

# Kjeltec™ 8100 Manual Distillation Unit



*Simple to use distillation unit for analysis of Kjeldahl nitrogen/protein, ammonium nitrogen, TKN, Direct distillation (DD), volatile acids/bases etc. (Also shown in picture; Tecator™ Digester 20 Auto Lift and the Scrubber)*

## Features & Benefits:

- Automatic dilution, alkali addition, distillation and tube emptying provide ease of use
- Variable output steam generator broadens application area to other volatile components
- Official and accurate procedures (ISO, AOAC, EPA, DIN etc.) simplify validation
- Patented SAFe\* feature for safe distillation of tubes with salt cakes
- Built-in safety systems for user protection
- Self adjusting cooling water control saves water and reduces costs
- Bellows pumps for accurate reagent dispensing
- Alkali resistant plastic splash head for long lifetime

## Description:

The Kjeltec™ 8100 Distillation Unit provides a simple and reliable solution for safe, semi-automatic distillations.

The possibility to pre-program alkali addition and distillation time supports the production of accurate results, independent of operator.

Accurate bellows pumps give long term stability in reagent delivery. The unit is equipped with sensors for safety door, tube platform, distillate temperature as well as level and overpressure sensors for the variable output steam generator.

The patented SAFe\* technology improves safety by a mixing procedure, reducing the exothermic reaction between alkali and acid during distillation.

The user is fully protected by the unique rotating safety door which must be closed with a tube in place before the unit will operate. The safety door and drip tray can be easily removed for cleaning.

Cooling water is used only during analysis and further savings are achieved through an automatic flow control function.

Running costs are reduced further through optimized applications. Downtime and service costs are minimised using selected components. A routine maintenance schedule supports Good Laboratory Practice (GLP) routines.

*\* Steam Addition for Equilibration*

**Order numbers:**

81000001 Manual Distilling unit, 200 – 240 V, 50 – 60 Hz comprising:  
Microprocessor controlled distillation unit with tube draining and automatic addition of water and alkali, Built-in steam generator for deionised water or tap water, Complete with alkali/water/waste tanks with level sensors, receiver flask, combi-adapter for 100, 250, 400 & 750 ml tubes and digestion tubes for 100 & 250 ml

**Optional accessories:**

For a complete Kjeldahl system a Digestor with appropriate accessories such as Exhaust, Scrubber, test tubes and catalyst tablets should be selected. Details can be found in the separate data sheet Tecator™ Digestor Systems.

60032042 Tank 20 l (Alkali/water/waste) without level sensors  
60032043 Level sensor kit for waste  
60032044 Level sensor kit for reagents  
1002-022 Titration unit complete, 50 ml  
60030343 Adapter for Büchi tubes  
10000089 Basket for 20 receiver flasks (250 ml)  
10000164 Receiver flasks, 250 ml (set of 10)  
10000897 Handling device for digestion tubes

**Performance data at 230 V:**

Distillation time: 3.5 minutes at 30 mg N  
(6.5 minutes at 200 mg N)  
Distillation capacity: ~ 40 ml/min  
Measuring range: 0.1 – 200 mg N  
Reproducibility: 1% RSD (including the digestion step)  
Recovery: > 99.5% at nitrogen levels between 1 – 200 mg N  
Tube draining: 200 ml in less than 10 s  
Reagent pump volumes: 0 – 150 ml in steps of 10 ml  
Delay: 0 – 1800 seconds  
SAfE<sub>Patented</sub>: 0 – 15 seconds

**Installation requirements:**

Power supply: 200 – 240 V 50 – 60 Hz  
Power consumption: 2 200 W  
Water consumption: 2 l/min at water temp of 30°C  
(during distillation only) 1 l/min at water temp of 15°C  
Ambient temperature: 5 - 40°C  
Ambient humidity: max. 80% relative  
Weight net: 30 kg  
Dimensions: (W×D×H) 480 × 580 × 690 mm  
Drain: For cooling water only

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