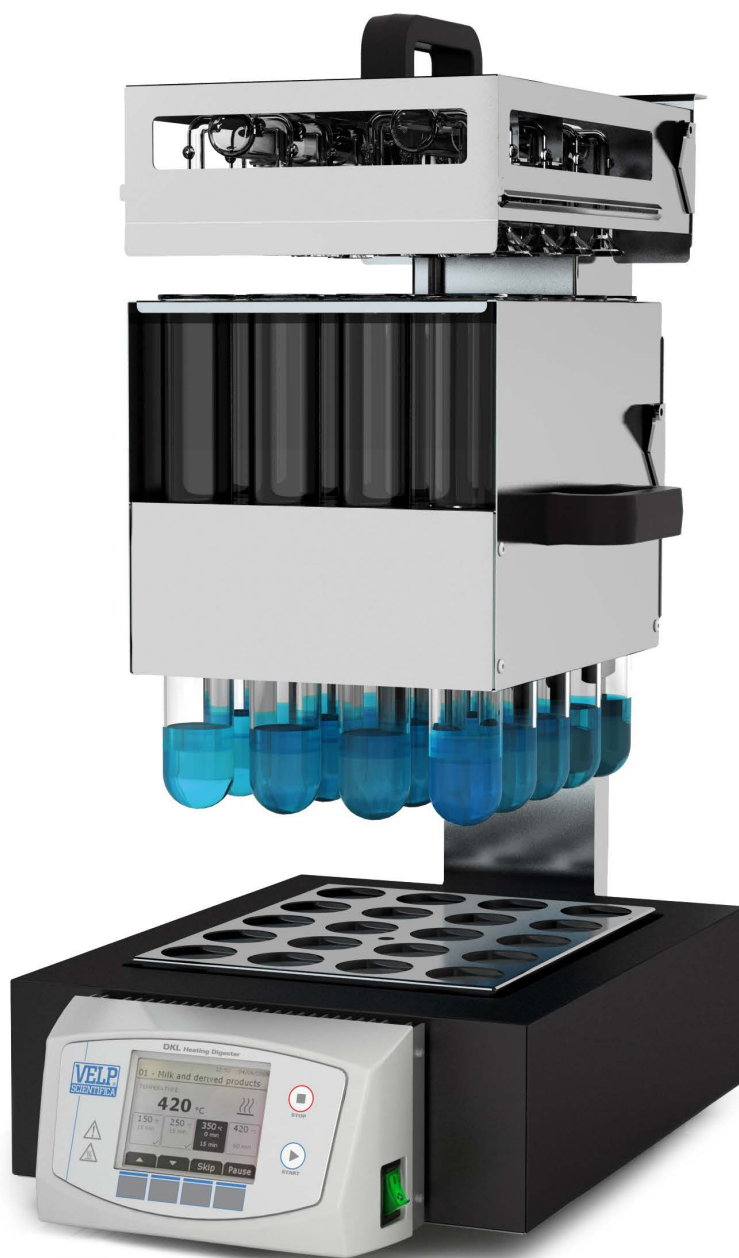




DKL Series

Fully Automatic Digestion Units

Fast, safe and compact aluminum heating block digesters
for unattended operations



DKL Fully Auto Digesters

The digester is a widely used instrument in laboratories performing analysis for diversified applications in food&feed, beverage (nitrogen, protein, Total Kjeldahl Nitrogen), environmental (COD, Total Kjeldahl Nitrogen, Heavy Metal Trace), chemical and pharmaceutical (organic nitrogen) industries. DKL digesters work in accordance with a variety of Standards (such as AOAC, ISO, EPA, DIN etc.)

FULLY AUTOMATIC

The auto-lift facilitates the operator by reducing strain and time spent in manual tasks. The customizable programs allow for repeatable processes to run fully unattended.

FAST AND FLEXIBLE

Extremely fast aluminum heating block is capable of reaching 420°C in just 20 min and maintaining temperature with an accuracy of $\pm 0.5^\circ\text{C}$. A complete set of available accessories allows for analysis of all sample types and quantities.

