

**WiseCube®
& Wisecryo®**

Refrigerators



- Digital Cold Lab Chamber, 0 ~ 10 °C
- Digital Laboratory Freezer, -35 °C

The New Generation SHFS™ Simplified Hi-Efficiency Freezing System

- Digital Ultra-Low Temperature Freezer, Dual SHFS™, Upright Type, -95 °C
- Digital Ultra-Low Temperature Freezer, SHFS™, Upright Type, -86 °C
- Digital Ultra-Low Temperature Freezer, SHFS™, Chest Type, -86 °C
- Personal Digital Ultra-Low Temperature Freezer, SHFS™, Upright Type, -90 °C

- Innovative SHFS™ (Simplified Freezing System).
- Highest Stability System, Dual SHFS™ Models, WUF-D Series.
- Fastest Freezing : only 3 hrs Down to -86 °C
- Powerful Touch-Screen TFT LCD Controller.
- Automatic Vacuum Dissolver.
- Robust & Flexible design of Power Door Handle.
- Filter-Free Mechanism, Dust free, Filter Free.



WUF-D500

► Digital Ultra-Low Temperature Freezer, Dual SHFS™, Upright Type



WUF-31

► Digital Ultra-Low Temperature Freezer, SHFS™, Chest Type

“witeg” WiseCube® WCC Digital Cold Lab Chamber/Refrigerator, 0,0 °C~10,0 °C, 250- & 1.176- Lit.
 Digital Fuzzy Control, Highest Temperature Uniformity, CFC-Free (134A) Refrigeration, Automatic Defrost System



Digital Cold Lab Chamber/Refrigerator (WCC-1000)



Teflon Coated Steel Wire Shelves

WiseRemote® Remote Control Software
 - standard delivery

Connection of **Wisdom** Temperature Devices with Interface RS232C to a PC Export Recorded Data (Excel Spreadsheet)



Main Screen



RS232C Cable & Software

- Highest Temperature Uniformity by Forced Air Circulation
- CFC-Free (134A) Refrigeration System
- Patented Jog-Shuttle Control System
- CE Certified

Application & Features

- * Digital Fuzzy Control System Implementing Superior Temperature Accuracy.
- * RS232C Interface for Monitoring and Controlling with PC.
- * Storage Function : Set Values of Temperature and Timer.
- * Digital LCD Display with Back-Light Function.
- * Automatic Defrost System.
- * Locking Mode Supported for Experimental Safety. (Input to Jog-Shuttle can be Disabled)
- * Highest Temperature Uniformity by Forced Air Circulation.
- * Intelligent Control of Refrigerator for Preventing Overload of Compressor.
- * Corrosion Resistant 304 Stainless Steel Chamber and Teflon-coated Shelves.
- * Wide Tempered Glass Window with Double Fold.
- * CFC-Free (134A) Refrigeration System.
- * Over & Under Temperature Protection, Over Current Protection and Sensor Error Detection.
- * Patented Jog-Shuttle Control System.
- * CE Certified.

Specification

Model		WCC-250	WCC-1000
Interior Dimension	Size (w × d × h) (mm)	505 × 505 × 1.000	1.200 × 700 × 1.400
	Load per Rack	15 kg	
	Permitted Total Load	25 kg	100 kg
	Weight of the Unit (empty)	217 kg	398 kg
Exterior Dimension	Size (w × d × h) (mm)	660 × 790 × 1.800	1.350 × 850 × 2.000
	Wall Clearance Rear	300 mm	
	Wall Clearance Side	300 mm	
Capacity	255 Lit.	1.176 Lit.	
Refrigerator	245 W	276 W	
Door/Shelves	1 × Door, 3 Shelves	2 × Door, 6 Shelves	
Controller	Digital Fuzzy Controller with Jog-Shuttle Switch (Turn+Push)		
Display	Digital LCD Display with Back-Light Function		
Temp.	Range	0,0 °C to 10,0 °C, 0,1 °C Resolution	
	Accuracy	± 0,5 °C at 4 °C	
	Uniformity	± 2,0 °C at 4 °C	
	Sensor	PT100	
Refrigerant	CFC-Free(134A) Refrigeration System		
Material	Internal	Stainless Steel (# 304)	
	External	Powder Coated Steel	
	Shelves	Teflon-Coated Steel	
Door	Outer Door with Glass Window & Inner Glass Door		
	One Door	Two Doors	
Utility Device	Access Hole Consent 110 V / 220 V Lamp		
Circulation	Dual Turbo Fan		
Defrost	Automatic Defrost System		
Evaporator	Auto Exchange Dual Evaporator		
Safety Device	Over & Under Temperature Protection, Over Current Protection, Sensor Error Detection.		
Others	CE Certified, Alarm (Error Status and Timer-end) RS232C Interface for Monitoring and Controlling with PC Storage Function (Temp., Timer) Locking Mode (Jog-Shuttle Input disabled)		
Packing Dimension (w × d × h) (mm)	960 × 960 × 2.050	1.580 × 1.220 × 2.180	
Gross Weight	277 kg	478 kg	
Power Consumption	600 W	700 W	
Power plug type	Hybrid E+F		
Power Supply*	AC 230 V, 50 / 60 Hz		

* Other Specifications are available upon Customer's Request.

