

20. Vacum Pump	
Flow Rate (max.): 7 l/min	
Ultimate Vacuum (max.): 130 mbar (abs.)	
Voltage pump (V): 24 DC	
Flow rate [m3/h] at atm. Pressure: 0.4	
Adjustable speed control	
Protection class IP40	
Small footprint to optimize workspace	
Maintenance-free	
100% oil-free transfer – thereby pure transferring, evacuation and compression of gases.	
PTFE-coated diaphragm is ideal for aggressive/ corrosive gases and vapors	
Pump head PPS	
Integrated rotational speed control	
Environmentally friendly	
21. Dispersers Digital	
High-performance dispersing instrument for volumes from 1 – 2000 ml (H2O) with digital speed display.	
wide speed range from 3000 – 25,000 rpm	
Maximum viscosity of medium: 5,000 mPas.	
Motor rating input /output: 800 / 500 W	
Extension arm (shaft) diameter: ~13 mm; length ~160 mm	
Permissible ambient temperature: 5-40 °C; relative humidity up to 80% (at ≤31 °C) decreasing to 50% at 40 °C.	
Digital speed display	
Electronic speed control	
Electronic overload protection	
Stainless steel dispersing elements can be cleaned quickly and easily	
Plastic disposable dispersing elements are available in two sizes	
Error code display	
Quiet operation (noise 75 db)	
The dispersing element (rotor□stator) is not included must be selected separately based on the application/volume.	
22. Dispersers Basic	
High-performance dispersing instrument for volumes from 0.5 – 100 ml (H2O)	
wide speed range from 800 – 30,000 rpm	
Maximum viscosity of medium: 5,000 mPas.	
Motor rating input /output: 125 / 75 W	

Extension arm (shaft) diameter: ~8 mm; length ~100 mm
Permissible ambient temperature: 5-40 °C; relative humidity up to 80%
Scale speed display
Ideal for manual operation
Stainless steel dispersing elements can be cleaned quickly and easily
Plastic disposable dispersing elements are available in two sizes
Quiet operation (noise 65 db)
23. Dispersing tools 1-100ml
Volume range: 1-100 ml
Circumferential speed (m/s): 9.8
Ultimate fineness, suspensions (μm): 10-50
Ultimate fineness, emulsions (μm): 1-10
Stator diameter 10 mm
Immersion depth 22 - 85 mm
Materials in contact with medium: PTFE, AISI 316L
Suitable for solvents
Max. temperature: 180 °C
Sterilization methods: all methods
24. Dispersing tools 100-2000ml
Volume range: 100-2000 ml
Circumferential speed (m/s): 23.6
Ultimate fineness, suspensions (μm): 5-25
Ultimate fineness, emulsions (μm): 1-5
Stator diameter: 25 mm
Immersion depth: 40 - 165 mm
Materials in contact with medium: PTFE, AISI 316L
Suitable for solvents
Max. temperature: 180 °C
Sterilization methods: all method
25. Disperser (1-1500ml)+ dispensing Tool
High-performance dispersing instrument for volumes from 1 – 1500 ml (H ₂ O) with digital speed display.
wide speed range from 3000 – 25,000 rpm
Maximum viscosity of medium: 5,000 mPas.
Motor rating input /output: 500 / 300 W
Extension arm (shaft) diameter: ~13 mm; length ~160 mm
Permissible ambient temperature: 5-40 °C; relative humidity up to 80% (at ≤31 °C) decreasing to 50% at 40 °C.

Digital speed display LED
Electronic speed control
Electronic overload protection
Stainless steel dispersing elements can be cleaned quickly and easily
Plastic disposable dispersing elements are available in two sizes
Error code display
Quiet operation (noise 75 db)
The dispersing element (rotor□stator) is not included must be selected separately based on the application/volume.
With Dispersing Element: 10-1500 ml. Speed: 16.6 m/s
Immersion depth: 40 - 165 mm
Materials in contact with medium: PTFE, AISI 316L
Suitable for solvents: yes
Max. temperature: 180 °C
Sterilization methods: all methods
26. OHS Digital Stirrer
Digital Overhead Stirrer with 40 Ncm torque, digital display and timer able to stir up to 25 l.
Motor: Brushless DC
Stirring Volume (H2O): Up to 25 L
Speed Gears: 1
Max Torque: 40 Ncm
Stirring Speed Range: 30-2000 rpm
Speed Setting Resolution: 1 rpm
Max Viscosity: 25.000 mPa*s
Torque Compensation: SpeedServo
Chuck Range : from 1 to 13 mm
Shaft diameter Pass-Through: up to 8.5mm
Integrated overload, overtemperature, and overcurrent safety alarms
Key lock to prevent accidental changes.
27. Muffle furnace
Ash-determinations, enameling, fusions, precipitate drying
Capacity 12L
Temperature range: 300_1000 C
Required time to reach 800°C: 20 mns
User's self-compensation function for temperature (±50.0°C)
Resolution: 1°C, 1 min
Ceramic fibre plate included

