# The New Generation SHFS™ Simplified Hi-Efficiency Freezing System !

DAIHAN<sup>®</sup> Digital Ultra-Low Temp. Freezer, Upright-type, "SWUF-D", Dual SHFS<sup>™</sup>, Eco Mode, -95 °C ~-65 °C NEW with Smart-Lab<sup>™</sup> System, Dual SHFS<sup>™</sup>, Non-Freon Refrigerants, Automatic Vacuum Releasing System, 308 -/393-/503-/714-Lit.



Dual SHFS<sup>™</sup> Digital Ultra-Low Temperature Freezer, Upright Type "SWUF-D300"

## >>> DAIHAN WiRe<sup>™</sup> App & Web Service





WiRe<sup>™</sup> App & Web Service

of time and place.

- with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System
- Simplified Hi-Efficiency Freezing System can freezes down to -86 °C : realize robust and long life time.
- Dual SHFS™(Simplified Hi-Efficiency Freezing System) can down to -95 °C and High-stability system can be offered. : If one SHFS fails in operation, the other SHFS still works and maintains down to -80 °C
- Eco Mode Function for Low Power-consumption.
- GMP Certified(Only "SWUF-D500" Model)
- CE & RoHS Certified
  PL(Product Liability) Insurance
- \* Ergonomic 7<sup>″</sup> Full Touch Screen TFT LCD(Smart-Lab™ Controller)
- \* WiRe<sup>™</sup> App & Web Service. \* Storage Management Function
- \* Self-Diagnostic Function
  - \* Automatic Data Recording
- Internet Connectivity with WiFi
   Automatic Vacuum Breaker Easy to re-open the Door.
- \* Robust & Flexible design of Door Handle
- \* Easy Monitoring and Control Eye level Controller
- \* CFC-free Refrigerants are used \* External Temp. Sensor Hole
- \* Use of Block Condenser removes filter and causes of related failure.
- Filter-free Mechanism lowers heat generated by the compressor
- \* Easy Maintenance and Improved Performance
- \* High-quality Insulation Panel and Inner Doors ensure defrosting around outer surface.
- \* Built in Standard Warning and Alarm Functions
- \* RS232 Communication Link and a Remote Control Software are supported
- \* KGMP Certified(Only SWUF-D500 model)

