



VAPODEST® 500

Standard configuration	VAP 500
Multi Touch Sensitive Screen 7"	●
Automatic addition H ₃ BO ₃	●
Automatic addition H ₂ O	●
Automatic addition NaOH / reagent	●
Programmable reaction time	●
Programmable distillation time	●
Variable steam power 0 - 100 %	●
Automatic suction of sample waste	●
Automatic suction of the receiver	●
Selection of language	●
Vergabe von Benutzerrechten	●
Optical and acoustical error messages	●
Stand-by-Function	●
Automatic calculation of results	●
Method data base	●
Programmable methods	●
Connection for external keyboard	●
Connection for external PC-mouse	●
Automatic check of chemical reservoir	●
Kjeldatherm digestion tubes can be used ¹⁾	●
Kjeldahl flasks can be used ¹⁾	●
Automatic titration	●
Micro dosing pump for titration	●
Gerhardt Dashboard (Data management program for PC)	●
USB-interface on the front side	1 x
USB-interface on the back	4 x
Ethernet-interface on the back	1 x
RS-232 interface on the back	1 x

● = Standard configuration

1) = see digestion tubes and Kjeldahl-flasks on page 3

SCOPE OF DELIVERY

Type	VAP 500
Distillation system	1 x
Gerhardt Dashboard Data management program for VAPODEST 500	1 x
KJELDATHERM® digestion tube	1 x
pH-electrode	1 x
Buffer solution pH7	1 x
Buffer solution pH4	1 x
KCl-solution	1 x
Tubing set complete	1 x
Mains cable	1 x
Stickers for tubes (for marking the tubes)	1 x

TECHNICAL DATA

Type	VAP 500
Cooling water consumption [l/min]	2 / 5 / 7 adjustable
Distillation time [min]	2 - 4
Recovery rate [%]	> 99,5
Reproducibility [%]	+/- 1
Detection limit N [mg]	0,1
Nominal voltage [VAC]	230
Frequency [Hz]	50
Nominal wattage [W]	2200
Weight [kg]	ca. 44 kg
Dimensions W / D / H [mm]	527 x 390 x 697

ORDER INFORMATION

Order No.	Type	Description
12-0500	VAP500	Distillation system, Version Standard, 230 V Especially for the Kjeldahl determination
12-0501	VAP500	Distillation system, Version Standard, 115 V Especially for the Kjeldahl determination

Further versions and special voltages on request

1) special for dosing of phosphoric acid max. 85 % and hydrochloric acid max. 5 % - more acids on request

