

behr steam distillers S 1 to S 5

Customised features



Exemplary safety for the steam distillation

behr steam distillers are not only efficient and reliable partners in everyday laboratory life. An important issue during the development and design of the equipment was also the safety of users.

Therefore, all steam distillers have:

- a protection switch as master switch, which automatically trips in the event of overload and short-circuit
- a mechanical overpressure safety valve to prevent excessive pressure in the steam generator
- vessel monitoring (distillation is not possible until a vessel has been inserted)
- a door contact switch, which automatically switches off the distiller if the door is open
- a resettable excess temperature thermostat (in the event of lack of water in the steam generator)
- cooling circuit monitoring by means of pressure switches
- temperature-controlled steam heating phase and pressure control via solenoid valve

Steam distillers

behr S series steam distillers are the optimum addition to the behr Kjeldahl digestion system. Depending on the requirements, the user can choose between five automatic steam distillers. These have identical basic designs, however, their ease of use and degree of automation differ. The top of the range unit, the behr S 5, is prepared for work with an external titrator.

Maintenance set for behrotest® steam distillers

The set comes with all the necessary spare parts for the working area as well as for the interior of the behrotest® steam distillers.

The maintenance set included are exactly those

- screw caps,
- seals,
- tubes and
- valves

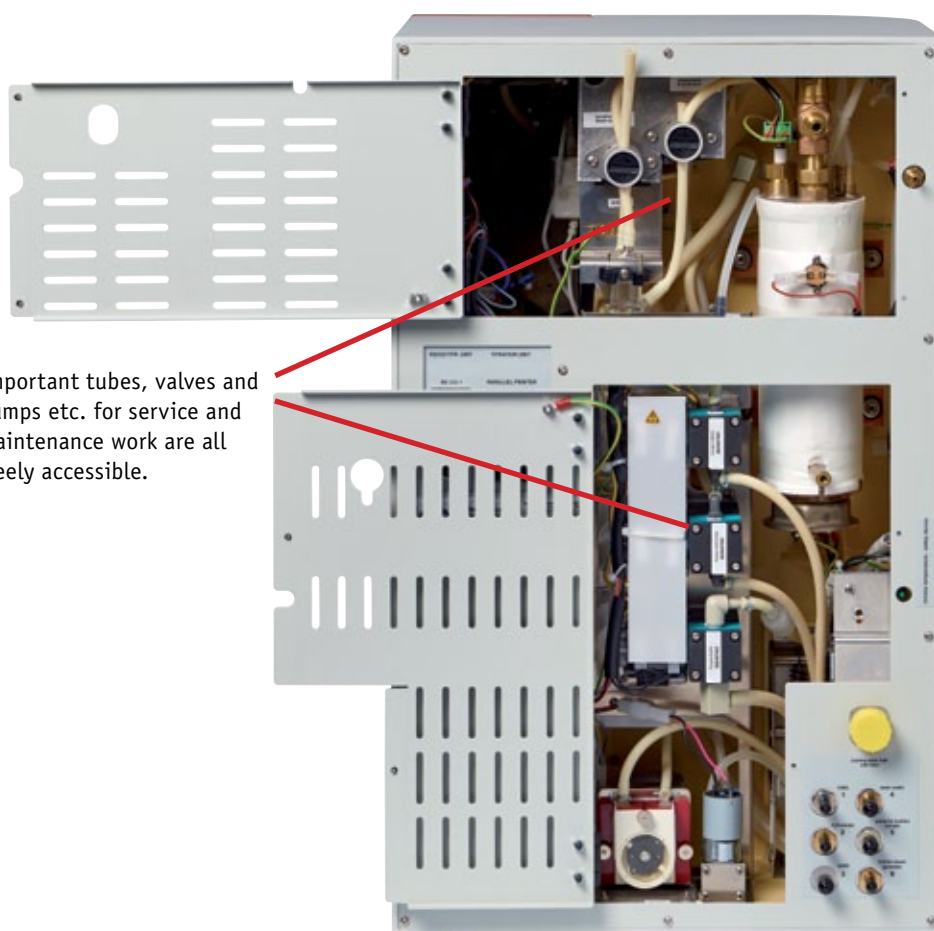
which are prone to wear out during everyday use in the laboratory.



Type	Art. No.
behrotest® maintenance set	B00606938

behrotest®
maintenance set

Maintenance friendly design



Important tubes, valves and pumps etc. for service and maintenance work are all freely accessible.

User friendly design:

doors at the rear can be opened simply without tools and give access for routine maintenance work.



