

COD - DIGESTION UNIT

COD with lift

For determining the chemical oxygen demand, e.g. in accordance with DIN 38409/German standard method H41.

Digestion in aluminium heating block with precise temperature control. Heating up samples to 148 °C in less than 10 minutes.

Tried and tested C. Gerhardt technology.

Available for 8 or 20 samples.

- Range of functions**
- Ensures transparency and traceability of the digestion process
 - Methods can be defined and stored
 - Assignment of user rights
 - USB interface for data export
 - Pre-heat function
 - Automatic lift
 - Automatic control of TURBOSOG and cooling water valve



COD DIGESTION UNIT with lift

Type	CSB-L 8s	CSB-L 20s
TECHNICAL DATA		
Heating places	8	20
Size of tubes [ml]	250/300	250/300
Temperature max. [°C]	240	240
Temperature control accuracy [%]	+/- 0.5	+/- 0.5
Programmable methods	99 ¹⁾	99 ¹⁾
Display size [inch"]	3.5	3.5
Power consumption [W]	1160	2360
Dimensions W / D / H [mm]	515 / 483 / 790 ²⁾	515 / 483 / 790 ²⁾
Weight [kg]	approx. 46.5	ca. 61.5
Nominal voltage [V]	230	230
Frequency [Hz]	50 - 60	50 - 60
DELIVERS		
KJELDATHERM-digestion block with two-tier console and operating unit	1 x	1 x
Insert rack EB for tubes	1 x (12-0710)	1 x (12-0722)
Insert rack for condensers	1 x (12-0249)	1 x (12-0250)
COD/SMA digestion tubes KMG, 250 ml (with KS40)	8 x (12-0321)	20 x (12-0321)
COD/SMA condensers SMK (with KS40)	8 x (12-0322)	20 x (12-0322)
ORDER INFORMATION		
Version 230 V	12-0762	12-0760

1) Each program is available with 40 different heating steps that have programmable times and heating capacities

2) Height in lower lift position, in upper lift position + 100 mm

COD without lift

Digestion in aluminium heating block with precise temperature control. Identical to model COD with lift but without motorliftconsole. The user has to lift and lower the insert rack by hand.

Tried and tested C. Gerhardt technology.

- Range of functions**
- Ensures transparency and traceability of the digestion process
 - Methods can be defined and stored
 - Assignment of user rights
 - USB interface for data export
 - Pre-heat function



COD DIGESTION UNIT without Lift

Type	CSB 8s
TECHNICAL DATA	
Heating places	8
Size of tubes [ml]	250/300
Temperature max. [°C]	240
Temperature control accuracy [%]	+/- 0.5
Programmable methods	99 ¹⁾
Display size [inch"]	2,4
Nominal wattage [W]	1000
Dimensions W / D / H [mm]	515 / 483 / 1140
Weight [kg]	approx. 24
Nominal voltage [V]	230
Frequency [Hz]	50 - 60
DELIVERS	
KJELDATHERM digestion block with operating unit	1 x
Insert rack EB for tubes	1 x (12-0711)
COD/SMA digestion tubes SMG8, 250 ml (with NS29)	8 x (12-0315)
COD/SMA condensers SML (with NS29)	8 x (12-0318)
ORDER INFORMATION	
Version 230 V	12-0764

1) Each program is available with 40 different heating steps that have programmable times and heating capacities

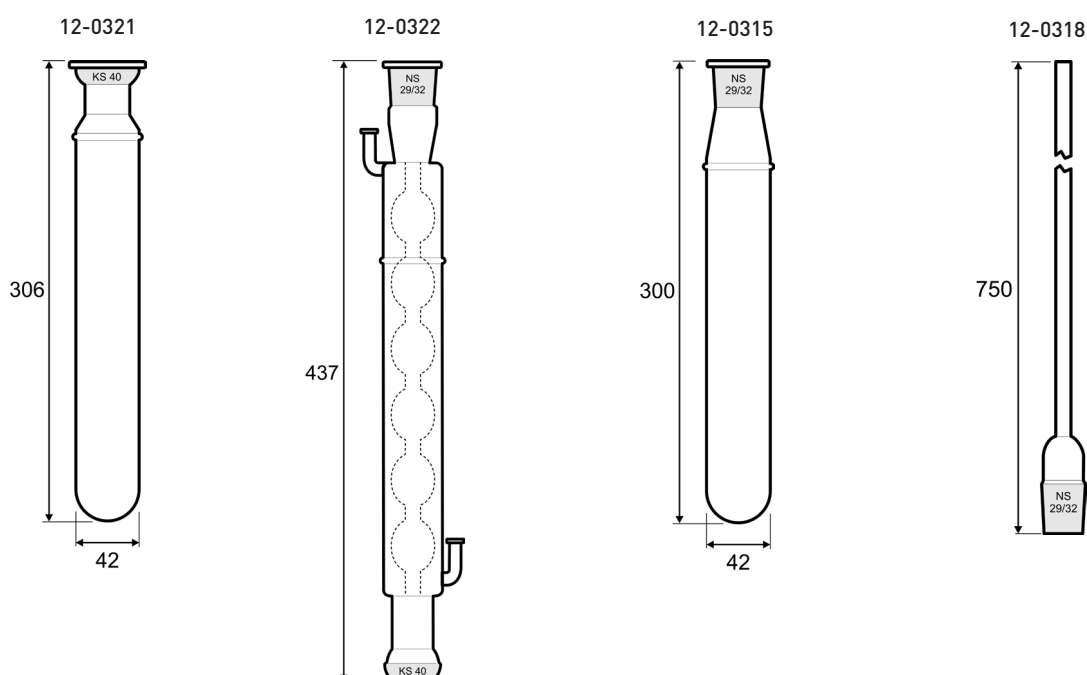
CONSUMABLES AND ACCESSORIES

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 COD digestion units in the C. Gerhardt application lab.

