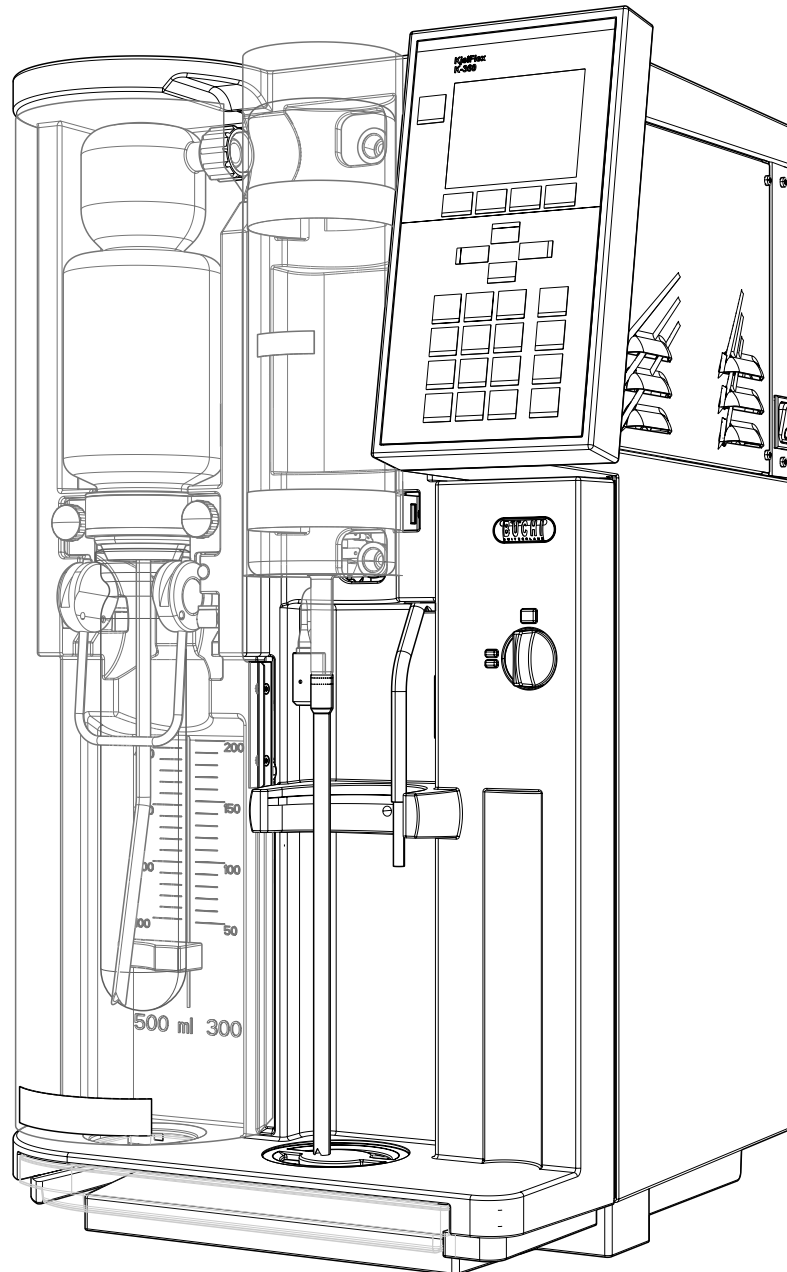




KjelFlex K-360

Technical data sheet

Modular distillation unit for a wide range of applications requiring steam distillation. The instrument can be configured to fulfill various requirements and can be upgraded if needs change.



Scope of delivery

All instrument versions are supplied ready to use and comprise a steam generator, pumps for dosage of alkali, boric acid and water as well as the aspiration of sample tube and receiver residues.

Components	K-360
Sample tube (300 mL)	1
Storage tanks (10 L)	3
Hose for chemical feed	6.0 m
Hose for cooling water feed	1.5 m
Hose for waste drain	1.8 m
Hose for water drain	1.8 m
Pair of glass tongs	1

Order code

Choose the configuration according to your needs:



KjelFlex K-360

- 0 Splash protector glass
- 1 Splash protector plastic
- 4 Splash protector plastic, acid pump
- 5 Splash protector glass, acid pump
- 6 Splash protector plastic, titration set
- 7 Splash protector glass, titration set
- 8 Splash protector plastic, acid pump, titration set
- 9 Splash protector glass, acid pump, titration set

Technical data

Dimensions (WxHxD)	405 x 660 x 400 mm
Weight	22 kg
Display	LC display, monochrome
Memory	50 methods and 500 results
Password protection	Yes
Language versions	DE, EN, IT, ES, FR, JA, CN, KO, PL, RU

Pumps	NaOH, H ₃ BO ₃ , H ₂ O (optional: acid resistant pump)
Adjustable steam output	30 – 100 %
Measuring range	0.1 – 200 mg N
Reproducibility (RSD)	<1 %
Recovery	>99.5 % (1 – 200 mg N)
RS232 ports	2 (titrator, dosing unit)
USB port	1 (printer)
Safety sensors	3 (service door, protecting door, sample tube)
Sensor cooling water flow	Yes
Power supply	220 – 240 V ±10 %
Frequency	50/60 Hz
Power consumption	2200 W
Ambient	5 – 40 °C, max. 80 % relative humidity

Accessories

Sample tubes and holders	Qty	Order number	Picture
Sample tubes 300 mL For sample volumes up to 200 mL or 5 g in weight	4	037377	①
Sample tubes 300 mL	20	11059690	
Sample tubes graduated 300 mL	4	043049	
Sample tube 500 mL	1	026128	②
Sample tubes 500 mL	4	043982	
Sample tubes micro (100 mL)	4	11057442	
Sample tube holder (6 x 300 mL tubes)	1	043039	③
Sample tube holder (12 x 300 mL tubes)	1	043041	
Sample tube holder (4 x 500 mL tubes)	1	016951	

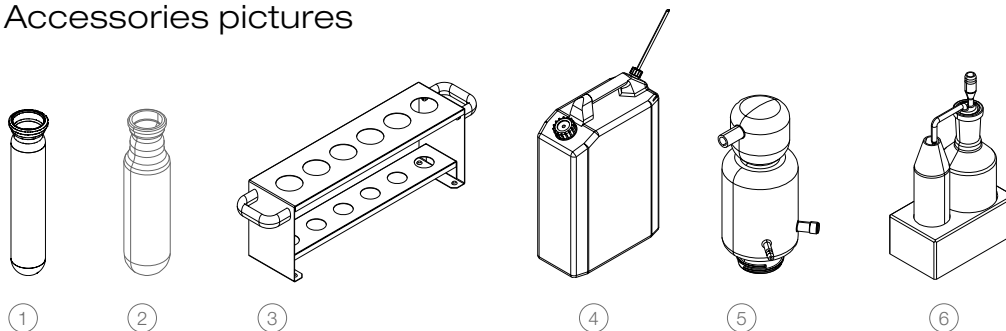
Storage tanks and level sensors	Qty	Order number	Picture
Storage tank (10 L) for chemicals	1	043468	④
Storage tank (10 L) for waste	1	043470	
Storage tank (20 L) for chemicals	1	043469	
Storage tank (20 L) for waste	1	043471	
Storage tank (10 L) with level sensor for chemicals	1	043472	
Storage tank (10 L) with level sensor for waste	1	043474	
Storage tank (20 L) with level sensor for chemicals	1	043473	

Storage tanks and level sensors	Qty	Order number	Picture
Storage tank (20 L) with level sensor for waste	1	043475	
Level sensor for chemical tank	1	043403	
Level sensor for waste tank	1	043404	
Rubber stopper for level sensor	1	043409	

Other accessories	Qty	Order number	Picture
External PC keyboard (US)	1	031456	
External PC keyboard (CH)	1	031457	
Glass splash protector Devarada	1	043335	⑤
Glass set for SO ₂ determination	1	048680	⑥
External dosing device (115 V)	1	043367	
External dosing device (230 V)	1	043596	
Cable to external dosing device	1	043621	
Cable to Mettler titrator (DL-series)	1	043616	
Cable to Metrohm (7-series)/Mettler (T-series) titrator	1	043617	
Adapter for Metrohm 702/719 titrator	1	047803	
Cable to Metrohm Titrino Plus 877/848 titrator	1	11055333	
Cable to Schott Titroline Easy titrator	1	043618	
Cable to Radiometer titrator	1	043619	
Titration set (receiving vessel, holder, stirrer, valve)	1	043698	
Sher indicator 100 mL	1	003512	

Documentation	Qty	Order number	
Kjeldahl Guide (EN) Comprehensive guide covering all aspects of the theoretical and practical know-how	1	11055033	
Kjeldahl Practice Guide (EN) Provides theoretical background information, useful hints and calculation tables for daily routine work	1	11592548	
Kjeldahl Practice Guide (DE)	1	11592547	
Kjeldahl Practice Guide (CN)	1	11592549	
IQ/OQ set (EN) Complete set for Installation and Operational Qualification of the instrument	1	093189	
IQ/OQ set (DE)	1	045541	
Repeating OQ (EN)	1	11055493	
Repeating OQ (DE)	1	11055494	

Accessories pictures



Modular instrument setup

Due to its modular concept the KjeldFlex K-360 can be adapted to any need. The choice of glass or plastic splash protector, acid resistant pump and titration set allows to match different requirements. The distillation unit is compatible with a wide selection of titration units to guarantee smooth and trouble-free operation.

A) Two splash protector types

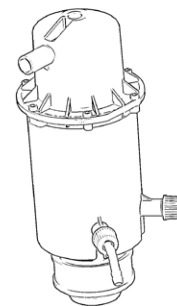
The splash protector is crucial to obtain accurate results. Two types are available: Glass or glass-fibre reinforced polypropylene splash protector (referred to as “plastic”).

Advantage of the glass splash protector:

- visual monitoring of the distillation process makes method development more convenient

Advantage of the plastic splash protector:

- increased durability to sodium hydroxide extends the lifetime of the protector

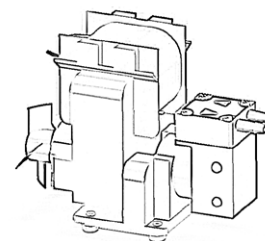


B) Acid resistant pump for an extended application range

Besides the classical Kjeldahl, TKN or Devarda applications, the K-360 can be used for additional steam distillations. Especially analysis of samples requiring the dosing of strong acids can be carried out conveniently.

Additional applications:

- alcohol
- sulphur dioxide
- phenol
- volatile acids
- formaldehyde
- TVBN



C) Titration set to automate the analysis process

The titration set is needed to connect an external titrator. This configuration increases the level of automation and enables higher sample throughput.

Titration sets recommended with the K-360:

- Metrohm (702, 719, 785, Titrino Plus 877/848)
- Mettler-Toledo (DL15, DL22, T50)
- Radiometer (TitraLab 840)
- Schott/SI Analytics (TitroLine Easy)