S 1

Steam distiller S 1 with automatic addition of NaOH

- Exemplary safety and reliability
- Robust and insensitive housing made of polyurethane
- Distillation time approx. 3 min per sample
- Detection limit 0.1 mg N
- Retrieval rate > 99.5%
- Reproducibility $\pm 1\%$
- Adjustable steam output (10% - 100%)
- Particularly easy, menu-driven operation using a single control (behr single-knob control)
- Programmable reaction time
- Programmable distillation time
- USB interface
- Level monitoring for the canister set
- Practical quick-release clamping device, which the user can also easily operate with their left hand

S 1

Type	Product description	Art. No.
S 1	Steam distiller, semi-automated	B00218025
KAS 20	Canister set for S 1 and S 2, consisting of 2 canisters à 20 l, incl. float switches	B00218041
KAS 20/10	Canister set for S 1 and S 2, consisting of 2 canisters à 10 l, incl. float switches	B00704640



S 2

Steam distiller S 2 with automatic addition of NaOH and H₂O

- Exemplary safety and reliability
- Robust and insensitive housing made of polyurethane
- Distillation time approx. 3 min per sample
- Detection limit 0.1 mg N
- Retrieval rate > 99.5%
- Reproducibility $\pm 1\%$
- Adjustable steam output (10% - 100%)
- Particularly easy, menu-driven operation using a single control (behr single-knob control)
- Programmable reaction time
- Programmable distillation time
- USB interface
- Level monitoring for the canister set
- Practical quick-release clamping device, which the user can also easily operate with their left hand

S 2

Type	Product description	Art. No.
S 2	Steam distiller, semi-automated	B00233702
KAS 20	Canister set for S 1 and S 2, consisting of 2 canisters à 20 l, incl. float switches	B00218041
KAS 20/10	Canister set for S 1 and S 2, consisting of 2 canisters à 10 l, incl. float switches	B00704640

Steam distiller S 3 with automatic addition of NaOH and H₂O with automatic extraction of the sample residues and with 10 programs

- Exemplary safety and reliability
- Robust and insensitive housing made of polyurethane
- Distillation time approx. 3 min per sample
- Detection limit 0.1 mg N
- Retrieval rate > 99.5%
- Reproducibility ± 1%
- Adjustable steam output (10% - 100%)
- Particularly easy, menu-driven operation using a single control (behr single-knob control)
- Programmable reaction time
- Programmable distillation time
- USB interface
- Level monitoring for the canister set
- Practical quick-release clamping device, which the user can also easily operate with their left hand

S 3

Type	Product description	Art. No.
S 3	Steam distiller, semi-automated	B00233703
KAS 30	Canister set for S 3, consisting of 3 canisters à 20 l, incl. float switches	B00218042
KAS 30/10	Canister set for S 3, consisting of 3 canisters à 10 l, incl. float switches	B00736342



S 3

Steam distiller S 4 with automatic addition of NaOH, H₂O and H₃BO₃ with automatic extraction of the sample residues and with 99 programs

- Exemplary safety and reliability
- Robust and insensitive housing made of polyurethane
- Distillation time approx. 3 min per sample
- Detection limit 0.1 mg N
- Retrieval rate > 99.5%
- Reproducibility ± 1%
- Adjustable steam output (10% - 100%)
- Particularly easy, menu-driven operation using a single control (behr single-knob control)
- Programmable reaction time
- Programmable distillation time
- USB interface
- Level monitoring for the canister set
- Practical quick-release clamping device, which the user can also easily operate with their left hand

S 4

Type	Product description	Art. No.
S 4	Steam distiller, fully automatic	B00218032
KAS 40	Canister set for S 4 and S 5, consisting of 4 canisters à 20 l, incl. float switches	B00218043
KAS 40/10	Canister set for S 4 and S 5, consisting of 4 canisters à 10 l, incl. float switches	B00513618



S 4



Steam distiller S 5 with automatic addition of NaOH, H₂O and H₃BO₃ with automatic extraction of the sample residues, with 99 programs and a connection option for external titrator

- Exemplary safety and reliability
- Robust and insensitive housing made of polyurethane
- Distillation time approx. 3 min per sample
- Detection limit 0.1 mg N
- Retrieval rate > 99.5%
- Reproducibility ± 1%
- Adjustable steam output (10% - 100%)
- Particularly easy, menu-driven operation using a single control (behr single-knob control)
- Programmable reaction time
- Programmable distillation time
- USB interface
- Level monitoring for the canister set
- Practical quick-release clamping device, which the user can also easily operate with their left hand

S 5

S 5

Type	Product description	Art. No.
S 5	Steam distiller, fully automatic, prepared for external titrator (e.g. TB 2)	B00218034
KAS 40	Canister set for S 4 and S 5, consisting of 4 canisters à 20 l, incl. float switches	B00218043
KAS 40/10	Canister set for S 4 and S 5, consisting of 4 canisters à 10 l, incl. float switches	B00513618
TB 2	Titration module for connection to the S 5 steam distilling apparatus, with Kjeldahl method and evaluation. Printer upon request	B00645403