Powder-coated steel body, ceramic fibre insulation, ceramic fibre exposed heating wire interior with 4-sided heating
Backlight LCD display
CE certified and unique serial number for tracing
Safety switch for door opening
Overheat and over-current protection
Sensor error detection
Jog-Dial controller (PID) with 2-way knob (turn + push), digital LCD with backlight, and two durable setting buttons
Programmable: 4 patterns with 10 segments
28. BOD (Biochemical Oxygen Demand) / respirometric analyzer system
Respirometric/pressure sensor measuring oxygen consumption by microorganisms, via drop in pressure (CO ₂ absorption) in a closed bottle
BOD Scales: 90, 250, 600, 1000, 4000, Higher values after dilution
Pressure range (sensor): 500 ÷ 2000 mbar (hPa)
Display/interface: 4-digit LED display, intuitive 2-button interface
Communication / Data: Wireless transmission , real-time curve monitoring, cloud platformsupport
Sensor construction with Technopolymer; IP 54 rated protection (against dust/particles & splashes) for the system. Safety class IEC/EN 61010-1
Bottle/sample volume: Example for Sensor: 500 mL bottle typical
Positions: 6 bottles simultaneously
Dimensions & Weight: approx 270 × 300 × 185 mm, ~2.3 kg.
Results available in BOD (mg/l) and Pressure (mbar).
Cooled incubator:
Usable volume: 109 L
Uniform temperature by the use of forced ventilation (± 0,5°C)
Constant temperature: 20 °C
Internal sockets to power devices
Accepts 3 BOD Sensor System 6, or 2 BOD Sensor System 10
Accepts 3 RESPIROMETRIC Sensor System 6
DIGITAL DISPLAY: 2-digit, 1 °C resolution
USABLE INTERNAL VOLUME: 109 liters
ELECTRONIC THERMOREGULATION SYSTEM: Traditional
NUMBER OF SHELVES INCLUDED: 2
NUMBER OF INTERNAL SOCKETS: 2
POWER: 120 W

29. Rotary Evaporator
The evaporator should be equipped with special glassware designed for greaseless usage, ensuring a cleaner and more efficient operation
The system includes : Water bath/condenser/receiver flask/vacuum system & controller
1000 ml evaporating flask with ground joint socket ST 29/32
500 ml receiver flask round bottom with spherical joint socket KS 35
Clamps and connections
Power supply: AC 230 V, 50/60 Hz
Speed range: 20-280 RPM
Flask types suitable: 50-3000 ML
Bath temperature up to 180 °C
Bath material: Stainless steel SUS304
Built-in digital controller with lcd display
Easy height control by accurate motor with up/down buttons.
Double binding PTFE and NBR nitrile vacuum seal
Insulated heater
Double- jacketed bath body
Low water level detection and automatic stop function.
30. Dispenser
Positive-displacement piston mechanism with a fluoroplastic (PFA) sealing lip on the cylinder wall, which acts like a wind-screen wiper to prevent crystal build-up for readily crystallisable.
Glass cylinder should be coated with a plastic material (sleeve) to reduce the risk of splashes in case of breakage.
Telescopic filling (intake) tube should be adjustable for different bottle heights.
Materials in contact with media: borosilicate glass; Al ₂ O ₃ -ceramic; ETFE; FEP; PFA; PTFE; platinum-iridium; PP closure cap.
Autoclavable: Fully autoclavable at 121 °C (2 bar) according to DIN EN 285.
Should be manufactured in accordance with ISO 9001 and ISO 14001 quality & environmental standards.
Temperature should be from +15 °C to +40 °C of instrument and reagent.
Steam pressure: max. 600 mbar; Kinematic Viscosity up to: max. 500 mm ² /s
Density: max. 2.2 g/cm ³
Should be delivered with 3 or 5 adapters (PP), telescopic filling tube, mounting tool, instruction manual, quality certificate, without reservoir bottle.
31. Water Distiller
Capacity should be 8 Liters/Hour Distiller
Automatic distillers of continuous production and with water flow control.
Stainless steel for the inner and the inner heater, stainless steel painted with epoxy for housing.

Easily removable for its cleaning.
Overheating protection, silicone gasket sealing, automatic heater shut-off in case of cooling water failure
The system should give a High quality of distillation: water of types III and IV (laboratory degree water)
Conductivity at 20°C: 1,5 microsiemens/ cm.
Resistivity at 20°C: 0,67 megaohms/ cm.
PH outcoming water between 5-8
Power Consumption: 6KW
EU Directives: 2011/65/EU, 2012/19/EU, 2014/30/EU, 2014/35/UE. Standards: EN 61326-1, EN 61010-1, EN 61010-2-101
32. UltraPure Water
Ultrapure water system should provide water quality ASTM Type I 18.2 MΩ/cm, or 0.055 μS/cm
Should be supplied with fully automatic control unit with monitoring of all functions on a 7" touch panel display
System must have a valve chamber with dead space free flushing
Should have a flexible dispenser arm, plastic housing, both sides easy to open
Should be provided with an integrated osmosis for tap water connection
TOC values should be <5 ppb reading 999-1ppb,
Measurement method should be Real-time differential measurement
Bacteria should be <99,9%
Endotoxins values must be EU/ml 0.001
RNase : 1pg/ml, DNase : 4pg/ml, protease: 0.20ug/ml
UV lamp : 185 + 254nm
Temperature should be Automatically compensated at 25°C or system can work without temperature compensation
Flow rate should be 1-2 ltr/min
Volume dosing should be 0,01-99,99Ltr., accuracy +/-1,2% calibratable
System should have a height adjustable dispenser arm 0-400mm freely adjustable
System should be supplied with ultrapure water cartridges QTY 2
System should be supplied with a final filter qty1 x end filter
Cartridge change Information on display
System to be supplied with a UV lamp
Circulation should be Interval
System should be able to be directly connected to your tap water supply, allowing it to produce both Type I (ultrapure water) and Type II (pure water)