SAFE AND ROBUST

The separated control panel is protected from heat and spills ensuring reliability and longevity. The innovative microprocessor controls the temperature of the block and is supported by safety thermostat.

RESISTANT

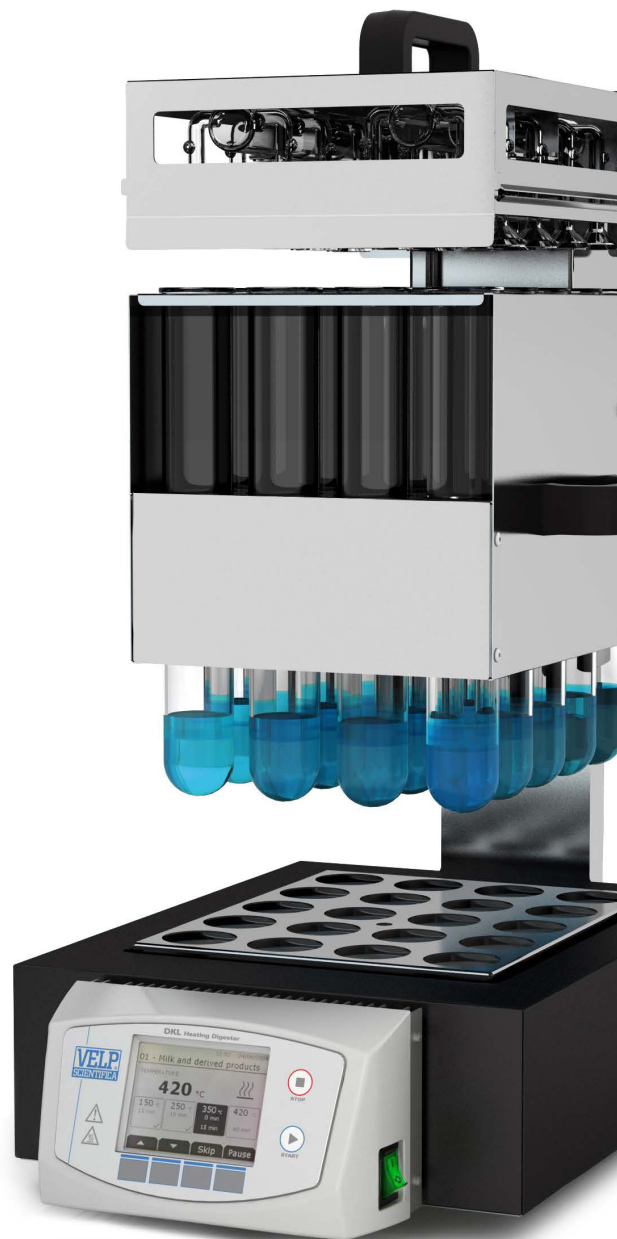
The DKL Series is constructed with highly resistant materials such as the corrosion-protected housing that provides resistance to harsh working environments.

USER FRIENDLY

The intuitive control panel makes operating and monitoring every stage of the analysis effortless. Many standard methods are pre-loaded and more can be customized and saved.

COMPACT DESIGN

Thanks to the narrow footprint, the DKL Series saves valuable fume hood space to accommodate other instruments.



VELP SOLUTIONS FOR KJELDAHL ANALYSIS

SAMPLE



1 DIGESTION

DKL SERIES / DK SERIES
DIGESTERS

JP
RECIRCULATING WATER VACUUM PUMP

SMS
SCRUBBER

2 DISTILLATION

UDK SERIES
DISTILLATION UNITS

3 TITRATION

UDK 149
CONNECTIVITY TO EXTERNAL TITRATION
SYSTEMS

UDK 159 / UDK 169
INTEGRATED COLORIMETRIC TITRATION
SYSTEM



NITROGEN mg (Protein %)

Configurations

DKL 8



8 x 250 ml

DKL 12



12 x 250 / 400 ml

DKL 20



20 x 250 / 400 ml

DKL 42/26



42 x 100 ml

Microkjeldahl tubes (100 ml) are suitable for samples with a high nitrogen/protein content, 250 ml for standard Kjeldahl digestion and Jumbo tubes (400 ml) for samples with a low nitrogen/protein content.

