



VOSTOK FREEZERS

ULTRA-LOW TEMPERATURE FREEZERS FOR MEDICAL & LABORATORY COLD STORAGE

Minus80 Series

ATS' VOSTOK, Minus80 series of ultra-low temperature refrigeration systems are designed and manufactured specifically for the long term storage of medical and laboratory products. ATS' VOSTOK freezers are ideal for biological storage, including vaccines, viruses, germs, blood plasma, skin, bone marrow, sperm, and other biological, pelagic and special test products.

ATS' VOSTOK, Minus80 series includes a wide range of single self-cascade, dual-cascade and double-cooling refrigeration systems. With its optimized evaporator design and state-of-the-art compressor, all Vostok freezers comfortably cool to -86°C.

Features

- » Wide ambient temperature design cools to -86°C under ambient temperature from 10°C to 43°C
- » Wide voltage range, from 187V-242V
- » Removable condenser cover, convenient for maintenance & cleaning
- » Reserved installation hole for circular-chart recorder
- » Protective cover for on/off switch, external alarm port & USB port
- » Removable inner door
- » Adjustable SUS304 shelves
- » Professional double testing hole
- » Adjustable foma wheel, easy for installation, leveling & maneuvering
- » Optional Frozen rack
- » Foamed inner & outer door, forced inner door handle & 3 layers of silicon seals
- » Each component is equipped with noise reducing, high density fire-proof sound-absorbing cotton

Safety & Alarm Systems

- » Perfect alarm system with buzzer sound & lamp flashing alarm functions.
- » Alarms include: High/Low temperature, Power Failure, Abnormal Voltage, Sensor Error, Filter Screen Check, Thermostat Failure, Low Battery, Condenser Clean, High Ambient, Temperature & Door Ajar.
- » Multiple-protection functions including: password protection, frequent start-up protection & refrigerating system operation protection if sensor is faulted.

Refrigeration System

- » Ultra-thick foam layer, dual-sealing design of door, for effective temperature protection.
- » Optimized auto-cascade refrigerating system, state-of-the-art compressor, for excellent refrigerating performance.
- » Optimized evaporator design ensures the most effective flow of refrigerating fluid & temperature uniformity in the cabinet.
- » Unique fluoride-free mixed refrigerant fluid is 100% CFC-Free.
- » Single-compressor system, fewer part for lower failure rate & energy consumption.
- » EBM-Papst noiseless fan for stable performance & lower noise.



Temperature Control Function

- » Micro-computer control, digital temperature display, adjust unit is 0.1°C.
- » Adjustable temperature. Temperature difference of start-up & shutdown can be set.
- » High & low temperature alarm function, alarm temperature can be set as needed.

Humanized Design

- » Food-grade stainless steel liner never get rusty, safe for samples.
- » Heavy duty casters design makes it convenient to move.
- » Safety door design to prevent accidental opening.
- » LED temperature display, convenient & clear to observe.
- » Suitable for using at environmental temperature of 10~30°C
- » Optional digital temperature recorder makes it convenient to record & store performance data at special conditions, equipment with USB connector to copy data for analyzing.
- » Wide voltage range design, suitable for using when the voltage is 187V~242V.

Applications

- » Hospitals
- » Blood Banks
- » Epidemic Prevention/Response Services
- » Research Institutes
- » Biomedical & Chemical Industries
- » Marine Fishery Industries



Self-Cascade Cooling Systems with LED Controller

TEMP
-86°C

CAPACITY
50~936L

Handle

- » Handle for easy operation
- » Door lock for safety use



USB & Remote Alarm Port

- » USB port makes it easy to read & store temp recordings
- » Remote alarm port connects to remote alarm system



Heavy Duty Castors

- » Casters with breaks
- » Allows for easy moving & stopping



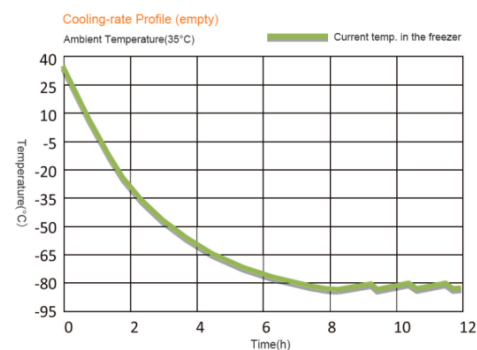
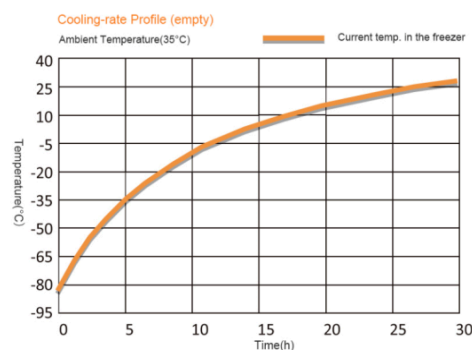
Microcomputer Control

- » Digital temperature display ensures precise & stable running.
- » USB port reads temp & alarm conditions for 3 recent months.
- » Able to change to touch screen display.