Ordering Information

DH.WCC00250 Cold Lab Chamber, **WCC-250**, 0,0 °C~10,0 °C, 250 Lit., 1 × Door
 DH.WCC01000 , **WCC-1000**, 0,0 °C~10,0 °C, 1.176 Lit., 2 × Door

Spare Accessories

DH.WCC10250 Wire Shelf, Teflon Coated Steel, **CCS250**, for **WCC-250**, w 470 × d 480 mm
 DH.WCC11000 , **CCS1000**, for **WCC-1000**, w 580 × d 620 mm

Validation (IQ, OQ & PQ) Service

DH.WCC30250 Validation Service(IQ, OQ & PQ), **CCV250**, for **WCC-250**
 DH.WCC31000 , **CCV1000**, for **WCC-1000**
 DH.WCC40250 Calibration Certificate Service, 1 & 3 points, **CCC0250**, for **WCC-250**
 DH.WCC41000 , 1 & 3 points, **CCC01000**, for **WCC-1000**
 DH.WCC50250 Calibration Certificate Service, 9 points, **CCC1250**, for **WCC-250**
 DH.WCC51000 , 9 points, **CCC11000**, for **WCC-1000**

Patented Control System
 (No. 10-0554098)

1 or 2 Mode Buttons + Jog Shuttle Switch
 Realize “Easy to Use”

“witeg” WiseCryo® WLF Digital Laboratory Freezer, -35 °C~to Room Temp., 420 Lit.
 Digital Fuzzy Control, Fast Freeze Function, RS232C Interface, CFC-Free Refrigeration, Automatic Defrost System

- Digital Fuzzy Control System Implementing Superior Temperature Accuracy
- Fast Freezing Function
- Patented Jog-Shuttle Control System
- CFC-Free (134A) Refrigeration System ■ CE Certified

Application & Features

- * Suitable for Storage of Bio Reagent, Seed, Enzyme and Various Samples.
- * Digital Fuzzy Control System Implementing Superior Temperature Accuracy.
- * RS232C Interface for Monitoring and Controlling with PC.
- * Storage Function : Set Values of Temperature and Timer.
- * Digital LCD Display with Back-Light Function.
- * Locking Mode supported for Experimental Safety. (Input to Jog-Shuttle can be Disabled)
- * Intelligent Control of Refrigerator for Preventing Overload of Compressor.
- * Fast Freezing Function.
- * Corrosion Resistant 304 Stainless Steel Chamber and Shelves.
- * Automatic Defrost System.
- * Over Current Protection, Sensor Error Detection, Leakage Breaking.
- * Patented Jog-Shuttle Control System.
- * CFC-Free (134A) Refrigeration System. * CE Certified.

Specification

Model		WLF-420
Style		Upright Type
Interior Dimension	Size (w × d × h) (mm)	600 × 700 × 1.000
	Load per Rack	15 kg
	Permitted Total Load	40 kg
	Weight of the Unit (empty)	274 kg
Exterior Dimension	Size (w × d × h) (mm)	800 × 800 × 1.700
	Wall Clearance Rear	300 mm
	Wall Clearance Side	300 mm
Chamber Capacity		420 Lit.
Refrigerator		736 W
Temp.	Range	-35 °C to Ambient(Room Temp.), 1 °C Resolution
	Sensor	PT 100
Controller		Digital Controller with Jog-Shuttle Switch (Turn+Push)
Display		Digital LCD Display with Back-Light Function
Refrigerant		CFC-Free(134A) Refrigeration System
Material	Internal	Stainless Steel (# 304)
	External	Powder Coated Steel
Shelves		4 ea Stainless Steel Shelves(# 304)
Defrost		Automatic Defrost System
Safety Device		Over Current Protector, Sensor Error Detector, Leakage Breake
Others		CE Certified RS232C Interface for Monitoring and Controlling with PC Storage Function (Temp., Timer) Locking Mode (Jog-Shuttle Input Disabled) Alarm (for Error Status and Timer-end)
Packing Dimension (w × d × h) (mm)		1.160 × 1.060 × 2.160
Gross Weight		314 kg
Power Consumption		1,8 kW
Power plug type		Hybrid E+F
Power Supply*		AC 230 V, 50 / 60 Hz

* Other Specifications are available upon Customer's Request.

Ordering Information

DH.WLF00420 Lab Freezer, **WLF-420**, -35 °C to Room Temp., 420 Lit.

Spare Accessories

DH.WLF10420 Wire Shelf, Stainless Steel, **LFS420**, w 580 × d 680 mm, for **WLF-420**

Validation (IQ, OQ & PQ) Service

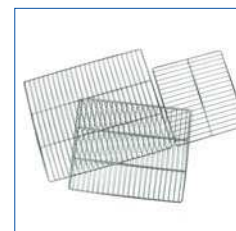
DH.WLF30420 Validation Service(IQ, OQ & PQ), **LFS420**, for **WLF-420**

DH.WLF40420 Calibration Certificate Service, 1 & 3 points, **LFC0420**, for **WLF-420**

DH.WLF50420 , 9 points, **LFC1420**, for **WLF-420**



Digital Laboratory Freezer (WLF-420)



Stainless Steel Wire Shelves



WLF-420

WiseRemote® Remote Control Software
 - standard delivery

Connection of **Wisdom** Temperature Devices with Interface RS232C to a PC Export Recorded Data (Excel Spreadsheet)



Main Screen



RS232C Cable & Software

Patented Control System
 (No. 10-0554098)

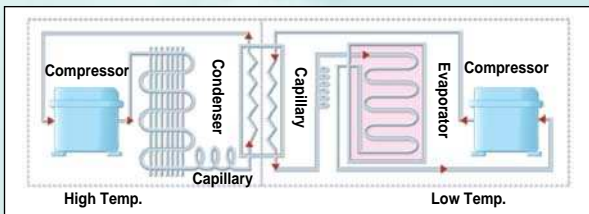
1 or 2 Mode Buttons + Jog Shuttle Switch
 Realize “Easy to Use”

The New Generation SHFS™ (Simplified Hi-Efficiency Freezing System)

