

Deep Freezers



Upright Type Deep Freezers

ARA M/MD Series

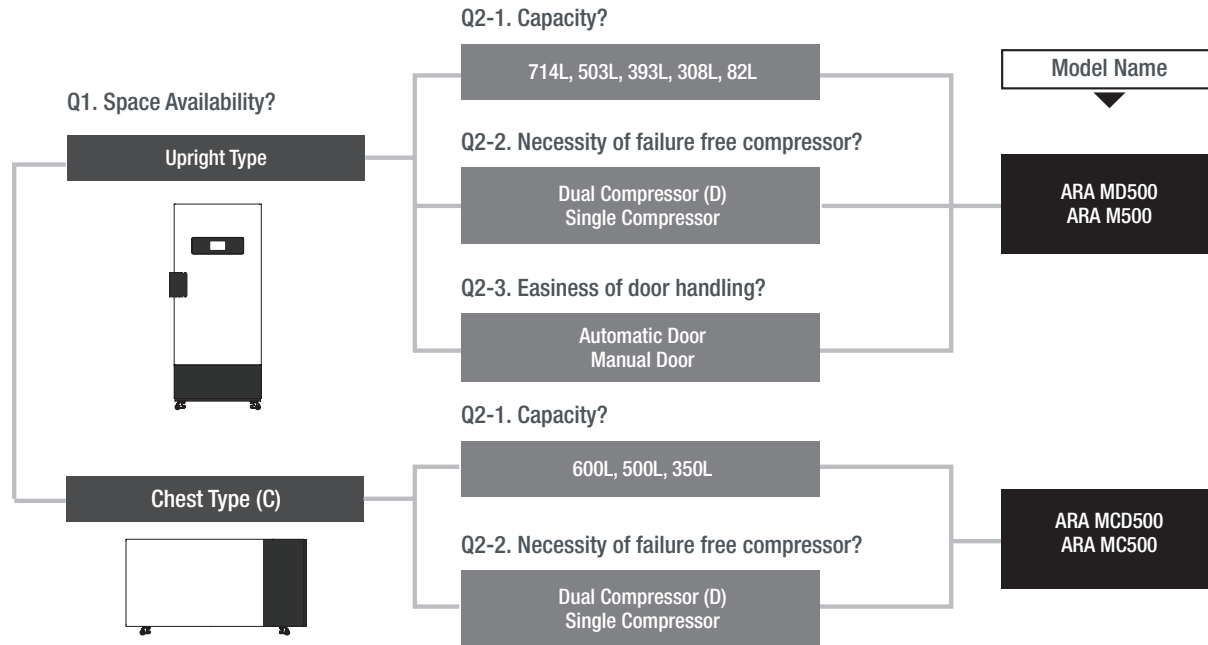


Chest Type Deep Freezers

ARA MC/MCD Series

How to Select the Right Deep Freezer

► Main Body



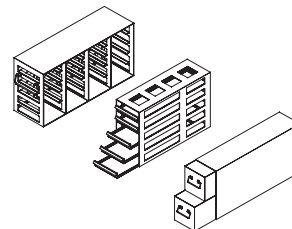
► Accessories

Q3-1. Sample type & size ;
micro-tube, bottles, or tissues

Storage boxes
Rack dimensions

Q3-2. Easiness of In & Out

Open rack
Tray drawer
Box drawer



Q3-3. Auxiliary & Back-up system

LCO₂ back-up
LN₂ back-up
Chart recorder
External alarm

ARA M Deep freezers advanced functionality with intuitive display and control panel

► Control Panel

The actual temperature of chamber is monitored through three sensors at on minute interval.

The “ALARM” events are recorded by time and can be downloaded through USB.

On the screen of “MODE”, the settings of temperature, ECO, alarm, etc can be made. And the history of door opening by user ID can be checked

The actual temperature inside the chamber is displayed in the center of the screen and the set values with high and low limit range in the right side.

The opened edge of the black panel and the inner hole behind support the automatic vacuum release during the door opening and closing actions.

The “Dual” compressor model displays which compressor is working and could be controlled with energy-saving “ECO” management.

This optional function of LCO₂ back can be used by manually or activated under the freezing system error condition.

The USB port for downloading temperature graph, maximum for 300 days and ALARM event history.

The color of “ALARM” turns to RED at the situations of abnormal temperature and compressor, door open status, improper voltage, battery shortage, power failure, etc.

The opening of the door is simply accomplished by one touch click of the “DOOR” button followed by ID and password input. The ID can be managed up to 100.