Technical data for steam distillers

	S 1	S 2	S 3	S 4	S 5
Voltage	230 VAC/115 VAC				
Frequency	50/60 Hz				
Power consumption	1700 W				
Current consumption	9 A				
Cooling water consumption	approx. 5 l/min				
Distillation time	approx. 2 - 4 min per sample				
Storage container	Any size required. Recommendation: behrotest® KAS canister sets				
Interface	USB				
Display	LCD				
Programs	1	1	10	99	99
Dimensions (W x H x D in cm)	approx. 41 x 67.5 x 41				
Weight	approx. 20 kg	approx. 21 kg	approx. 23 kg	approx. 24,5 kg	approx. 29 kg
Titration connection	no	no	no	no	yes



Features of the various units

	S 1	S 2	S 3	S 4	S 5
Automatic addition of H ₂ O	–	+	+	+	+
Automatic addition of NaOH	+	+	+	+	+
Automatic addition of H ₃ BO ₃	–	–	–	+	+
Automatic extraction of the sample residues	–	–	+	+	+
Number of programs	1	1	10	99	99
Titration connection option	–	–	–	–	+
Programmable reaction time	+				
Programmable distillation time	+				
Automatic steam generation	+				
Adjustable steam output (10% – 100%)	+				
Separate purging program	+				
Display language selectable by user	+				
Optical error indications	+				
Acoustic error indications	+				
Door safety contact switch	+				
USB interface	+				
Standby mode between distillations	+				
Level monitoring for the canister set	+				
Different glass digestion tubes can be used	+				

Adapter for the use of different digestion vessels



Our practical adapter ensures that you can use digestion vessels by manufacturers, who deviate from standard sizes in our behrotest® steam distillers.

Adapter for the use of different digestion vessels

Product description	Art.-No.
Microadapter 100 ml PTFE for Micro-Kjeldahl vessels SR4	B0023 2266
PP-adapter for Büchi-vessels of S 1 - S 5	B0023 2254

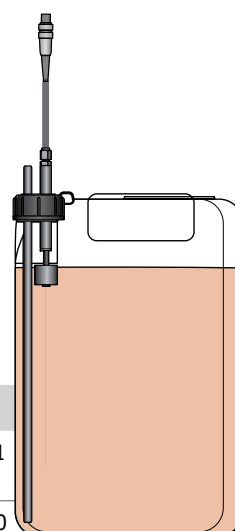
Canister sets

behr canister sets are based on hazardous goods canisters with UN approval.

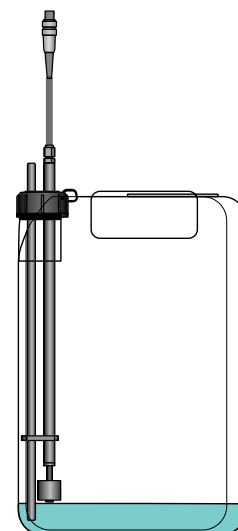
The level sensors form a unit with the screw caps. If necessary, the user can therefore also directly connect commercial chemical containers without any need for dangerous refilling or transfer actions.

Canister sets

Type	Product description	Art. No.
KAS 20	Canister set for S 1 and S 2, consisting of 2 canisters à 20 l, incl. float switches	B00218041
KAS 20/10	Canister set for S 1 and S 2, consisting of 2 canisters à 10 l, incl. float switches	B00704640
KAS 30	Canister set for S 3, consisting of 3 canisters à 20 l, incl. float switches	B00218042
KAS 30/10	Canister set for S 3, consisting of 3 canisters à 10 l, incl. float switches	B00736342
KAS 40	Canister set for S 4 and S 5, consisting of 4 canisters à 20 l, incl. float switches	B00218043
KAS 40/10	Canister set for S 4 and S 5, consisting of 4 canisters à 10 l, incl. float switches	B00513618



Canister with level sensor for waste disposal



Canister with level sensor for NaOH

Manual titration station STI

The STI manual titration station consists of:

- a burette with digital display and
- a magnetic stirrer with precise fitting holder for an Erlenmeyer flask

A screen serves as a neutral background and enables the user to precisely determine the colour alteration at the end of the titration. This means that the titrations are always performed under similar optical conditions. This improves the accuracy and reproducibility of the results.

The precise positioning of the vessel in the holder at the top of the magnetic stirrer also contributes towards this. The angular sides of the screen provide additional protection against lateral glare.



STI

Manual titration station STI

Type	Product description	Art. No.
STI	Manual titration system for the determination of nitrogen using the Kjeldahl method	B00218002
TS	Tashiro mixed indicator, 1 l	B00491148

Technical data for the manual titration station STI

Voltage	230 VAC
Frequency	50/60 Hz
Weight	approx. 3.5 kg
Dimensions in cm (W x D x H)	approx. 33 x 20 x 60



TS

Nitrogen determination according to Kjeldahl

Customised features



DOS 25

Type	Product description	Art. No.
DOS 25	behrotest® dispenser for metering sulfuric acid, 2.5-25 ml adjustable without bottle	B00661157
LGF 2000	behrotest® Laboratory bottle with ISO-Thread 2000 ml with graduation, crystal clear	B00225419
LGFB 2000	behrotest® Laboratory bottle with ISO-Thread 2000 ml with graduation, brown	B00225423



behr laboratory