

ARA

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M Series

Deep Freezers

P Series

CO₂ Incubators

D Series

Shaker / Vortexer / Stirrer

ARA Handy®

Pipettor / Pipette Aid

Consumables

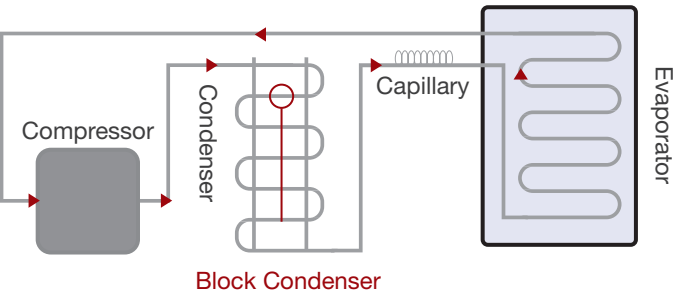
Anti Microbial Drop / Conical Tubes

Deep Freezers

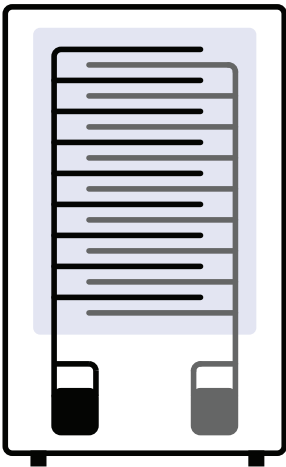
- Fast pull-down and recovery to optimal storage temperature (500 L dual /95 °C, 700 L Dual / -90 °C)
- Unique pin-less block condenser and independent compressor (single or dual selectable) structures
- Failure free dual brain PCB and dual independent compressor systems
- Effortless auto-door with safe lock and unlock function (optional manual door is available)
- Controllable ECO mode of dual compressor model for energy saving operation
- Informative 7" display and touch screen control
- Data tracking and storage to chart recorder or through USB transfer
- Alarm warning by text message transfer to maximum 5 users (optional)
- LCO2 or LN₂ back up system is available (optional)



Unique Block Condenser and Dual Independent Compressor System



The innovative block condenser structure with a mixed refrigerant single compressor achieves below -80°C ultra-low temperature refrigeration within 4 hours. The dual compressor functions as a back-up or achieves -95°C (500 L) and -90°C (700 L) ultra-low temperature refrigeration when fully operated.



Fast Pull-Down Time of ARA M Series

	ARA MD300	ARA MD500	ARA MD700	ARA MD870
Time to -80°C	135 min	150 min	180 min	200 min
Time to -90°C	154 min	170 min	211 min	253 min
Time to -95°C	220 min	330 min	-	-

Technical Specifications

Compressor	Hermetic Type, Single or Independent Dual Compressor (Eco mode of Dual type for economic operation)				
Condenser type	Block Condenser, No pinm Filter Free Mechanism				
Regrigerant	Natural (CFC Free Refrigerant System)				
Controller & Display	Failure free Dual Controller and 7" Touch Screen TFT LCD				
Material	Internal Stainless Steel / External Powder Coated Steel Plate				
Power supply	Single Phase, AC 230V, 50/60Hz (Optional AC 120V, 60Hz)				

		ARA M80	ARA M300	ARA MD300	ARA M400	ARA MD400
Capacity		85 Lit.	317 Lit.			404 Lit.
Temperature range		-86°C ~ -65°C	-86°C ~ -65°C	-95°C ~ -65°C	-86°C ~ -65°C	-95°C ~ -65°C
Compressor		Single	Single	Dual, Independent	Single	Dual, Independent
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	
	External	572 x 730 x 1,147	800 x 792 x 1,990		930 x 792 x 1,990	
Net weight		102 kg	190 kg	220 kg	220 kg	260 kg
Power requirement	Eco. mode			364 W/h		386 W/h
	Dual mode	321 W/h	364 W/h	415 W/h	386 W/h	461 W/h
Cat. No.	Auto door	-	AMUS300	AMUD300	AMUS400	AMUD400
	Manual door	AMUS080-M	AMUS300-M	AMUD300-M	AMUS400-M	AMUD400-M

		ARA M500	ARA MD500	ARA M700	ARA MD700	ARA M870	ARA MD870
Capacity		514 Lit.		732 Lit.		876 Lit.	
Temperature range		-86°C ~ -65°C	-95°C ~ -65°C	-80°C ~ -65°C	-90°C ~ -65°C	-80°C ~ -60°C	-90°C ~ -60°C
Compressor		Single	Dual, Independent	Single	Dual, Independent	Single	Dual, Independent
Dimension (W x D x H, mm)	Internal	600 x 640 x 1,310		880 x 620 x 1,310		880 x 760 x 1,310	
	External	930 x 932 x 1,990		1,210 x 912 x 1,990		1,210 x 1,137 x 1,990	
Net weight		245 kg	284 kg	285 kg	327 kg	335 kg	385 kg
Power requirement	Eco. mode		469 W/h	508 W/h	508 W/h	547 W/h	547 W/h
	Dual mode	469 W/h	526 W/h	508 W/h	576 W/h	547 W/h	613 W/h
Cat. No.	Auto door	AMUS500	AMUD500	AMUS700	AMUD700	AMUS870	AMUD870
	Manual door	AMUS500-M	AMUD500-M	AMUS700-M	AMUD700-M	AMUS870-M	AMUD870-M