3 Types of Optional Cooling Systems

- » Cascade system with refrigerant R404a & R507a, most widely used system, easy to repair.
- » Cascade system with refrigerant R290 & R170 green refrigerant
- » One compressor with mixed refrigerant. Energy saving & better price.





Self-Cascade Cooling Systems

with LED Controller

PRODUCT SPECIFICATIONS

	PART NUMBER							
	ATSM80- E28L10	ATSM80- E58L13	ATSM80- E108L24	ATSM80- E158L28	ATSM80- E188L27	ATSM80- E208L34	ATSM80- E308L41	ATSM80- E340L57
Temperature Range (°C)	-40 ~ -86	-40 ~ -86	-40 ~ -86	-40 ~ -86	-40 ~ -86	-40 ~ -86	-40 ~ -86	-40 ~ -86
Capacity (L)	28	58	108	158	188	208	308	340
Outer Dimensions L*W*H (in)	18.5*19.9*44.1	21.3*24.4*43.9	28.3*28.9*49.6	28.3*27.6*62.2	27.6*27.6*62.2	34.4*28.9*58.3	33.9*29.1*71.3	33.5*39.4*75.2
Inner Dimensions L*W*H (in)	10.5*10.3*15.7	14.2*15.9*16.1	18.1*18.1*20.1	18.1*17.9*31.5	18.3*18.3*32.7	22.4*19.1*31.5	22.4*19.1*44.9	19.2*23.9*44.9
Temp Controller	Digital	Digital	Digital	Digital	Digital	Digital	Digital	Digital
Touch Screen	☉	☉	☉	☉	N/A	☉	☉	NA
Compressor	DANFOSS	DANFOSS	DANFOSS	DANFOSS	CUBIGEL	DANFOSS	DANFOSS	SECOP
Refrigerant	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed
Cooling Method	Direct	Direct	Direct	Direct	Direct	Direct	Direct	Direct
Condenser Fan	EBM	EBM	EBM	EBM	EBM	EBM	EBM	EBM
Exterior Material	Cold Rolled Steel	Cold Rolled Steel	Cold Rolled Steel	Cold Rolled Steel	Color Sprayed Steel	Cold Rolled Steel	Cold Rolled Steel	Color Sprayed Steel
Inner Material	SS304	SS304	SS304	SS304	SS304	SS304	SS304	SS304
Shelf/Drawer QTY	1	1	1	2	2	2	2	3
Small Door (pcs)	2	2	2	3	3	3	3	2
Foam Thickness (mm)	100	100	120	120	150	120	120	150
Door Handle	Built-In	Built-In	Built-In	Built-In	Separate	Built-In	Full Height	Separate
Door Lock	Guard Lock	Guard Lock	Guard Lock	Buckle Lock	Lock with key	Buckle Lock	Buckle Lock	Lock with key
Handle, Lock & Key	☉	☉	☉	☉	✓	☉	☉	✓
Balance Hole	N/A	N/A	☉	☉	1	☉	☉	1
Caster	☉	☉	☉	☉	✓	☉	☉	✓
Temperature Recorder	☉	☉	☉	☉	☉	☉	☉	☉
USB Interface	☉	☉	☉	☉	✓	☉	☉	✓
Power (W)	350	450	550	630	660	650	690	660
Weight (Kg)	64	73	113	130	174	138	149	222
Voltage (V/Hz)	220/50	20/50	220/50	220/50	220/50	220/50	220/50	220/50
Voltage (110V/60Hz)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Packing	Honeycomb Board	Honeycomb Board	Honeycomb Board	Honeycomb Board	Plywood	Honeycomb Board	Plywood	Plywood



Self-Cascade Cooling Systems (Cont'd)

with LED Controller

PRODUCT SPECIFICATIONS (CONT'D)