VELP Recommendation

In order to remove hazardous and noxious gases and vapors generated during the digestion process, every digester should be combined with a SMS Scrubber and a JP Pump to prevent potential damage to the digester and surrounding equipment.

SMS SCRUBBER



SMS SCRUBBER is designed for the neutralization of toxic and corrosive fumes coming from digestion.

- HIGHLY COMPACT AND EFFICIENT
- USABLE FOR BOTH BASIC AND ACID NEUTRALIZATION
- SAFE AND ROBUST

JP PUMP



JP WATER VACUUM PUMP is an innovative and reliable recirculating water pump for aspirating fumes with dual operating modes.

- AUTOMATION AND OPTIMIZATION OF VACUUM POWER
- REDUCED WATER CONSUMPTION
- HIGH EFFICIENCY

FULLY AUTOMATED AND UNSUPERVISED DIGESTION IN 3 STEPS

1 DIGESTION

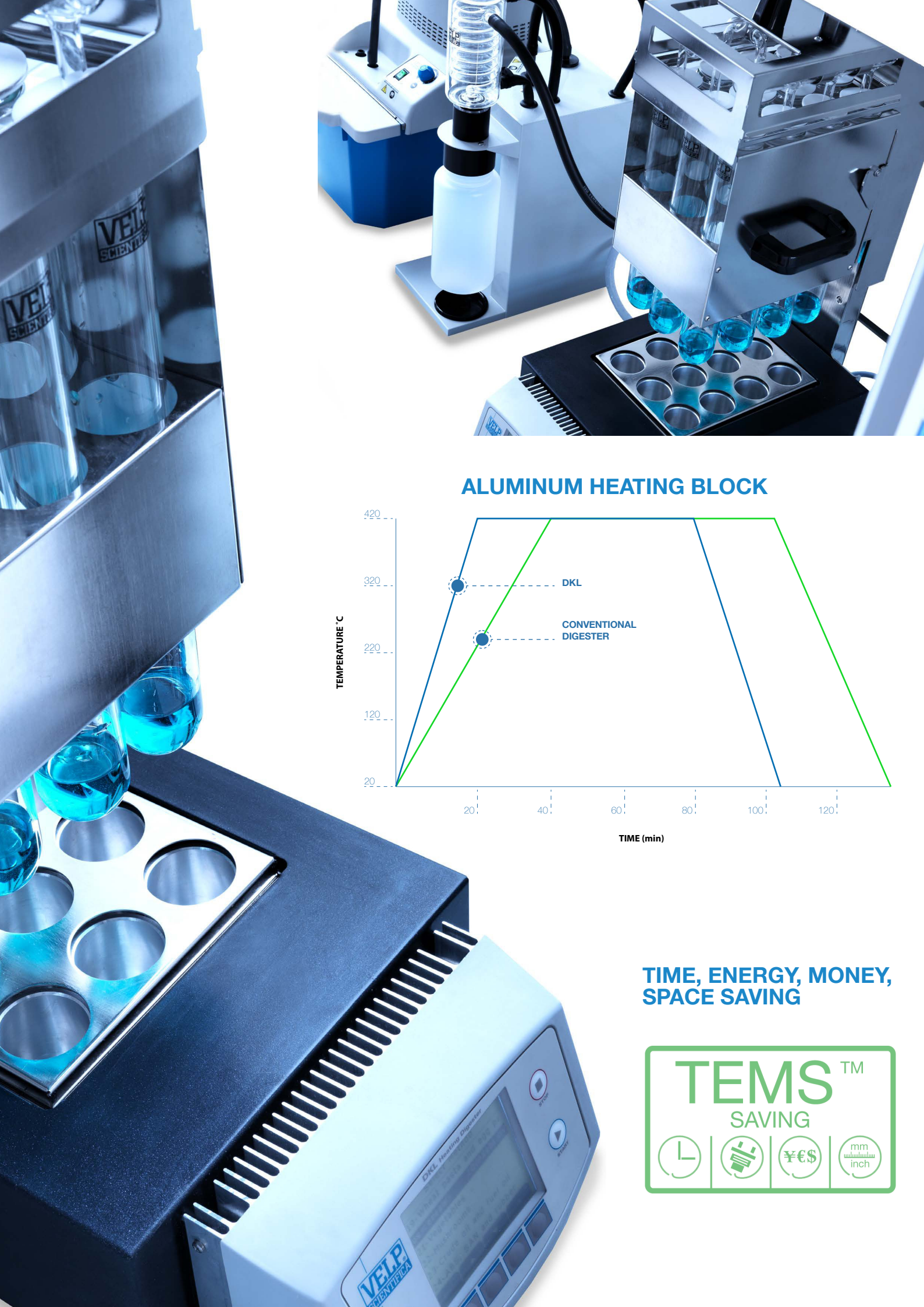


2 COOLING

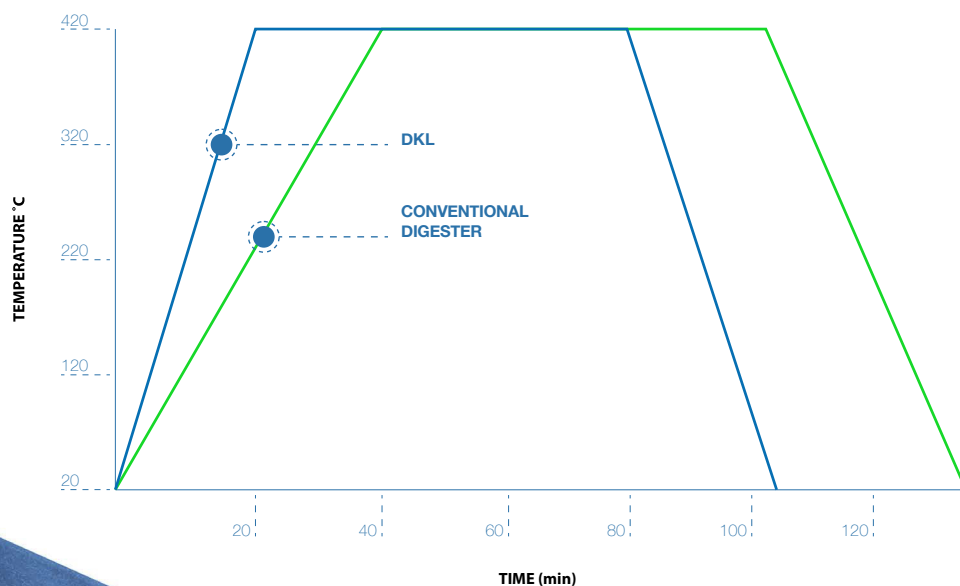


3 RACK EXTRACTION AND RE-LOADING





ALUMINUM HEATING BLOCK



**TIME, ENERGY, MONEY,
SPACE SAVING**



OPTIONAL ACCESSORIES

