

DAIHAN Scientific

UniFreez™ FD

New

Lab-scale, Bench-top

Freeze Dry System



Compact Size

Fastest Freezing Time

DAIHAN Scientific

Freeze Dry System UniFreez™ FD

Lab-scale, Bench-top Freeze Dryer

Patented
Jog-Dial
&
Touch-Button
Control

Compact-size
Lab-scale,
Bench-top

Fastest
Freezing
Time

Ergonomic & Compact Body

- Lab-scale, Bench-top Model
- Compact size for all laboratory table
- Ergonomic design

Company	DAIHAN	Competitor
Chamber Capacity	8 Lit.	8 Lit.
External Dimension (mm)	w400xd530xh415	w500xd646xh976

Intuitive User Interface

- Patented Jog-dial controller(Turn and Push)
- Capacitive touch button for user convenience
- Precise control by microprocessor
- Digital back-light LCD



Others

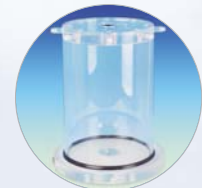
- High sublimation rate : 3Lit/24hr
- Manual defrost function : Hot gas defrost function for quick next cycle turn-around
- Automatic or manual process control
- Controllable temperature, vacuum and timer at automatic mode
- LED Indication light on in case of suitable temperature and vacuum
- Can be used with various accessories

Various Installing Accessories

- Used with 12-port manifold or 8-port dry chamber, Various size flasks, Flask top, Vacuum valve, Vacuum pumps, Table cart etc.



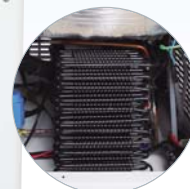
12-port T-type
Manifold



8-port Acrylic
Dry Chamber

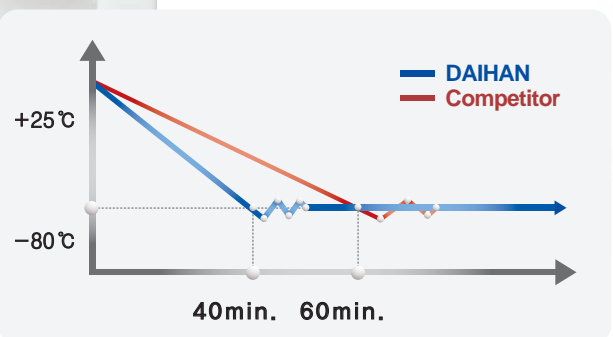
Fastest Freezing System

- DAIHAN Freezing system realizes Quick freezing and quick defrosting function



Freezing System

- Freezing speed comparison with competing product



DAIHAN Freeze Dry System, Lab-scale Bench-top, "UniFreez™ FD", 8 Lit, 3Lit/24hr, Cold Trap Max. -90°C **NEW**
with Jog-Dial & Touch Button Control, Automatic & Manual Process, Used with 12-port T-type Manifold or 8-port Acrylic Drying Chamber



"UniFreez™ FD-8" Freeze Dry System,
with Optional 12-port T-type Manifold
and 12ea Vacuum Handle Valves

- CE Certified
- Patented Jog-Dial & Touch Button Control System
- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- PL (Product Liability) Insurance
- Ideal for Wide Rang from Pharmaceuticals, Biology, Food Industry to Petro-Chemistry and Semiconductor Industry, etc.

- * Ergonomic Design and Compact Body Size for All Laboratory Tables
- * Allows Automatic or Manual Process Control
- * LCD Indicates Temperature and Vacuum
- * Rapid Integrated Hot Gas Defrost Function for Quick Next Cycle Turn-around
- * LED Indication Light On in Case of Suitable Temperature and Vacuum
- * Can be Controlled Temperature, Vacuum and Timer at Automatic Mode
- * Homogeneous Temperature Distribution across all Shelves in Dry Chamber

Specifications & Ordering information

Spec.	Models	"UniFreez™ FD-8"
Chamber & Max Condenser Capa.		Chamber : 8 Lit., Max Condenser : 10 Lit.
Sublimation Rate(Lit/day)		3 Lit/day
Max. Temperature		Cold Trap : -90°C , Condenser : -40°C
Set Temperature Range		-60°C ~ -90°C
Pressure Range		10 ~ 0.03 torr
Compressor & Defrost-type		Compressor : 1/2 HP, Defrost-type : Manual
Controller		Digital Fuzzy Control with Jog-Dial(Turn & Push) & Touch Button
Display		Digital LCD with Back-Light Function
Material		Stainless-steel(SUS304)
Dimension(mm) & Weight		Exterior : w400×d530×h415, Condenser : ϕ 300×h150mm, Net Weight : 55 kg Packing Dimension : w560×d760×h675, Gross Weight : 60kg
Electrical Reqts.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz
Cat. No.	230V	DH.Frd00208
	120V	DH.Frd00108

* Other Specifications are available upon Customer's Request.