Specification

$ \begin{array}{c c c c c c } \label{eq:conditional} \hline \begin{tabular}{ c c c c c } \hline \begin{tabular}{ c c c c c } \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$							
Temp95 °C65 °C-90 °C65 °CTemp.Image: Colspan="2">-90 °C65 °CSensorPT100 SensorCompressorHermetic TypeBlock Condenser, No Pin, Filter Free MechanismRefrigerantTypeBlock Condenser, No Pin, Filter Free MechanismRefrigerantController & Display7" Full Touch Screen TFT LCD (Smart-Lab™ Controller)Shelves12pcs of 15(3 × 5)- Placed Rack (RFU3040)Included 3 Stainless Steel ShelvesPlaced Rack (RFU3040)Placed Rack (RFU3040)RetrinalPowder Coated Steel PlateInternalPowder Coated Steel PlateInner DoorPowder Coated Steel (#304)KGMP Certified, CE & RoHS Certified PL(Product Liability) Insurance, CFC-Free Refrigerants Touch-Screen TFT LCD Smart-Lab™ Controller Built in Standard Warning and Alarm Functions RS232 Communication Link, Remote Control SoftwareChamber Dimension (w × d × h)Internal(mm)470 × 500 × 1,310600 × 500 × 1,310600 × 600 × 640 × 1,310Back colspan="2">Steel Steel PlateInternalPowder Coated Steel PlateInternalPowder Coated Steel Plat	Capacity & Model						
Temp.Rangeat room temperature of 30 °C and humidity of 70%SensorPT100 SensorCompressorHermetic TypeCondenser TypeBlock Condenser, No Pin, Filter Free MechanismRefrigerantHFC (CFC Free Refrigerant System)Controller & Display7" Full Touch Screen TFT LCD (Smart-Lab™ Controller)ShelvesIncluded 3 Stainless Steel ShelvesMax. Q'ty of Racks12pcs of $15(3 \times 5)$ - Placed Rack (RFU3040)16pcs of $20(4 \times 5)$ - Placed Rack (RFU3040)24pcs of $20(4 \times 5)$ - Placed Rack (RFU3040)MaterialInternalStainless Steel (#304)MaterialInternalPowder Coated Stainless Steel (#304)MaterialInternalPowder Coated Stainless Steel (#304)Chamber Dimension (w × d × h)Internal(mm) $470 \times 500 \times 1,310$ $600 \times 500 \times 1,310$ $600 \times 640 \times 1,310$ $880 \times 620 \times 1,310$ Net Weight220 kg260 kg300 kg $352 kg$ $352 kg$ $442 kg$ Power Consumption720 W $1.6  kW$ $1.6  kW$ $1.6  kW$	Freezing System		Dual Simplified Hi-Effiency Freezing System(Dual SHFS™)				
Temp.Temperature of 30 °C and humidity of 70%SensorPT100 SensorCompressorHermetic TypeCondenser TypeBlock Condenser, No Pin, Filter Free MechanismRefrigerantHFC (CFC Free Refrigerant System)Controller & Display7" Full Touch Screen TFT LCD (Smart-Lab <sup>TM</sup> Controller)ShelvesIncluded 3 Stainless Steel ShelvesMax. Q'ty of Racks12pcs of 15(3×5)- Placed Rack (RFU3040)16pcs of 15(3×5)- Placed Rack (RFU3040)16pcs of 20(4×5)- Placed Rack (RFU50)24pcs of 20(4×5)- Placed Rack (RFU50)MaterialInternalStainless Steel (#304)Zenced Rack (RFU50)Placed Rack (RFU50)24pcs of 20(4×5)- Placed Rack (RFU50)MaterialInternalPowder Coated Stainless Steel (#304)KGMIP Centified, CE & RoHS Centified PL(Product Liability) Insurance, CFC-Free Refrigerants Touch-Screen TFT LCD Smart-Lab <sup>TM</sup> Controller Built in Standard Warning and Alarm Functions RS232 Communication Link, Remote Control SoftwareChamber Immension (w X d x h)Internal(mm)470×500×1,310600×500×1,310600×640×1,310880×620×1,310Net Weight (w X d x h) (mm)220 kg260 kg300 kg322 kg320 kgPacking Size (w X d x h) (mm)110×110×222116×116×222116×124×222140×140×221300 kg352 kg352 kg442 kgPower Consumption720 W1.6 kW1.6 kW1.6 kW	Temp.	Banga	<b>−95 ℃~−65 ℃</b>			_90℃~_65℃	