ARA M Deep Freezers scheme shortens the pull-down time of ultra-low temperature.

Model	ARA MD300	ARA MD500	ARA MD700
Time to -80 °C	120 min	180 min	210 min
Time to -90 °C	180 min	280 min	380 min
Time to -95 °C	220 min	330 min	-

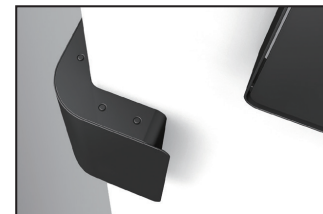
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► Features

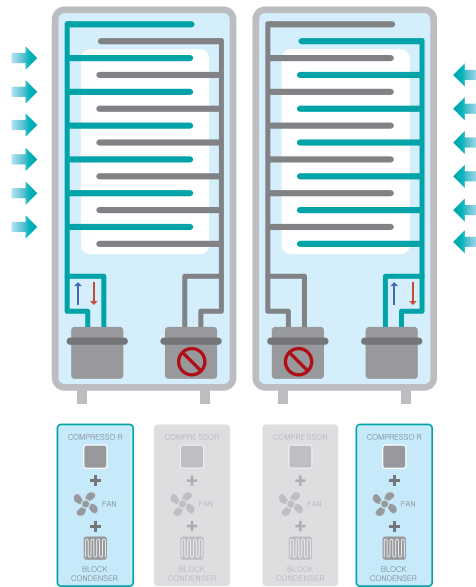
- Fast pull-down and recovery to optimal storage temperature
- Automatic door for safety lock and easy unlock (Manual type is optionally available.)
- Automatic vacuum release structure for fast lock and unlock
- Independent dual compressor system with no oil separator and expansion tank
- Unique SMART freezing system with pin-less block condenser
- Exclusive recipe, CFC-free refrigerant
- Three internal temperature sensors for failure free temp-monitoring
- Dual controller construction for failure-free operation
- Controllable ECO mode for energy saving operation (For dual compressor model)
- Informative 7" display and control screen with history tracking
- Easy data transportation through USB port
- Alarm function for abnormal temperature and compressor, door open status, improper voltage, battery shortage, power failure, etc.
- Optionally attachable external remote alarm system
- Optionally available chart recorder and LCO₂ back-up system



▶ Technical Specifications

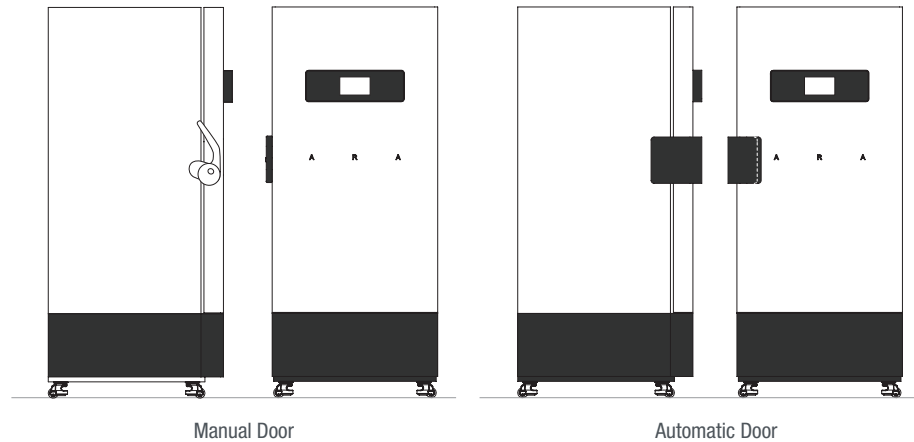
Model	Upright Type Deep Freezer
Capacity	82, 308, 393, 503, or 714 Lit.
Temperature range	-86°C / -80°C ~ -65°C or -95°C / -90°C ~ -65°C
Compressor	Hermetic Type, Single or Independent Dual Compressor (Eco mode of Dual type for economic operation)
Condenser Type	Block Condenser, No pin, Filter Free Mechanism
Refrigerant	Natural (CFC Free Refrigerant System)
Controller & Display	Failure free Dual Controller and 7" Touch Screen TFT LCD
Door	Door opening and closing by pressing a touch button on control screen (Manual Door is Optional)
Material	Internal Stainless Steel / External Powder Coated Steel Plate
Power supply	Single Phase, AC 230V, 50/60Hz (Optional AC 120V, 60Hz)

