

3053

KJELDAHL DIGESTION & DISTILLATION SYSTEM



EPC / PRODUCTS / APPLICATION / SOFTWARE / ACCESSORIES / CONSUMABLES / SERVICES

Analytical Technologies Limited

An ISO 9001 Certified Company

www.analyticalgroup.net

KJELDAHL DISTILLATION UNITS KD-3053

FEATURES



- » Auto / Manual Modes.
- » Automatic Sequencing of all processes.
- » Integrated Microcontroller based precise PID Module with Feather Touch Controls and Large Graphical LCD Display contains menu's and sub menu's for setting all parameters.
- » Completely user friendly.. No technical expertise required.
- » Automatic Energy efficient steam generator available either as Stainless Steel or Borosilicate Glass.
- » Automatic Water Level maintenance of Steam Generator..
- » Steam Generator Efficiency adjustable upto 100%.
- » Safety Door Interlock present. Machine will not start when the door is open.
- » Error indication if Tube is not in place.
- » Automatic Error diagnosis with alarm indication.
- » Reservoir level sensors.
- » Software for data calculation and storage (Optional).
- » Preset programs of about 50nos in-built. Further programs can be created by the user (PROKJEL AU).
- » Moulded Corrosion free front panel.
- » MS Exterior neatly powder coated (SS Exterior Optional).
- » Safety valve, Secondary thermostat for additional safety for steam generator.
- » Low Water Level cut off for safe guarding the heater from running dry
- » Additional Vent valve to avoid back suction of distillate at the end of distillation cycle.
- » Sample food, feed, plant & soil

TECHNICAL DATA

Parameter	KD-3053 (with chosen digestion system)
Nitrogen Recovery	99.8 - 100 %
Accuracy	Supersedes conventional Kjeldahl apparatus results.
Reproducibility	± 1% relative or better
Analysis range	0.5 - 160 mg of nitrogen / 3 - 1000 mg of protein
Distillation Capacity	3 - 4 minutes per sample (15 to 20 samples per hour)
Receiver Solution	Programmable between 15-50ml
Water dilution	Programmable between 0-100 ml in steps of 10ml
Alkali addition	Automatic mode / Manual mode (Continuous)
Alkali volume	Programmable between 15 - 50 ml
Reaction delay time	Programmable 0-5 minutes.
Distillation time	Programmable 1-99 minutes
Steam generator	Borosilicate glass / Stainless Steel and Safety valve
Temperature control	RTD based Micro controller with Standby mode.
Water level control	Stainless Steel Float Switches
Cooling Water	Automatic (90 liters per hour) Nil with CRC 25 Chiller
Condenser	Made of borosilicate glass
Distillate collection	18 - 25 ml per minute optimally.
Water/Alkali tank	5 liters ea.
Dimension (W x D x H)	370 x 320 x 720 mm.
Electrical requirement	230V, 50Hz Single phase AC, 1500W.

APPLICATIONS

KD-3053 - MANUAL

- » Manual Alkali Addition
- » Automatic Sample Dilution
- » Automatic Steam Processing
- » Automatic Reaction Delay Time
- » End of Cycle Buzzer

KD-3053 - SEMI AUTOMATIC

- » Automatic Alkali Addition
- » Automatic Sample Dilution
- » Automatic Steam Processing
- » Automatic Reaction Delay Time
- » Automatic KmnO₄ Addition
- » End of Cycle Buzzer

KD-3053 - AUTOMATIC

- » Automatic Alkali Addition
- » Automatic Sample Dilution
- » Automatic Steam Processing
- » Automatic Reaction Delay Time
- » Automatic KmnO₄ Addition
- » Automatic Receiver Solution Addition
- » Automatic Sample Residue Removal
- » RS 232 Port for External Auto Titration
- » End of Cycle Buzzer

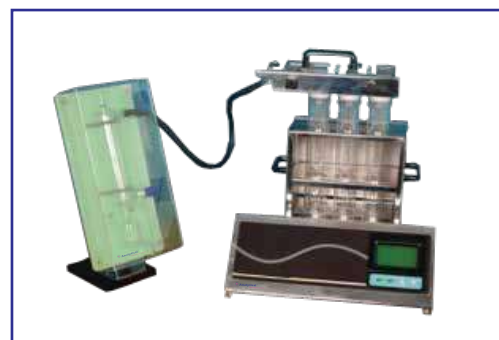
KD-3053 - FULLY AUTOMATIC

- » Automatic Alkali Addition
- » Automatic Sample Dilution
- » Automatic Steam Processing
- » Automatic Reaction Delay Time
- » Automatic KmnO₄ Addition
- » Automatic Receiver Solution Addition
- » Automatic Sample Residue Removal
- » In-Built Auto Titrator
- » Automatic End Point detection
- » Automatic Result calculation
- » End of Cycle Buzzer

KJELDAHL DIGESTION UNITS KD-3068

FEATURES

Parameter	KD-3068 (with chosen Analytical Distillation system)
Sample size	Up to 5 gm / 15 ml relevant to nitrogen content
Digestion time	30-45 minutes typical.
Temperature Range	40-450 °C. Accuracy: $\pm 0.1^{\circ}\text{C}$
Controller	PID based Micro controller with thermocouple sensor.
Setting	Feather Touch Keys
Indication	Graphical LCD
Heating Block	Special Aluminum alloy.
Power Supply	230 V, 50 Hz Single phase AC.



- » Homogenous and fast digestion of samples.
- » Custom-built high-density cartridge heater made of stainless steel.
- » Special aluminum alloy block that ensures homogenous heating.
- » Optimum clearance between digestion tubes and walls of the wells.
- » Optimum ceramic fiber insulation bounded by Asbestos boards for effective insulation.
- » Integrated Microcontroller based precise PID Module with Feather touch Controls and Large Graphical LCD Display. In-Built Timer ensures automatic Cut-off of unit after programmed digestion time is complete.
- » Multi cycle programmable ramp possible
- » Specially designed leak proof Exhaust Manifold assembly made of glass with stainless steel stand.
- » Specially designed Stainless Steel Digestion Tube holder.
- » Provided along with chemical & heat resistant Teflon caps for the Digestion tube and a Stainless Steel Manifold rack.
- » Specially designed vapour aspirator pump made of borosilicate glass with teflon drain valve, fixed on a nylon board with acrylic cover and stand.
- » Vapour aspiration tube is made of Viton.
- » Heat deflector plate made of SS316 grade
- » Available with acid fume neutralizer AFN 50 as an optional accessory.

TECHNICAL DATA

Model	KD 3312	KD 3324	KD 3340	KD 3506	KD 3512	KD 3520
No. of Samples	12	24	40	6	12	20
Tube Capacity (ml)	100	100	100	250	250	250
Tube Dimension (mm)	26x300	26x300	26x300	42x300	42x300	42x300
Power (Watts)	1000	2000	3000	1000	2000	3000
Block Dim. WxDxH (mm)	350x200x140	360x320x140	420x420x140	340x200x140	400x320x140	460x320x140



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Analyzer



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for immunoassay
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Semen Analyzer



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