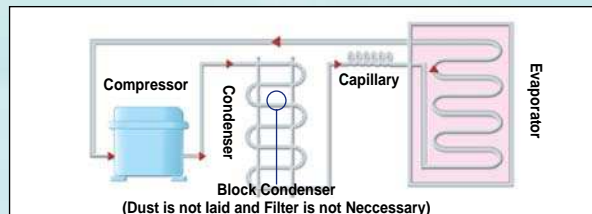
Most of the Ultra-Low Temperature Freezers have two compressors cooperating with each other to drop the internal temperature down to $-86\text{ }^{\circ}\text{C}$ as shown in the following figure, and its overall freezing mechanism is very complicated. But, our **New SHFS™** uses only single compressor. Even though single set of a compressor, a capillary tube, a condenser and an evaporator is incorporated, it ensures the temperature down to $-86\text{ }^{\circ}\text{C}$ by an **Advanced Control Technology** of the compressor and the process of **Specially Mixed Refrigerants**. **SHFS™** overcomes technical complexity of the typical cascaded double compressor system. Simplification of the freezing mechanism and electricity minimizes the noise, power consumption and failure.

- ▶ Only single freezing cycle works to reach down to $-86\text{ }^{\circ}\text{C}$ ▶ Much simpler mechanism
- ▶ Advanced Compressor Control Technology + Specially Mixed Refrigerants
- ▶ Dramatically lowered noise, power consumption and fail rate
- ▶ Oil separator free, Expansion tank free
- ▶ Block condenser against typical pin-type condenser : Dust free, Filter free

Simplified Hi-Efficiency Freezing System Mechanism : Easy Maintenance



Typical Cascaded Compressor System
Two Freezing cycles contribute Complicated mechanism

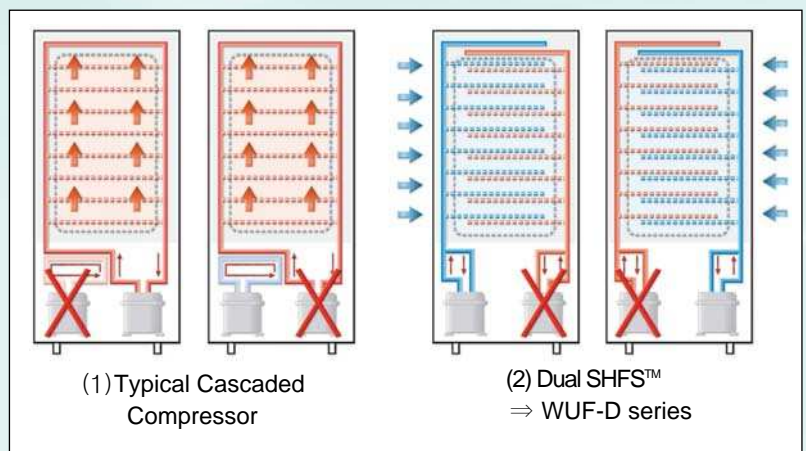


New **Simplified Hi-Efficiency Freezing System**
Single freezing cycle works only!!
(Dust is not laid and Filter is not Necessary)

Doubled Stability and Robustness!! Dual SHFS™

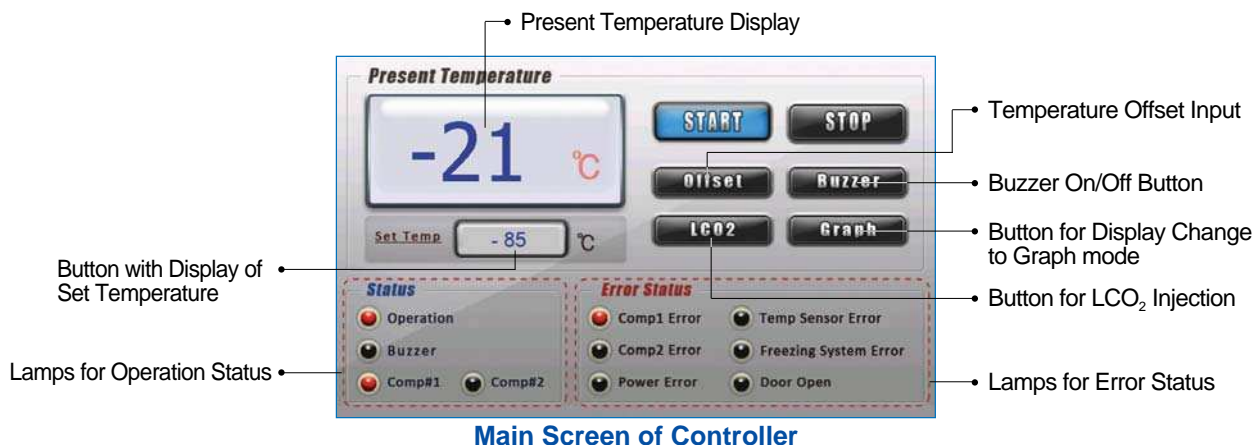
We offer an extraordinary high-stability system powered by two **Simplified Hi-Efficiency Freezing System** operating independently. Normally, both of the two compressors are running, and it drops the temperature inside the storage chamber down to $-95\text{ }^{\circ}\text{C}$. Even if one SHFS™ fails in operation by a certain unexpected problem, the other SHFS™ still works and maintains ultra-low temperature down to $-80\text{ }^{\circ}\text{C}$. It means one SHFS™ works as a 'backup' of the other SHFS™. This innovative mechanism realizes doubled stability, robustness and fault tolerance, which are the most important feature of the ULT freezer needed by all the customers.

- ▶ **The lowest temperature** of $-95\text{ }^{\circ}\text{C}$ is ensured by Dual SHFS™ system running independently and simultaneously
- ▶ **Fault Tolerance System**
 - Realization of doubled stability and robustness
- ▶ **Incomparable Fast and Powerful Freezing**
 - Fast Recovery of Target Temperature



- (1) Complicated mechanism
⇒ If one of compressor fails, temperature would go up
- (2) Even if one the two SHFS™ fails to run, the other is still running properly
⇒ Minimum $-80\text{ }^{\circ}\text{C}$

Powerful High Performance Touch-Screen TFT LCD Controller !



