DKL Series
Digestion Units

Fully Automatic Digestion Units for a Wide Range of Application
DKL Fully Auto Digester

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 ± 0.5°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 thermostats.

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
- DIGESTION
  DKL SERIES / DK SERIES DIGESTERS
  JP
  RECIRCULATING WATER VACUUM PUMP
  SMS
  SCRUBBER

- DISTILLATION
  UDK SERIES DISTILLATION UNITS

- 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 Ø50x300 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 Ø42x200 mm, 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 1,8m: 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 DKL/DKL/ECO: A00000362

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: A00000170
- Sample rack: A00000173
- Test tubes: A00000174
- Test tubes: A00000179
- Sample rack: A00000180

TEST TUBES

- A00000144: DKL 8, DKL 12, DKL 20 Test tubes Ø 42x300 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 26x300 mm 400 ml (3pcs/box)

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

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.
## TECHNICAL DATA

<table>
<thead>
<tr>
<th></th>
<th>DKL 8</th>
<th>DKL 12</th>
<th>DKL 20</th>
<th>DKL 42/26</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CONSTRUCTION MATERIAL</strong></td>
<td>Stainless steel with chemical resistant coating</td>
<td>Stainless steel with chemical resistant coating</td>
<td>Stainless steel with chemical resistant coating</td>
<td>Stainless steel with chemical resistant coating</td>
</tr>
<tr>
<td><strong>LIFT AND SUCTION CAP CONTROL</strong></td>
<td>Automatic</td>
<td>Automatic</td>
<td>Automatic</td>
<td>Automatic</td>
</tr>
<tr>
<td><strong>CONTROL SYSTEM</strong></td>
<td>Microprocessor with LCD Graphic Display</td>
<td>Microprocessor with LCD Graphic Display</td>
<td>Microprocessor with LCD Graphic Display</td>
<td>Microprocessor with LCD Graphic Display</td>
</tr>
<tr>
<td><strong>TEMPERATURE RANGE</strong></td>
<td>Ambient to 450 °C / 842 °F</td>
<td>Ambient to 450 °C / 842 °F</td>
<td>Ambient to 450 °C / 842 °F</td>
<td>Ambient to 450 °C / 842 °F</td>
</tr>
<tr>
<td><strong>TEMPERATURE ACCURACY</strong></td>
<td>± 0.5 °C</td>
<td>± 0.5 °C</td>
<td>± 0.5 °C</td>
<td>± 0.5 °C</td>
</tr>
<tr>
<td><strong>TEMPERATURE CALIBRATION</strong></td>
<td>Automatic</td>
<td>Automatic</td>
<td>Automatic</td>
<td>Automatic</td>
</tr>
<tr>
<td><strong>PROGRAM LIBRARY</strong></td>
<td>54 Program library, including 24 user-programmable memories</td>
<td>54 Program library, including 24 user-programmable memories</td>
<td>54 Program library, including 24 user-programmable memories</td>
<td>54 Program library, including 24 user-programmable memories</td>
</tr>
<tr>
<td><strong>TEMPERATURE RAMPING</strong></td>
<td>4 ramps per program</td>
<td>4 ramps per program</td>
<td>4 ramps per program</td>
<td>4 ramps per program</td>
</tr>
<tr>
<td><strong>TIME SELECTION</strong></td>
<td>1 to 999 Minutes - 1 Minute Steps</td>
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<td>1 to 999 Minutes - 1 Minute Steps</td>
<td>1 to 999 Minutes - 1 Minute Steps</td>
</tr>
<tr>
<td><strong>COUNTERDOWN</strong></td>
<td>Digital Readout</td>
<td>Digital Readout</td>
<td>Digital Readout</td>
<td>Digital Readout</td>
</tr>
<tr>
<td><strong>LANGUAGES</strong></td>
<td>UK, I, E, F, RUS, CN + Additional downloadable</td>
<td>UK, I, E, F, RUS, CN + Additional downloadable</td>
<td>UK, I, E, F, RUS, CN + Additional downloadable</td>
<td>UK, I, E, F, RUS, CN + Additional downloadable</td>
</tr>
<tr>
<td><strong>INTERFACE</strong></td>
<td>USB</td>
<td>USB</td>
<td>USB</td>
<td>USB</td>
</tr>
<tr>
<td><strong>DAMAGED TEMPERATURE PROBE</strong></td>
<td>Automatic Detection and Alarm Message</td>
<td>Automatic Detection and Alarm Message</td>
<td>Automatic Detection and Alarm Message</td>
<td>Automatic Detection and Alarm Message</td>
</tr>
<tr>
<td><strong>HEATING PLACES</strong></td>
<td>8</td>
<td>12</td>
<td>20</td>
<td>42</td>
</tr>
<tr>
<td><strong>SIZE OF TUBES</strong></td>
<td>250 ml</td>
<td>250 / 400 ml</td>
<td>250 / 400 ml</td>
<td>100 ml</td>
</tr>
<tr>
<td><strong>POWER</strong></td>
<td>1150 W</td>
<td>1500 W</td>
<td>2300 W</td>
<td>2300 W</td>
</tr>
<tr>
<td><strong>OVERALL DIMENSION (WxHxD)</strong></td>
<td>210x690x540 mm 8.3x27.2x21.3 in</td>
<td>266x690x540 mm 10.5x27.2x21.3 in</td>
<td>322x690x584 mm 12.7x27.2x23.0 in</td>
<td>322x690x584 mm 12.7x27.2x23.0 in</td>
</tr>
<tr>
<td><strong>OVERALL WEIGHT</strong></td>
<td>19.7 kg 43.5 lb</td>
<td>23.3 kg 51.4 lb</td>
<td>30.8 kg 66.0 lb</td>
<td>33.5 kg 74.0 lb</td>
</tr>
</tbody>
</table>

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**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.

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**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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