resideo Water Treatment

Braukmann KS10S

Softening device KaltecSoft

APPLICATION

Calcium carbonate dissolved in water is a valuable mineral but may create serious problems to private households as soon as the water is heated. A solid layer of lime scale, is formed preferably on hot surfaces. This scale lowers the heat efficiency of water heaters and boilers and reduces the life time of expensive appliances connected to the water supply. KaltecSoft is designed to provide a cost efficient solution to protect your water installations. KaltecSoft combines the proven ion exchange technology with a state-of-the-art control valve. Regeneration is volume controlled to ensure minimum consumption of water and salt.

Available in two different sizes KaltecSoft is easy to install and simple to operate.

APPROVALS

- CE
- DVGW (KS10S-30) incl. additional test to EN 14743

SPECIAL FEATURES

- Proportional salting - Before each regeneration, the device checks the consumed amount of water and regenerates proportionally to the water consumption
- Automatic capacity adjustment - Depending on the water consumption, the device selects the optimal power level
- Simple operation
- Easy installation

TECHNICAL DATA

Media	
Medium:	Drinking water
Max. flow rate:	3.2 m^3/h
Connections/Sizes	
Connection sizes:	1" internal thread
Connection water output:	$^1/_2$" hose nozzle
Pressure values	
Operating pressure:	1.3 - 8.5 bar
Nominal pressure:	PN 10
Pressure loss during max. flow rate:	2.0 bar
Operating temperatures	
Water temperature:	1 - 40 °C
Ambient temperature:	2 - 40 °C
Specifications	
Mains voltage (ext. transformer):	230 V / 50 Hz
Micro fuse:	24 V /50 Hz
Power consumption:	2 W
Protective class:	IP 22

The plant is designed for operation with salt tablets (acc. EN 973 Typ A).

CONSTRUCTION

Overview		Components	Materials
	**1**	Control panel with status indicator	Glass-fibre-reinforced plastics
	2	Housing	high-quality synthetic material
		Not depicted components:	
		Microprocessor	-
		Bottle with monodisperse ion exchanger	Noryl
		Bypass valve with integrated diluting valve	Brass
		External transformer	-
		Disinfection unit	-
		Rotary disc valve	Noryl
		Corrugated pipe connection hoses	Stainless steel
		Total hardness measuring instrument	-

METHOD OF OPERATION

The softening device is controlled by a highly modern microprocessor. Using the integrated consumption counter the microprocessor calculates the individual consumption characteristics and the remaining capacities resulting thereof as well as the optimal time for the regeneration.

Regeneration

The regeneration is done in 4-day intervals, i.e. at the latest 4 days after the last regeneration the next regeneration is initiated (independent of the water consumption).

If 97 % of the calculated capacity has been reached, a regeneration is initiated independently of the 4-day interval. During the regeneration, untreated water can be taken out.

Disinfection

The softening device is equipped with a disinfection unit that disinfects all drinking water porting parts of the softening device during each regeneration.

Clean-Feature on KS10S-30

In this cleaning function, a backflow takes place first with a fast rinse cycle before the normal regeneration begins. This is needed especially for water that contains iron and/or a high content of sediments (sand, soil, dirt, etc.).

Type	Resideo recommendations
KS10S-30	1-3 family dwelling
KS10S-60	3-8 family dwelling

KS10S-30 is certified by DVGW (Registration No. NW9151-CO0166) for use in houses for 6-8 families or up to 20 persons.

TRANSPORTATION AND STORAGE

Keep parts in their original packaging and unpack them shortly before use.