● Touch-Screen TFT LCD

- Ease-of-use the Touch-Screen TFT LCD Controller as well as easy Monitoring.
- All Operating Status and Errors could be checked and managed on LCD Display easily.

● DATA Storage Function and USB Port Support

- Temperature data for some years could be stored and maintained in the controller. An External Temperature Recorder is not necessary for storage of data.
- The controller offers a USB connector, by which you could back-up the Temperature data into a USB memory stick. The stored data could be checked on a PC.

● Safe and Smart Operation

- Even in the case of unexpected power failure, the controller is still alive to operate by Embedded Battery, record the Temperature Change and generate Error Alarm. Also, if you equip optional LCO₂ back-up system, LCO₂ will be injected to the device automatically.
- We offer the Password Set Function for Secure Operation like Starting & Stopping operation, Setting Temperature and so on required password input before setting.



● Graph Display Function

- This Powerful Data Management Function is for monitoring Present and Previous Temperature Status by Graph.
- Zoom-In & -Out Function helps to check Temperature Variation easily and accurately.

● Offset Value Input Display

Adjustable Temperature Range : -15 °C~+15 °C
(NOTE) Factory Default Value is stored by production-stage tuning.

● Easy Offset Setting

- You could want to use your own thermometer as a reference covering the whole experiment procedure and to equalize the temperature shown at the Present Temperature of unit to the thermometer. In that case, you can input an "Offset" value which is added to Present Temperature of the unit for equalization. This Function is applied to the Digital Controller of all **Wisdom** products which has the Thermostatic Control System. And, it offers Reliability of your experimental data by Normalization of all Temperature Control Condition.



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

“witeg” **WiseCryo® WUF-D** Digital Ultra-Low Temperature Freezer, Upright Type -95 °C ~ -65 °C
 Dual SHFS™, Non-Freon Refrigerants, Automatic Vacuum Releasing System, Touch-Screen TFT LCD Controller 308-/ 393-/ 503-/683- Lit.



Digital Ultra-Low Temperature Freezer Upright Type(WUF-D500)

- **Simplified Hi-Efficiency Freezing System** can freeze 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
- **CE Certified**

Application & Features

- * **Simplified Hi-Efficiency Freezing System** can freeze 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
- * Automatic Vacuum Releasing System - Easy to re-open the Door.
- * Ease-of-use and High Performance Touch-Screen TFT LCD Controller.
- * Robust & Flexible design of Door Handle.
- * Easy Monitoring and Control - Eye level Controller.
- * CFC-free Refrigerants are used.
- * 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 is supported.
- * CE Certified.

Specification

Model		WUF-D300	WUF-D400	WUF-D500	WUF-D700
Dimension (w×d×h)	Internal (mm)	470×500×1.310	600×500×1.310	600×640×1.310	815×500×1.310
	External (mm)	780×898×1.980	910×898×1.980	910×1.038×1.980	1.105×1.058×1.980
Capacity		308 Lit.	393 Lit.	503 Lit.	683 Lit.
Max. Q'ty of Racks		12 pcs of 15(3x5)-Placed Rack (RFU3040)	16 pcs of 15(3x5)-Placed Rack (RFU3040)	16 pcs of 20(4x5)-Placed Rack (RFU50)	20 pcs of 20(4x5)-Placed Rack (RFU50)
Temp.	Range	-95 °C ~ -65 °C			-86 °C ~ -65 °C
	Sensor	at the room temperature of 30 °C and the humidity of 70 %			
Controller		Full Touch-Screen TFT LCD Controller			
Compressor		Hermetic Type			
Condenser Type		Block Condenser, No Pin, Filter Free Mechanism			
Refrigerant		HFC (CFC Free Refrigerant System)			
Material	Internal	Stainless Steel (#304)			
	External	Powder Coated Steel Plate			
	Inner Door	Powder Coated Stainless Steel (#304)			
Shelves		3 Stainless Steel Shelves			
Weight		220 kg	260 kg	300 kg	320 kg
Others		CE Certified, PL(Product Liability) Insurance Touch-Screen TFT LCD Controller CFC-Free Refrigerants Built in Standard Warning and Alarm Functions RS232 Communication Link, Remote Control Software			
Packing Dimension (w×d×h) (cm)		110×110×222	116×116×222	116×124×222	136×126×222
Gross Weight		300 kg	352 kg	352 kg	442 kg
Power Consumption		720 W	1,6 kW	1,6 kW	1,6 kW
Power plug type		Hybrid E+F			
Power Supply*		AC 230 V, 50 / 60 Hz			

* Other Specifications are available upon Customer's Request.

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Ordering Information

Upright Type, Dual Simplified Hi-Efficiency Freezing System

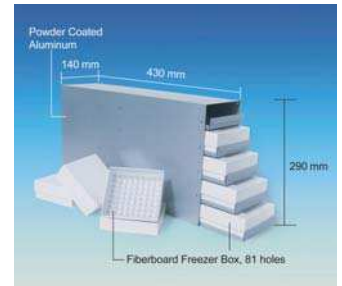
- DH.WUF01300 Ultra Low Temp. Freezer, Upright, **WUF-D300**, -95 °C ~ -65 °C, 308 Lit.
- DH.WUF01400 , **WUF-D400**, -95 °C ~ -65 °C, 393 Lit.
- DH.WUF01500 , **WUF-D500**, -95 °C ~ -65 °C, 503 Lit.
- DH.WUF01700 , **WUF-D700**, -86 °C ~ -65 °C, 683 Lit.