DKL 8 Stand for sample rack	A00000184
DKL 12 Stand for sample rack	A00000183
DKL 20, DKL 42/26 Stand for sample rack	A00000182
DKL 12, DKL 20 Test tube Ø 50x300 mm, 400 ml	A00000185
DKL 12 Sample rack for test tubes 400 ml	A00000181
DKL 20 Sample rack for test tubes 400 ml	A00000246
DKL 8, 12, 20 Glass cap	A00000243
DKL 20 Sample rack for COD analysis	A00000237
DKL 20 Test tubes Ø42x200mm, 200 ml with cone NS 29/32 (3pcs/box) for COD analysis	A00000145
DKL 20 Air refrigerator with ground cone for COD analysis	A00001041
DKL 20 Antisplash bell for COD analysis	A00001045
DKL 20 PTFE sheaths for 29/32 cones for COD analysis	A00001042
USB cable A/B 1,8mt	40002309
DKL IQ/OQ Manual	A00000186
KjTabs VCM - 1000 pcs/box	A00000274
KjTabs VKPC - 1000 pcs/box	A00000275
KjTabs VCT - 1000 pcs/box	A00000276
KjTabs VST - 1000 pcs/box	A00000277
KjTabs VTCT - 1000 pcs/box	A00000281
KjTabs VW - 1000 pcs/box	A00000282
KjTabs VS - 1000 pcs/box	A00000283
Adapter x probe Ø3mm for DK/DKL/ECO	A00000362