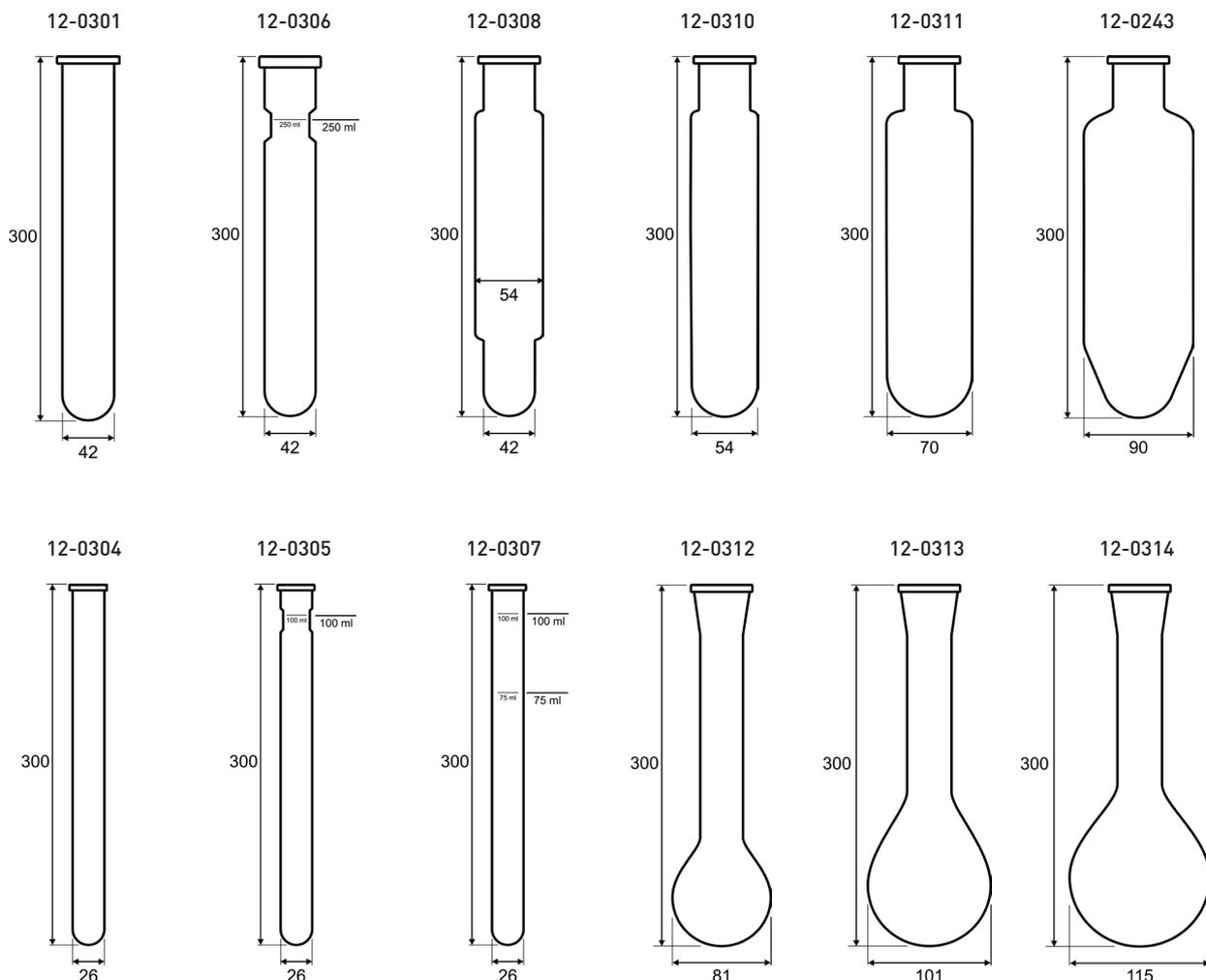
CONSUMABLES AND ACCESSORIES

Make sure to use only original C. Gerhardt spare parts in order to obtain the best possible results. These parts have been tested thoroughly for the operation with VAPODEST® in the C. Gerhardt application lab.

KJELDAHL-DIGESTION TUBES AND KJELDAHL-FLASKS

Depending on sample type and sample quantity VAPODEST® 500 can use a lot of Kjeldahl-digestion tubes as well as Kjeldahl-flasks. All tubes are made of high standard Duran® material.

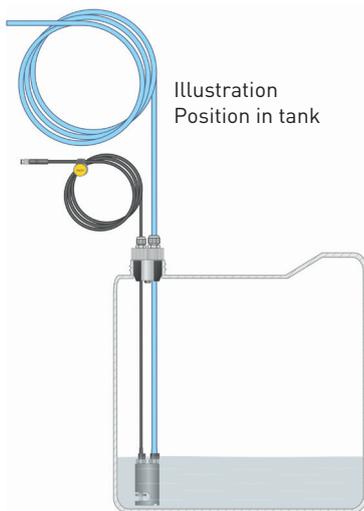
Order No.	Type	Description
12-0301	KTG	KJELDATHERM®-digestion tube, macro 250/300 ml - 10 pcs
12-0306	KTG/E	KJELDATHERM®-digestion tube, macro 250/300 ml, with constriction + calibrated at 250 ml
12-0308	BS-400	KJELDATHERM®-digestion tube, 400 ml, diminished
12-0310	KDD400	Jumbo-digestion tube 400 ml - 4 pcs
12-0311	KDD800	Jumbo-digestion tube 800 ml - 4 pcs
12-0243	KDD1200	Jumbo-digestion tube 1.200 ml
12-0304	KMT	KJELDATHERM®-digestion glas, micro 100 ml - 10 pcs
12-0305	KMT/E	KJELDATHERM®-digestion glas, micro 100 ml with constriction + calibrated at 100 ml
12-0307	KMT	KJELDATHERM®-Glas, mikro 100 ml, calibrated at 100 ml + 75 ml
12-0312	KD250	Kjeldahl-flask 250 ml, with enlarged neck
12-0313	KD500	Kjeldahl-flask 500 ml, with enlarged neck, 4 pcs
12-0314	KD750	Kjeldahl-flask 750 ml, with enlarged neck, 4 pcs