Optional Accessories for Freeze Dryer



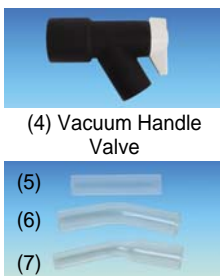
(1) 12-port T-type
Manifold



(2) 8-port Acrylic
Dry Chamber



(3) 3-stage Shelf,
Stainless-steel



(4) Vacuum Handle
Valve



(5) Tube Adapters
for Connecting Flask Top



(8) Flask Top, Silicone



(9) DURAN Glass Flasks



(10) Vacuum Pump



(11) 2-stage Table Cart

Optional 12-port T-type Manifold / 8-port Acrylic Dry Chamber / 3-stage Shelf

- DH.Frd01034 (1) T-type Manifold, 12-port, for Connecting 3/4" Vacuum Handle Valve, with Silicon Stopper
DH.Frd02010 (2) Acrylic Dry Chamber, 8-port, for Connecting 3/4" Vacuum Handle Valve, with Silicon Stopper
DH.Frd02020 (3) 3-stage Shelf, Stainless-steel(STS), for Acrylic Dry Chamber

Optional Vacuum Handle Valve-/Tube Adapters-for Connecting Flask

- DH.Frd03010 (4) 3/4" Vacuum Handle Valve, Neoprene Rubber & PP, for Connecting Flask
DH.GL28091 (5) 3/4" Glass Tube Adapter, ϕ 19/1.8t×L80mm, for Connecting Middle & Large-size Flask Top
DH.GL28092 (6) 3/4" Glass Bend-type Tube Adapter, ϕ 19/1.8t×L80mm, for Connecting Middle & Large-size Flask Top
DH.Frd04010 (7) 3/4" PP Tube Adapter, ϕ 19/1.8t×L80mm, for Connecting Small-size Flask Top

Optional DURAN® Borosilicate α 3.3 Glass Flasks / Silicone Flask Top

- DH.Frd05010 (8) Flask Top, Silicone, 3/4" Small-size Flask Top, for 40-/80-ml Flask
DH.Frd05020 , 3/4" Middle-size Flask Top, for 200-/300-ml Flask
DH.Frd05030 , 3/4" Large-size Flask Top, for 500-/700-/1000-ml Flask
DH.GL12041 (9) Glass Flask, DURAN® Glass α 3.3, 40ml, ϕ 40/2.3t×h80mm
DH.GL12042 , 80ml, ϕ 40/2.3t×h120mm
DH.GL12043 , 200ml, ϕ 65/2.2t×h100mm
DH.GL12044 , 300ml, ϕ 65/2.2t×h140mm
DH.GL12045 , 500ml, ϕ 90/2.5t×h125mm
DH.GL12046 , 700ml, ϕ 90/2.5t×h165mm
DH.GL12047 , 1000ml, ϕ 90/2.5t×h225mm

Optional Vacuum Pumps / 2-stage Table Cart for Vacuum Pump

- V3.VOP100 (10) Vacuum Pump, "VOP-100", 100/120Lit./min, 50/60Hz, 220V
V3.VOP150 , "VOP-150", 150/180Lit./min, 50/60Hz, 220V
DH.Frd06025 NW25 Vacuum Pump Connection-set, Tube / O-ring / Clamp
DH.Frd06016 NW16 Vacuum Pump Connection-set, Tube / O-ring / Clamp / Adapter
V3.OMT150 Oil Mist Trap for Vacuum Pump, NW25
V3.COS101 Oil for Vacuum Pump, 1Lit.
V3.COS104 , 4Lit.
DH.Ca1002 (11) 2-stage Table Cart for Freeze Dryer & Vacuum Pump,
with Stop-on Caster and Vacuum Pump Oil Tray, w504×d604×h780mm

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Distributor