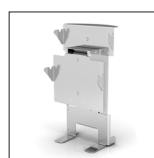


Use Genuine VELP consumables and accessories to get the best performance from your DKL

INSTRUMENT - CODE

DKL 8	230 V / 50-60 Hz	S30100200
DKL 8	115 V / 50-60 Hz	S30110200
DKL 12	230 V / 50-60 Hz	S30100190
DKL 12	115 V / 50-60 Hz	S30110190
DKL 20	230 V / 50-60 Hz	S30100210
DKL 42/26	230 V / 50-60 Hz	S30100180

SUPPLIED WITH



LIFT

DKL 8	A00000170
DKL 12	A00000176
DKL 20	A00000167
DKL 42/26	A00000167



SAMPLE RACK

DKL 8	A00000173
DKL 12	A00000172
DKL 20	A00000168
DKL 42/26	A00000180



SUCTION CAP AND DRIP TRAY

DKL 8	A00000175
DKL 12	A00000174
DKL 20	A00000169
DKL 42/26	A00000179



TEST TUBES

DKL 8	A00000144
DKL 12	A00000144
DKL 20	A00000144
DKL 42/26	A00000146

TEST TUBES



A00000144
DKL 8, DKL 12,
DKL 20
Test tubes
Ø 42x200 mm
250 ml (3pcs/box)



A00000145
DKL 20
Test tubes
Ø 42x200 mm
with cone NS
29/32 (3pcs/box)



A00000146
DKL 42/26
Test tubes
Ø 26x300 mm
100 ml (6pcs/box)



A00000185
DKL 12, DKL 20
Test tubes
Ø 50x300 mm
400 ml (3pcs/box)

FIELDS OF APPLICATION

The DKL Series is suitable for a variety of applications including the determination of nitrogen, protein, COD, TKN and more, in accordance with official methods.

FOOD, FEED AND BEVERAGE INDUSTRY

ENVIRONMENTAL INDUSTRY

PHARMACEUTICAL AND CHEMICAL INDUSTRY



TECHNICAL DATA

	DKL 8	DKL 12	DKL 20	DKL 42/26
CONSTRUCTION MATERIAL	Stainless steel with chemical resistant coating	Stainless steel with chemical resistant coating	Stainless steel with chemical resistant coating	Stainless steel with chemical resistant coating
LIFT AND SUCTION CAP CONTROL	Automatic	Automatic	Automatic	Automatic
CONTROL SYSTEM	Microprocessor with LCD Graphic Display	Microprocessor with LCD Graphic Display	Microprocessor with LCD Graphic Display	Microprocessor with LCD Graphic Display
TEMPERATURE RANGE	Room temp. to 450 °C / 842 °F	Room temp. to 450 °C / 842 °F	Room temp. to 450 °C / 842 °F	Room temp. to 450 °C / 842 °F
TEMPERATURE ACCURACY	± 0.5 °C	± 0.5 °C	± 0.5 °C	± 0.5 °C
SET TEMPERATURE	Digital Readout in °C, °F or K	Digital Readout in °C, °F or K	Digital Readout in °C, °F or K	Digital Readout in °C, °F or K
TEMPERATURE CALIBRATION	Automatic	Automatic	Automatic	Automatic
PROGRAM LIBRARY	54 Program library, including 24 user-programmable memories	54 Program library, including 24 user-programmable memories	54 Program library, including 24 user-programmable memories	54 Program library, including 24 user-programmable memories
TEMPERATURE RAMPING	4 ramps per program	4 ramps per program	4 ramps per program	4 ramps per program
TIME SELECTION	1 to 999 Minutes - 1 Minute Steps	1 to 999 Minutes - 1 Minute Steps	1 to 999 Minutes - 1 Minute Steps	1 to 999 Minutes - 1 Minute Steps
COUNTDOWN	Digital Readout	Digital Readout	Digital Readout	Digital Readout
LANGUAGES	UK, I, E, F, RUS, CN + Additional downloadable	UK, I, E, F, RUS, CN + Additional downloadable	UK, I, E, F, RUS, CN + Additional downloadable	UK, I, E, F, RUS, CN + Additional downloadable
INTERFACE	USB	USB	USB	USB
RUN COMPLETED ALERT	Visual and Acoustic Signal	Visual and Acoustic Signal	Visual and Acoustic Signal	Visual and Acoustic Signal
DAMAGED TEMPERATURE PROBE	Automatic Detection and Alarm Message	Automatic Detection and Alarm Message	Automatic Detection and Alarm Message	Automatic Detection and Alarm Message
HEATING PLACES	8	12	20	42
SIZE OF TUBES	250 ml	250 / 400 ml	250 / 400 ml	100 ml
POWER	1150 W	1500 W	2300 W	2300 W
OVERALL DIMENSION (WxHxD)	210x690x540 mm 8.3x27.2x21.3 in	266x690x540 mm 10.5x27.2x21.3 in	322x690x584 mm 12.7x27.2x23.0 in	322x690x584 mm 12.7x27.2x23.0 in
OVERALL WEIGHT	19.7 kg 43.5 lb	23.3 kg 51.4 lb	30.8 kg 68.0 lb	33.5 kg 74.0 lb