▶ Independent Dual Compressor System



SMART Freezing System
with Block Condenser

▶ Robust and Flexible Design of Door Handle



Manual Door

Automatic Door

ARA M/MD Series

Upright Type Deep Freezers

► Ordering Information

Cat. No.		ARA M80	ARA M300	ARA MD300	ARA M400	ARA MD400	ARA M500	ARA MD500	ARA M700	ARA MD700
Capacity		82 Lit.	308 Lit.		393 Lit.		503 Lit.		714 Lit.	
Temperature Range		-86°C ~ -65°C	-86°C ~ -65°C	-95°C ~ -65°C	-86°C ~ -65°C	-95°C ~ -65°C	-86°C ~ -65°C	-95°C ~ -65°C	-80°C ~ -65°C	-90°C ~ -65°C
Compressor		Single	Single	Dual, Independent	Single	Dual, Independent	Single	Dual, Independent	Single	Dual, Independent
Rack Capacity		4 pcs of 12 (3 x 4) Placed Rack	12 pcs of 15 (3 x 5) Placed Rack		16 pcs of 15 (3 x 5) Placed Rack		16 pcs of 20 (4 x 5) Placed Rack		24 pcs of 20 (4 x 5) Placed Rack	
Chamber Dimension (W x D x H, mm)	Internal	340 x 485 x 520	470 x 500 x 1,310		600 x 500 x 1,310		600 x 640 x 1,310		880 x 620 x 1,310	
	External	572 x 730 x 1,147	800 x 792 x 1,990		930 x 792 x 1,990		930 x 932 x 1,990		1,210 x 912 x 1,990	
Net Weight		102 kg	190 kg	220 kg	220 kg	260 kg	245 kg	284 kg	285 kg	327 kg
Power Requirement	Dual Mode	321 W/h	364 W/h	364 W/h	386 W/h	386 W/h	469 W/h	469 W/h	508 W/h	508 W/h
	Eco Mode			415 W/h		461 W/h		526 W/h		576 W/h
Cat. No.	Auto Door	-	AMUS300	AMUD300	AMUS400	AMUD400	AMUS500	AMUD500	AMUS700	AMUD700
	Manual Door	AMUS080-M	AMUS300-M	AMUD300-M	AMUS400-M	AMUD400-M	AMUS500-M	AMUD500-M	AMUS700-M	AMUD700-M



ARA MC/MCD Series

Chest Type Deep Freezers



► Features

- Much safer and energy-saving deep freezer for not losing cooled status by door opening
- All features are the same with upright type deep freezer except the automatic door
- Installed with easy to move and heavy duty casters (4~6 casters)

► Technical Specifications

Model	Chest Type Deep Freezer
Capacity	350, 500 or 600 Lit.
Temperature range	-86°C ~ -65°C or -95°C ~ -65°C
Compressor	Hermetic Type, Single or Independent Dual Compressor (Eco mode of Dual type for economic operation)
Condenser Type	Block Condenser, No pin, Filter Free Mechanism
Refrigerant	Natural (CFC Free Refrigerant System)
Controller & Display	Failure free Dual Controller and 7" Touch Screen TFT LCD
Door	Manual type
Material	Internal Stainless Steel / External Powder Coated Steel Plate
Power supply	Single Phase, AC 230V, 50/60Hz (Optional AC 120V, 60Hz)

ARA MC/MCD Series

Chest Type Deep Freezers

► Ordering Information

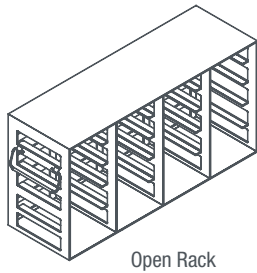
Cat. No.		ARA MC350	ARA MCD350	ARA MC500	ARA MCD500	ARA MC600	ARA MCD600
Capacity		350 Lit.		500 Lit.		600 Lit.	
Temperature Range		-86°C ~ -65°C	-95°C ~ -65°C	-86°C ~ -65°C	-95°C ~ -65°C	-86°C ~ -65°C	-95°C ~ -65°C
Compressor		Single	Dual, Independent	Single	Dual, Independent	Single	Dual, Independent
Rack Capacity		21 pcs of 11 (1 x 11)-placed Rack & 3 pcs of 7 (1 x 7)-placed Rack		30 pcs of 11 (1 x 11)-placed Rack & 3 pcs of 7 (1 x 7)-placed Rack		36 pcs of 11 (1 x 11)-placed Rack & 3 pcs of 7 (1 x 7)-placed Rack	
Chamber Dimension (W x D x H, mm)	Internal	1,050 x 470 x 670		1,500 x 470 x 670		800 x 470 x 670	
	External	1,690 x 776 x 1,150		2,140 x 776 x 1,150		2,440 x 776 x 1,150	
Net Weight		190 kg	230 kg	220 kg	270 kg	250 kg	310 kg
Power Requirement	Dual Mode	364 W/h	364 W/h	386 W/h	386 W/h	469 W/h	469 W/h
	Eco Mode		415 W/h		461 W/h		526 W/h
Cat. No.		AMCS350	AMCD350	AMCS500	AMCD500	AMCS600	AMCD600