The following parameters apply during transportation and storage:

Parameter	Value
Environment:	clean, dry and dust free
Min. ambient temperature:	5 °C
Max. ambient temperature:	40 °C
Min. ambient relative humidity:	25 % *
Max. ambient relative humidity:	85 % *

*non condensing

INSTALLATION GUIDELINES

Setup requirements

- All works should only be carried out by a qualified installer
- Ensure that installation is not subject to freezing or extreme heat
  - Avoid direct exposure to sunlight
- The softening device should rest on an even surface
- If the input pressure is more than 5 bar, then a pressure reducer needs to be installed ahead of the softening device according to DIN 1988
- It should be checked whether a dosing device to prevent corrosion should be added to the plant
- A filter (e.g. F76S) should be installed no more than 1 meter ahead in flow direction of the softening device to protect the plant
- The following is needed for operation in the close vicinity of the device:
  - a channel interface (at least DN50)
  - separate mains connection (230 V/50 Hz)
  - floor drain

Installation Example

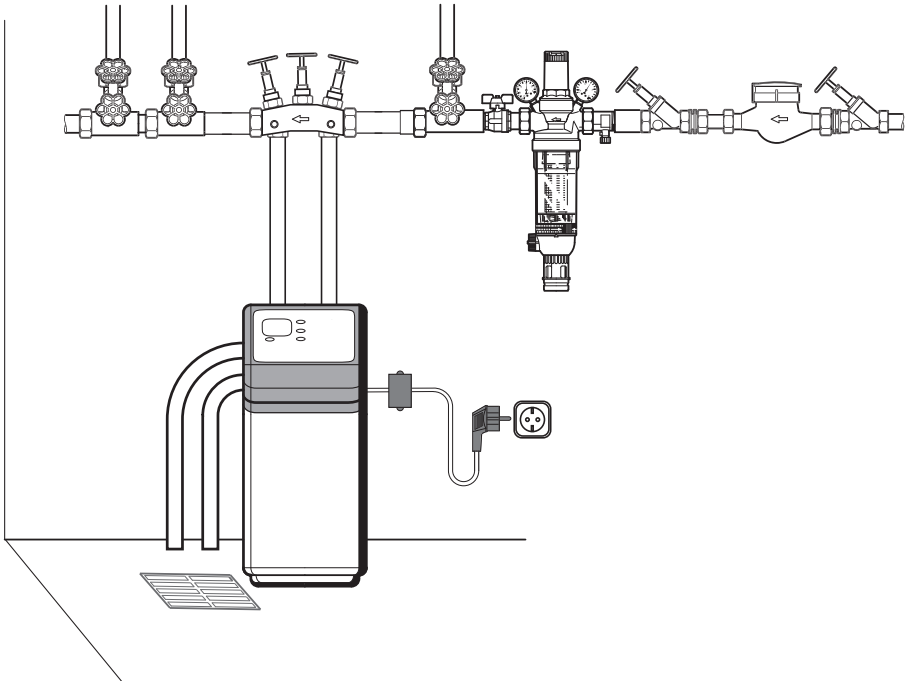
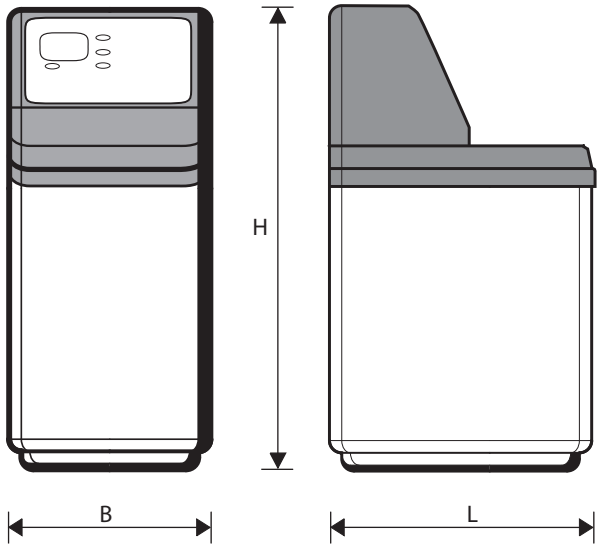


Fig. 1 Standard installation example for the Softening device KaltecSoft

DIMENSIONS

Overview



Parameter		KS10S-30	KS10S-60
Connection sizes:	R	1" AG	1" AG
Weight:	kg	20	25
Dimensions:	H	670	1100
	L	550	550
	B	300	300
Volume of ion exchanger:	l	11	17
Provision of operating material:	kg	25	50
Exchange capacity between regenerations:	mol/l	4.7-5.4 (26.5-30.2 °dH x m^3)	5.8-12.3 (32.4-68.9 °dH x m^3)
Regeneration period:	min	85 - 90	75 - 110
Salt consumption (depending on the capacity level and proportional salting):	kg	0.84 -1.17	0.8-4.5
Water consumption during regeneration:	l	85 - 87	125 - 135
DVGW registration number:		NW9151CO0166	

Note: All dimensions in mm unless stated otherwise.

