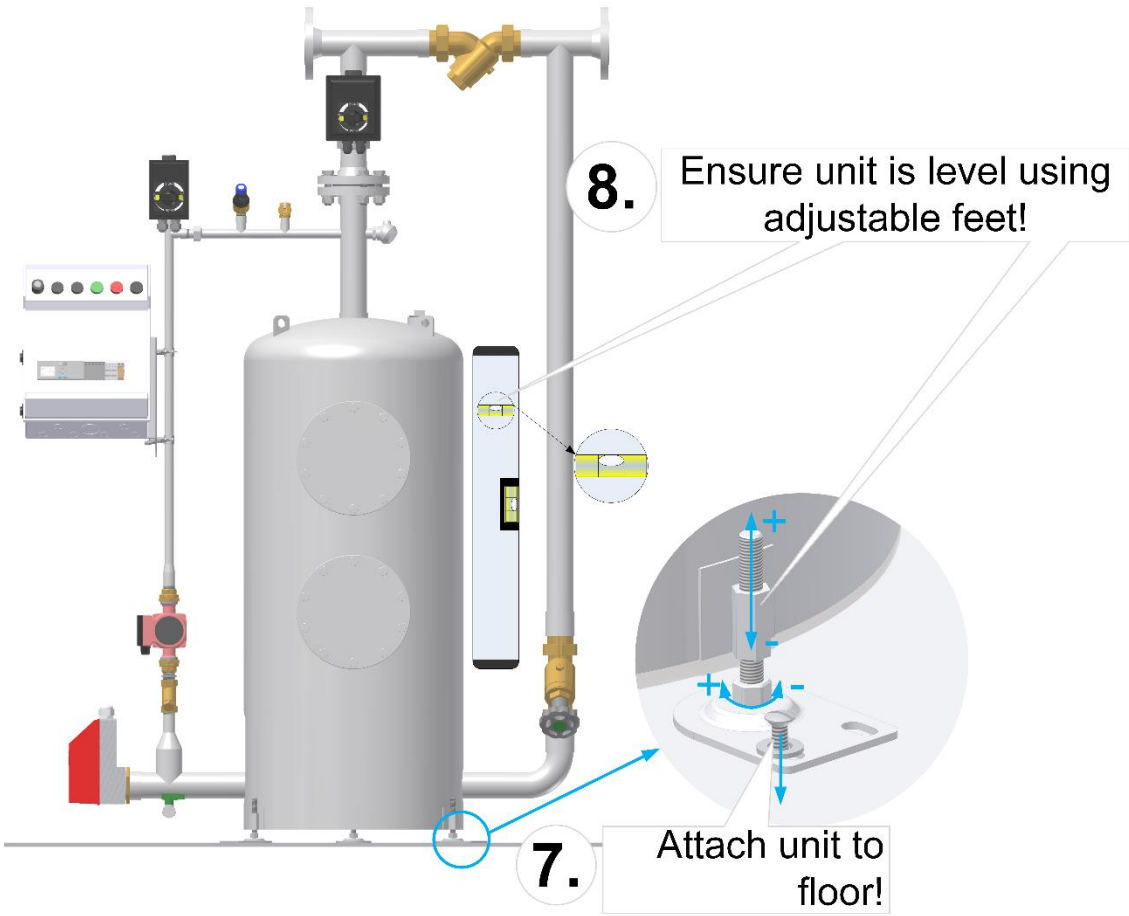


6.

Place unit in position
Ensure maintenance clearances!



Keep access areas and maintenance areas free!
Ensure that the system is accessible to the extent that it is possible to dismantle the system and the attachments at any time.



9.

The **discharge pipe** must comply with **DIN EN 12828!**
The safety valve opening pressure is **10 bar!**



Ensure discharge pipe is sloping!



Min. dimension DN15!



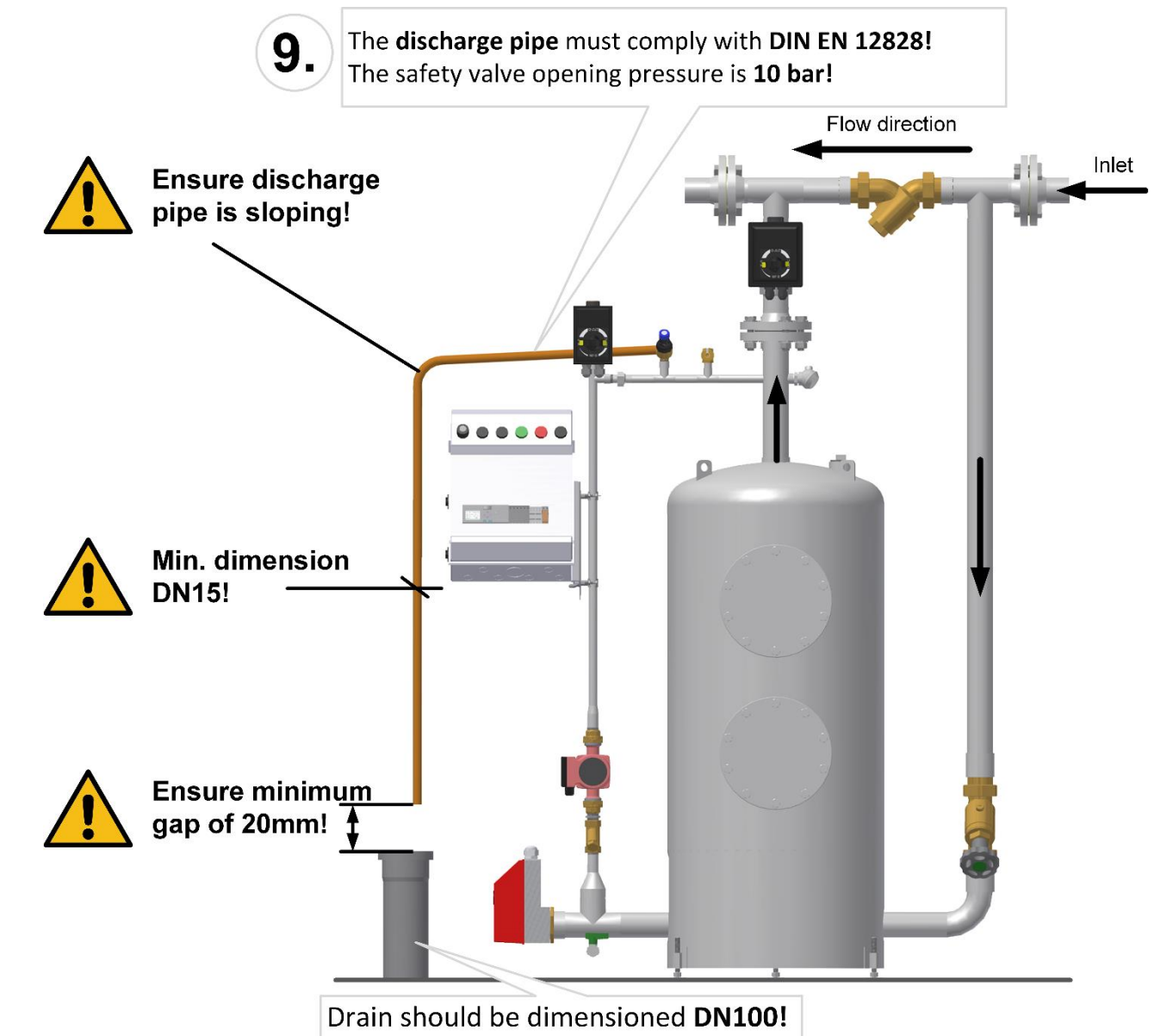
Ensure minimum gap of 20mm!