PART NUMBER								
	ATSM80-E408L56	ATSM80-E508L43	ATSM80-E580L73	ATSM80-E608L63	ATSM80-E708L75	ATSM80-E808L79	ATSM80-E838L83	ATSM80-E938L88
Temperature Range (°C)	-40 ~ -86	-40 ~ -86	-40 ~ -86	-40 ~ -86	-40 ~ -86	-40 ~ -86	-40 ~ -86	-40 ~ -86
Capacity (L)	408	508	580	608	708	808	838	938
Outer Dimensions L*W*H (in)	34.3*37*76.6	34.4*28.7*74.8	46.9*34.3*78.3	37.8*38.2*75.6	45.5*38.6*73.2	42.9*39.8*79.7	45.7*42.1*74.8	48.8*39.4*78.7
Inner Dimensions L*W*H (in)	21.7*24.8*44.9	22.4*28*44.3	23.9*29.1*51.6	27.6*26.8*49.4	33.5*28.1*46.1	33.5*28.9*52.6	35.2*28.3*51.6	39.4*27.6*52.6
Temp Controller	Digital	Digital	Digital	Digital	Digital	Digital	Digital	Digital
Touch Screen	☐	☐	N/A	☐	☐	☐	N/A	☐
Compressor	DANFOSS	DANFOSS	SECOP	DANFOSS	DANFOSS	DANFOSS	SECOP	DANFOSS
Refrigerant	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed	Mixed
Cooling Method	Direct	Direct	Direct	Direct	Direct	Direct	Direct	Direct
Condenser Fan	EBM	EBM	EBM	EBM	EBM	EBM	EBM	EBM
Exterior Material	Cold Rolled Steel	Cold Rolled Steel	Color Sprayed Steel	Cold Rolled Steel	Cold Rolled Steel	Cold Rolled Steel	Color Sprayed Steel	Cold Rolled Steel
Inner Material	SS304	SS304	SS304	SS304	SS304	SS304	SS304	SS304
Shelf/Drawer QTY	3	3	3	3	3	3	3	3
Small Door (pcs)	4	4	2	4	4	4	2	4
Foam Thickness (mm)	150	150	100	150	150	150	100	150
Door Handle	Full Height	Full Height	Separate	Full Height	Full Height	Full Height	Separate	Full Height
Door Lock	Buckle Lock	☐	Lock with key	☐	☐	☐	Lock with key	☐
Handle, Lock & Key	☐	Buckle Lock	✓	Buckle Lock	Buckle Lock	Buckle Lock	✓	Buckle Lock
Balance Hole	☐	☐	1	☐	☐	☐	1	☐
Caster	☐	☐	✓	☐	☐	☐	✓	☐
Temperature Recorder	☐	☐	☐	☐	☐	☐	☐	☐
USB Interface	☐	☐	✓	☐	☐	☐	✓	☐
Power (W)	750	1400	660	1600	1630	1650	660	1700
Weight (Kg)	230	225	290	280	290	300	344	320
Voltage (V/Hz)	220/50	220/50	220/50	220/50	220/50	220/50	220/50	220/50
Voltage (110V/60Hz)	☐	☐	☐	☐	☐	☐	☐	☐
Packing	Plywood	Plywood	Plywood	Plywood	Plywood	Plywood	Plywood	Plywood

Self-Cascade Cooling Systems

with LED Controller

AVAILABLE OPTIONS

ITEMS	PART NUMBER	WEIGHT (Kg)
LCD Touch Screen Controller	ATSM80-UP01	0.5
USB Interface	ATSM80-UP02	0.5
Large Color LCD Paperless Temperature Recorder with USB	ATSM80-UP03	0.5
Large Door Handle with Key Lock	ATSM80-UP04	1
External Hung Type Temperature Recorder	ATSM80-UP05	0.5
TR3000 Remote Temperature Recorder Data Logger	ATSM80-UP06	0.5
Stainless Steel Rack, 5*5	ATSM80-UP07	5.45
Stainless Steel Rack, 4*4	ATSM80-UP08	4.16
Stainless Steel Rack, 5*4	ATSM80-UP09	4.92
Stainless Steel Rack, 4*3	ATSM80-UP10	4.1
Stainless Steel Rack, 5*5	ATSM80-UP11	5.45
Stainless Steel Rack, 4*4	ATSM80-UP12	4.16
Stainless Steel Rack, 5*4	ATSM80-UP13	4.92
Stainless Steel Rack, 4*3	ATSM80-UP14	4.1
CO ₂ /LN Standby System	ATSM80-UP15	15

NOTE:

» CO₂/LN Standby System not available for ATSM80-E28L10, ATSM80-E58L13, ATSM80-E108L24, ATSM80-E158L28, ATSM80-E208L34, ATSM80-E308L41, ATSM80-E408L56, ATSM80-E508L43, ATSM80-E608L63, ATSM80-E708L75, ATSM80-E808L79 & ATSM80-E938L88.

OPTIONAL CO₂ STANDBY SYSTEM

The carbon dioxide (liquid nitrogen) backup system is an auxiliary refrigeration system that provides refrigeration for cooling equipment in the event of a power failure or cooling failure to ensure that the temperature inside the refrigeration equipment is maintained within the required range. When the refrigeration equipment is working, the carbon dioxide (liquid nitrogen) backup system is in the standby state; when the cooling equipment is powered off, the carbon dioxide (liquid nitrogen) backup system uses its own rechargeable battery to work and spray liquid CO₂ (N2) through the partition into the refrigeration equipment.

SPECIFICATIONS

- » Included controller, interface, does not included CO₂ bottle
- » Temperature: 3 hours reach up to -70°C
- » Consumption: 40L CO₂/2hours
- » Automatic start & stop when power off/on

**For further technical information, please contact
ATS, Inc. at 781-769-2800 or ats-hq@qats.com**



CO₂ STANDBY SYSTEM CONTROLLER