

DAIHAN® 3 & 6Lit/day Freeze Dry System “UniFreez™ FD”, Lab Scale Benchtop-type, Automatic & Manual Process, -90°C
 Various Optional Acc.; T-type Manifold, Round · Square · Stoppering-Acrylic Dry Chamber & Stainless steel Dry Chamber
 실험실용 동결 건조기, 콤팩트 바디 사이즈, 터치식 컨트롤러



I. 3Lit/day Freeze Dryer “FD-8”
 ※ The Figure; Installation of Optional 12-port T-type Manifold and 12 Vacuum Handle Valve

2-Year Warranty



II. 6Lit/day Freeze Dryer “FD-16”
 ※ The Figure; Installation of Optional Large Volume Square-type Acrylic Dry Chamber

2-Year Warranty



(1) 12-port T-type Manifold with 12 Silicon Stoppers



(2)-a-b 8-port Round-type Acrylic Dry Chamber (2)-c-d 3-stage SS Shelf

- Made in Korea
- 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 a Wide Range of Applications Including Pharmaceutical, Biological, Food Industry, Petrochemical and Semiconductor Industry, etc.
- Various Optional Accessories;
 - (1) T-type Manifold with 12-port
 - (2) Round-type Acrylic Dry Chamber with 8-port
 - (3) Large Volume Square-type Acrylic Dry Chamber
 - (4) Heated Stoppering Acrylic Dry Chamber
 - (5) Stainless-steel Dry Chamber with 12-port
- * Ergonomic Design and Compact Body Size
- * Allows Automatic or Manual Process Control
- * Rapid Integrated Hot Gas Defrost Function for Quick Next Cycle Turn-around
- * LCD Indicates Temp and Vacuum
- * LED Indication Light On in Case of Suitable Temp and Vacuum
- * Can be Controlled Temp and Timer at Automatic Mode
- * Homogeneous Temp Distribution across all Shelves in Dry Chamber

Specifications & Ordering information

<L1>

Spec.	Model	I. “UniFreez™ FD-8”	II. “UniFreez™ FD-16” NEW
Sublimation Rate(Lit / day)		3Lit / day	6Lit / day
Chamber & Max Condenser Capa.		Chamber : 8 Lit, Condenser : 10 Lit	Chamber : 16 Lit, Condenser : 20 Lit
Set Temp Range		-90°C ~ -60°C	
Compressor & Defrost-type		1/2 HP, Manual	3/4 HP, Manual
Display		Digital LCD with Back-Light Function	
Material		Stainless-steel 304	
Dimension(w×d×h) & Weight		Exterior : 460×620×h520 mm, Condenser : ϕ300×h150 mm, Net Weight : 55 kg	Exterior : 520×680×h600 mm, Condenser : ϕ300×h300 mm, Net Weight : 60 kg
Electrical Reqts.		1 Phase, AC 120 V, 60 Hz or AC 230 V, 50 / 60 Hz	
Cat. No.	230V	DH.Frd00208	DH.Frd00216
	120V	DH.Frd00108	DH.Frd00116
Price, Each. ₩			

* Other Specifications are available upon Customer's Request.

Optional Manifold & Dry Chamber

(1) 12-port T-type Manifold

- DH.Frd01041 12-port T-type Manifold with 12 Silicon Stoppers, for Connecting 3/4" Vacuum Handle Valve, for “UniFreez™ FD-8” model
- DH.Frd01042 12-port T-type Manifold with 12 Silicon Stoppers, for Connecting 3/4" Vacuum Handle Valve, for “UniFreez™ FD-16” model

Ea.	Price, ₩

(2) 8-port Round-type Acrylic Dry Chamber & 3-stage Shelf

- DH.Frd01051 a 8-port Round-type Acrylic Dry Chamber with 8 Silicon Stoppers, for Connecting 3/4" Vacuum Handle Valve, Chamber Size : Int. ϕ284×h390mm, Ext. ϕ300×h463mm, Shelf Size : ϕ259×11mm, Total h225mm, for “UniFreez™ FD-8” model
- DH.Frd01052 b 8-port Round-type Acrylic Dry Chamber with 8 Silicon Stoppers, for Connecting 3/4" Vacuum Handle Valve, Chamber Size : Int. ϕ334×h390mm, Ext. ϕ350×h453mm, Shelf Size : ϕ310×11mm, Total h225mm, for “UniFreez™ FD-16” model
- DH.Frd01061 c 3-stage Stainless-steel(SS) Shelf ϕ260×11mm, Total h225mm, for “UniFreez™ FD-8”
- DH.Frd01062 d 3-stage Stainless-steel(SS) Shelf ϕ310×11mm, Total h225mm, for “UniFreez™ FD-16” model

Ea.	Price, ₩

<Continued On Next Page>

<Continued From...DAIHAN® Freeze Dry System Lab Scale Benchtop-type "UniFreez™ FD">

