GENERAL CATALOGUE

DORSA tech

Laboratory Equipments & Scientific Glasswares

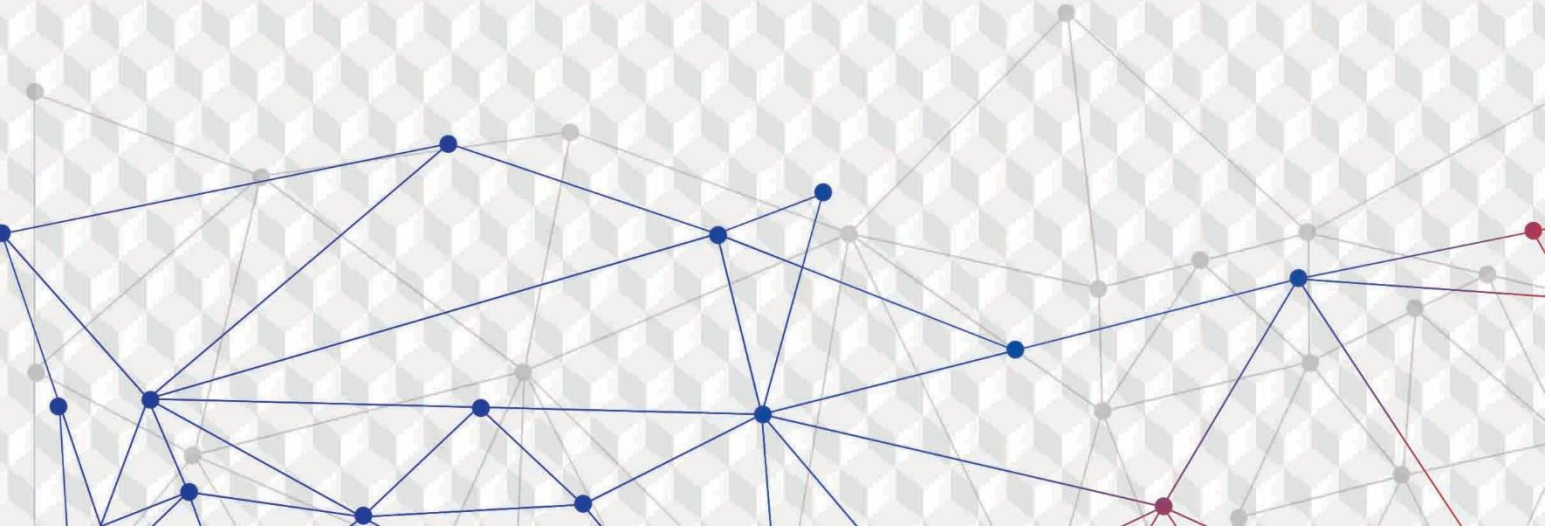
Version 2.0

DorsaTech provides a comprehensive range of tailor-made laboratory glassware & scientific equipments.
We are commited to be precise, agile and stay focused on the quality, to meet consumer requirements & satisfication at a reasonable & competitive price.


DORSA tech
Laboratory Equipments & Scientific Glasswares

Laboratory Equipments

- Jacketed glass reactor
- Jacketed Stainless Steel reactor
- Spray Dryer
- Freeze Dryer
- Extruder & Spheronizer
- Heating Circulators
- Rotary Evaporator



JACKETED GLASS REACTOR

- Jacketed glass reactors are designed for synthetic reactions of different types of materials under a controlled temperature
- Applications: small scale production, scale-up processes in chemical and pharmaceutical development labs, crystallisation processes & HVLV manufacturing

Electronic Motor Controller
Digital Temprature Display

Double wall jacketed condenser with cooling area proportional to the reactor capacity

Reflux or direct exit of distilled liquids

5 neck reactor lid as connections for thermopocket, sparger, condenser & addition