SERVICE & SUPPORT

VELP Scientifica products are designed by our engineers to resist years of laboratory use.

Our products are manufactured with premium materials to guarantee the best performance with maximum safety.

According to our experience, a proper and regular maintenance is necessary to ensure the highest performance of analytical instrument. VELP Service Department and VELP Official Partners are always ready to offer you maintenance and service support tailored to your needs.

GET THE SUPPORT YOU NEED CHOOSING THE OPTIONS:

- Installation
- Preventive Maintenance
- Help-desk and Remote support
- Technical Assistance
- Analytical Support
- Calibration Certification



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We do not assume liability for errors in printing, typing or transmission

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DK Series

Semi-Automatic Digestion Units

Versatile, safe and precise block digesters for Kjeldahl analysis



Semi-Automatic Digesters

The DK Series consists of basic digestion blocks providing accuracy, high thermal homogeneity and minimum energy consumption. DK Series digester are suitable for Kjeldahl digestion application and selected models can be combined with accessories in order to perform COD and Trace Metal Determination applications.

EXCELLENT ACCURACY AND REPEATABILITY

The aluminum heating block ensures high thermal homogeneity heating up to 450°C.

- Temperature selection with 1°C steps and a precision of $\pm 0.2^\circ\text{C}$.
- Heating block temperature stability of $\pm 0.5^\circ\text{C}$.

ENERGY SAVINGS

The DK Series digesters guarantee fast temperature set point reaching, reducing the energy consumptions.

- Average 13% lower consumption compared to the previous models.

SPACE SAVING DESIGN

Save valuable space under the fume hood with the VELP DK digesters. The design of the DK Series ensures minimum space requirement.

INTUITIVE INTERFACE

The bright digital display provides maximum visibility and easy reading of the information.

- Supports the recording of up to 20 methods with 4 temperature ramps.
- Easy to use interface with 4 buttons.

VERSATILE

All models DK models are available with tubes and all necessary parts to operate.

- Wide range of accessories is available to match analytical requirements.
- Genuine consumables to digest efficiently the samples.



TEMS™ Technology

Save Time, Energy, Money and Space.