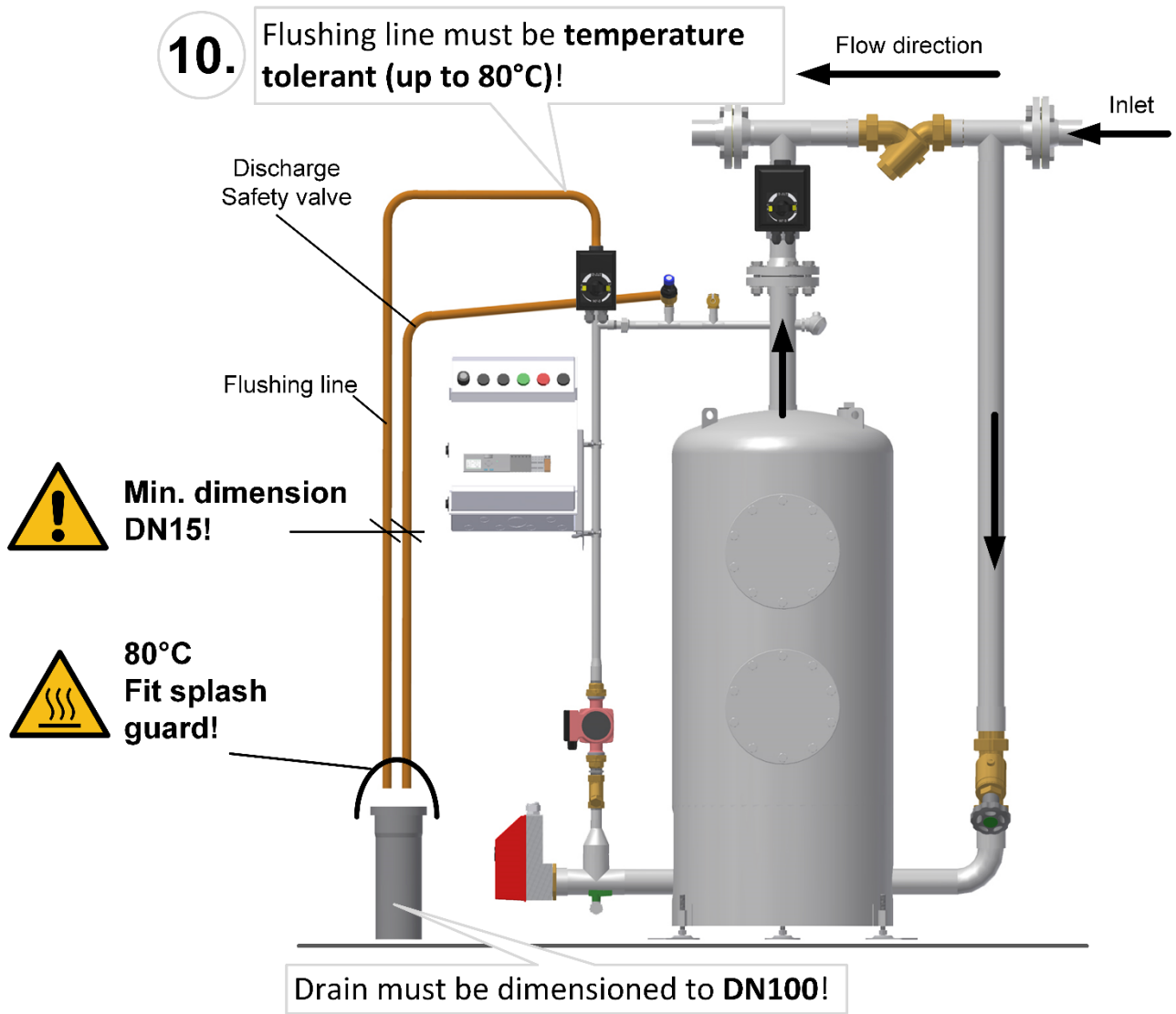
Drain should be dimensioned **DN100!**



Attention!

The function of the safety valve must be checked once a year by a specialist.





The backwash quantities can be taken from the table below!

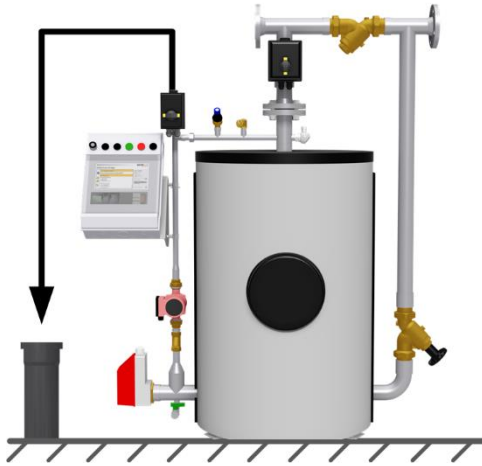
Type of device	BF volume flow [L/min]	BF quantity [L]	BF temperature [°C]
KS 8000	40	80	approx. 80
KS 11000		150	
KS 14000		180	



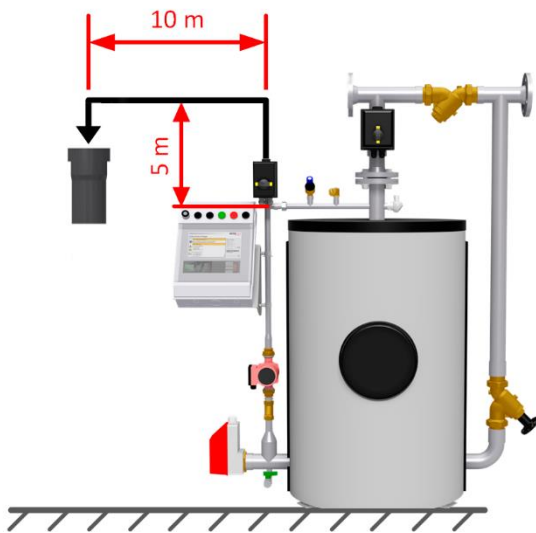
Avoid lifting units if possible!

If a lifting unit is integrated, it **MUST** be designed according to the RS volume flow and the RS temperature!