<L1>

NEW



(3) Large Volume Square-type Acrylic Dry Chamber With 5-stage SS Shelf

(3) Large Volume Square-type Acrylic Dry Chamber with 5-stage Shelf **NEW**

- DH.Frd02100** Large Volume Square-type Acrylic Dry Chamber, with 5-stage SS shelf, Chamber Size : Int. 380×415×h400, Ext. 440×475×h465mm, Shelf Size : 380×380×h25mm, for "UniFreez™ FD-8" model
- DH.Frd02101** Large Volume Square-type Acrylic Dry Chamber, with 5-stage SS shelf, Chamber Size : Int. 435×485×h420mm, Ext. 495×540×h475mm, Shelf Size : 450×450×h25mm, for "UniFreez™ FD-16" model

Ea. Price, ₩

NEW



(4) Heated Stopping Acrylic Dry Chamber with 2-stage SS Shelf

(4) Heated Stopping Acrylic Dry Chamber, with Height Adjustable 2-stage Shelf **NEW and Analog Temp Controller Package-set**

- DH.Frd07001** Heated Stopping Acrylic Dry Chamber, with Height Adjustable 2-stage Shelf, Chamber Size : Int. ϕ 284×h320mm, Ext. ϕ 300×h523mm, Shelf Size : ϕ 255×13mm, Total h278mm, for "UniFreez™ FD-8" model
- DH.Frd07002** Heated Stopping Acrylic Dry Chamber, with Height Adjustable 2-stage Shelf, Chamber Size : Int. ϕ 334×h320mm, Ext. ϕ 350×h523mm, Shelf Size : ϕ 305×13mm, Total h278mm, for "UniFreez™ FD-16" model
- DH.Frd09001** Analog Temp. Controller for Heated Stopping Acrylic Dry Chamber, 230V, Temp. Range 0°C~40°C

Ea. Price, ₩

NEW



(5) 12-port SS Dry Chamber

(5) 12-port Stainless-steel Dry Chamber & 3-stage Shelf **NEW**

- DH.Frd08001** 12-port Stainless-steel Dry Chamber, for "UniFreez™ FD-8" model, Chamber Size : Int. ϕ 296×h350mm, Ext. ϕ 320×h370mm Shelf Size : ϕ 259×11mm, Total h278mm
- DH.Frd08002** 12-port Stainless-steel Dry Chamber, for "UniFreez™ FD-16" model, Chamber Size : Int. ϕ 346×h350mm, Ext. ϕ 370×h370mm Shelf Size : ϕ 310×11mm, Total h278mm
- DH.Frd01061** 3-stage Stainless-steel(SS) Shelf ϕ 260×11mm, Total h225mm, for "UniFreez™ FD-8" model
- DH.Frd01062** 3-stage Stainless-steel(SS) Shelf ϕ 310×11mm, Total h225mm, for "UniFreez™ FD-16" model

Ea. Price, ₩

Optional Vacuum Handle Valve & Tube Adapter for Connecting Flask

- DH.Frd03010** (6) 3/4" Vacuum Handle Valve, Neoprene Rubber & PP, for Connecting Flask
- DH.GL28091** (7) 3/4" Glass Tube Adapter, ϕ 19/1.8t×L80mm for Connecting Middle & Large-size Flask Top
- DH.GL28092** (8) 3/4" Curved Glass Tube Adapter, ϕ 19/1.8t×L80mm, for Connecting Middle & Large-size Flask Top
- DH.Frd04010** (9) 3/4" PP Tube Adapter, ϕ 19/1.8t×L80mm, for Connecting Small-size Flask Top

Ea. Price, ₩

Optional DURAN® Borosilicate α 3.3 Glass Flask & Silicone Flask Top

- DH.Frd05010** (10) Silicone Flask Top, 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** (11) 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

Ea. Price, ₩

Optional Vacuum Pump & 2-stage Table Cart for Vacuum Pump

- V3.VOP100.FRD** (12) Vacuum Pump, "VOP-100", 120(100)Lit./min, NW25, 220V
- V3.VOP150.FRD** , "VOP-150", 180(150)Lit./min, NW25, 220V
- DH.Frd06025** NW25 Vacuum Pump Connection-set, Tube · O-ring · Clamp
- DH.Frd06016** NW16 Vacuum Pump Connection-set, Tube · O-ring · Clamp · Adapter
- DH.Ca1002** (13) 2-stage Table Cart for Freeze Dryer & Vacuum Pump, with Stop-on Casters and Vacuum Pump Oil Tray, w504×d604×h780mm

Ea. Price, ₩



(6) Vacuum Handle Valve



(7) Tube Adapter for Connecting Flask Top



(10) Silicone Flask Top



(11) Glass Flask



(12) Vacuum Pump



(13) 2-stage Table Cart