VELP SOLUTIONS FOR KJELDAHL ANALYSIS

SAMPLE



1 DIGESTION

DKL SERIES / DK SERIES
DIGESTERS

JP
RECIRCULATING WATER VACUUM PUMP

SMS
SCRUBBER

2 DISTILLATION

UDK SERIES
DISTILLATION UNITS

3 TITRATION

UDK 149
CONNECTIVITY TO EXTERNAL TITRATION
SYSTEMS

UDK 159 / UDK 169
INTEGRATED COLORIMETRIC TITRATION
SYSTEM



NITROGEN mg (Protein %)

Configurations



DK 6

6 positions for 250 ml test tubes Ø 42 mm



DK 6/48

6 positions for 300 ml test tubes Ø 48 mm



DK 8

8 positions for 250 ml test tubes Ø 42 mm



DK 18/26

18 positions for 100 ml test tubes Ø 26 mm



DK 20

20 positions for 250 ml test tubes Ø 42 mm



DK 42/26

42 positions for 100 ml test tubes Ø 26 mm

VELP Recommendation

In order to remove hazardous and noxious gases and vapors generated during the digestion process, every digester should be combined with a SMS Scrubber and a JP Pump to prevent potential damage to the digester and surrounding equipment.

SMS SCRUBBER



SMS SCRUBBER is designed for the neutralization of toxic and corrosive fumes coming from digestion.

- HIGHLY COMPACT AND EFFICIENT
- USABLE FOR BOTH BASIC AND ACID NEUTRALIZATION
- SAFE AND ROBUST

JP PUMP



JP WATER VACUUM PUMP is an innovative and reliable recirculating water pump for aspirating fumes with dual operating modes.

- AUTOMATION AND OPTIMIZATION OF VACUUM POWER
- REDUCED WATER CONSUMPTION
- HIGH EFFICIENCY

INSTRUMENT - CODE

	POWER	SYSTEM	INSTRUMENT
DK 6	230 V / 50-60 Hz	S30100400	F30100400
	115 V / 50-60 Hz	S30110400	F30110400
	100 V / 50-60 Hz	S30180400	F30180400
DK 6/48	230 V / 50-60 Hz	S30100410	F30100410
	115 V / 50-60 Hz	S30110410	F30110410
DK 8	230 V / 50-60 Hz	S30100420	F30100420
	115 V / 50-60 Hz	S30110420	F30110420
	100 V / 50-60 Hz	S30180420	F30180420
DK 18/26	230 V / 50-60 Hz	S30100430	F30100430
	115 V / 50-60 Hz	S30110430	F30110430
	100 V / 50-60 Hz	S30180430	F30180430
DK 20	230 V / 50-60 Hz	S30100440	F30100440
	200 V / 50-60 Hz	S30110440	F30110440
DK 42/26	230 V / 50-60 Hz	S30100450	F30100450
	200 V / 50-60 Hz	S30110450	F30110450

OPTIONAL ACCESSORIES

Glass cap	A00000243
Air condenser with ground cone	A00001041
PTFE sheaths for 29/32 cones	A00001042
Antisplash bell	A00001045
Stand for DK6-DK6/48	A00000397
Stand for DK-DKL8 DK18/26	A00000184
Stand for DKL-DK20, DKL-DK42/26	A00000182
Adapter for probe Ø3 mm for DK-DKL-ECO	A00000362
TMD6 Mineralization System	A00000409
Sample rack for COD DK6	A00000408
Sample rack for COD DKL20-DK20	A00000237
Test tube COD Ø42x200 mm 200 ml, 3 pcs/box	A00000145
IQ/OQ DK Manual	A00008338
KjTabs VCM - 1000 pcs/box	A00000274
KjTabs VKPC - 1000 pcs/box	A00000275
KjTabs VCT - 1000 pcs/box	A00000276
KjTabs VST - 1000 pcs/box	A00000277
KjTabs VTCT - 1000 pcs/box	A00000281
KjTabs VW - 1000 pcs/box	A00000282
KjTabs VS - 1000 pcs/box	A00000283
Weighing boats 58x10x10 mm, 100 pcs/box	CM0486000
Weighing boats 70x23x15 mm, 100 pcs/box	CM0486001

SUPPLIED WITH THE SYSTEM



SUPPORT
SYSTEM

DK 6	A00000191
DK 6/48	A00000191
DK 8	A00000191
DK 18/26	A00000191
DK 20	A00000190
DK 42/26	A00000190



SAMPLE
RACK

DK 6	A00000395
DK 6/48	A00000398
DK 8	A00000173
DK 18/26	A00000400
DK 20	A00000168
DK 42/26	A00000179



SUCTION CAP
AND DRIP TRAY

DK 6	A00000396
DK 6/48	A00000399
DK 8	A00000175
DK 18/26	A00000401
DK 20	A00000169
DK 42/26	A00000180



TEST TUBES

DK 6	A00000144
DK 6/48	A00001088
DK 8	A00000144
DK 18/26	A00000146
DK 20	A00000144
DK 42/26	A00000146

FIELDS OF APPLICATION

The DK Series is suitable for a variety of applications including the determination of nitrogen, protein, COD, TKN and more, in accordance with official methods.