6 Possibilities Backwash line

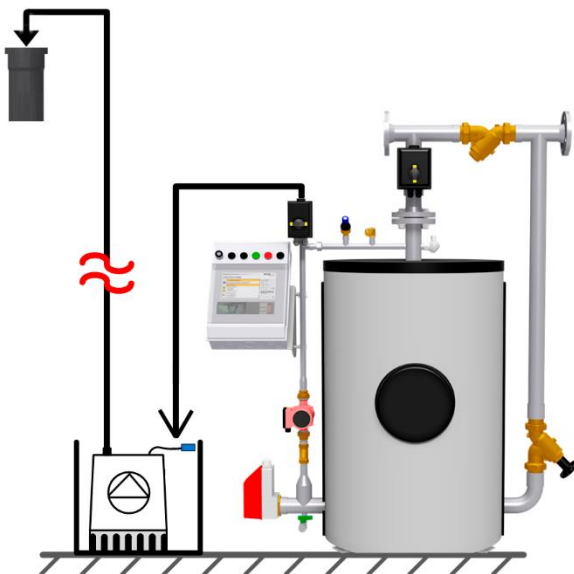


Backwash directly into the drain



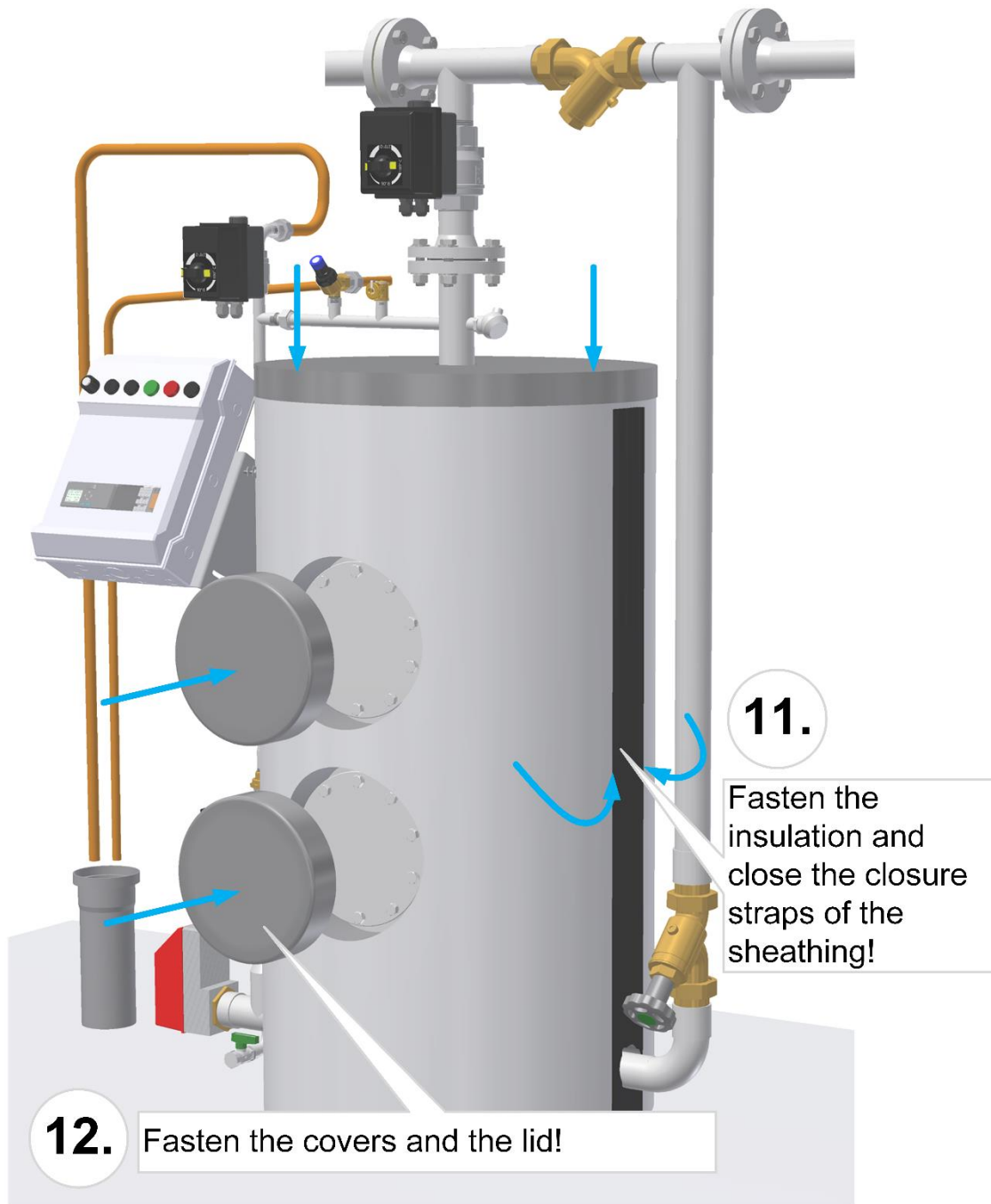
Backwash into the nearest sewer.

Max. 10 m length
Max. 5 m height difference

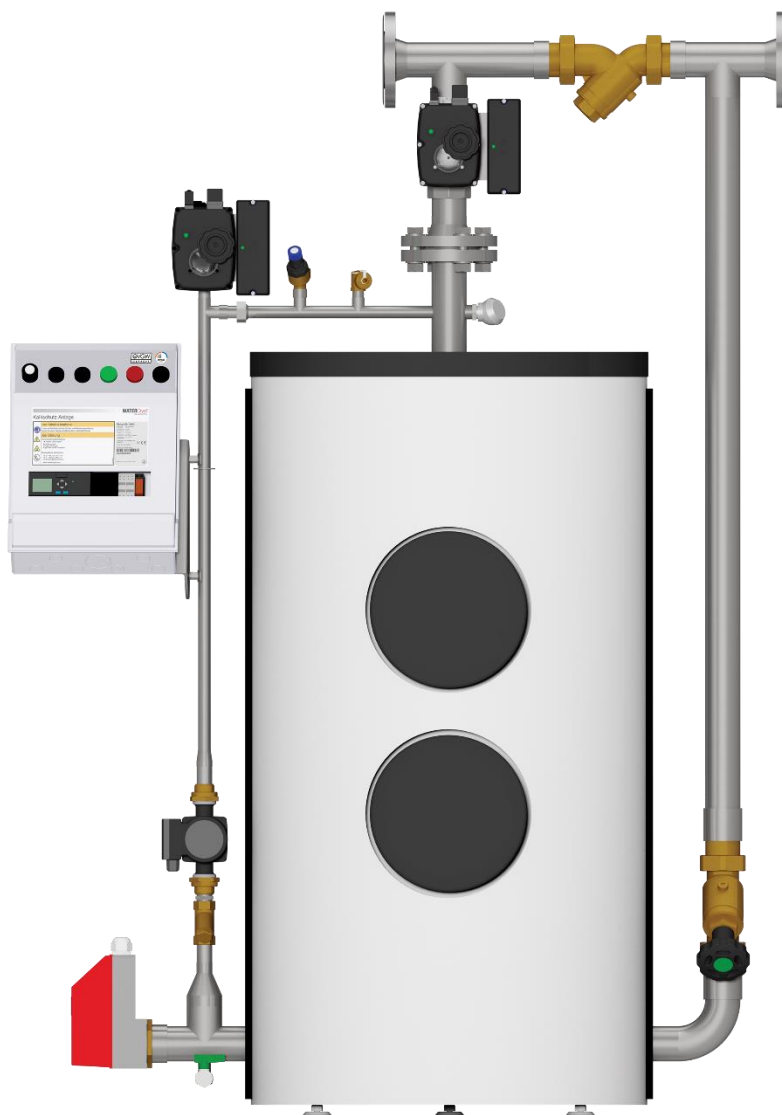


Backwash line is led into the lifting unit.

ATTENTION:
Flow rate: 40 L/min
Temperature: up to 80°C



Commissioning is carried out by WATERCryst customer service!