Compressor         Hermetic Type           Condenser Type         Block Condenser, No Pin, Filter Free Mechanism           Refrigerant         HFC (CFC Free Refrigerant System)           Controller & Display         7" Full Touch Screen TFT LCD (Smart-Lab™ Controller)           Shelves         Included 3 Stainless Steel Shelves           Max. Q'ty of Racks         12pcs of 15(3×5)- Placed Rack (RFU3040)         16pcs of 15(3×5)- Placed Rack (RFU3040)         16pcs of 20(4×5)- Placed Rack (RFU3040)         24pcs of 20(4×5)- Placed Rack (RFU50)           Material         Internal         12pcs of 15(3×5)- Placed Rack (RFU3040)         16pcs of 20(4×5)- Placed Rack (RFU3040)         24pcs of 20(4×5)- Placed Rack (RFU50)           Material         Internal         12pcs of 15(3×5)- Placed Rack (RFU3040)         Powder Coated Steel Shelves           Material         Internal         Powder Coated Stainless Steel (#304)         Powder Coated Steel Plate           Others         Inner Door         Powder Coated Stainless Steel (#304)         KGMP Certified, CE & ROHS Certified PL(Product Liability) Insurance, CFC-Free Refrigerants Touch-Screen TFT LCD Smart-Lab™ Controller Built in Standard Warning and Alarm Functions RS232 Communication Link, Remote Control Software           Chamber Dimension (w × d × h)         Internal(mm)         470×500×1,310         600×500×1,310         600×640×1,310         880×620×1,310           Net Weight         220 kg         2		Range	at room temperature of 30 $^\circ\!\!\!\mathrm{C}$ and humidity of 70%				
$\begin{tabular}{ c c c c c c } \hline Condenser Type & Block Condenser, No Pin, Filter Free Mechanism \\ \hline Refrigerant & HFC (CFC Free Refrigerant System) \\ \hline Controller & Display & 7" Full Touch Screen TFT LCD (Smart-LabTM Controller) \\ \hline Shelves & Included 3 Stainless Steel Shelves \\ \hline Shelves & 12pcs of 15(3 \times 5)- \\ Placed Rack & (RFU3040) & Placed Rack & (RFU50) & Placed Rack & (RFU50) \\ \hline Placed Rack & (RFU3040) & (RFU50) & Placed Rack & (RFU50) & Stainless Steel (#304) & & & & & & & & & & & & & & & & & & &$		Sensor	PT100 Sensor				
HFC ( CFC Free Refrigerant System)         Controller & Display       7" Full Touch Screen TFT LCD (Smart-Lab™ Controller)         Shelves         Max. Q'ty of Racks       12pcs of 15(3×5)- Placed Rack (RFU3040)       16pcs of 15(3×5)- Placed Rack (RFU3040)       16pcs of 20(4×5)- Placed Rack (RFU3040)         Material       Internal       External       Powder Coated Stainless Steel (#304)       Z4pcs of 20(4×5)- Placed Rack (RFU3040)       24pcs of 20(4×5)- Placed Rack (RFU3040)         Material       Internal       External       Powder Coated Stainless Steel (#304)       Powder Coated Stainless Steel (#304)         Fourier Coated Stainless Steel (#304)         KGMP Certified, DEC-Free Refrigerants Touch-Screen TFT LCD Smart-Lab™ Controller Built in Standard Warming and Alarm Functions RS232 Communication Link, Remote Control Software         Chamber Dimension (w × d × h)       Internal(mm)       470×500×1,310       600×500×1,310       600×640×1,310       880×620×1,310         Net Weight       220 kg       260 kg       300 kg       322 kg	Compressor		Hermetic Type				
$\begin{tabular}{ c c c c c c c } \hline Controller & Display & 7" Full Touch Screen TFT LCD (Smart-LabTM Controller) \\ \hline Shelves & Included 3 Stainless Steel (#304) & Internal & External & Powder Coated Stainless Steel (#304) & KGMP Certified Certified & PL(Product Liability) Insurance, CFC-Free Refrigerants & Touch-Screen TFT LCD Smart-LabTM Controller & Built in Standard Warning and Alarm Functions & RS232 Communication Link, Remote Control Software & Chamber & Internal(mm) & 470 \times 500 \times 1,310 & 600 \times 500 \times 1,310 & 600 \times 640 \times 1,310 & 880 \times 620 \times 1,310 & Internal(mm) & 710 \times 750 \times 1,900 & 840 \times 750 \times 1,900 & 840 \times 890 \times 1,900 & 1,120 \times 870 \times 1,900 & Net Weight & 220 kg & 260 kg & 300 kg & 320 kg & 320 kg & S20 kg $	Condenser Type		Block Condenser, No Pin, Filter Free Mechanism				
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	Refrigerant		HFC (CFC Free Refrigerant System)				
Max. Q'ty of Racks12pcs of $15(3 \times 5)$ - Placed Rack (RFU3040)16pcs of $20(4 \times 5)$ - Placed Rack (RFU3040)24pcs of $20(4 \times 5)$ - Placed Rack (RFU50)MaterialInternalExternalPowder Coated Steel (#304)Formation Coated Steel PlateInner DoorPowder Coated Stainless Steel (#304)KGMP Certified, CE & RoHS Certified PL(Product Liability) Insurance, CFC-Free Refrigerants Touch-Screen TFT LCD Smart-Lab <sup>TM</sup> Controller Built in Standard Warming and Alarm Functions RS232 Communication Link, Remote Control SoftwareChamber Dimension (w × d × h)Internal(mm) $470 \times 500 \times 1,310$ $600 \times 500 \times 1,310$ $600 \times 640 \times 1,310$ $880 \times 620 \times 1,310$ Net Weight & 220 kg220 kg260 kg300 kg $320 kg$ Packing Size (w × d × h) (mm) & & Gross Weight $110 \times 110 \times 222$ $116 \times 116 \times 222$ $116 \times 124 \times 222$ $140 \times 140 \times 221$ 300 kg $352 kg$ $442 kg$ Power Consumption $720 W$ $1.6 kW$ $1.6 kW$	Controller & Display		7″ Full Touch Screen TFT LCD (Smart-Lab™ Controller)				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Shelves		Included 3 Stainless Steel Shelves				
MaterialExternalPowder Coated Steel PlateInner DoorPowder Coated Stainless Steel (#304)KGMP Certified, CE & ROHS CertifiedPL(Product Liability) Insurance, CFC-Free Refrigerants Touch-Screen TFT LCD Smart-Lab Built in Standard Warning and Alarm Functions RS232 Communication Link, Remote Control SoftwareChamber Dimension (w × d × h)Internal(mm)470 × 500 × 1,310600 × 500 × 1,310 $600 \times 640 \times 1,310$ $880 \times 620 \times 1,310$ Net Weight220 kg260 kg300 kg $320$ kgPacking Size (w × d × h) (mm) & & Gross Weight110 × 110 × 222 $116 \times 116 \times 222$ $116 \times 124 \times 222$ $140 \times 140 \times 221$ & Gross Weight720 W1.6 kW1.6 kW1.6 kW	Max. Q'ty of Racks		Placed Rack	Placed Rack	Placed Rack	Placed Rack	
$\begin{tabular}{ c c c c c c c } \hline \mbox{Inner Door} & $$Powder Coated Stainless Steel (#304$)$ \\ \hline \mbox{KGMP Certified, CE & RoHS Certified} \\ $$PL(Product Liability) Insurance, CFC-Free Refrigerants Touch-Screen TFT LCD Smart-LabTM Controller Built in Standard Warning and Alarm Functions RS232 Communication Link, Remote Control Software \\ \hline \mbox{Chamber Dimension (w × d × h)} & $$Internal(mm)$ 470 \times 500 \times 1,310$ 600 \times 500 \times 1,310$ 600 \times 640 \times 1,310$ 880 \times 620 \times 1,310$ \\ \hline \mbox{External(mm)}$ 710 \times 750 \times 1,900$ 840 \times 750 \times 1,900$ 840 \times 890 \times 1,900$ 1,120 \times 870 \times 1,900$ \\ \hline \mbox{Net Weight}$ & $$20 kg$ 260 kg$ 300 kg$ 320 kg$ \\ \hline \mbox{Packing Size} (w \times d \times h) (mm) \\ \& Gross Weight$ & $$110 \times 110 \times 222$ 116 \times 116 \times 222$ 116 \times 124 \times 222$ 140 \times 140 \times 221$ \\ \hline \mbox{300 kg}$ 352 kg$ 352 kg$ 442 kg$ \\ \hline \mbox{Power Consumption}$ 720 W$ 1.6 kW$ 1.6 kW$ 1.6 kW$ \\ \hline \end{tabular}$	Material	Internal	Stainless Steel (#304)				