Tank level control



Tank level control 1005098



Order No.	Type	Description
1005098	ID8	Tank level control for Reagent-storage tank , incl. cable labels for clear identification, suitable for tanks with the following dimensions: - Height = min. 130 mm... max. 2000 mm - Filler neck = min. Ø 40 mm... max. Ø 50 mm
1005721	PA8	Tank level control for sample waste storage tank , incl. cable labels for clear identification, suitable for tanks with the following dimensions: - Height = all tanks - Filler neck = min. Ø 47 mm... max. Ø 50 mm
12-0505	NIV500	Tank level control set for 3 reagent-tanks and 1 sample waste tank and 1 titration tank, consisting of: - 3 x Tank level control for reagent-tank no. 1005098 - 1 x Tank level control for sample waste tank, no. 1005721 - 1 x Tank 5 L for titration acid, incl. tank level control

Storage tanks



Order No.	Type	Description
1005849	KAN10	Tank made of HDPE, 10 L
1005850	KAN20	Tank made of HDPE, 20 L

Labelling - Stickers



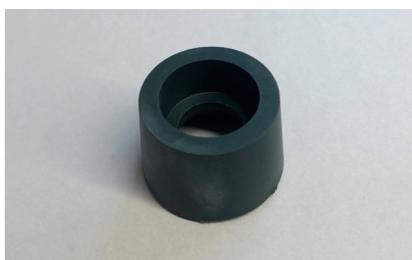
Order No.	Type	Description
1005823		Stickers for tank level sensors (cable banner), can be attached to the tubes. 12 Stickers: Reagent 1, Reagent 2, H ₂ O, NaOH, HCl, H ₃ BO ₃ , NDF, ADF, H ₂ SO ₄ , KOH, Sample Waste, Neutral
1005824		Stickers for tanks, can be affixed to any place on the tank. 12 Stickers: Reagent 1, Reagent 2, H ₂ O, NaOH, HCl, H ₃ BO ₃ , NDF, ADF, H ₂ SO ₄ , KOH, Sample Waste, Neutral

Gerhardt Dashboard


Bestellnr.	Typ	Beschreibung
12-0506		Gerhardt Dashboard, program to support sample input and sample management via a network / PC in combination with VAPODEST® 500. The program offers convenient functions for data management and supports requirements of EN ISO 17025 and GLP. Delivery incl. USB-Stick.

Connection stopper, Viton


Order No.	Type	Description
12-0477		Viton-connection stopper, normal size for PP distribution head 1006342

Connection stopper, Micro


Order No.	Type	Description
12-0352		Connection stopper VK, Isoversinic micro, special edition for the use of micro digestion tubes 100 ml

Catalyst tablets


Order No.	Type	Description
12-0326	Se	KJELCAT-tablets, tin of 1,000 pcs 3.5 g K_2SO_4 + 0.0035 g Se
12-0328	Cu	KJELCAT-tablets, tin of 1,000 pcs 5.0 g K_2SO_4 + 0.5 g $CuSO_4 \times 5H_2O$
12-0329	CuTi	KJELCAT-tablets, tin of 1,000 pcs 5.0 g K_2SO_4 + 0.15 g $CuSO_4 \times 5H_2O$ + 0.15 g TiO_2
12-0336	Cu light	KJELCAT-tablets, tin of 1,000 pcs 5.0 g K_2SO_4 + 0.1 g $CuSO_4 \times 5H_2O$