BIOCAT KS 14000 - mounted



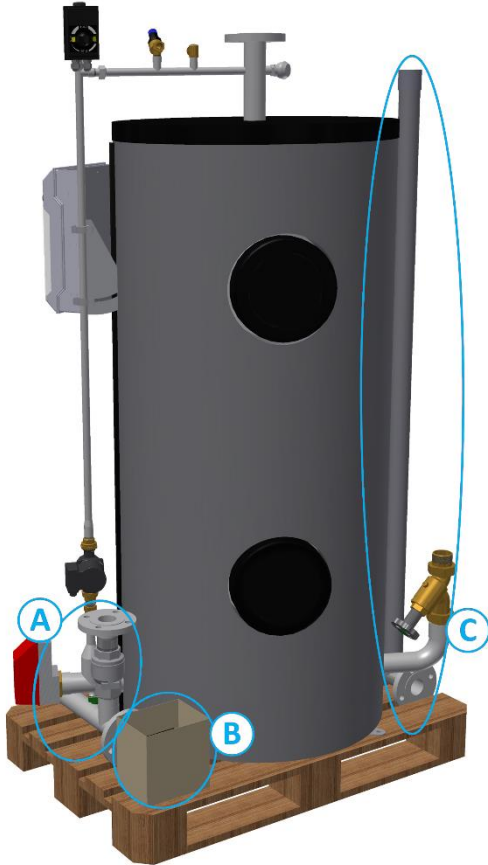
Attention!
Commissioning is carried out by WATERCryst customer service!

Mounting

BIOCAT KS 3.5D

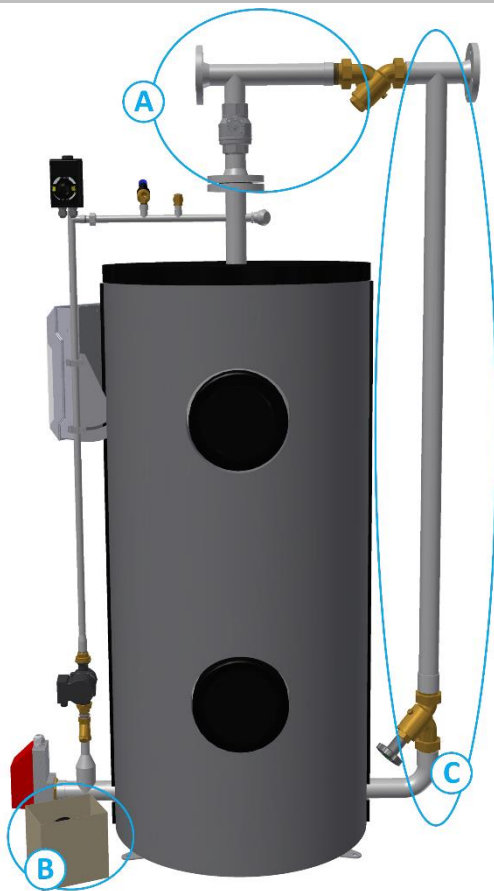
BIOCAT KS 5D

7 Mounting BIOCAT KS 3.5D, KS 5D



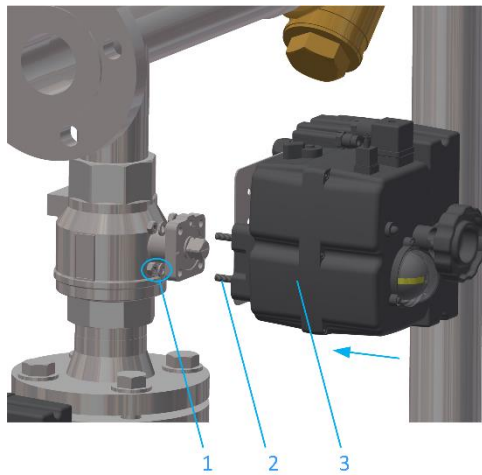
DELIVERY STATE:

- A. Piping piece - bypass
- B. Actuator KH1 incl. screws and reducer
- C. Piping piece - device inlet



Mount the pipe sections as shown opposite!

Mounting actuator BV1



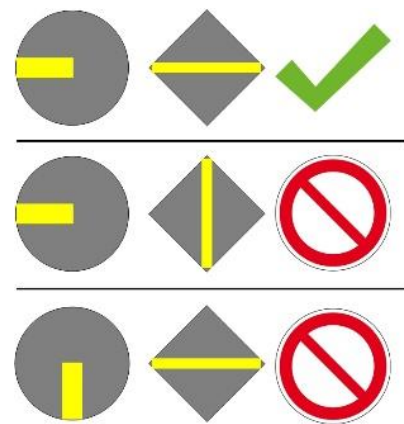
1. fastening elements -washer M6, hexagon nut M6
2. grub screws M6x45mm
3. actuator BV1