Optional Accessories

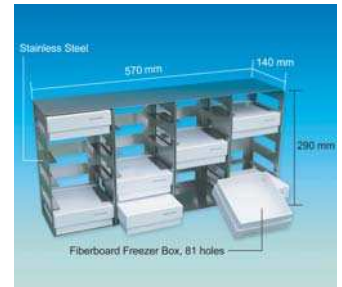
- DH.RFU3040 Rack, **RFU3040**, 15 Places, Aluminum, w 140 × d 430 × h 290 mm, for **WUF-(D)300/400**
- DH.RFU50 Rack, **RFU50**, 20 Places, Stainless Steel, w 140 × d 570 × h 290 mm, for **WUF-(D)500/700**
- DH.KAUB33080A Fiberboard Freezer Box, **UB33-080A**, 81 holes, w/cover, w 132 × d 132 × h 52 mm
- DH.KT622 Temperature Chart Recorder, **KT622**, with one chart paper of **C657** for 7 days recording
- DH.C657 Chart Paper, **C657**, 60 Charts per one box for 420 days recording in **KT622**
- DH.P222 Chart Recorder Replacement Pens, **P222** 6 ea Red color, for **KT622**
- DH.LCO2B LCO₂ Back up System, **LCO2B**
- DH.RWAS Remote Wire/Wireless Alarm System, **RWAS**
- DH.WRCK1300* Refrigerant Charging Tank, **RCK1300**, for **WUF-D300**
- DH.WRCK1400* , **RCK1400**, for **WUF-D400**
- DH.WRCK1500* , **RCK1500**, for **WUF-D500**
- DH.WRCK1700* , **RCK1700**, for **WUF-D700**
- *The Charging Tank is for One Freezing System
- DH.WRCK1100 Refrigerant Charging Kit, for all WUF Series (without Charging Tank)

Validation (IQ, OQ & PQ) Service

- DH.WUF31300 Validation Service(IQ, OQ & PQ), **UFDV300**, for **WUF-D300**
- DH.WUF31400 , **UFDV400**, for **WUF-D400**
- DH.WUF31500 , **UFDV500**, for **WUF-D500**
- DH.WUF31700 , **UFDV700**, for **WUF-D700**
- DH.WUF41300 Calibration Certificate Service, 1 & 3 points, **UFDC0300**, for **WUF-D300**
- DH.WUF41400 , 1 & 3 points, **UFDC0400**, for **WUF-D400**
- DH.WUF41500 , 1 & 3 points, **UFDC0500**, for **WUF-D500**
- DH.WUF41700 , 1 & 3 points, **UFDC0700**, for **WUF-D700**
- DH.WUF51300 Calibration Certificate Service, 9 points, **UFDC1300**, for **WUF-D300**
- DH.WUF51400 , **UFDC1400**, for **WUF-D400**
- DH.WUF51500 , **UFDC1500**, for **WUF-D500**
- DH.WUF51700 , **UFDC1700**, for **WUF-D700**



15 (3 × 5) -Placed Rack, Aluminum (RFU3040)



20 (4 × 5) -Placed Rack, Stainless Steel (RFU50)



Fiberboard Freezer Box, 81 holes, w/cover (UB33-080A)



Temperature Chart Recorder, KT622



Chart Paper, C657 (60 charts for 420 days)



Chart Recorder Replacement Pens, P222 (6 ea, Red color)

WiseRemote® Remote Control Software - standard delivery

Connection of **Wisdom** Temperature Devices with Interface RS232C to a PC Export Recorded Data (Excel Spreadsheet)



Main Screen



RS232C Cable & Software

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

“witeg” **WiseCryo® WUF** Digital Ultra-Low Temperature Freezer, Upright Type $-86\text{ }^{\circ}\text{C} \sim -65\text{ }^{\circ}\text{C}$
 SHFS™, Non-Freon Refrigerants, Automatic Vacuum Releasing System, Touch-Screen TFT LCD Controller, 308-/ 393-/ 503- Lit.



Digital Ultra-Low Temperature Freezer
 Upright Type(WUF-500)

- Simplified Hi-Efficiency Freezing System can freeze down to $-86\text{ }^{\circ}\text{C}$: realize robust and long life time.
- Automatic Vacuum Releasing System - Easy to re-open The Door
- CE Certified

Application & Features

- * **Simplified Hi-Efficiency Freezing System** can freeze down to $-86\text{ }^{\circ}\text{C}$: realize robust and long life time.
- * Automatic Vacuum Releasing System - Easy to re-open the Door.
- * Ease-of-use and High Performance Touch-Screen TFT LCD Controller.
- * Robust & Flexible design of Door Handle.
- * Easy Monitoring and Control - Eye level Controller.
- * CFC-free Refrigerants are used.
- * 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 is supported.
- * CE Certified.

Specification

Model		WUF-300	WUF-400	WUF-500
Dimension (w×d×h)	Internal (mm)	470×500×1.310	600×500×1.310	600×640×1.310
	External (mm)	780×898×1.980	910×898×1.980	910×1.038×1.980
Capacity		308 Lit.	393 Lit.	503 Lit.
Max. Q'ty of Racks		12 pcs of 15(3x5)-Placed Rack (RFU3040)	16 pcs of 15(3x5)-Placed Rack (RFU3040)	16 pcs of 20(4x5)-Placed Rack (RFU50)
Temp.	Range	$-86\text{ }^{\circ}\text{C} \sim -65\text{ }^{\circ}\text{C}$ at the room temperature of $30\text{ }^{\circ}\text{C}$ and the humidity of 70 %		
	Sensor	PT100		
Controller		Full Touch-Screen TFT LCD Controller		
Compressor		Complete Closed Type		
Condenser Type		Block Condenser, No Pin, Filter Free Mechanism		
Refrigerant		HFC (CFC Free Refrigerant System)		
Material	Internal	Stainless Steel (#304)		
	External	Powder Coated Steel Plate		
	Inner Door	Powder Coated Stainless Steel (#304)		
Shelves		3 Stainless Steel Shelves		
Weight		180 kg	210 kg	240 kg
Others		CE Certified Touch-Screen TFT LCD Controller CFC-Free Refrigerants Built in Standard Warning and Alarm Functions RS232 Communication Link, Remote Control Software		
Packing Dimension (w×d×h) (cm)		110×110×222	116×116×222	116×124×222
Gross Weight		275 kg	296 kg	327 kg
Power Consumption		360 W	780 W	780 W
Power plug type		Hybrid E+F		
Power Supply*		AC 230 V, 50 / 60 Hz		

* Other Specifications are available upon Customer's Request.

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Ordering Information

Upright Type, Simplified Hi-Efficiency Freezing System

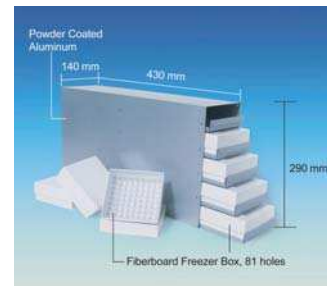
- DH.WUF00300 Ultra Low Temp. Freezer, Upright, **WUF-300**, -86 °C~-65 °C, 308 Lit.
- DH.WUF00400 , **WUF-400**, -86 °C~-65 °C, 393 Lit.
- DH.WUF00500 , **WUF-500**, -86 °C~-65 °C, 503 Lit.

Optional Accessories

- DH.RFU3040 Rack, **RFU3040**, 15 Places, Aluminum, w 140×d 430×h 290 mm, for **WUF-(D)300/400**
- DH.RFU50 Rack, **RFU50**, 20 Places, Stainless Steel, w 140×d 570×h 290 mm, for **WUF-(D)500/700**
- DH.KAUB33080A Fiberboard Freezer Box, **UB33-080A**, 81 holes, w/cover, w 132×d 132×h 52 mm
- DH.KT622 Temperature Chart Recorder, **KT622**, with one chart paper of **C657** for 7 days recording
- DH.C657 Chart Paper, **C657**, 60 Charts per one box for 420 days recording in **KT622**
- DH.P222 Chart Recorder Replacement Pens, **P222** 6 ea Red color, for **KT622**
- DH.LCO2B LCO₂ Back up System, **LCO2B**
- DH.RWAS Remote Wire/Wireless Alarm System, **RWAS**
- DH.WRCK0300 Refrigerant Charging Tank, **RCK0300**, for **WUF-300**
- DH.WRCK0400 , **RCK0400**, for **WUF-400**
- DH.WRCK0500 , **RCK0500**, for **WUF-500**
- DH.WRCK1100 Refrigerant Charging Kit, for all WUF Series (without Charging Tank)

Validation (IQ, OQ & PQ) Service

- DH.WUF30300 Validation Service(IQ, OQ & PQ), **UFV300**, for **WUF-300**
- DH.WUF30400 , **UFV400**, for **WUF-400**
- DH.WUF30500 , **UFV500**, for **WUF-500**
- DH.WUF40300 Calibration Certificate Service, 1 & 3 points, **UFC0300**, for **WUF-300**
- DH.WUF40400 , **UFC0400**, for **WUF-400**
- DH.WUF40500 , **UFC0500**, for **WUF-500**
- DH.WUF50300 Calibration Certificate Service, 9 points, **UFC1300**, for **WUF-300**
- DH.WUF50400 , **UFC1400**, for **WUF-400**
- DH.WUF50500 , **UFC1500**, for **WUF-500**



15 (3×5) -Placed Rack, Aluminum (RFU3040)



20 (4×5) -Placed Rack, Stainless Steel (RFU50)



Fiberboard Freezer Box, 81 holes, w/cover (UB33-080A)



Temperature Chart Recorder, KT622




Chart Paper, C657 (60 charts for 420 days)




Chart Recorder Replacement Pens, P222 (6 ea, Red color)

WiseRemote® Remote Control Software

Connection of **Wisdom** Temperature Devices with Interface RS232C to a PC Export Recorded Data (Excel Spreadsheet)



Main Screen



RS232C Cable & Software

Innovative SHFS™ & Dual SHFS™ (Simplified Hi-Efficiency Freezing System)



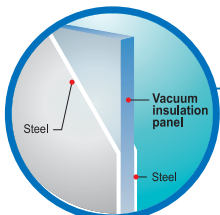
• **Triple-layer Gasket for Perfect Insulation**



• **Automatic Vacuum Dissolver making Door Opening Easy**



• **Robust & Flexible Design of Power Door Handle with Locking Function**



• **Insulation Panel packed in Housing and Door Ensures Defrosting around outer surface**



• **Filter-Free Mechanism**
Significantly Lowers Heat Generated by the Compressor.
Block Condenser (without pins)
Realizes Filter Free Structures



• **Inner Door Handle**
- easily opened against frosting



• **Powerful Touch-Screen TFT LCD Controller**
- Easy Setting, Temperature Graph, Storage Function (USB Interface), etc.