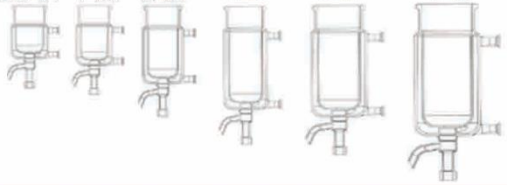
Double wall jacketed vessel

Residual-free Bottom valve for drainage of solvents from the reactor

Stainless steel chassis on epoxy coated base

FEATURES

- Jacketed cylindrical reactor, made of borosilicate 3.3
- Distillation and condensation area proportional to the reactor capacity
- Wide range of accessory glassware including condensers, dropping funnels etc.
- Stirrer guides, shafts, propellers, connectors, fittings and adapters (standard and custom)

Technical data overview		
Vessel Capacity (lit)	0.5 lit 1 lit 2 lit 4 lit 5 lit 6 lit 	
Vessel type	Double Wall	
Operating pressure	Atmospheric	
Operating Temp	-20°C to 220 °C	
(ΔT) Heat shock	80°C	
Dimensions (W×H×D)	40×50×100 cm (0.5- 1lit)	50×70×180 cm (2- 6 lit)
Weight	Approx. 20 kg	
Overhead stirrer		
Power consumption	max.250 W	
Connection voltage	200–230 V ± 10 %	
Frequency	50/60 Hz	
Speed Range (rpm)	50-450	
Maximum Torque (Ncm)	300	
Max. Viscosity (mPas)	10000	
Controller	VFD Control	
Display	Digital LCD Display RPM	
Accessories (Optional)		
Hot Water/Oil Circulator, Chiller, Heating /Cooling System ,Vacuum Pump, pH Probe With Transmitter, Temperature Probe With Transmitter Pressure Gauge		

JACKETED STEEL REACTOR

- Jacketed glass reactors are designed for synthetic reactions of different types of materials under a controlled temperature
- Applications: Pilot scale production, scale-up processes in chemical and pharmaceutical development labs, crystallisation processes & HVLV manufacturing

Dropping funnel 1200 cc

Electronic Motor Controller
Digital Temprature Display

6-Neck Lid With
Large Powder
Addition Port

Residual-free Bottom valve
for drainage of solvents from
the reactor

Double wall jacketed
condenser with cooling
area proportional to the
reactor capacity

Reflux or direct exit
of distilled liquids

Condenser with
Coiled Inner Tube

Receiving Flask

FEATURES

- Single-Layer Glass Reactor with stainless steel jacket
- Distillation and condensation area proportional to the reactor capacity
- Wide range of accessory glassware including condensers, dropping funnels etc.
- Stirrer guides, shafts, propellers, connectors, fittings and adapters (standard and custom)

Technical data overview	
Vessel Capacity	30 lit
Vessel type	Single Layer Glass
Operating pressure	Atmospheric
Operating Temp	-20°C to 220 °C
(ΔT) Heat shock	80°C
Dimensions (W×H×D)	60×90×190 cm
Weight	Approx. 70 kg
Overhead stirrer	
Power consumption	max.400 W
Connection voltage	200–230 V ± 10 %
Frequency	50/60 Hz
Speed Range (rpm)	10-200
Maximum Torque (Ncm)	300
Max. Viscosity (mPas)	10000
Controller	Frequency converter
Display	Digital LCD Display RPM
Accessories (Optional)	
Hot Water/Oil Circulator, Chiller, Heating /Cooling System ,Vacuum Pump, pH Probe With Transmitter, Temperature Probe With Transmitter Pressure Gauge	

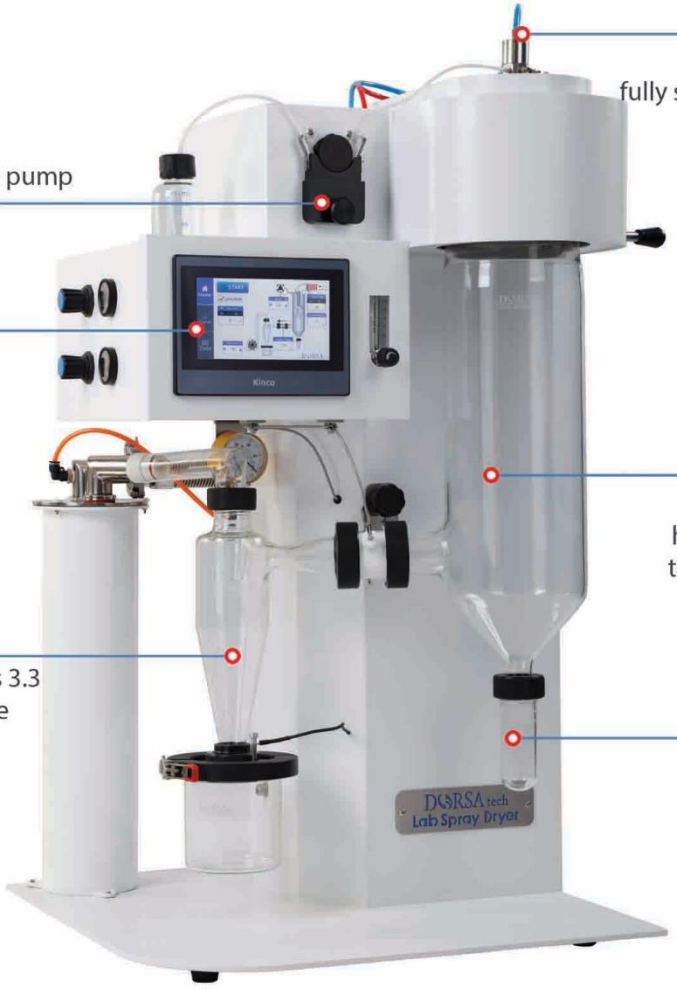
Spray Dryer

- Converts solutions & suspensions into dry powder using hot airflow
- Applications: Pharmaceuticals, micro-encapsulation and coating, foodstuffs, medicals, nutraceuticals and biotech products (fermentative, alga, protein).

Peristaltic pump

Micron scale
fully stainless steel atomizer

Touch screen
control panel



Borocilicate glass 3.3
heating chamber with
temperature telorance
up to 220 °C

Borocilicate glass 3.3
seperator cyclone

Residual liquid
collection tube

FEATURES

- Glass parts made of borosilicate 3.3
- Direct drying from solution/suspension liquid to fine powder with a reduced risk of contamination
- Integrated automation for adjusting operational parameters
- Simple and economical to operate and cleaning
- PLC based control system & HMI user interface
- Compact bench top model, Easy operation to work with small sample volume
- Two-fluid nozzle and the nozzle cleaner needle
- Suitable for aqueous solutions samples

Technical data overview	
Power consumption	max.3500 W
Connection voltage	200–230 V ± 10 %
Frequency	50/60 Hz
Evaporating capacity	max 1000 ml/h (water like)
Airflow	Max. of 35 m3/h
Max. temperature input	220 °C
Heating control	PT-100, fuzzy logic, control accuracy ± 2 °C
Nozzle tip diameter	0.7 mm standard, other sizes 1.4 and 2.0 mm available
Possible particle diameter range	2–25 µm
Dimensions (W×H×D)	65×110×70 cm
Weight	66 kg
Yield	40% up to 70%
MAX viscosity	300 cps
Accessories	
Air Compressor	50 Lit - Oil Free – 10 bar

Freeze Dryer

- Freeze drying is a water removal process typically used to preserve perishable materials, to extend shelf life or make the material more convenient for transport.
- Applications: freeze-drying materials such as biological cultures, blood, plasma, serum fractions, plant extracts, pharmaceutical and others.

Drying chamber

Pirani Vacuum Gauge

Control panel

Pressure Control Valve

Condenser compressor

High Performance Condenser

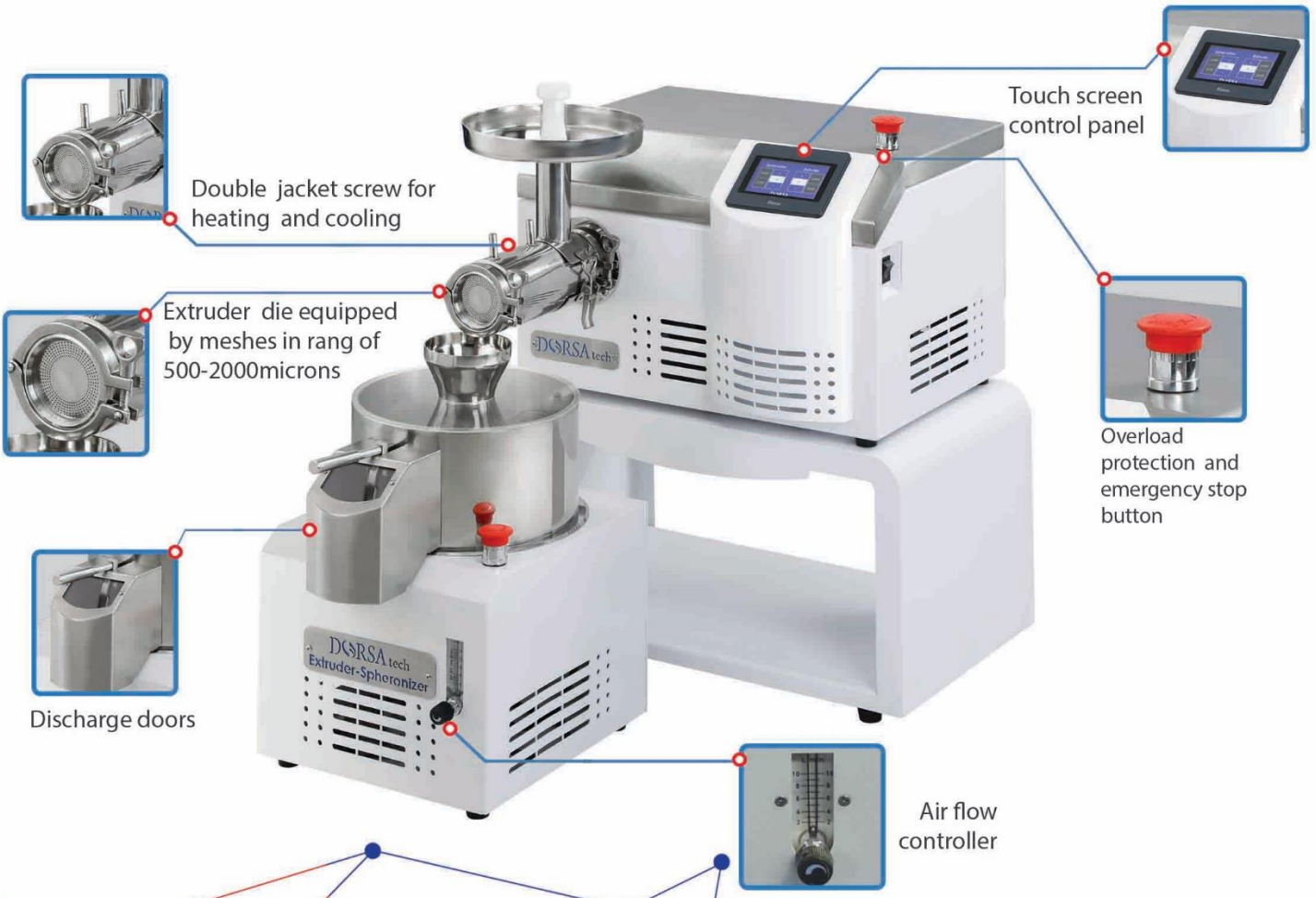
FEATURES

- Compact, high-performance laboratory systems with a small footprint
- Drying chamber above the ice condenser chamber for high sublimation performance and short process times
- Ice condenser chamber with internal condenser coils, all made from high-grade stainless steel
- Digital indication of ice condenser temperature and vacuum
- indirect product temperature determination based on the curve of vapor pressure over ice
- vacuum control for process time optimization
- Suitable for aqueous solutions samples

Technical data overview	
Power consumption	Max 1.1 kw
Connection voltage	200-230V ±10%
Frequency	50/60Hz
Ice condenser capacity	4 kg
Ice condenser performance	4kg/24h
Ice condenser temperature	Approx. -50 °C
Dimension : **- height:** **- width:** **- depth:**	400mm+300mm drying chamber 450 mm 550mm+ 80 mm vacuum connection
Weight	42 kg
Working pressure	0.1- 6 mbar
Accessories	
Vacuum Pump	10 m^3/h - 50 Hz - Ultimate pressure 0.001 mbar

Extruder Spheronizer

- Mainly used in extruding granulation and spheronization in pilot production of pharmaceutical, food and chemicals
- Applications: Controlled release pellets, Multi particulate systems, neutraceuticals and others.



FEATURES

- Extruded granulating and spheronizing process integrated in one unit
- Precision in air flow control
- Useful for conducting spheronization scale–up studies
- Single screw extruder with variable speed
- Various designs of chequered plates are available with different pitch (optional)
- Cooling / Heating jacket for heat sensitive product
- Fully integrated with Standard HMI / VFD controls

Technical data overview	Extruder	Spheronizer
Power consumption	max.1500 W	
Connection voltage	200–230 V ± 10 %	
Frequency	50/60 Hz	
Rotate speed (rpm)	5-90	100-1400
Capacity	1-5 (kg/h)	0.2 – 1 (kg/Batch)
Dimensions (W×H×D)	60×50×75 cm	40×30×50 cm
Weight	25	10
Die roller	1 , 1.2 , 1.5 mm	-
Material return ratio	99%	
Display	HMI	
Material (contact parts)	stainless steel316	
Accessories (Optional)		
Air Compressor	50Lit - Oil Free – 10 bar	

HEATING CIRCULATOR

- Heating Circulator feature professional technology for wide range of applications.
- Applications: External temperature applications in combination with jacketed reactors, distillation apparatus, mini-plant applications, photometers, internal temperature applications of samples.

FEATURES

- The integrated internal programmer makes it possible to automatically run temperature time profiles
- High-quality bath tanks made of stainless steel with bath lid and drain
- Easy change-over from internal to external circulation
- Strong pump capacity
- Integrated cooling coil for counter-cooling

Technical data overview	
Power consumption	max.4500 W
Connection voltage	200–230 V ± 10 %
Frequency	50/60 Hz
Working temperature range °C	20 – 180 °C
Heating control	PT-100, fuzzy logic, control accuracy ± 2 °C
Temperature stability °C	± 0.5
Working and Safety temperature sensor	PT100
Flow rate / Pressure	25 l/min - 0.2 bar
Dimensions (W×H×D)	73×55×43 cm
Weight	40 kg
Filling volume liters	30

Rotary Evaporator

- Evaporates solvents using heated water bath and also making vacuum above the solvent
- Applications: Rotary evaporation can be used to separate solvent from many organic, inorganic, and polymeric materials.

Condenser with a 1,500 cm^2 cooling surface

Fast motorized lift & automatic release of evaporating flask to the top position in case of power failure

Chemical resistant dual PTFE seals and pressure springs provide excellent sealing

Large 5L water/oil heating bath. Temperature range: ambient to 180˚C

Easy to read large LCD screen displays heating temperature, rotation speed and timer

FEATURES

- Heating bath with precise temperature control and adjustable safety circuit
- Motorized lift with quick-action, automatic release evaporating flask to top position in case of power failure
- Precise temperature control and adjustable safety circuit
- Available with timer function to precise control processing
- Chemical-resistant double PTFE system and pressure spring provide excellent sealing

Technical data overview	
Power consumption	max.1400 W
Connection voltage	200–230 V ± 10 %
Frequency	50/60 Hz
Speed Range [rpm]	20-280
Display	LCD
Heating Temperature Range [°C]	180 °C
Timer	Yes
Lift	Motor- 150mm
Dimensions (W×H×D)	46×45×58 cm
Weight	15 kg
Accessories	
Vacuum Pump	2 m^3/h - 50 Hz - final vaccum 10mbar

DORSA tech

+98 26 3230 5076
+98 26 3230 9073

+98 26 3230 9063

www.dorsatech.ir
Info@dorsatech.ir

Design: +98 935 787 43 43