Position actuator BV1



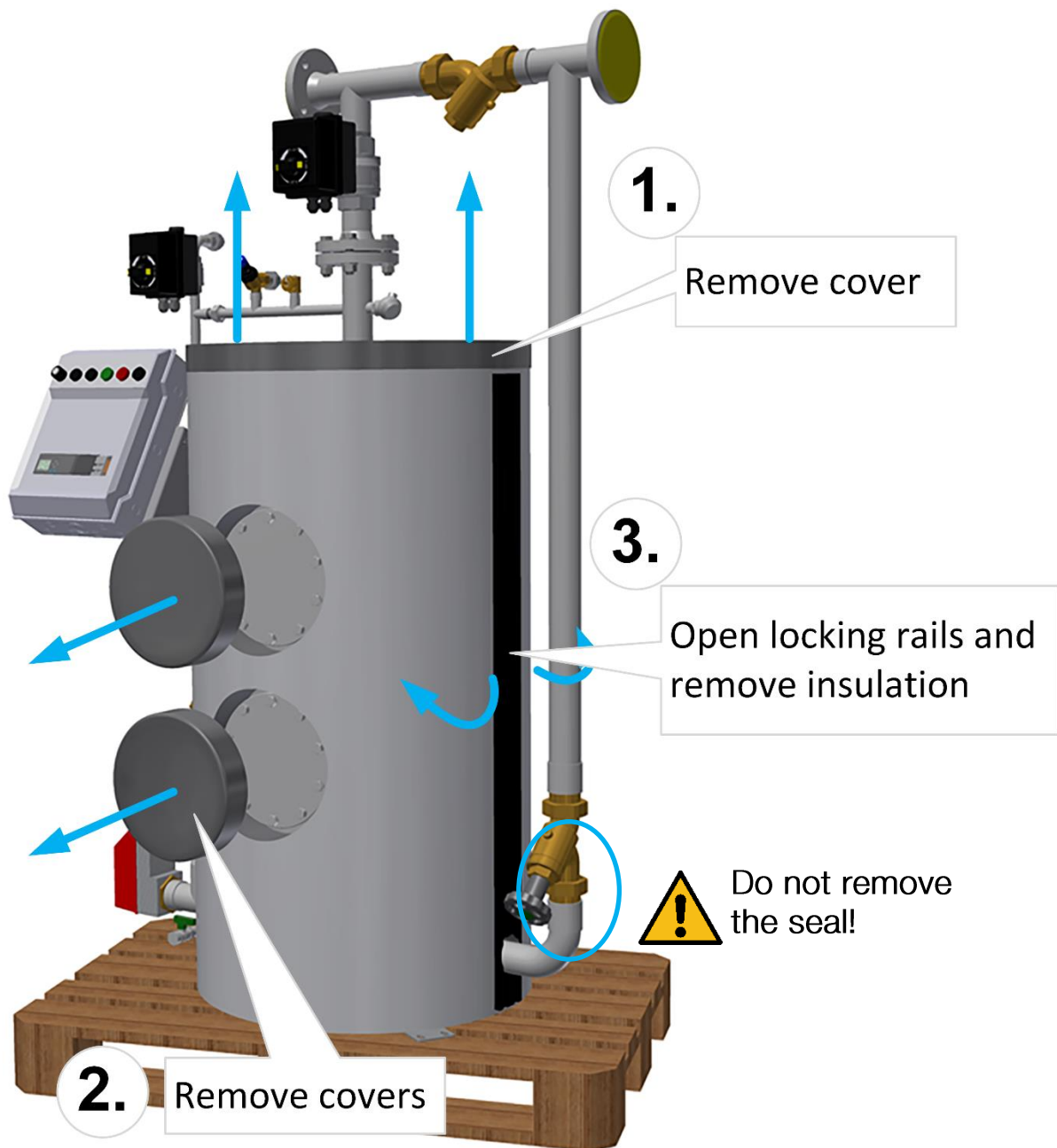
Ball valve position



Position ball valve & actuator



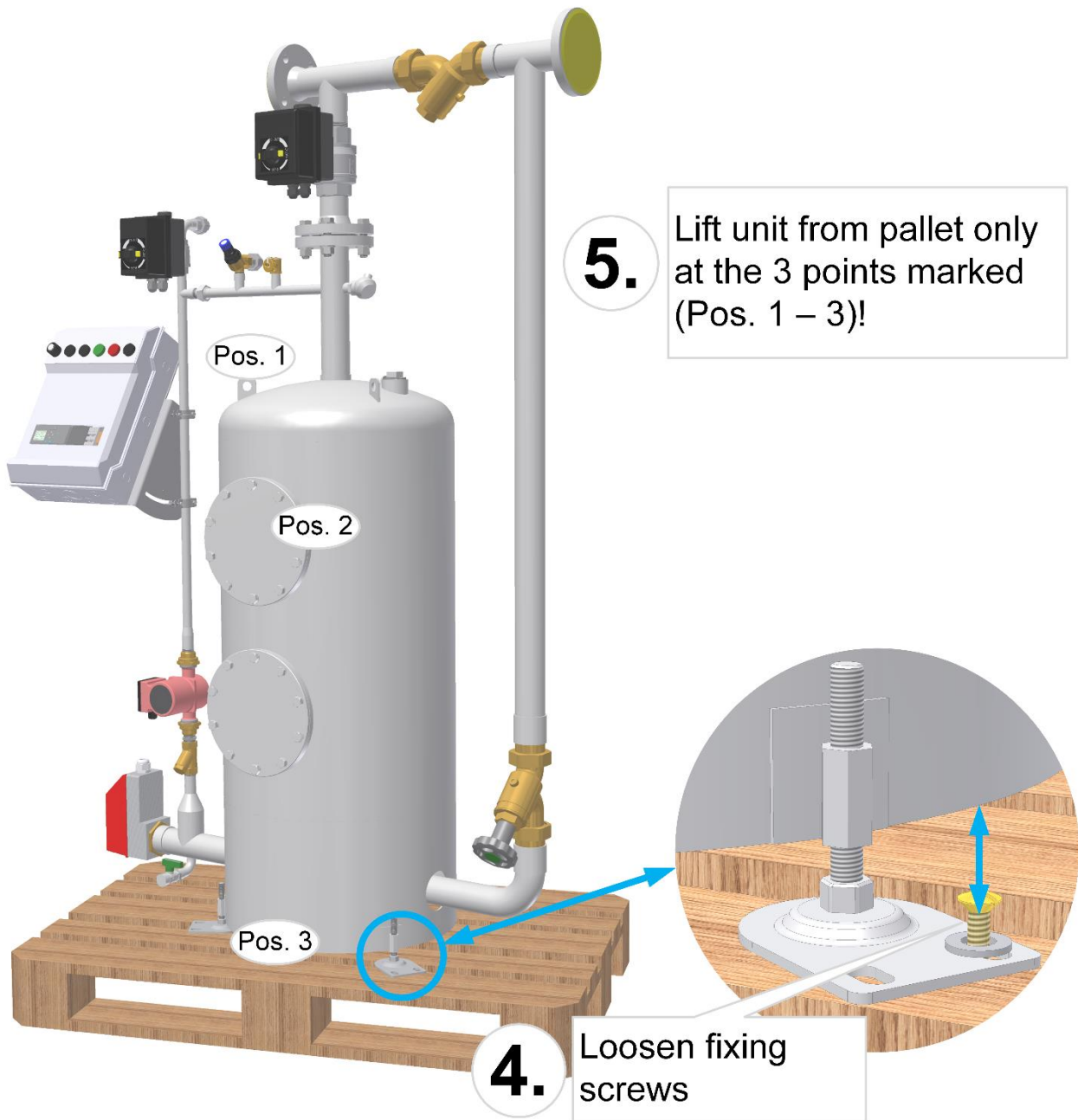
The direction of indication on the actuator, as well as on the ball valve, **MUST** match





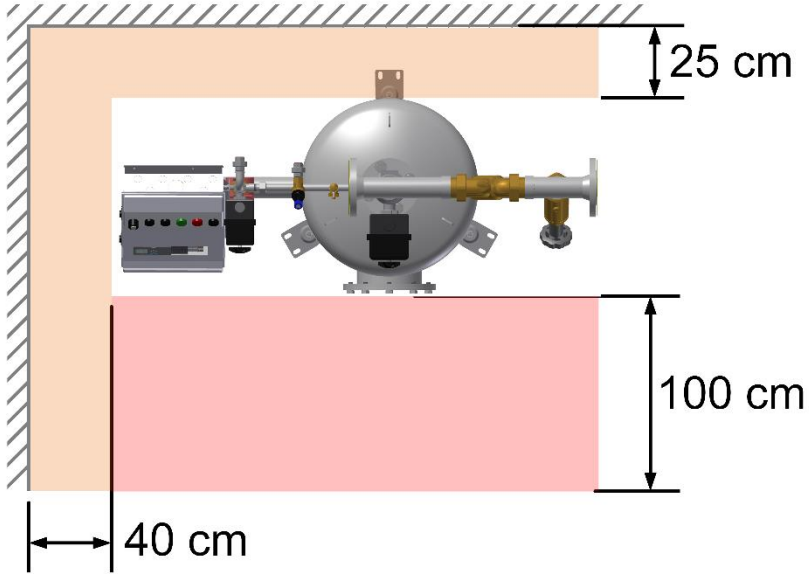
Risk of breakage!