System should be equipped with a preheated UV lamp, significantly reducing energy consumption
System should be supplied with an INTEGRATED TOC MONITORING
System should feature a customizable volume dispensing from 1 mL to 50,000 mL with precise calibration.
System must feature a Pre-set programmable options for easy access.
33. Thermohygrometre
Digital Thermo-Hygrometer with Clock
Temperature Range: 0.0 to 50.0°C
Humidity Range: 20 to 90% RH
Temperature Accuracy: $\pm 1^{\circ}\text{C}$
Humidity Accuracy: $\pm 5\%$ RH (mid-range), otherwise $\pm 8\%$ RH
Resolution: 0.1°C for temperature; 1% RH for humidity
Display: LCD screen displaying time, temperature, and humidity
Features: 12/24-hour clock; °F/°C switchable; Min/Max memory for temperature and humidity; Internal sensors
Mounting: Built-in stand, wall mount, or double-back tape
Power: Operates on AAA batteries
Certifications: Traceable® Certificate, calibrated to NIST standards
Dimensions: 4.25" x 2.25" x 0.5
34. Data Logger for temperature T and humidity TH
Dimensions: 100 × 53 × 12 mm (L × W × H)
Weight: 54 g
Housing / casing: ABS hard plastic case
Battery: CR2450 (replaceable by user)
Memory capacity: Up to 60,000 readings
Logging interval: Programmable from 10 seconds to 11 h 59 min (default 10 minutes)
Run time (maximum): Up to approx 6 months (depends on log interval & temperature range)
Interface: USB 2.0 (A-type)
Start/Stop modes: Via button, via software, or timed start
Report generation: Automatic PDF and CSV reports
Conformity: EN 12830, CE, RoHS
Protection class: IP65 (for T version) or IP52 (for TH version) depending model
35. Heating Mantles for round flask,
Spherical flasks 100 ml
Temperature: 100°C-450°C.
Full choice of vessel, capacity, housing and control are offered

Nickel chrome heating element
coil type: acid resistant, long life time
All kinds of round flasks can be used (Duran/Kimax/pyrex..)
CE certified and unique serial number for tracing
80 W
Flask Size 63-66mm
Built in temperature controller
36. Heating Mantles for round flasks with Magnetic stirrer
Spherical flasks 500 ml
Temperature: 100°C-450°C.
Full choice of vessel, capacity, housing and control are offered
Nickel chrome heating element
coil type: acid resistant, long life time
Built in temperature controller
All kinds of round flasks can be used (Duran/Kimax/pyrex..)
CE certified and unique serial number for tracing
Built-in stirring and temperature controller
Two stirrer barrs included
240 W
Flask size 102-105mm
37. Heating Mantles for round flasks with Magnetic stirrer
Spherical flasks 100 ml
Temperature: 100°C-450°C.
Full choice of vessel, capacity, housing and control are offered
Nickel chrome heating element
coil type: acid resistant, long life time
Built in temperature controller
All kinds of round flasks can be used (Duran/Kimax/pyrex..)
CE certified and unique serial number for tracing
Built-in stirring and temperature controller
Two stirrer barrs included
80 W
Flask Size 63-66mm
38. Heating Mantles for round flask,
Spherical flasks 250 ml
Temperature: 100°C-450°C.

Full choice of vessel, capacity, housing and control are offered
Nickel chrome heating element
coil type: acid resistant, long life time
All kinds of round flasks can be used (Duran/Kimax/pyrex..)
CE certified and unique serial number for tracing
140 W
Flask Size 83-86mm
Built in temperature controller
39. Heating Mantles Multi_place
3 Places heating mantle
Spherical flask 500 ml
Temperature: 100°C-450°C.
Nickel chrome heating element
coil type: acid resistant, long life time
Easy handling
Lower profile for space saving convenience
CE certified and unique serial number for tracing
Built in analog controller
720W
102x105 cm Flask size
40. Heater and magnetic stirrer
User interface: Digital
Plate material: ceramic coated aluminum alloy
Plate diameter: 135 mm
Stirring volume: 20 L
Stirring speed range: 50 - 1500 rpm
Speed control: Digital
Motor: Brushless
Torque compensation: SpeedServo
Temperature range: Room temp - 310 °C
Heating control: Digital
Temperature setting resolution: 1 °C
Precise thermoregulation of the medium with Pt100/Pt1000 probe (± 1.0 °C) and VTF Digital Thermoregulator (± 0.5 °C).
Two year warranty