ORDERING INFORMATION

The following tables contain all the information you need to make an order of an item of your choice. When ordering, please always state the type, the ordering or the part number.

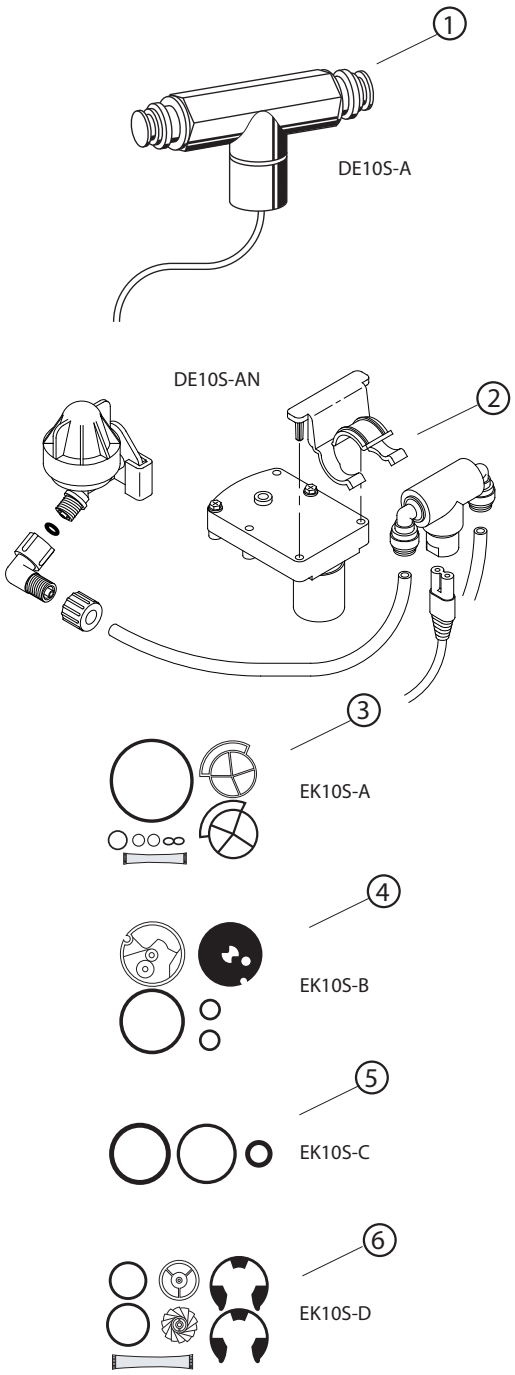
Accessories

	Description		Dimension	Part No.
	**OFV10S-A**	**Bypass valve insert**		
		If a pressure scourer is applicated it is neccessary tofit a bypass valve insert into the bypass valve.		OFV10S-A

Spare Parts

Softening device KaltecSoft KS10S, from 2013 onwards

Overview



	Description	Dimension	Part No.
1	**Disinfection unit**		
			DE10S-A
2	**Disinfection unit for devices produced from August 2013 onwards**		
			DE10S-AN
3	**Controller head seal kit**		
			EK10S-A
4	**Spare part kit for brine pump**		
			EK10S-B
5	**O-ring set**		
			EK10S-C
6	**Turbine water counter**		
			EK10S-D
	Bypass/blending valve for KS10S		
			BV10S-A
	Stainless steel corrugated pipe for KS10S		
			CP10S-A
	Transformer KS10S		
			TR10S-A
	Control panel for KS10S		
			CE10S-A

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Subject to change. EN0H-1417GE23 R0420