

# Distillation Unit K-350 and K-355



# **Distillation Unit K-350 and K-355**

**Distillation Unit K-350 and K-355 are efficient and versatile. Both units provide accurate and highly reproducible measuring results with a high recovery rate. They can be used for a wide range of applications in analytical laboratories in the food and beverages, feed, agricultural, environmental, chemical and pharmaceutical industries. These applications include the classical practices of nitrogen and protein determination, such as Kjeldahl, TKN (Total Kjeldahl Nitrogen) and Devarda, in accordance with official methods (AOAC, EPA, ISO and DIN). Beyond the classical methods (Kjeldahl, TKN, Devarda) the K-355 is designed for additional applications, such as alcohol, sulfur dioxide, volatile acids and phenol determination.**

**The K-350 and K- 355 are based on proven technology, and feature a robust and compact design that takes up minimal space in your laboratory. A powerful steam generator ensures a fast and reliable process.**

**Up-to-date monitoring technique ensures safe operation of the distillation units.**



### **The K-350: Easy-to-use distillation unit for classical Kjeldahl applications**

The K-350 is the cost-effective solution for fast and reliable nitrogen determination in accordance with official methods.

- Nitrogen and protein determination according to Kjeldahl
- Nitrogen determination according to Devarda
- TKN determination in the environmental industry



### **The K-355: Versatile Kjeldahl distillation unit for a wide range of applications**

In addition to classical applications, the K-355 allows all kinds of steam distillation options, including methods which require reduced steam output. A reliable and acid-resistant pump even allows applications where the dosage of strong acids is required.

Additional applications for the K-355:

- Alcohol distillation
- Determination of sulfur dioxide
- Phenol distillation
- Determination of volatile acids
- Cyanide determination
- Formaldehyde determination
- TVB-N  
(Total Volatile Basic Nitrogen) in fish



# Features of K-350 and K-355

|  | K-350 | K-355 |
|--|-------|-------|
| <b>High degree of convenience:</b>                                   |       |       |
| Compact stand-alone unit using minimal space                         | ●     | ●     |
| Modern and functional design   | ●     | ●     |
| Easy-to-use keyboard   | ●     | ●     |
| Integrated timer   | ●     | ●     |
| LC display   | ●     | ●     |
| Service door (front access)  | ●     | ●     |
| Storage of nine different methods                                    |       | ●     |
| <b>Steam generator:</b>  |       |       |
| High-performance steam generator for efficient steam distillation    | ●     | ●     |
| Electronic regulation of steam output                                |       | ●     |
| Storage of steam output  |       | ●     |
| <b>Dosage:</b>   |       |       |
| Alkali addition  | ●     | ●     |
| Acid dosage via acid-resistant pump                                  |       | ●     |
| Recall of last dosage  | ●     | ●     |
| <b>Safety features:</b>  |       |       |
| Protective door with sensor  | ●     | ●     |
| Sample tube detector   | ●     | ●     |
| Service door sensor  | ●     | ●     |
| Drip tray  | ●     | ●     |
| Cooling water flow sensor  |       | ●     |
| <b>Control:</b>  |       |       |
| Glass splash protector   | ●     | ●     |
| Plastic splash protector   | ●     | ●     |
| Cooling water control  | ●     | ●     |
| Storage of distillation time   | ●     | ●     |
| <b>Applications:</b>   |       |       |
| Kjeldahl, Devarda, TKN   | ●     | ●     |
| Alcohol, phenol, sulfur dioxide, volatile acids, formaldehyde, TVB-N |       | ●     |

The keyboard and easy-to-read display allow user-friendly operation. Error codes (e.g. door open) are immediately displayed and indicated by a signal. The K-355 offers additional convenience, enabling the storage and recall of nine different customer-specific methods.



User interface of the Distillation Unit K-355



Plastic splash protector



Glass splash protector



Protective door monitored by a sensor



## **Buchi Kjeldahl solutions: An integrated workflow package**



Some applications require sample preparation prior to distillation. With the powerful Mixer B-400, non-homogeneous substances can be minced or crushed and homogenized to provide a representative sample. Digestion with a Buchi digestion unit is necessary whenever the nitrogen-containing substance in a sample has to be converted into the appropriate form of nitrogen. During this process, acid fumes and reaction gases may emerge. For this reason the Scrubber B-414 is recommended to prevent bad odors and hazardous gases by neutralizing and absorbing all kind of fumes and gases. Once it has cooled to room temperature, a sample prepared in this way can be utilized directly for Distillation Unit K-350 or K-355.

# Order information

Order no.

## Distillation Unit K-350

Includes steam generator, pair of glass tongs, sample tube, hoses, mains cable and two 10-liter tanks

|  |       |
|--|-------|
| Unit with glass splash protector 230 V, 50/60 Hz   | 43500 |
| Unit with plastic splash protector 230 V, 50/60 Hz | 43418 |

## Distillation Unit K-355

Includes steam generator, pair of glass tongs, sample tube, hoses, mains cable and three 10-liter tanks

|  |       |
|--|-------|
| Unit with glass splash protector 230 V, 50/60 Hz   | 43505 |
| Unit with plastic splash protector 230 V, 50/60 Hz | 43419 |

## Accessories for K-350 and K-355

Order no.

|   |             |
|---|-------------|
| 300 ml sample tube (set of 4)                       | 37377       |
| 300 ml sample tube graduated (set of 4)             | 43049       |
| 500 ml sample tube                                  | 26128       |
| 500 ml sample tube (set of 4)                       | 43982       |
| Holder for 4 sample tubes, 500 ml                   | 16951       |
| Holder for 6 sample tubes, 300 ml                   | 43039       |
| Holder for 12 sample tubes, 300 ml                  | 43041       |
| Tanks 10 l: chemicals/waste                         | 43468/43470 |
| Tanks 20 l: chemicals/waste                         | 43469/43471 |
| Splash protector Devarda                            | 43335       |
| Condenser cover                                     | 43484       |
| SO <sub>2</sub> adsorption glass set                | 48680       |
| Universal adapter Kit for competitor Kjeldahl tubes | 43115       |
| Constricted distillate outlet tube ø 5 mm           | 43096       |
| IQ/OQ-set K-350 (en)                                | 45542       |
| IQ/OQ-set K-355 (en)                                | 45543       |

# Technical data

| Distillation Unit           | K-350              | K-355              |
|-----------------------------|--------------------|--------------------|
| Mains voltage               | 230 V              | 230 V              |
| Frequency                   | 50/60 Hz           | 50/60 Hz           |
| Power consumption           | 2200 W             | 2200 W             |
| Current consumption (230 V) | 9.5 A              | 9.5 A              |
| Weight                      | 16.5 kg            | 17 kg              |
| Dimensions ( L x H x D)     | 400 x 660 x 360 mm | 400 x 660 x 360 mm |
| Recovery rate               | ≥ 99.5 %           | ≥ 99.5 %           |
| Reproducibility (RSD)       | ≤ ± 1 %            | ≤ ± 1 %            |
| Detection limit             | ≥ 0.1 mg nitrogen  | ≥ 0.1 mg nitrogen  |
| Steam performance           | 160 ml / 5 Min     | 160 ml / 5 Min     |

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