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Lab Solutions

# UDK 149 Automatic Distillation Unit

Food&Feed Line

## The flexible VELP Solution for Automatic Distillation

- Designed to be connected to different types of external titrator
- Patented Steam Generator and Patent Pending Titanium Condenser
- Low Consumption of Cooling Water (from 0.5 l/min)

The UDK 149 Automatic Distillation Unit is designed to perform nitrogen and protein content analysis according to the Kjeldahl Method (TKN) in the Food & Feed industries and several other applications in environmental control (phenols, nitrogen in water, sludge, soil and lubricant) and also in the chemical and pharmaceutical industries after having digested the sample accurately.

The UDK 149 is exceptional in providing savings, by using **TEMS™** technology:
**T**ime Saving - Fast and frequent analyses; no heating delay between runs.
**E**nergy Saving - Cooling water consumption starting from only 0.5 l/min; excellent insulation of internal parts.
**M**oney Saving - Cost reduction is substantial, in line with reduced power consumption.
**S**pace Saving - The extremely compact footprint saves useful laboratory bench space.

With a **3.5'' touch screen color display**, the UDK 149 achieves **automated distillation** through its addition of sodium hydroxide, water and boric acid, with preprogrammed distillation protocols and reaction times.
It provides regulated steam output (10 % to 100 %) and, conveniently, automatic draining of sample residues. High-precision pumps ensure constant accurate dosing of reagents. Designed with a **highly resistant technopolymer housing** for corrosion protection, the system is built around the tough, **patented steam generator**, **titanium condenser** (**patent pending**) and **technopolymer splash head** to ensure exceptional quality in nitrogen analysis. Connection to different models of external titrator extends the **versatility and customer choice**!

**Reliable and robust** solution… for a long life!

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The **patented VELP steam generator** operates without pressure for **safe distillation**, no heat-up delays and requires no maintenance. The **efficient titanium condenser** offers reduced water consumption, ensuring that the distillate temperature always remains below the threshold value and provides high resistance to breakage. The unique **technopolymer splash head**, that contains no glass in its robust design, ensures long life.

A **range of sensors make the UDK 149 convenient and safe** – tube positioning, closed protective door, lever to avoid touching the base of the tube during placement, drip tray, cooling water flow and reagent level alarms… all on board. Colored tubes enable an immediate identification for safety.

As it can easily **be connected to different automatic titrator models**, the UDK 149 enables the final result to be obtained directly. All the parameters of distillation and titration phases are stored in the method with the advantage of time saving. The combination with the "Titroline Easy K" (supplied by VELP Scientifica) represents an integrated and compact solution able to optimize performance and time, in a tried and tested system.

UDK 149 offers **powerful data handling** with **on-board archive** for data storage, titrator data input, output to PC, pen drive, printer in a common format, via Ethernet, USB and RS232.

The unit comes **ready to use**, supplied with test tube, pincer for test tube, collecting flask, inlet and discharge tubes.

## Industry – Application Fields:

- **Food, Feed** and **Beverage** industries - TKN, proteins, TVBN (Total Volatile Basic Nitrogen), alcohol
- **Environmental** and **Agriculture** industries - TKN, Devarda, phenols, ammonia
- **Pharmaceutical** and **Chemical** industries - organic nitrogen, ammonia

| Technical Data | Description |
|---|---|
| Structure: | Corrosion-resistant technopolymer |
| Display: | 3.5" color touch screen |
| Storage capacity: | Up to 50,000 measurements |
| Programmable delayed start for Devarda alloy analysis: | 0 – 99 min. |
| Protocol library: | 20 customizable methods |
| Selectable languages: | UK, I, E, F, RUS, CN + Additional Customizable (downloadable) |
| Addition of sodium hydroxide / water / boric acid: | Automatic / Automatic / Automatic |
| Steam flow regulation: | 10 – 100 % |
| Tap water consumption: | From 0.5 l/min at 15 °C – fr om 1 l/min at 30°C |
| Reproducibility (RSD): | ≤ 1 % |
| Recovery: | ≥ 99.5 % at nitrogen levels between 1 and 200 mg N |
| Detection limit: | ≥ 0.1 mg N |
| Interfaces: | Ethernet, 2 x USB, RS232, TTL |
| Conformity with standards: | AOAC, EPA, DIN, ISO, GLP |
| Power: | 2100 W |
| Power supply: | 230 V - 50 / 60 Hz |
| Weight: | 27 kg / 59.5 lb |
| Dimensions (WxHxD): | 385x780x416 mm (15.2x30.7x16.4 in) |
| **Ordering Information Code No** | **Description** |
| F30200140 | UDK 149 Automatic Distillation Unit |
| R30800194 | Titrator Titroline Easy K |

Contact us for information on standard and optional accessories

Your authorized agent:

We reserve the right to make technical alternations
We do not assume liability for errors in printing, typing or transmission

ISO 9001 ISO 14001 OHSAS 18001 BUREAU VERITAS certification

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