COD AND SMA TUBES

All tubes are made of high standard Duran material.

Order No.	Type	Description
12-0321	SMG	COD/SMA tube SMG, 250ml, with KS40, (for automatic COD units), 4 pcs
12-0322	SMK	COD/SMA water condenser SMK, ball condenser, with KS40, 1 pc
12-0315	SMG8	COD/SMA tube SMG8, 250ml, with NS29, (for manual COD units), 4 pcs
12-0318	SML	COD air condenser SML, with NS 29, 750 mm long, 1 pc



INSERT RACKS FOR TUBES for COD with lift



Order No.	Type	Description
12-0722	EB20	Insert rack, 20-place, white, for SMA-L and CSB-L system, for 20 x 250 ml tubes SMG
12-0710	EB8	Insert rack, 8-place, white, for SMA/SMA-L and CSB-L system, for 8 x 250 ml tubes SMG

INSERT RACK FOR TUBES for COD without lift



Order No.	Type	Description
12-0711	EB	Insert rack, 8-place, white, for CSB system, for 8 x 250ml tubes SMG8

INSERT RACK FOR WATER CONDENSER



Order No.	Type	Description
12-0250	EB20K	Insert rack, 20-place, white, for COD/SMA-Systems for 20 x water condenser SMK
12-0249	EB8K	Insert rack, 8-place, white, for COD/SMA-Systems for 8 x water condenser SMK

COOLING WATER VALVE



Order No.	Type	Description
12-0775	WTZ	Cooling water valve, 110-230 V, for the cooling water regulation of the SMA- and CSB-digestion units with lift.

Communication cable



Order No.	Type	Description
1007118	PK45	KT Patchcable RJ45, yellow, 2 m Connecting cable between controller and digestion block

VACUSOG Vacuum Scrubber unit



Order No.	Type	Description
12-0779	VS	VACUSOG gas scrubber for effective extraction of large quantities of inorganic gases. A water connection is not necessary. Suitable for all TURBOTHERM and KJELDATHERM units. - Nominal voltage: 115 - 230 V, 50/60 Hz - Current consumption: 0,4 - 1 A - Weight: approx. 22 kg - Dimensions, closed (W/D/H): 342 / 463 / 490 mm - Dimensions, open (W/D/H): 342 / 463 / 720 mm For more informations see „Product data sheet VACUSOG“

Additional cooling unit for VACUSOG



Order No.	Type	Description
12-0786	ZKV	The ZKV additional cooler was specifically designed for water separation in Kjeldahl digestion in water. The system is installed on the side next to the VACUSOG and connected to the cooling water supply in the laboratory. Complete with water inlet and outlet hose and cooling water regulation: <ul style="list-style-type: none"> - Cooling water consumption: 0 - 5 l/min - Cooling water pressure: 0 - 6 bar - Nominal voltage: 24 VDC - Dimensions, closed (W/D/H): 160 / 400 / 490 mm - Dimensions, open (W/D/H): 160 / 400 / 720 mm

SCRUBBER UNITS



TUR/K + ZKE



WSP

Order No.	Type	Description
12-0057	TUR/K	TURBOSOG scrubber unit. Condenses and neutralizes aggressive acid fumes, suited for all KJELDATHERM systems: <ul style="list-style-type: none"> - Nominal voltage: 230 V, 50 Hz - Nominal wattage: 205 W - Weight: 19 kg - Dimensions: W 330 / D 450 / H 420 mm For more informations see „Product data sheet TURBOSOG“
10-0088	WSP	Water jet pump. Condenses and neutralizes aggressive acid fumes, suitable for all digestion units KJELDATHERM.

Additional cooling unit



Order No.	Type	Description
12-0361	ZKE	Additional cooling unit for TUR/K. To be attached at the side of the TURBOSOG and connected to the water supply. Separates the water from digestion gas - for a big number of aqueous samples.

Laboratory bottles for TURBOSOG



Order No.	Type	Description
12-0358	EFL	Spare bottle, 2000 ml for Turbosog complete with screw cap GL45 + silicone seal GL45

Glass pipes for TURBOSOG

Order No.	Type	Description
12-0359	KOA	Downpipe for condensate bottle, short
12-0360	WAA	Downpipe for washing bottle, long

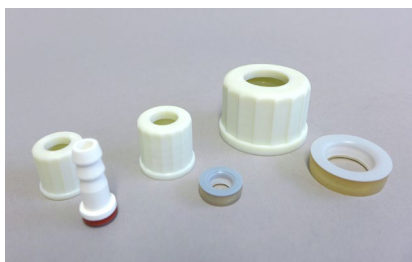


Tubes



Order No.	Type	Description
1000393	AWS	Cooling water outlet tubing, 22x29 mm, 2 m long
10-0091	ISO	Isoversinic-tubing 12x17mm, black

GL-Screw caps for laboratory bottles



Order No.	Type	Description
1004320		Screw cap GL14, nat. white
1004321		Screw cap GL18, nat. white
1004322		Screw cap GL32, nat. white
1004323		Screw cap GL45, nat. white
1000358		Silicone seal GL 14 with connection, straight
1000356		Silicone seal GL 18
1000357		Silicone seal GL 32
1000355		Silicone seal GL 45

TABLE OF CONFIGURATION

Please arrange the required system

DIGESTION 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:

