

# COMMERCIAL FOOD

## FREEZE DRYER FDR SERIES



Vikumer FDRS freeze dryers are medium capacity food freeze drying equipment suit commercial heavy use. Capable of freeze drying food items include fruits, vegetables, seafood, prepared meals, soup, meat, dairy, nutrient and health care products. The range freeze dryer capacity from 50kgs to 300kgs per load.

## Technical Specifications

	FD-5R	FD-10R	FD-20R	FD-30R
<b>Shelf Area</b>	4.8m <sup>2</sup>	9.7m <sup>2</sup>	19.4m <sup>2</sup>	29m <sup>2</sup>
<b>No. of Shelves</b>	9+1	9+1	12+1	12+1
<b>Shelf Size</b>	610*910mm	910*1210mm	1210*1360mm	1360*1810mm
<b>Shelf Spacing</b>	60mm	60mm	60mm	60mm
<b>Shelf Temp.</b>	-35C ~ +100C	-35C ~ +100C	-35C ~ +100C	-35C ~ +100C
<b>Final Vacuum</b>	<15Pa	<15Pa	<15Pa	<15Pa
<b>Condenser 24Hrs</b>	50Kgs	100Kgs	200Kgs	300Kgs
<b>Condenser Total</b>	75Kgs	150Kgs	330Kgs	550Kgs
<b>Condenser Temp.</b>	-45C	-45C	-45C	-45C
<b>Voltage</b>	380V/50Hz/3P	380V/50Hz/3P	380V/50Hz/3P	380V/50Hz/3P
<b>Power</b>	15Kwh	22Kwh	45Kwh	55Kwh
<b>Size (mm)</b>	1300*2800*2000	1500*4000*2100	1800*5500*2400	2000*6500*2400

## Performance & Features

- All-in-one structure with clean room wall panel.
- S/S304 hemispheric chamber door.
- S/S304 drying chamber, interior polish Ra<1um.
- Anodized aluminum shelves, flatness <0.5mm/m.
- Shelves Temp. controllable -35C ~ +100C, accuracy <+/-2C.
- Shelves heating rate >1C/Min.
- S/S304 ice condenser, interior polish Ra<1um.
- S/S304 condenser coils, surface polish Ra<0.8um.
- Condenser lowest -45C, pull down to -40C <30Min.
- Condenser hot water defrost.
- System final vacuum <15Pascal.
- Chamber vacuumize to 100Pa <30Min.
- Chamber leak rate <5Pa L/Sec.
- All the machinery that involved with the operation of FDR freeze dryer is mounted in a steel frame. Thoroughly quality and performance test before it is shipped. Deliver includes:
  - Industrial grade, PLC and touch screen HMI based control system. FD-MEGA interface.
  - Rubber sponge insulated drying chamber and condenser.
  - Sandwich type shelves enable thermal fluid circulates inside for heating and chilling. Electric heating and PID control.
  - Exposed coils type, internal ice condenser.
  - Water cooled reciprocating compressor system. Cool condenser by refrigerant direct expand, cool shelves through an intermediate plate heat exchanger.
  - 2-stage oil sealed rotary vane vacuum pump, roots pump for larger models.
  - PT-100 temperature sensors.
  - Pirani vacuum gauge.
  - Magnetic valve and needle valve for pressure regulate.

## Accessories and Options

Name	Part No.	Description
Low Temperature Version		Shelves lowest -45C, condenser -55C.
S/S304 Shelves		
External Condenser		Install behind drying chamber.
PTFE Coated Trays		Suit sticky materials, fluid and paste.
Material Trays Cart		S/S304 cart for material & tray quick transfer.
IQF Room		For product quick freezing.
Screw Type Vacuum Pump		Dry type, maintenance-free.
Vacuum Break Filter		0.22um.
Pneumatic Operated Valves		For all air and water isolate: vacuum pump, vacuum break, defrost water supply etc.
Eutectic Point Detector		
PC Control		
Redundant System		Back up compressor, vacuum pump, fluid pump.
Qualification Documentation		IQ, OPQ validation documents.
		FAT/SAT
Technical Documents		P&ID, install drawing.
Training Service		Install, worker training etc.

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