FOOD, FEED AND BEVERAGE INDUSTRY

ENVIRONMENTAL INDUSTRY

PHARMACEUTICAL AND CHEMICAL INDUSTRY

TECHNICAL DATA

	DK 6	DK 6/48	DK 8	DK 18/26	DK 20	DK 42/26
CONSTRUCTION MATERIAL	Epoxy painted with chemical resistant coating	Epoxy painted with chemical resistant coating	Epoxy painted with chemical resistant coating	Epoxy painted with chemical resistant coating	Epoxy painted with chemical resistant coating	Epoxy painted with chemical resistant coating
TEMPERATURE RANGE	Ambient to 450 °C / 842 °F	Ambient to 450 °C / 842 °F	Ambient to 450 °C / 842 °F	Ambient to 450 °C / 842 °F	Ambient to 450 °C / 842 °F	Ambient to 450 °C / 842 °F
STABILITY OF THE HEATING BLOCK TEMPERATURE	± 0,5 °C	± 0,5 °C	± 0,5 °C	± 0,5 °C	± 0,5 °C	± 0,5 °C
PRECISION OF THE HEATING BLOCK TEMPERATURE	± 0,5 °C	± 0,5 °C	± 0,5 °C	± 0,5 °C	± 0,5 °C	± 0,5 °C
SET TEMPERATURE	Digital readout in °C or °F	Digital readout in °C or °F	Digital readout in °C or °F	Digital readout in °C or °F	Digital readout in °C or °F	Digital readout in °C or °F
TEMPERATURE CALIBRATION	Automatic	Automatic	Automatic	Automatic	Automatic	Automatic
SELECTABLE RAMPS	Up to 4 per program	Up to 4 per program	Up to 4 per program	Up to 4 per program	Up to 4 per program	Up to 4 per program
DIGESTION TIME RANGE	1 to 999 minutes	1 to 999 minutes	1 to 999 minutes	1 to 999 minutes	1 to 999 minutes	1 to 999 minutes
TIME SELECTION	1 minute steps	1 minute steps	1 minute steps	1 minute steps	1 minute steps	1 minute steps
COUNTDOWN	Digital readout	Digital readout	Digital readout	Digital readout	Digital readout	Digital readout
SELECTABLE LANGUAGE	EN, IT	EN, IT	EN, IT	EN, IT	EN, IT	EN, IT
HEATING PLACES	6-position	6-position	8-position	18-position	20-position	42-position
SIZE OF TUBES	250 ml test tubes (Ø 42 mm)	300ml test tubes, Ø 48 mm	250 ml test tubes (Ø 42 mm)	100 ml test tubes, Ø 26 mm	250 ml test tubes (Ø 42 mm)	100 ml test tubes, Ø 26 mm
POWER	1000 W	1000 W	1150 W	1150 W	2300 W	2300 W
WEIGHT	9 kg (35.7 lb)	9 kg (35.7 lb)	11 kg (24.2 lb)	11 kg (24.2 lb)	18 kg (39.7 lb)	18 kg (39.7 lb)
DIMENSIONS (WxHxD) (aluminum block only)	350x220x130 mm (13.8x8.7x5.1 in)	350x220x130 mm (13.8x8.7x5.1 in)	420x230x130 mm (16.5x9x5.1 in)	420x230x130 mm (16.5x9x5.1 in)	330x140x510 mm (12.9x5.4x20.1 in)	330x140x510 mm (12.9x5.4x20.1 in)



SERVICE & SUPPORT

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