

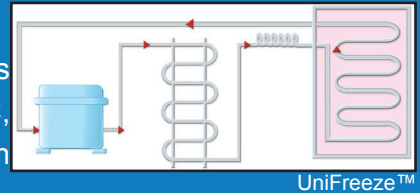
# Freezer

## SMART-Lab™

upright-type  
personal-type

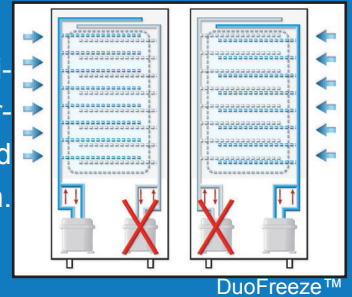
### UniFreeze™ system

Single compressor ensures temperatures down to -86°C, minimized power consumption and minimized noise level.



### DuoFreeze™ system

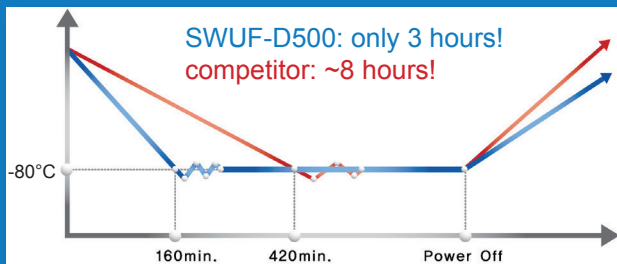
The combination of a doubled UniFreeze™ system ensures temperatures down to -95°C. The second system also acts as backup system.



### Time taken to reach low temperature:

upright-type	UniFreeze™					DuoFreeze™			
	SWUF-80	SWUF-300	SWUF-400	SWUF-500	SWUF-700	SWUF-D300	SWUF-D400	SWUF-D500	SWUF-D700
Capacity	82 l	308 l	393 l	503 l	714 l	308 l	393 l	503 l	714 l
Down to -80°C	170 min	270 min	250 min	310 min	430 min	140 min	150 min	160 min	250 min

tested with room temperature of 30°C - 33°C



### Green product

#### RoHs certified

No hazardous substances (Pb, Cd, Hg, Hex-Cr, PBB, PBDE) are used in all UniFreeze™ and DuoFreeze™ freezers!

#### Natural refrigerants

Instead of using HFC refrigerants (R-134a, R-404A, R-507) all UniFreeze™ and DuoFreeze™ models have a specially mixed refrigerant mostly consisting of natural materials.

#### Power consumption

UniFreeze™ SWUF-D500	Savings	Competitor (typical)
4,015 kWh/year	<b>39%</b>	6,570 kWh/year
1,963 kgCO <sub>2</sub> /year		3,212 kgCO <sub>2</sub> /year

calculated by the electricity-specific emission factors sourced from the IEA (2011a).

### SMART-Lab™



- full touch screen TFT LCD:
- WiRe™ app service, remote control system
- variable program settings
- self-diagnosis and interactive temperature graph
- automatic data recording and password protection
- data transfer to PC by USB memory
- digital calibration (offset function)
- min-/max-temperature memory & program function
- push-alarm service to smartphone or tablet PC

more information on page 8 - 11

**IQ | OQ**  
available

Validation | IQ & OQ - page 12 for details

upright-type, DuoFreeze™ system, SmartLab™ controller, down to -95°C, 308 / 393 / 503 / 714 l



SWUF-D300 & 3x stainless steel shelves (included)

## SWUF-D -95°C, DuoFreeze

### Ideal for:

- ultra low refrigeration

### Features:

- CFC free refrigerant (R-404A)
- DuoFreeze™ with 2 compressors: when one system fails, the other still cools down to -80°C
- automatic vacuum breaker – easy to re- open door
- external temperature sensor hole
- block condenser removes filter and causes of related failure
- filter-free mechanism lowers compressor heat
- easy maintenance and improved performance
- high-quality insulation panel and inner doors ensure defrosting around outer surface
- easy monitoring and control – eye level controller
- stainless steel interior, powder-coated steel body and inner door
- 3x stainless steel shelves to separate chamber into 4 sub-chambers included
- castors for easy movement
- UL/CUL, CE and RoHS certified and unique serial number for tracing
- SWUF-D500 model is GMP certified

### Safety mechanism:

- push alarm service to your smartphone
- sensor error detection
- door locking system, door open error
- door ajar and power failure alarm
- standard warning and alarm functions

### Controller:

- **Smart-Lab™ controller** with 7" full touch screen TFT LCD:
  - ◆ WiRe™ app service, remote control system
  - ◆ variable program settings
  - ◆ self-diagnostic function
  - ◆ automatic data recording
  - ◆ data transfer to PC by USB memory
  - ◆ Internet connectivity with WiFi

Model	SWUF-D300	SWUF-D400	SWUF-D500	SWUF-D700
Capacity	308 l	393 l	503 l	714 l
Temperature range & sensor	-95°C to -65°C			-90°C to -65°C
	at 30°C room temperature & 30% humidity, PT 100 sensor			
Compressor	Hermetic type			
Condenser type	block condenser, no pin, filter-free			
Max. rack quantity	12 pcs. of 15 (3x5) placed racks (RFU3040)	16 pcs. of 15 (3x5) placed racks (RFU3040)	16 pcs. of 20 (4x5) placed racks (RFU50)	24 pcs. of 20 (4x5) placed racks (RFU50)
Internal chamber dimensions (W x D x H)	470 x 500 x 1310 mm	600 x 500 x 1310 mm	600 x 640 x 1310 mm	880 x 620 x 1310 mm
External chamber dimensions(W x D x H), net weight	710 x 750 x 1900 mm, 220 kg	840 x 750 x 1900 mm, 260 kg	840 x 890 x 1900 mm, 300 kg	1120 x 870 x 1900 mm, 320 kg
Packing size (W x D x H), gross weight	110 x 110 x 222 cm, 300 kg	116 x 116 x 222 cm, 352 kg	116 x 124 x 222 cm, 352 kg	140 x 140 x 221 cm, 442 kg
Power supply	1 Phase AC 120V, 60 Hz or AC 230V, 50/60 Hz			
Power consumption dual mode	398 w/h	474 w/h	507 w/h	596 w/h
Power consumption eco mode	352 w/h	373 w/h	458 w/h	503 w/h
Order number 230V	DH.SWUF01300	DH.SWUF01400	DH.SWUF01500	DH.SWUF01700
Order number 120V	DH.SWUF02300	DH.SWUF02400	DH.SWUF02500	DH.SWUF02700

Accessories: Suitable racks and temperature recorder can be found on page 103