Antifoam tablets


Order No.	Type	Description
12-0332	AS	Antifoam extra tablets, tin with 1,000 pcs 0.97 Na_2SO_4 + 0.03 g silicone antifoam

pH-combined electrode



Order No.	Type	Description
12-0354	ET-KCL	pH-combined electrode KCl, require regularly filling with KCl
12-0355	ET-GEL	pH-combined electrode gel electrolyte, maintenance free

KCL and Buffer solution



Order No.	Type	Description
1000178		Electrolyte solution KCl
1000176		Buffer solution pH 4
1000177		Buffer solution pH 7

Accessories for receiver



Order No.	Type	Description
1001269	REC	Receiver vessel for collecting distillate

Distribution head PP



Order No.	Type	Description
1006342		Distribution head PP for VAP500

Destillationskühler



Bestellnr.	Typ	Beschreibung
12-0552		Distillation condenser glass with short outlet pipe, for PP-distribution head 1006342 with connecting piece for ventilation valve
1000036		Ventilation valve for distillation condenser

GL-Screw caps + seals



Order No.	Type	Description
1004320		Screw cap GL14, nat. white
1004321		Screw cap GL18, nat. white
1004322		Screw cap GL 32, nat. white
1000358		Silicone seal GL 14 with connection, straight
1000356		Silicone-seal GL 18
1000357		Silicone-seal GL 32

Recirculating cooler FL



Order No.	Type	Description
10-0045	FL1201	Recirculating cooler 230 V / 50 Hz, 1200 W, for economical and environmentally friendly cooling water supply of VAPODEST®
10-0047	FL1201	Identical to 10-0045, but in version 115 V / 60 Hz

Drip tray



Order No.	Type	Description
1006749	TW	Drip tray VAPODEST® TSG, front side

Plastic bottles



Order No.	Type	Description
1006521		Bottle for buffer solution, 50 ml with screw cap

Tubings / Cable

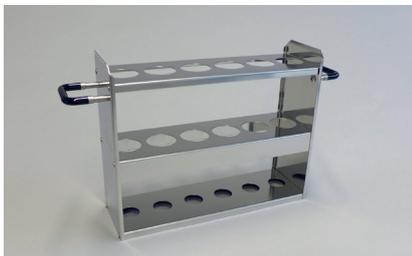


Order No.	Type	Description
1000394		Water inlet tube 10/17, 2 m long, 90bar, 3/8 x 1/2" + 3/8 x 3/4"
1000047*		PVC-tubing, 8 x 12 mm
1000499*		Verpren-tubing, 8 x 12 mm
1000567		PVC-pipe 400 mm long, 10,2 x 1,4 mm
10-0057		Mains cable, 3 m

*length needed when order

Insert racks for digestion tubes

Insert racks made of stainless steel, best for collecting the single digestion tubes, e.g. for direct distillation.



Order No.	Type	Description
12-0269	EG625	Insert rack 6-place for tubes 250 ml
12-0273	EG125	Insert rack 12-place for tubes 250 ml
12-0271	EG440	Insert rack 4-place for tubes 400 ml
12-0272	EG480	Insert rack 4-place for tubes 800 ml
12-0277	EG12-100	Insert rack 12-place for tubes 100 ml

Please see the product data sheet KJELDATHERM® for more insert racks and variants.

SUPPORT AND SERVICE

In addition to its high quality instruments, C. Gerhardt offers comprehensive services to maintain the functionality and efficiency of your equipment.

INSTALLATION / EQUIPMENT QUALIFICATION

Order no	Type	Description
99-0202	ABI-VAP	Installation and Instruction VAPODEST® 500 - Installation and connection of the unit - functional check - operating instructions
99-0211	GQF-VAP	Equipment Qualification (IQ/OQ) VAPODEST® 500 - Installation of the unit and instruction - Installation Q ualification I Q and O perational Q ualification O Q, Guidance for P erformance Q ualification P Q - Training of laboratory personnel with certificate - Individual training certificates, if requested

SERVICING AND MAINTENANCE CONCEPTS

For detailed information on servicing and maintenance concepts, please contact your local authorised C. Gerhardt representative.