KGMP Certified, CE & RoHS Certified PL(Product Liability) Insurance, CFC-Free Refrigerants Touch-Screen TFT LCD Smart-Lab <sup>TM</sup> Controller Built in Standard Warning and Alarm Functions RS232 Communication Link, Remote Control SoftwareChamber Dimension (w × d × h)Internal(mm) $470 \times 500 \times 1,310$ $600 \times 500 \times 1,310$ $600 \times 640 \times 1,310$ $880 \times 620 \times 1,310$ Net WeightZ20 kg260 kg300 kg320 kgPacking Size (w × d × h) (mm) & & Gross Weight $110 \times 110 \times 222$ $116 \times 116 \times 222$ $116 \times 124 \times 222$ $140 \times 140 \times 221$ Generative A gross Weight $300 \text{ kg}$ $352 \text{ kg}$ $442 \text{ kg}$ Power Consumption $720 \text{ W}$ $1.6 \text{ kW}$ $1.6 \text{ kW}$		External	Powder Coated Steel Plate				
OthersPL(Product Liability) Insurance, CFC-Free Refrigerants Touch-Screen TFT LCD Smart-Lab <sup>TM</sup> Controller Built in Standard Warning and Alarm Functions RS232 Communication Link, Remote Control SoftwareChamber Dimension (w × d × h)Internal(mm)470 $\times$ 500 $\times$ 1,310600 $\times$ 500 $\times$ 1,310600 $\times$ 640 $\times$ 1,310880 $\times$ 620 $\times$ 1,310Net Weight (w × d × h) (mm)220 kg260 kg300 kg320 kgPacking Size (w × d × h) (mm)110 $\times$ 110 $\times$ 222116 $\times$ 116 $\times$ 222116 $\times$ 124 $\times$ 222140 $\times$ 140 $\times$ 2218 Gross Weight300 kg352 kg352 kg442 kgPower Consumption720 W1.6 kW1.6 kW		Inner Door	Powder Coated Stainless Steel (#304)				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Others		PL(Product Liability) Insurance, CFC-Free Refrigerants Touch-Screen TFT LCD Smart-Lab™ Controller Built in Standard Warning and Alarm Functions				
$\begin{array}{ c c c c c c c } \hline (w \times d \times h) & \hline \mbox{External(mm)} & 710 \times 750 \times 1,900 & 840 \times 750 \times 1,900 & 840 \times 890 \times 1,900 & 1,120 \times 870 \times 1,900 \\ \hline \mbox{Net Weight} & 220 \ \mbox{kg} & 260 \ \mbox{kg} & 300 \ \mbox{kg} & 320 \ \mb$	Dimension	Internal(mm)	470×500×1,310	600×500×1,310	600×640×1,310	880×620×1,310	
Packing Size (w×d×h) (mm) & Gross Weight         110×110×222         116×116×222         116×124×222         140×140×221           300 kg         352 kg         352 kg         442 kg           Power Consumption         720 W         1.6 kW         1.6 kW         1.6 kW		External(mm)	710×750×1,900	840×750×1,900	840×890×1,900	1,120×870×1,900	
(w×d×h) (mm)         110×110×222         116×116×222         116×124×222         140×140×221           & Gross Weight         300 kg         352 kg         352 kg         442 kg           Power Consumption         720 W         1.6 kW         1.6 kW         1.6 kW	Net Weight		220 kg	260 kg	300 kg	320 kg	
Power Consumption         720 W         1.6 kW         1.6 kW         1.6 kW	(w×d×h) (mm)		110×110×222	116×116×222	116×124×222	140×140×221	
			300 kg	352 kg	352 kg	442 kg	
Power Supply & Cord Plug <sup>•</sup> 1 Phase, AC 120V, 60Hz or AC 230V, 50 / 60Hz, with Cord/Plug	Power Consumption		720 W	1.6 kW	1.6 kW	1.6 kW	
	Power Supply	/ & Cord Plug*	1 Phase, AC	120V, 60Hz or AC	230V, 50 / 60Hz, v	vith Cord/Plug	

\* Other Specifications are available upon Customer's Request.

\*\* 50Hz condition may cause 5% of temperature increase at -95 °C (SWUF-D700)

### <Continued on next page>

#### Cat. No

Articles

## <Continued from... Digital Ultra-Low Temperature Freezer, "SWUF-D">

### Ordering Information

DH.SWUF01300	Upright Type -95 °C Freezer, <b>SWUF-D300</b> , -95 °C ~ -65 °C, 308 Lit., <b>230V</b> , with Power Cord			
DH.SWUF01400	Upright Type -95°C Freezer, <b>SWUF-D400</b> , -95°C~-65°C, 393 Lit., <b>230V</b> , with Power Cord			
DH.SWUF01500	Upright Type -95 °C Freezer, <b>SWUF-D500</b> , -95 °C ~ -65 °C, 503 Lit., <b>230V</b> , with Power Cord			
DH.SWUF01700	Upright Type -95 °C Freezer, <b>SWUF-D700</b> , -95 °C ~ -65 °C, 714 Lit., <b>230V</b> , with Power Cord			
DH.SWUF02300 DH.SWUF02400 DH.SWUF02500 DH.SWUF02700	Upright Type -95°C Freezer, SWUF-D300, Same as Above, but only 120V , SWUF-D400, Same as Above, but only 120V , SWUF-D500, Same as Above, but only 120V , SWUF-D700, Same as Above, but only 120V			
	Optional Accessories			
DH.RFU3040SD	(1) Rack, Sliding Drawer-type, Aluminum, 15 places, "RFU3040SD", w140 × d430 × h290 mm, for WUF-(D)300/400, without boxes			
DH.RFU50SD	<ol> <li>Rack, Sliding Drawer-type, Aluminum, 20 places, "RFU50SD", w140×d570×h290 mm, for WUF-(D)500/700, without boxes</li> </ol>			
DH.RFU3040SA	(2) Rack, Side Access-type, Stainless Steel, 15 places, "RFU3040SA", w140×d430×h290 mm, for WUF-(D)300/400, without boxes			
DH.RFU50SA	(2) Rack, Side Access-type, Stainless Steel, 20 places, "RFU50SA", w140×d570×h290 mm, for WUF-(D)500/700, without boxes			
C11.001 C11.002	(3) Hard Board Box, with Hard Board Divider, 81 Hole, $127 \times 127 \times 152$ mm (3) Hard Board Box, with PolyPropylene Divider, 81 Hole,			
	127×127×h52 mm			
DH.KT622 DH.C657	(4) Temp. Chart Recorder, "KT622", with C657 Chart Paper (5) Chart Paper, "C657", 60 Charts, for 420 days recording			
DH.P222	(6) Replacement Pens, " <b>P222</b> ", 6ea Red color, for <b>KT622</b> Chart Recorder			
DH.LCO2B	(7) LCO2 Back up System, "LCO2B"			
DH.RWAS	(8) Remote Wire/Wireless Alarm System, "RWAS"			
DH.WRCK1100	(9) Refrigerant Charging Kit, for all WUF Series (without Charging Tank)			
DH.WRCK1300 *	(10) Refrigerant Charging Tank, "RCK1300", for WUF-D300			
DH.WRCK1400*	, " <b>RCK1400</b> ", for <b>WUF-D400</b>			
DH.WRCK1500*	, " <b>RCK1500</b> ", for <b>WUF-D500</b>			
DH.WRCK1700 *	, " <b>RCK1700</b> ", for <b>WUF-D700</b>			

\*-marks : The ordering no. of Charging Tank is for one freezing system only. If you'd like to refill both freezing systems, you are requested to purchase 2pcs of Charging Tank.

### Validation (IQ, OQ) Service

DH.SWUF31300 DH.SWUF31400 DH.SWUF31500 DH.SWUF31700 Validation Service(IQ, OQ), SUFDV300, for SWUF-D300 , SUFDV400, for SWUF-D400 , SUFDV500, for SWUF-D500 , SUFDV700, for SWUF-D700



(7) LCO2 back up system "LCO2B"



(8) Remote Alarm System "**RWAS**"



(9) Refrigerant Charging Kit

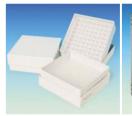




(1) Sliding Drawer-type Rack, 15Places "RFU3040SD"



(2) Side Access-type Rack, 20Places "RFU50SA"



(3) Hard Board Box 81 holes, w/cover





(5) Chart Paper, "**C657**", 60 charts for 420 days



(6) Replacement Pens6ea, Red color,"P222", for Cart Recorder