• **CFC-Free**
HFC Refrigerants are Used

• **Maintenance-free Cooling Device with Fully Hermetic High-Capacity Compressor**

• **Alarm**
Built in Standard Warning and Alarm Functions



• **Standard Back up Battery System for Data logger and Alarm System**



WUF - D500



• **Temperature Recorder (Optional)**
Large and vivid LED display

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

“witeg” WiseCryo® WUF Digital Ultra-Low Temperature Freezer, Chest Type

Non-Freon Refrigerants, 136-/237-/314-/375-/438- Lit., -86 °C ~ -65 °C

- Simplified Hi-Efficiency Freezing System can down to -86 °C : Can Realize Robust and Long Life Time
- CFC-free Refrigerants are Used ■ CE Certified

Application & Features

- * Simplified Hi-Efficiency Freezing System can down to -86 °C: Can Realize Robust and Long Life Time.
- * CFC-free Refrigerants are Used.
- * 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 Ensure Defrosting Around Outer Surface.
- * Built in Standard Warning and Alarm Functions.
- * CE Certified.

Specification

Model		WUF-11	WUF-21	WUF-31	WUF-41	WUF-51
Dimension (w×d×h)	Internal (mm)	520×450×680	850×450×680	1.100×450×680	1.300×450×680	1.500×450×680
	External (mm)	720×730×860	1.050×730×860	1.300×730×860	1.500×730×860	1.700×730×860
Capacity		136 Lit.	237 Lit.	314 Lit.	375 Lit.	438 Lit.
Max. Q'ty of Racks		6 pcs of 11(1x11)-Placed Rack & 3pcs of 7(1x7)-Placed Rack	12 pcs of 11(1x11)-Placed Rack & 3pcs of 7(1x7)-Placed Rack	18 pcs of 11(1x11)-Placed Rack & 3pcs of 7(1x7)-Placed Rack	21 pcs of 11(1x11)-Placed Rack & 3pcs of 7(1x7)-Placed Rack	27 pcs of 11(1x11)-Placed Rack & 3pcs of 7(1x7)-Placed Rack
Temp. Range	Range	-86 °C ~ -65 °C at the room temperature of 30 °C and the humidity of 70 %				
	Sensor	PT100				
Controller		Digital PID Controller				
Compressor		Hermetic Type				
Condenser Type		Block Condenser, No Pin, Filter Free Mechanism				
Refrigerant		HFC (CFC Free Refrigerant System)				
Material	Internal	Aluminum Plate				
	External	Steel Plate with Acrylic Acid Resin Coating				
Weight		45 kg	55 kg	67 kg	73 kg	82 kg
Others		CE Certified, CFC-Free Refrigerants Built in Standard Warning and Alarm Functions				
Packing Dimension (w×d×h) (cm)		90×94×115	128×94×115	158×94×115	180×94×115	205×94×115
Gross Weight		98 kg	100 kg	120 kg	126 kg	135 kg
Power Consumption		300 W	400 W	450 W	500 W	550 W
Power plug type		Hybrid E+F				
Power Supply*		AC 230 V, 50 / 60 Hz				

* Other Specifications are available upon Customer's Request.

Ordering Information

Chest Type, Simplified Hi-Efficiency Freezing System

- DH.WUF00011 Ultra Low Temp. Freezer, Chest, **WUF-11**, -86 °C ~ -65 °C, 136 Lit.
- DH.WUF00021 , **WUF-21**, -86 °C ~ -65 °C, 273 Lit.
- DH.WUF00031 , **WUF-31**, -86 °C ~ -65 °C, 314 Lit.
- DH.WUF00041 , **WUF-41**, -86 °C ~ -65 °C, 375 Lit.
- DH.WUF00051 , **WUF-51**, -86 °C ~ -65 °C, 438 Lit.

Optional Accessories

- DH.RFC11 Rack, **RFC11**, 11 Places, Stainless Steel, w 140×d 140×h 655 mm, for **WUF-X1**
- DH.RFC7 Rack, **RFC7**, 7 Places, Stainless Steel, w 140×d 140×h 385 mm, for **WUF-X1**
- DH.KAUB33080A Fiberboard Freezer Box, **UB33-080A**, 81 holes, w/cover, w 132×d 132×h 52 mm
- DH.WRCK0011 Refrigerant Charging Tank, **RCK0011**, for **WUF-11**
- DH.WRCK0021 , **RCK0021**, for **WUF-21**
- DH.WRCK0031 , **RCK0031**, for **WUF-31**
- DH.WRCK0041 , **RCK0041**, for **WUF-41**
- DH.WRCK0051 , **RCK0051**, for **WUF-51**
- DH.WRCK1100 Refrigerant Charging Kit, for all WUF Series (without Charging Tank)

Validation (IQ, OQ & PQ) Service

- DH.WUF30011 Validation Service(IQ, OQ & PQ), **UFV11**, for **WUF-11**
- DH.WUF30021 , **UFV21**, for **WUF-21**
- DH.WUF30031 , **UFV31**, for **WUF-31**
- DH.WUF30041 , **UFV41**, for **WUF-41**
- DH.WUF30051 , **UFV51**, for **WUF-51**

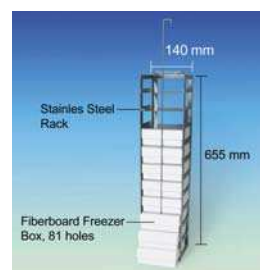
- DH.WUF40011 Calibration Certificate Service, 1 & 3 points, **UFC011**, for **WUF-11**
- DH.WUF40021 , **UFC021**, for **WUF-21**
- DH.WUF40031 , **UFC031**, for **WUF-31**
- DH.WUF40041 , **UFC041**, for **WUF-41**
- DH.WUF40051 , **UFC051**, for **WUF-51**
- DH.WUF50011 Calibration Certificate Service, 9 points, **UFC111**, for **WUF-11**
- DH.WUF50021 , **UFC121**, for **WUF-21**
- DH.WUF50031 , **UFC131**, for **WUF-31**
- DH.WUF50041 , **UFC141**, for **WUF-41**
- DH.WUF50051 , **UFC151**, for **WUF-51**



Digital Ultra-Low Temperature Freezer Chest Type (WUF-31)



Digital Ultra-Low Temperature Freezer Chest Type (WUF-31)



11 (1×11)-Placed Rack, Stainless Steel (RFC11)



7 (1×7)-Placed Rack, Stainless Steel (RFC7)



Fiberboard Freezer Box, 81 holes, w/cover (UB33-080A)

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

“witeg” **WiseCryo® WUF** Personal Digital Ultra-Low Temperature Freezer, Upright Type
SHFS™, Compact Type, Non-Freon Refrigerants, 25-/82- Lit., -90 °C ~ -65 °C



Digital Ultra-Low Temperature Freezer
Upright/Compact Type (WUF-80)

- Personal type Compact Ultra Low Temperature Freezer
- Simplified Hi-Efficiency Freezing System can Down to -90 °C : realize robust and long life time
- CE Certified

Application & Features

- * Personal type Compact Ultra Low Temperature Freezer.
- * **Simplified Hi-Efficiency Freezing System** can freezes down to -90 °C : realize robust and long life time.
- * Ease-of-use and High Performance Touch-Screen TFT LCD Controller. (WUF-80)
- * CFC-free Refrigerants are used.
- * 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 is supported.
- * CE Certified.

Specification

Model		WUF-25	WUF-80
Dimension (w×d×h)	Internal (mm)	200×400×300	360×410×500
	External (mm)	415×727×838	500×620×990
Capacity		25 Lit.	82 Lit.
Max. Q'ty of Racks		None, 10~15 boxes are applicable	4 pcs of 12 (3×4)-Placed Rack (RFU8)
Temp. Range	Range	-90 °C ~ -65 °C at the room temperature of 30 °C and the humidity of 70 %	
	Sensor	PT100	
Controller		Digital Temperature Controller	Full Touch-Screen TFT LCD Controller
Compressor		Hermetic Type	
Condenser Type		Block Condenser, No Pin, Filter Free Mechanism	
Refrigerant		HFC (CFC Free Refrigerant System)	
Material	Internal	Stainless Steel (#304)	
	External	Powder Coated Steel Plate	
	Inner Door	Powder Coated Stainless Steel (#304)	
Shelves		none	1 Stainless Steel Shelves
Weight		62,3 kg	85,5 kg
Others		CE Certified Touch-Screen TFT LCD Controller (WUF-80) CFC-Free Refrigerants Built in Standard Warning and Alarm Functions RS232 Communication Link, Remote Control Software	
Packing Dimension (w×d×h) (mm)		880×860×1.300	960×760×1.350
Gross Weight		118 kg	143 kg
Power Consumption		250 W	
Power plug type		Hybrid E+F	
Power Supply*		AC 230 V, 50 / 60 Hz	

* Other Specifications are available upon Customer's Request.



Digital Ultra-Low Temperature Freezer
Upright/Compact Type (WUF-25)

<Continued on Next page>

<Continued from... "witeg" **WiseCryo® WUF** Personal Digital Ultra-Low Temperature Freezer>

Ordering Information

Upright Type, Simplified Hi-Efficiency Freezing System

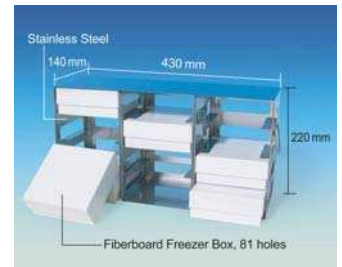
DH.WUF0032 Personal Ultra Low Temp. Freezer, Upright, **WUF-25**, -90 °C~-65 °C, 25 Lit.
 DH.WUF0075 , **WUF-80**, -90 °C~-65 °C, 82 Lit.

Optional Accessories

- DH.RFU8 Rack, **RFU8**, 12 Places, Stainless Steel, w 140×d 430×h 220 mm, for **WUF-80**
- DH.KAUB33080A Fiberboard Freezer Box, **UB33-080A**, 81 holes, w/cover, w 132×d 132×h 52 mm
- DH.KT622 Temperature Chart Recorder, **KT622**, with one chart paper of **C657** for 7 days recording
- DH.C657 Chart Paper, **C657**, 60 Charts per one box for 420 days recording in **KT622**
- DH.P222 Chart Recorder Replacement Pens, **P222** 6 ea Red color, for **KT622**
- DH.LCO2B LCO₂ Back up System, **LCO2B**
- DH.RWAS Remote Wire/Wireless Alarm System, **RWAS**
- DH.WRCK0025 Refrigerant Charging Tank, **RCK0025**, for **WUF-25**
- DH.WRCK0080 , **RCK0080**, for **WUF-80**
- DH.WRCK1100 Refrigerant Charging Kit, for all WUF Series (without Charging Tank)

Validation (IQ, OQ & PQ) Service

- DH.WUF30032 Validation Service(IQ, OQ & PQ), **UFV32**, for **WUF-25**
- DH.WUF30075 , **UFV75**, for **WUF-80**
- DH.WUF40032 Calibration Certificate Service, 1 & 3 points, **UFC032**, for **WUF-25**
- DH.WUF40075 , 1 & 3 points, **UFC075**, for **WUF-80**
- DH.WUF50032 Calibration Certificate Service, 9 points, **UFC132**, for **WUF-25**
- DH.WUF50075 , 9 points, **UFC175**, for **WUF-80**



12 (3×4) -Placed Rack, Stainless Steel (**RFU8**)



Fiberboard Freezer Box, 81 holes, w/cover (**UB33-080A**)



Temperature Chart Recorder, **KT622**



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



Chart Recorder Replacement Pens, **P222** (6 ea, Red color)

WiseRemote® Remote Control Software - standard delivery

Connection of **Wisdom** Temperature Devices with Interface RS232C to a PC Export Recorded Data (Excel Spreadsheet)



Main Screen



RS232C Cable & Software