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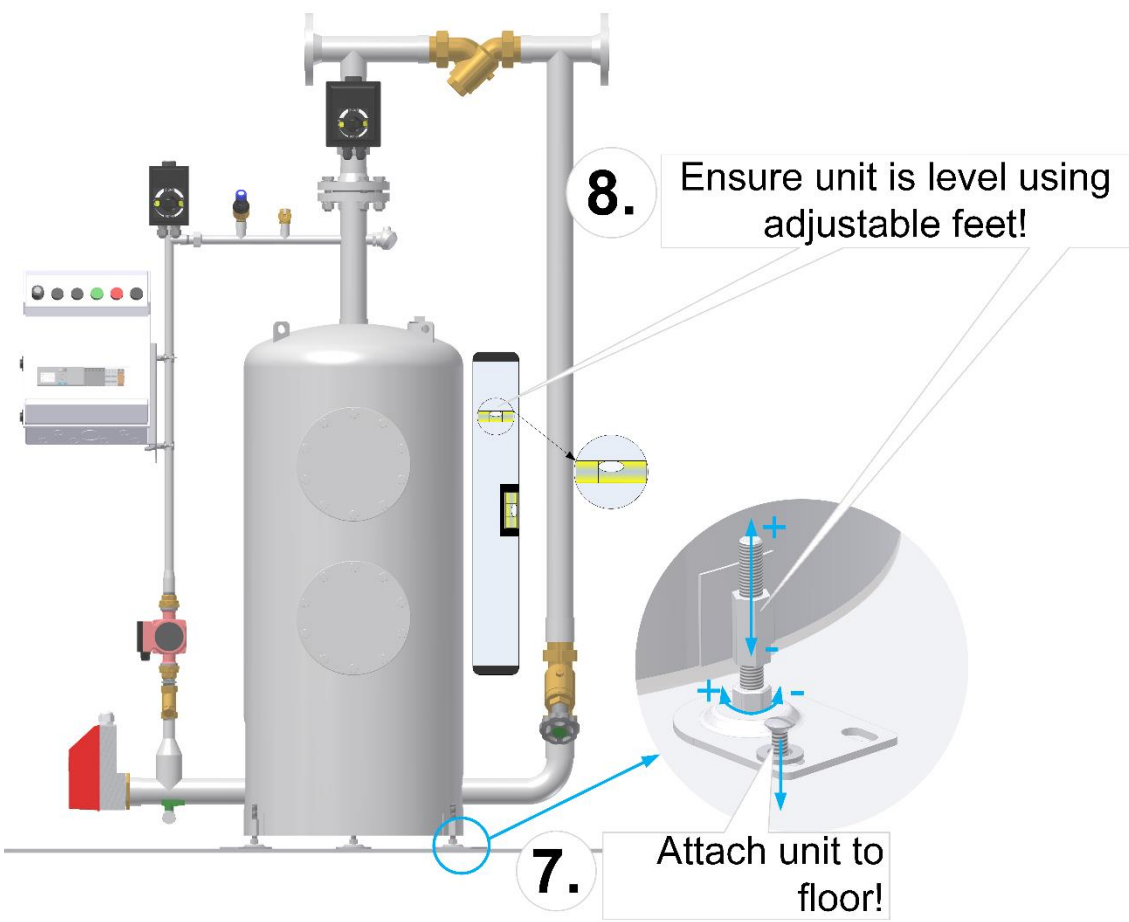


6.

Place unit in position
Ensure maintenance clearances!



Keep access areas and maintenance areas free!
Ensure that the system is accessible to the extent that it is possible to dismantle the system and the attachments at any time.



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The safety valve opening pressure is **10 bar!**



Ensure discharge pipe is sloping!



Min. dimension DN15!



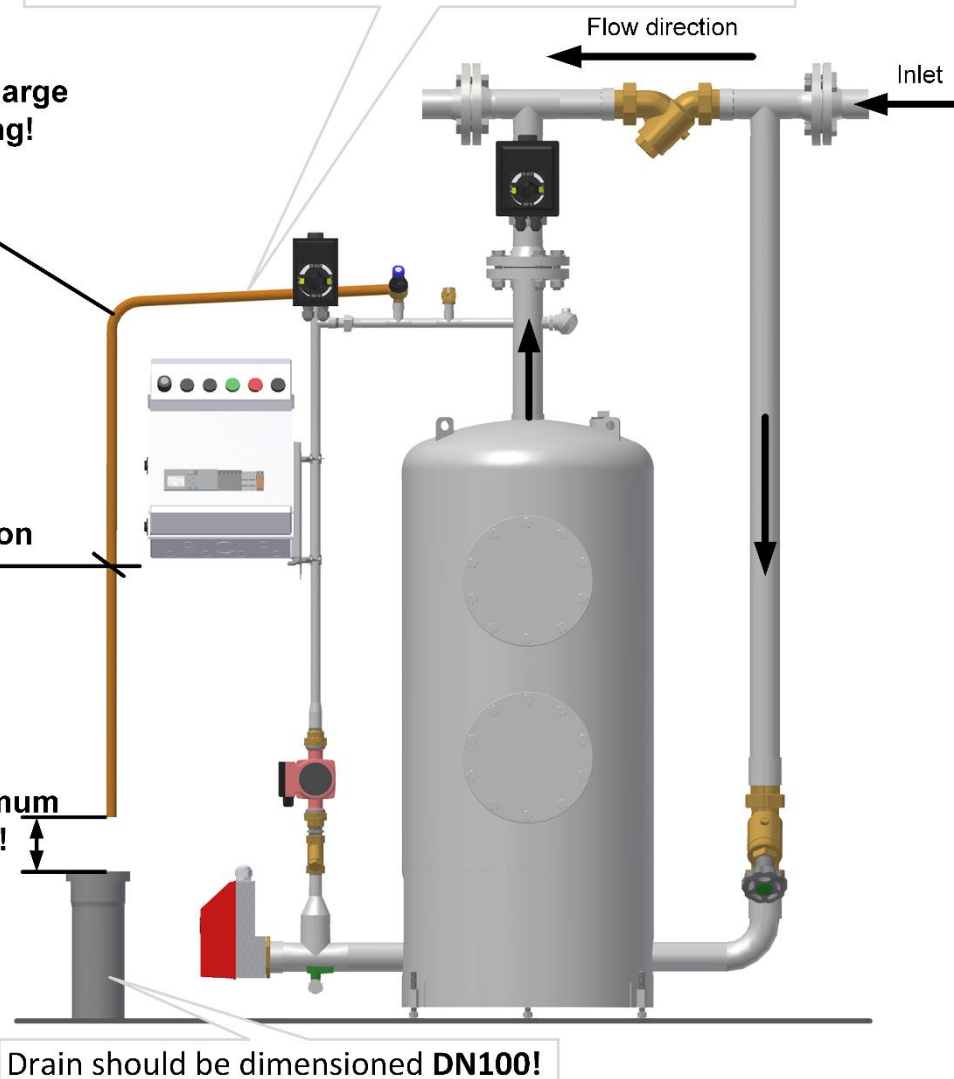
Ensure minimum gap of 20mm!

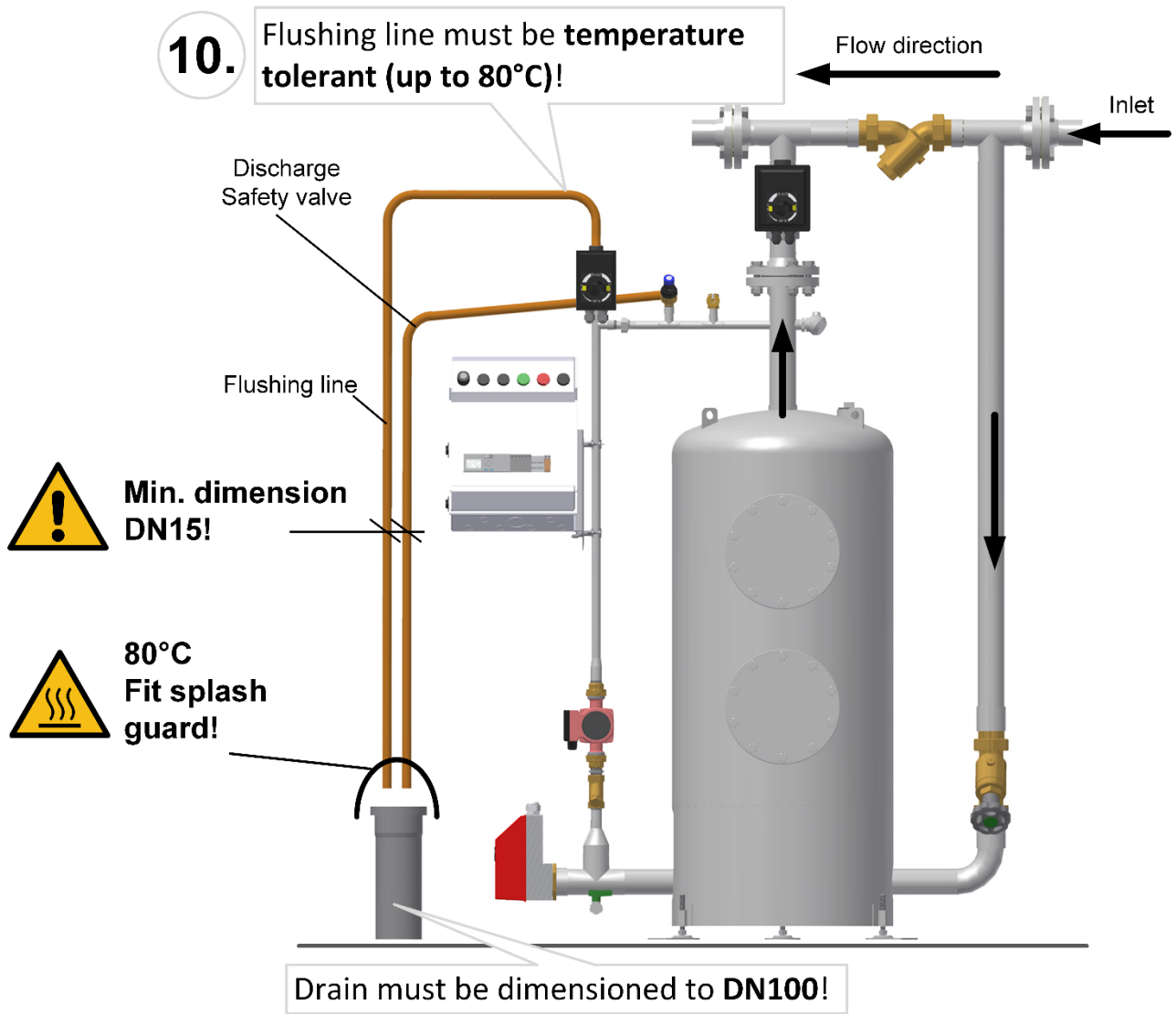
Drain should be dimensioned **DN100!**



Attention!

The function of the safety valve must be checked once a year by a specialist.





The backwash quantities can be taken from the table below!

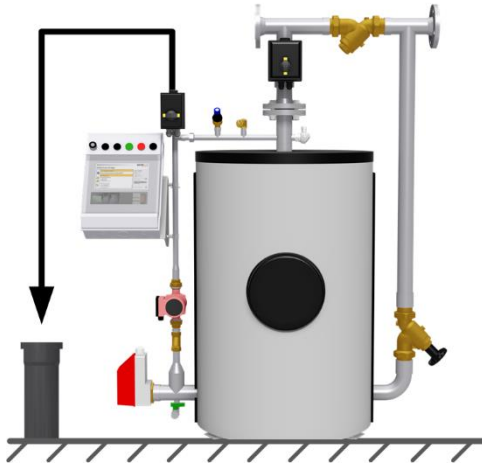
Type of device	BF volume flow [L/min]	BF quantity [L]	BF temperature [°C]
KS 3.5D	40	320	approx. 80
KS 5D		360	



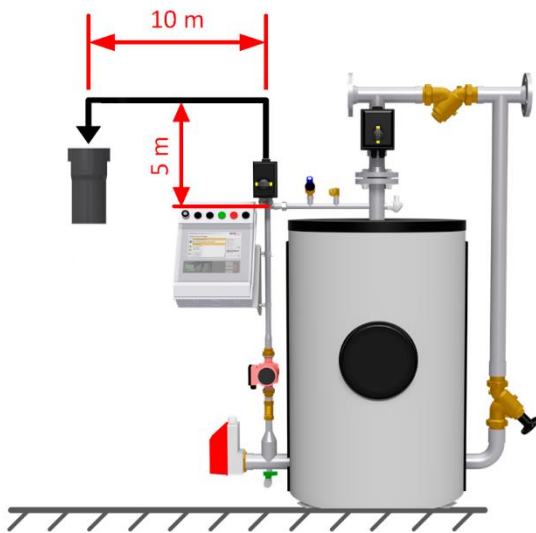
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If a lifting unit is integrated, it **MUST** be designed according to the RS volume flow and the RS temperature!

8 Possibilities Backwash line

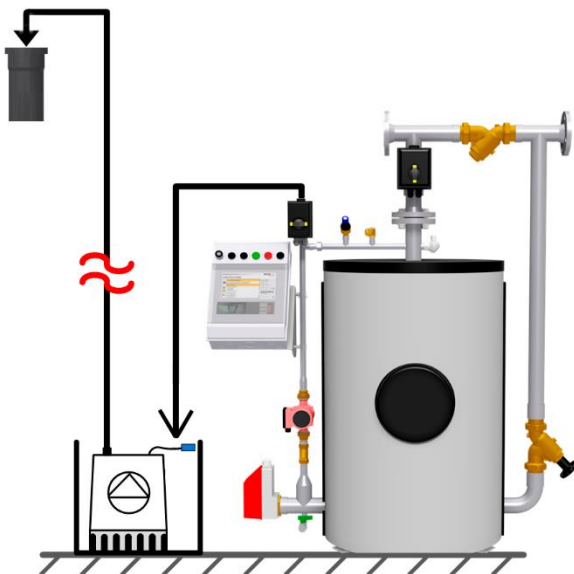


Backwash directly into the drain



Backwash into the nearest sewer.

Max. 10 m length
Max. 5 m height difference



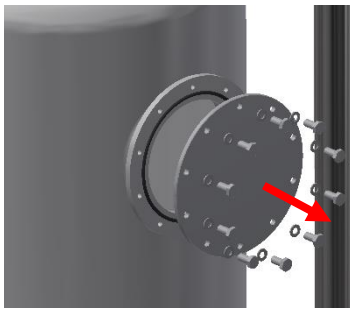
Backwash line is led into the lifting unit.

