

# **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. The DK Series digesters consist of six models to suit any laboratory need for Kjeldahl digestion, Chemical Oxygen Demand (COD) and Heavy Metals Trace Determinations.

### 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°C.
- Heating block temperature stability of  $\pm 0.5$  °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.

# VERSATILITY

- 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<sup>™</sup> Technology

Save Time, Energy, Money and Space.



# VELP SOLUTIONS FOR KJELDAHL ANALYSIS



# 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 toxic gases and vapors generated during the digestion process, every digester should be combined with a KS 1000 Scrubber to prevent potential damage to the digester and surrounding equipment.

### KS 1000 SCRUBBER



KS 1000 SCRUBBER is designed for the neutralization of toxic and corrosive fumes coming from digestion.

- HIGHLY EFFICIENT
- SAFE AND ROBUST
- EXTREMELY COMPACT
- REDUCED WATER CONSUMPTIONS
- USABLE FOR BOTH ACID AND BASIC NEUTRALIZATION

### INSTRUMENT - CODE

|          | POWER            | SYSTEM    | INSTRUMENT |
|----------|------------------|-----------|------------|
| DK 6     | 230 V / 50-60 Hz | S30100400 | F30100400  |
|          | 115 V / 50-60 Hz | S30110400 | F30110400  |
| 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  |
| DK 18/26 | 230 V / 50-60 Hz | S30100430 | F30100430  |
|          | 115 V / 50-60 Hz | S30110430 | F30110430  |
| DK 20    | 230 V / 50-60 Hz | S30100440 | F30100440  |
| DK 42/26 | 230 V / 50-60 Hz | S30100450 | F30100450  |

# 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<br>SYSTEM |
|----------|-------------------|
| DK 6     | A00000191         |
| DK 6/48  | A00000191         |
| DK 8     | A00000191         |
| DK 18/26 | A00000191         |
| DK 20    | A00000190         |
| DK 42/26 | A00000190         |



DK 6/48

| SAMPLE<br>RACK |
|----------------|
| A00000395      |
| 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.



# **TECHNICAL DATA**

|   | DK 6  | DK 6/48   | DK 8  | DK 18/26  | DK 20   | DK 42/26  |
|---|---|---|---|---|---|---|
| CONSTRUCTION MATERIAL                         | Epoxy painted with<br>chemical resistant<br>coating |
| TEMPERATURE RANGE                             | Ambient to 450 °C<br>/ 842 °F                       |
| STABILITY OF THE HEATING BLOCK<br>TEMPERATURE | ± 0,5 °C  |
| PRECISION OF THE HEATING BLOCK<br>TEMPERATURE | ± 0,5 °C  |
| SET TEMPERATURE                               | Digital readout in<br>°C or °F                      |
| TEMPERATURE CALIBRATION                       | Automatic   | Automatic   | Automatic   | Automatic   | Automatic   | Automatic   |
| SELECTABLE RAMPS                              | Up to 4 per<br>program                              |
| DIGESTION TIME RANGE                          | 1 to 999 minutes                                    |
| TIME SELECTION                                | 1 minute steps                                      |
| COUNTDOWN                                     | Digital readout                                     |
| SELECTABLE LANGUAGE                           | EN, IT  |
| HEATING PLACES                                | 6-position  | 6-position  | 8-position  | 18-position   | 20-position   | 42-position   |
| SIZE OF TUBES                                 | 250 ml test tubes<br>(Ø 42 mm)                      | 300ml test tubes,<br>Ø 48 mm                        | 250 ml test tubes<br>(Ø 42 mm)                      | 100 ml test tubes,<br>Ø 26 mm                       | 250 ml test tubes<br>(Ø 42 mm)                      | 100 ml test tubes,<br>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)<br>(aluminum block only)   | 220x140x350 mm<br>(8.7x5.5x13.8 in)                 | 220x140x350 mm<br>(8.7x5.5x13.8 in)                 | 230x690x420 mm<br>(9.1x17.2x16.5 in)                | 230x690x420 mm<br>(9.1x17.2x16.5 in)                | 330x140x510 mm<br>(13.0x5.5x20.1 in)                | 330x140x510 mm<br>(13.0x5.5x20.1 in)                |



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