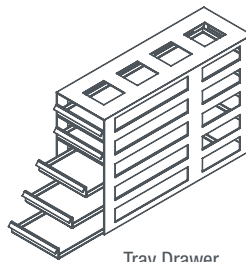
Rack System for Freezer

▶ Stainless Steel Rack for Upright Type Freezer

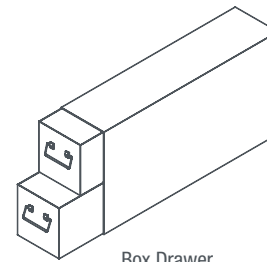
Rack Type	Open Rack	Tray Drawer	Box Drawer	Open Rack	Tray Drawer	Box Drawer	Open Rack	Tray Drawer	Box Drawer
Dimension (W x D x H, mm)	140 x 430 x 220		140 x 410 x 220	140 x 430 x 290		140 x 425 x 290	140 x 570 x 290		
Applicable Freezer	ARA M80			ARA M(D)300/400			ARA M(D)500/700		
Quantity of Available Boxes	12 ea (3 x 4)			15 ea (3 x 5)		12 ea (3 x 4)	20 ea (4 x 5)		16 ea (4 x 4)
Material	Stainless Steel								
Cat. No.	AMA-ORS	AMA-TDS	AMA-BDS	AMA-ORM	AMA-TDM	AMA-BDM	AMA-ORL	AMA-TDL	AMA-BDL



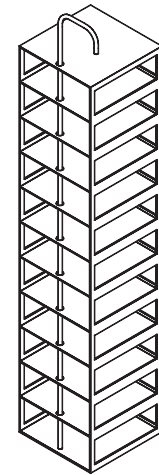
Open Rack



Tray Drawer



Box Drawer



Open Rack
for Chest Type

▶ Stainless Steel Rack for Chest Type Freezer

Rack Type	Open Rack	
Dimension (W x D x H, mm)	140 x 140 x 385	140 x 140 x 655
Applicable Freezer	ARA MC(D)350 / MC(D)500 / MC(D)600	
Quantity of Available Boxes	7 ea (1 x 7)	11 ea (1 x 11)
Material	Stainless Steel	
Cat. No.	AMA-SAS	AMA-SAM

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Freezer Box

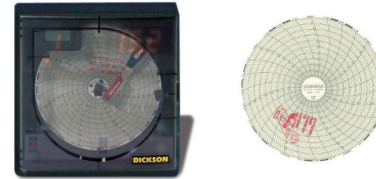
Cat. No.	Description
AMA-B001	Freezer box, Paper with dividers for 9 x 9 holes, 127 (W) x 127 (D) x 52 (H) mm
AMA-B002	Freezer box, PP with dividers for 9 x 9 holes, 127 (W) x 127 (D) x 52 (H) mm



Optional Common Accessories

Temperature Chart Recorder

- Continuously monitor and record freezer temperature
 - Easy to check the operation of the equipment
- 1 chart records 7days (included 60 charts)
- Recorder records temperatures from -100°C to 0°C
- Min/Max Temperature can be checked on digital display



Remote Alarm System

- Remote warnings for overtemperature (above -65°C)
- Alarm system is connected to the regulator and activates when the temperature rises
- Alarm is sent via phone or text
- Multiple phone numbers can be registered to receive alarm at the same time



LCO₂ Backup System (LCO₂ Gas Tank is optional)

- Protect samples of the freezer in case of power failure
- Liquid Carbon Dioxide(freezing point is -78°C) is injected into the chamber to keep the internal temperature below -65°C
- The operating time depends on the gas tank capacity.



► Ordering Information

Cat. No.	Description
AMA-TR622	Temperature Chart Recorder
AMA-CP657	Chart Paper, 60 Charts per one box for 420 days recording in AMA-TR622
AMA-P222	Chart Recorder Replacement Pens, 6ea Red color, for AMA-TR622
AMA-RAS	Remote Wire/Wireless Alarm System
AMA-LCO	LCO ₂ Backup System