ATTENTION:
Flow rate: 40 L/min
Temperature: up to 80°C

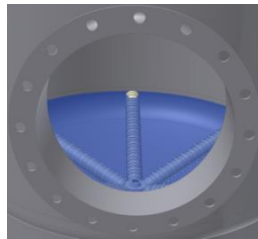
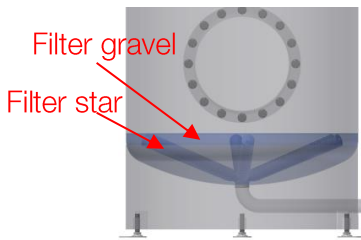
Filling the BIOCAT limescale protection system



The BIOCAT limescale protection system is filled carried out **exclusively by WATERCryst customer service!**



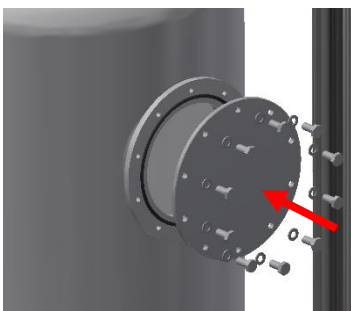
1. Loosen screws from lower flange cover.
2. Remove flange cover and flat gasket



3. Check the upper and lower filter star in the container.
4. Fill the filter gravel into the container (filter gravel must cover the filter star!).



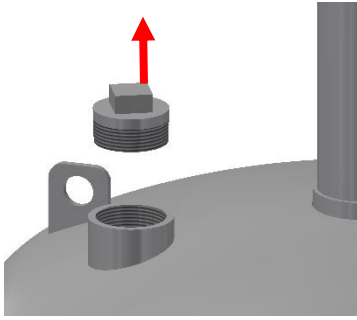
The filter gravel must be evenly distributed to achieve a good water flow distribution!



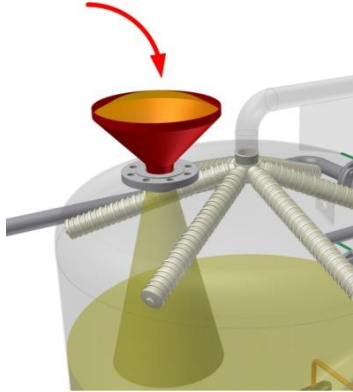
5. Clean the flat gasket and install it together with the flange cover.
6. Tighten the screws crosswise.



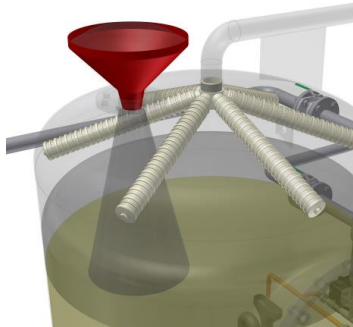
Ensure that the seal is seated correctly.



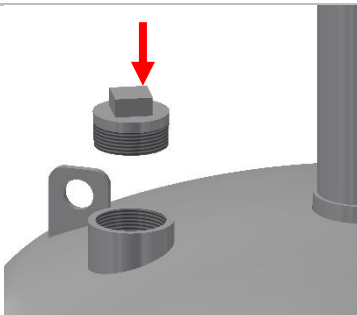
7. Loosen the dummy plug.
8. Remove the dummy plug.



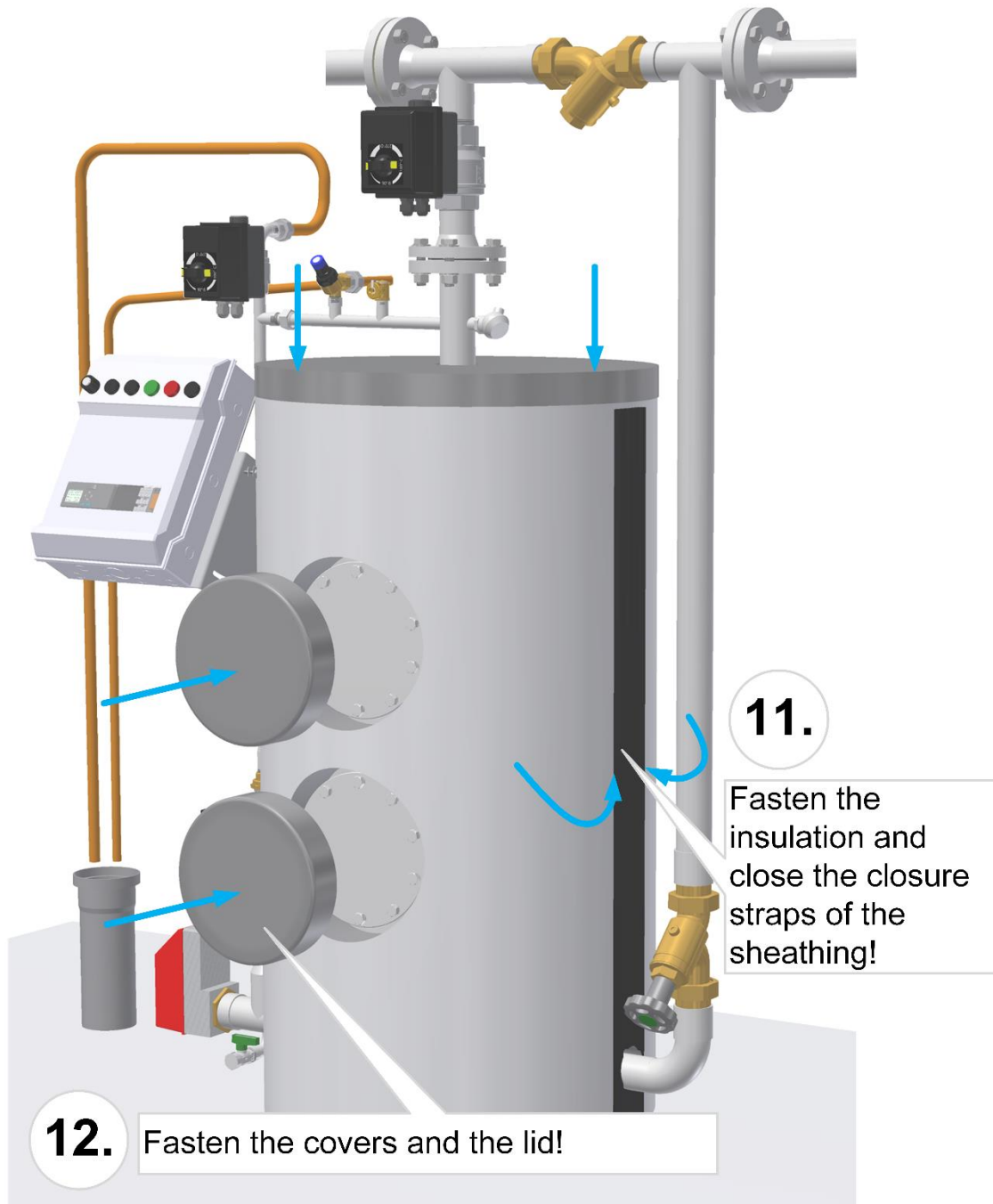
9. Fill in catalyst granulate (yellowish plastic granulate) via a funnel of appropriate size.



10. Fill in filter granulate (white, coarse plastic granulate) via a funnel of appropriate size.



11. Mount the dummy plug.



Commissioning is carried out by WATERCryst customer service!



BIOCAT KS 5D - mounted



Attention!
Commissioning is carried out by WATERCryst customer service!



Service

When requesting service, please be sure to quote the BIOCAT serial number from the type plate and the error code from the device display!



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