WORKSHOPS / SEMINARS / APPLICATIONS TRAINING

For detailed information on trainings and workshops, please contact your local authorised C. Gerhardt representative.

APPLICATION SERVICE

The following listed applications are examples from our comprehensive application data base. Please contact your local C. Gerhardt representative or write to application@gerhardt.de to ask for one of the listed application data sheets or to ask for an application which is not yet listed.

ANALYSIS OF FEED- AND FOODSTUFFS



Selection	Description
<input type="checkbox"/>	Non Protein content in Meat
<input type="checkbox"/>	Nitrogen in bread and rolls
<input type="checkbox"/>	Total Nitrogen in Raw Material for Breweries
<input type="checkbox"/>	Soluble Nitrogen Content Wort
<input type="checkbox"/>	Raw Protein Determination in Eggs
<input type="checkbox"/>	Total Protein in Margarine
<input type="checkbox"/>	Tomato puree and Ketchup
<input type="checkbox"/>	Nitrogen in Milk and Dairy Products
<input type="checkbox"/>	Nitrogen in Cream
<input type="checkbox"/>	Protein in Milk Powder
<input type="checkbox"/>	Non-Protein in Milk and Dairy Products
<input type="checkbox"/>	Raw Protein in Meat and Meat Products
<input type="checkbox"/>	Raw Protein in Grain and Grain Products
<input type="checkbox"/>	Raw Protein in Beer and Wort acc. to Lochner
<input type="checkbox"/>	Total Nitrogen in Sugar at very low N-content
<input type="checkbox"/>	Nitrogen in Starch
<input type="checkbox"/>	Nitrogen in Fish and Fish Products
<input type="checkbox"/>	Nitrogen in Chocolate
<input type="checkbox"/>	Total Protein in Fresh Yeast
<input type="checkbox"/>	Raw Protein in Feed
<input type="checkbox"/>	Volatile Acids in Wine
<input type="checkbox"/>	Sulphur Dioxide in Food
<input type="checkbox"/>	Sorbic acid in wine
<input type="checkbox"/>	TVBN in Fish and Fish Products
<input type="checkbox"/>	Vicinal Diketones in Beer
<input type="checkbox"/>	Alcohol in Beverages and Intermediates

ENVIRONMENTAL ANALYTICS / OTHER



Selection	Description
<input type="checkbox"/>	Coagulated Nitrogen
<input type="checkbox"/>	Nitrogen Determination in Fertilizers with Nitrate
<input type="checkbox"/>	Fertilizers without Nitrate Content
<input type="checkbox"/>	Ammonium Determination in Fertilizers
<input type="checkbox"/>	Water soluble Ammonium nitrogen in Fertilizers
<input type="checkbox"/>	Determination of Nitrat and Ammonium Nitrogen fert
<input type="checkbox"/>	Total Nitrogen in Xanthan
<input type="checkbox"/>	Total Nitrogen in Water
<input type="checkbox"/>	Total Nitrogen in Soil
<input type="checkbox"/>	Total Nitrogen in Grass and Plant Material
<input type="checkbox"/>	Total Nitrogen in Coal
<input type="checkbox"/>	Phenol Index in Soils and Water
<input type="checkbox"/>	Ammonium in Solid Samples
<input type="checkbox"/>	Ammonium in Aqueous Samples
<input type="checkbox"/>	Nitrate in Aqueous Samples and Eluates
<input type="checkbox"/>	Total Cyanide in Water, Soil and Sludge
<input type="checkbox"/>	Volatile Organic Acids in Sludge
<input type="checkbox"/>	Total Formaldehyde in Aminoplast Adhesive

TABLE OF CONFIGURATION

Please arrange the required system

DISTILLATION SYSTEM / TYPE

Quantity	Order No.	Type	Description

CONSUMABLES / ACCESSORIES

Quantity	Order No.	Type	Description

SUPPORT AND SERVICE

Quantity	Order No.	Type	Description

Send offer to:

Customer No.	
Company	
Name	
Address	
Tel.	
E-Mail	
Web	

Presented by:

