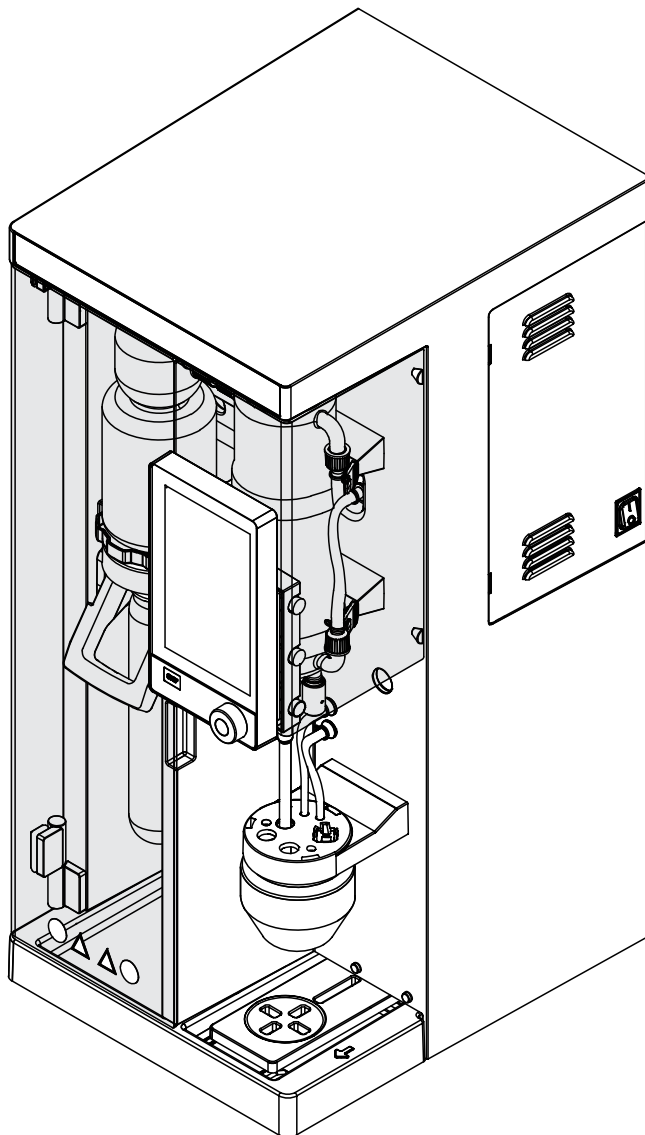




K-365 Dist Line

Technical data sheet



Dist Line

Due to its modular concept the Dist systems can be adapted to various needs. The different instrument configurations allow to meet different requirements.

A) Three instrument performance levels

- EasyDist: Base unit
- BasicDist: Intermediate unit
- MultiDist: Advanced unit

B) Splash protectors

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 and extended lifetime

C) Application versatility

All Dist system are designed to steam distill volatiles like:

- Alcohol
- Essential oils

All Basic and Multi systems contain an acid resistant pump, which allows to distill acid released volatiles:

- Sulfite
- Cyanide
- Volatile acids
- Phenol
- Formaldehyde

The Multi systems additionally contains a sodium hydroxide resistant pump which allows to do Kjeldahl applications:

- Ammonia
- Total
- Kjeldahl Nitrogen (TKN)
- Protein Nitrate/Nitrite

D) External titrators

Various titrators can be connected to the MultiDist systems:

- Metrohm (Eco Titrator and TitrinoPlus 848/877)
- SI Analytics (TitroLine 5000, Titroline 7000 and Titronic 300)

All other titrator models can be used via a semi automated integration.

Scope of delivery

All configurations are supplied ready to use.

	EasyDist	BasicDist	MultiDist
Instrument	1	1	1
Splash protector	1*	1*	1*
Titration set	-	-	*
External titrator	-	-	*
Recirculating chiller	*	*	*
BUCHI Bluetooth® Dongle	1	1	1
Power cable	1	1	1
Sample tube (300 mL)	1	1	1
Tanks (10 L)	1	2	3
Cap Set, 10 L tank	1	2	3
Tanks (20 L)	-	-	1
Cap Set, 20 L tank	-	-	1
Suction tube tank	1	2	5
Hose for chemical feed (2 m)	1	1	4
Hose for cooling water feed (1.5 m)	1	1	1
Hose for cooling water drain (3 m)	1	1	1
Pair of glass tongs	1	1	1
Hose for instrument drain	-	*	0
Hose clip acid pump	-	1	1
Hose clip reagent pumps	-	1	4
Hose clip peristaltic pumps	-	*	2

* According to order code

Order code EasyDist

Choose the configuration according to your needs:

1 1 K 3 6 5 1 2 0

Splash Protector

- 4 Glass without Dosing Inlet
- 5 Plastic without Dosing Inlet

Recirculation Chiller

- 0 None
- 1 F-314 230V

Order code BasicDist

Choose the configuration according to your needs:

1 1 K 3 6 5 2 2

Configuration

- 0 Base Unit
- 1 Base Unit with Sample Tube Aspiration
- 2 Base Unit with Sample Tube Aspiration and I-300 Pro

Splash Protector

- 1 Glass with Dosing Inlet
- 2 Plastic with Dosing Inlet

Recirculation Chiller

- 0 None
- 1 F-314 230V

Order code MultiDist

Choose the configuration according to your needs:



Configuration

- 0 Base Unit
- 1 Base Unit with Titration Setup and Receiver Waste Aspiration
- 2 Base Unit with Titration Setup, Receiver Waste Aspiration and Metrohm Eco Titrator

Splash Protector

- 1 Glass with Dosing Inlet
- 2 Plastic with Dosing Inlet
- 3 Devarda

Recirculation Chiller

- 0 None
- 1 F-314 230V

Technical data

K-365 Dist Line

	EasyDist	BasicDist	MultiDist
Dimensions (W x D x H)	320 x 400 x 730 mm	320 x 400 x 730 mm	320 x 400 x 730 mm
Weight	23 kg	23 kg	23 kg
Connection voltage	220 - 240 ± 10 % VAC	220 - 240 ± 10 % VAC	220 - 240 ± 10 % VAC
Power consumption	2100 W	2100 W	2100 W
Frequency	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz
IP Code	IP20	IP20	IP20
Pollution degree	2	2	2
Overvoltage category	II	II	II
Tap water pressure	1 - 10 bar	1 - 10 bar	1 - 10 bar
Tap water condition <small>(If the temperature is more than 25°C use a recirculating chiller)</small>	1- 25°C	1 - 25°C	1 - 25°C
Tap water consumption	~ 1.2 L/min	~ 1.2 L/min	~ 1.2 L/min
Approvals	CE, CSA	CE, CSA	CE, CSA

Analysis specifications

	EasyDist	BasicDist	MultiDist
Measuring range	analyte specific	analyte specific	0.02 – 220 mg N
Analysis time for 30 mg N <small>(with Metrohm Eco Titrator without titrator preparation)</small>	-	-	3.5 min
Analysis time for 200 mg N <small>(with Metrohm Eco Titrator without titrator preparation)</small>	-	-	5 min
Recovery	analyte specific	analyte specific	N: >98% with digestion process N: >99.5% (direct distillation)
Measurement reproducibility <small>(Direct distillation of 1 mg N absolute and 300 sec. distillation)</small>	analyte specific	analyte specific	N: <0.8%

Instrument specifications

	EasyDist	BasicDist	MultiDist
Distillation capacity (100%)	~ 40 mL/min	~ 40 mL/min	~ 40 mL/min
Distillation capacity (10%)	~ 12.5 mL/min	~ 12.5 mL/min	~ 12.5 mL/min
Adjustable distillation power	10 - 100%	10 - 100%	10 - 100%
MaxAccuracy Mode <small>(Compensation of power grid fluctuations)</small>	Yes	Yes	Yes
Distillate reproducibility (RSD) <small>(At 300 seconds distillation time)</small>	<1%	<1%	<1%
AutoDist Mode <small>(Automatic detection of the condensation start)</small>	No	Yes	Yes
NaOH pump	No	No	Yes
H ₂ O pump	No	No	Yes
Acid pump	No	Yes	Yes
Boric acid pump	No	No	Yes
Sample disposal	No	Optional	Yes
Receiver disposal	No	No	Optional
Safety sensors	Yes	Yes	Yes
Titration vessel	No	No	Optional
Titrator connection	No	No	Optional

Interface specifications

	Interface EasyDist, BasicDist	Interface pro BasicDist (option), MultiDist
Display	LCD color, 4.3 in	LCD color, 7.0 in
Control elements	Buttons / control knob	Touch-screen / control knob
Max. number of methods	8	96
Max. number of determinations	36	512
Max. number of determinations per series	16	32
Max. number of templates	4	16
Max. number of users	4	32
Max. number of determination results	40	256
Language	en, de, fr, it, es, pt, ja, zh, ru, pl, ko, id	en, de, fr, it, es, pt, ja, zh, ru, pl, ko, id

Ambient conditions

For indoor use only.

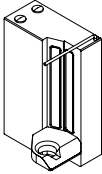
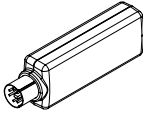

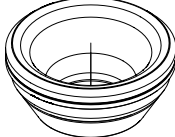
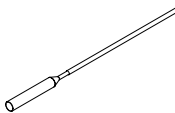
Max. altitude above sea level	2000 m
Ambient and storage temperature	5–40 °C
Maximum relative humidity	80% for temperatures up to 31 °C decreasing linearly to 50 % relative humidity at 40 °C

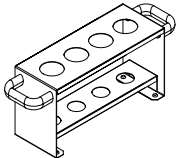
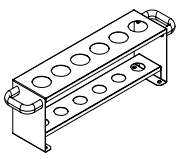
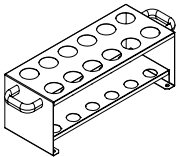
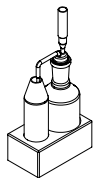
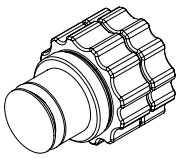
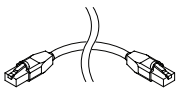
Materials

Component	Materials of construction
Housing	Polyurethane
Housing electric	Stainless steel
Steam generator housing	Stainless steel
Housing stirrer	Glass fiber reinforced polypropylene
Rear cover	Polyvinyl chloride
Glass parts	Borosilicate 3.3
Plastic splash protector	Glass fiber reinforced polypropylene
Protective cover	PMMA
Sealing	CSM
NaOH hose	EPDM
Three-way valve	PP / PE

Spare parts and accessories

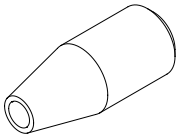
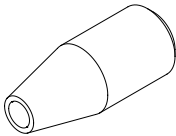
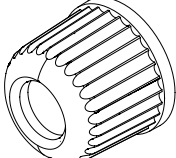
Accessories

	Order no.	Image
Reaction detection sensor	11072666	
OnLevel sensor	11070270	
Tank level sensor kit	11072294	
Eco Titrator	11072748	
StatusLight cpl., incl. communication cable Indicates the status of the instrument (instrument is ready to use, has an error or is in operation).	11068959	
BUCHI Bluetooth® Dongle, connects instrument to smart- phone via Bluetooth®	11067770	
Adapter for 3rd party sample tubes	11072398	
Sealing sample tube 3rd party adapter	11072180	
Condenser outlet for alcohol application	043096	

	Order no.	Image
Sample tube holder (4x 500 mL tubes)	016951	
Sample tube holder (6 x 300 mL tubes)	043039	
Sample tube holder (12 x 300 mL tubes)	043041	
SO ₂ absorption glass set	11073599	
Cyanide caps Caps for hermetical closing of all types of Kjeldahl sample tubes during sample preparation for cyanide in food	11067871	
Communication cable RJ45, 2 m Connection between vacuum controller/interface and recirculating chiller, vacuum controller/interface and vacuum pump or steam distillation unit and Eco titrator.	044989	
Dispenser unit Titronic 300	11062956	

Splash protector spare parts

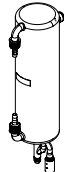
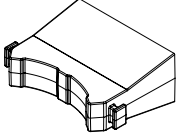
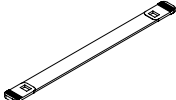
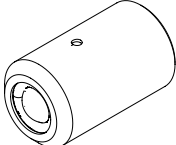
	Order no.	Image
Glass splash protector (EasyDist)	11071015	
Plastic splash protector (EasyDist)	11072055	
Glass splash protector	11071013	
Plastic splash protector	11070670	
Devarda splash protector	11071014	
Sealing sample tube to splash protector	043068	
Sealing sample tube to splash protector (acid resistant)	11063243	
Steam inlet tubing to sample tube	043424	
Steam inlet tubing to sample tube (750 mL)	043119	

	Order no.	Image
Connecting piece	019002	
Connecting piece EPDM	11062478	
Bridge splash protector to condenser	11070620	
Cap nut GL14	033577	
Hose barbs. set. 4 pcs, straight, GL14, FPM seal Content: Hose barbs, cap nuts, seals.	040296	
Seals, set. 10 pcs, for hose barbs GL14, FPM, green	040040	

Tank spare parts


	Order no.	Image
Cap Set, 10 L tank	11072173	
Canister 10L thin walled	043410	
Cap Set, 20 L tank	11072174	
Canister 20L	043408	
Tank labels	043434	

Condenser spare parts

	Order no.	Image
Condenser with check valve	11072183	
Clamp for condenser	11066868	
Rubber band	11070669	
Check valve	11071740	

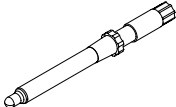
	Order no.	Image
Dist. Outlet PTFE L=300	11071940	

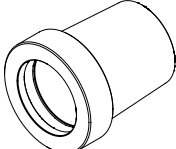
Titration spare parts

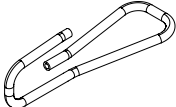
	Order no.	Image
Receiving vessel	043390	

Stirrer cpl.	11070246	
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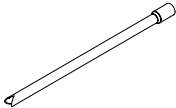
pH electrode (refillable electrolyte)	11065834	
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pH Electrode	11056842	
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Clamp cone pH-electrode	11069793	
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Hose Tygon Ø 8.0 x 4.8	043364	
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Receiving support	11071003	
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Dist. Outlet PTFE L=212	11071941	
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	Order no.	Image
Aspiration tubing receiving vessel	11072589	
H ₃ BO ₃ tubing receiving vessel	11072637	

Sample tubes

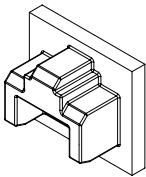
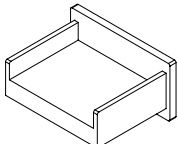
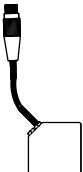
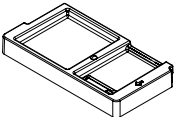
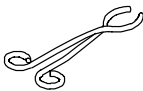
	Order no.	Image
Sample tubes micro (100 mL) 4 pcs.	11057442	
Sample tubes 300 mL 20 pcs.	11059690	
Sample tubes 300 mL For sample volumes up to 200 mL or 5 g in weight 4 pcs.	037377	
Sample tubes graduated 300 mL 4 pcs.	043049	
Sample tube 500 mL	026128	
Sample tubes 500 mL 4 pcs.	043982	

	Order no.	Image
Sample tube 750 mL including suction tube	11058999	

Cable and tubing

	Order no.
Hose peristaltic pump out (2.5 m)	11071630
Hose clips peristaltic pump hose	043586
Hose acid pump (2 m)	043588
Hose clip D7.6	043571
Hose to NaOH/ H ₂ O/H ₃ BO ₃ pumps or drain (2 m)	11072687
Hose clip to NaOH/H ₂ O/ H ₃ BO ₃ pumps or drain	043841
Suction to tube tank (0.58 m)	043407
Tap water hose cpl.	037780
Cable to Metrohm Titrimo Plus 877/848 titrator	11055333
Set of sealings tap water hose	040043
Cable to SI-Analytics TitroLine Easy and TitroLine 5000 titrator	043618
Cable to Metrohm (7-series)/Mettler (T-series) titrator	043617
Tubing to peristaltic pump	11070015
Silicone hose D6/9 L=3 m	048355

Other spare parts

	Order no.	Image
Cap RJ-45 cap	11055949	
USB cover	11069375	
Level sensor capacitive	11065245	
Tank level sensor (Velcro point)	11070517	
Tank level sensor (Velcro strap)	11070516	
Silicone hose D6/9 L=3 m	048355	
Collecting pan	11066465	
Pair of glass tongs	002004	

Consumables

	Order no.
2% boric acid pH 4.65 +/- 0.15 with Sher indicator, 5 L	11064972
4% boric acid pH 4.65 +/- 0.15 with Sher indicator, 5 L	11064973
4% boric acid pH 4.65 +/- 0.15 with bromocresol green / methly red mixed indicator, 5 L	11064976
Sher indicator 100 mL	003512
Ammonium phosphate monobasic, 25 g	045527

Maintenance kit

	Order no.
Customer Kit for Dist Line	11073025

Upgrade kits

	Order no.
Upgrade Basic base unit with aspiration pump	11CSN12157
Upgrade Basic base unit and aspiration pump with I-300 Pro	11CSN12158
Upgrade Basic base unit with aspiration pump and I-300 Pro	11CSN12159
Upgrade Multi base unit with titration vessel	11CSN12160

Documentation

	Order no.
IQ/OQ set MultiDist en	11073602
Repeating OQ MultiDist en	11073603
IQ/OQ set BasicDist en	11073631
Repeating OQ BasicDist en	11073632
Kjeldahl Knowledge Base (EN) Comprehensive guide covering all aspects of the theoretical and practical know-how.	11595478
Kjeldahl Practice Guide (EN) Provides theoretical background information, useful hints and calculation tables for daily routine work	11592548
Kjeldahl Practice Guide (DE)	11592547
Kjeldahl Practice Guide (CN)	11592549