

# UDK 169 & AutoKjel

## Fully Automatic Kjeldahl Analyzer with Autosampler

- Unattended operation
- Complete Package: Integrated Distillation & Titration System with Autosampler
- Patented Steam Generator and Patented Titanium Condenser



The UDK 169 Distillation & Titration System is designed to perform nitrogen and protein determination 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 combination of UDK 169 and the **AutoKjel** sampler offers **complete automation**: load up to 24 x250 ml (Ø 42 mm) or 21 x400 ml (Ø 52 mm) test tubes and you will get **accurate and reliable results, unattended**. Sample tubes are taken from the carousel and fed directly into the UDK 169 for further processing.

**Compact and impressive**, it eliminates unnecessary efforts and time. Upgrade your analyzer at any time, since UDK 169 can be used stand-alone, or it can be combined with the **AutoKjel autosampler**, to drastically increase the **productivity**.

The UDK 169 is exceptional in providing savings, by using **TEMS™** technology:

**Time Saving** - Fast and frequent analyses; no delay between runs; maximum productivity achieved.

**Energy Saving** - Cooling water consumption starting from only 0.5 l/min; excellent insulation of internal parts.

**Money Saving** - Cost reduction is substantial, in line with reduced power consumption.

**Space Saving** - The extremely compact footprint saves useful laboratory bench space.

The UDK 169 distillation & titration system is designed to satisfy the most demanding laboratories needing **high productivity and high safety standards**. It combines both distillation and titration units in one fully automatic, **integrated system**. Exceptional and original VELP design features are found in both units. 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** ensure the ultimate in nitrogen analysis for precise determination. High-precision pumps and burette ensure constant accurate dosing of reagents.

**Official and customizable methods** are piloted via the 6" color touch screen where the operator can set sodium hydroxide, water and boric acid addition, select the distillation and reaction times and regulate steam output (10% to 100%), in this **multifunction and easy system with full data handling features**.

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.

Automatic **colorimetric titration (AOAC recommended)** is followed by **automatic titration vessel cleaning**. The **multitasking software** enables the operator to set all the parameters for a fully automatic control of the distillation and titration processes. UDK distillation & titration system offers **instantaneous reporting, powerful data handling** with on-board archive for data storage, balance data input, output to PC, pen drive, printer in a common format, via Ethernet and USB.

RS232 port is used for the connection with AutoKjel autosampler.

Because of the solid design of **swivel locking wheels**, AutoKjel can be easily moved, thus enabling the wheel to roll in any direction. By locking the wheels, the unit remains fixed and stable.

#### 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
Autosampler capacity:	24 test tubes (250 ml) or 21 test tubes (400 ml)
Power:	2250 W , UDK 169 included
Power supply:	230 V / 50-60 Hz
Weight:	170 kg (374.8 lb), UDK 169 included
Dimensions (WxHxD):	830x1730x640 mm (32.7x68.1x25.2 in), UDK 169 included

Other specs of UDK 169 correspond to UDK 159.

Ordering Info Code No.	Description
F30200160	UDK 169 Kjeldahl Analyzer
F30200430	AutoKjel autosampler
S30200160	UDK 169 & AutoKjel

AutoKjel comes complete with all the accessories required for the connection with UDK 169. Tanks for NaOH (10-liter), H<sub>2</sub>O (20-liter), H<sub>3</sub>BO<sub>3</sub> (5-liter) and waste (20-liter) are included.

Your authorized agent:

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VELP Scientifica srl  
via Stazione 16  
20040 Usmate (Milano) Italy  
Tel +39 039 628811  
Fax +39 039 6288120  
inse@velp.it  
www.velp.com