Selection Guide

1) Freezer capacity

85L

317L

404L

514L

732L

876L

2) Door type

Automatic Door

Manual Door

3) Number of compressor

Single (MXXX)
-86°C~-65°C

Dual (MDXXX)
-95°C~-65°C

4) Rack System

Open Rack
AMA-ORS/M/L

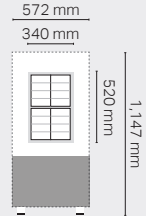
Tray Drawer
AMA-TDS/M/L

Box Drawer
AMA-BDS/M/L

M80

Depth (internal / external): 485 / 730 mm
Capacity
2x2 Racks (12 boxes / rack)
Total 48 freezer boxes

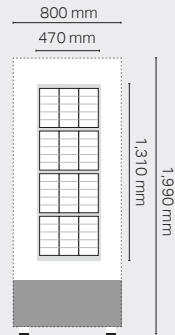
85L



M300 MD300

Depth (internal / external): 500 / 792 mm
Capacity
3x4 Racks (15 boxes / rack)
Total 180 freezer boxes

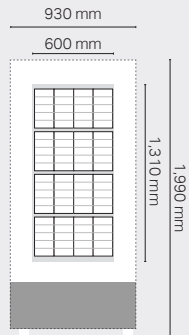
317L



M400 MD400

Depth (internal / external): 500 / 792 mm
Capacity
4x4 Racks (15 boxes / rack)
Total 240 freezer boxes

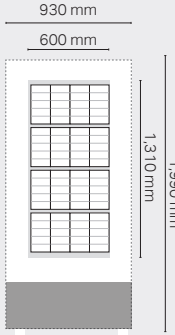
404L



M500 MD500

Depth (internal / external): 640 / 932 mm
Capacity
4x4 Racks (20 boxes / rack)
Total 320 freezer boxes

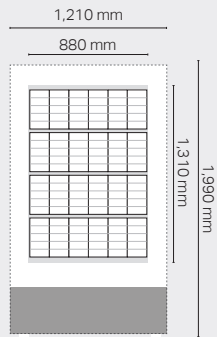
514L



M700 MD700

Depth (internal / external): 620 / 912 mm
Capacity
6x4 Racks (20 boxes / rack)
Total 480 freezer boxes

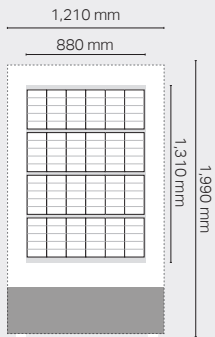
732L



M870 MD870

Depth (internal / external): 760 / 1,137 mm
Capacity
6x4 Racks (25 boxes / rack)
Total 600 freezer boxes

876L



Freezer Box for M seires

- Coated paper box with dividers for 9 x 9 holes
- 127W x 127D x 52H mm



CO₂ Incubators

- Internal max. capacity 150 L/170 L
- Fan-less direct heating with unique insulation technology
- Accurate CO₂ control with dual beam NDIR CO₂ sensor
- No vibration, no maintenance of HEPA filter, no spread-out of contamination by no fan structure
- Maximized inner space by no fan structure
- Intuitive 7" control touch screen and informative display
- USB port for data tracking



P150



P170

Technical Specifications

	CO ₂ Incubator P150	CO ₂ Incubator P170
Inner capacity	150 L	170 L
Door left/right	Factory Installed	On site
Fan	None	None
Decontamination	-	120°C Dry
Temperature (Microprocessor PID Control system)		
- Range	Amb. +5 ~ 50°C	
- Accuracy	±0.2°C	
- Uniformity	±0.3°C	
- Recovery time	less than 10 min.	
CO2 Control		
- Range	0 - 20%	
- Accuracy	±0.1%	
- Recovery time	less than 7 min.	
rH system	Water pan control / Range: over 90%	
Display	7" LCD touch screen	
Date tracking	240 hours continuous	
External dimension (mm)	657W x 741D x 877H	720W x 639D x 908H
Internal dimension (mm)	470W x 520D x 610H	547W x 479D x 647H
Net weight	62 kg	91 kg
Power requirement	1.1 kW	
Cat. No.	APR 150 (Right open) APL 150 (Left open)	AP 170

Laboratory Shakers



3D Motion Shaker, D-SD

- D-SD is optimized for multi-color dyeing and cleansing such as gel dyeing and blotting.
- Smooth 3D movement to provide more effective result than conventional shakers.



Tilting Shaker, D-ST

- D-ST contains a 27 x 18 cm platform to hold 4 microwell plates.
- The up-down movement is optimized for antigen-antibody interaction, cleansing, gel dyeing, and decolorization.



Reciprocal Shaker, D-SR
Orbital Shaker, D-SO

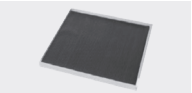
- Very quite and smooth operation
- Stable shaking even at 10 rpm
- Diverse flask holders available



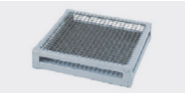
SR2/SO2



Flask Holder Plate



Flat-form Plate



Spring Rack

Technical Specifications

			Reciprocal / Orbital Shaker		
	3D Motion Shaker	Tilting Shaker	D-SR1, D-SO1	D-SR2, D-SO2	D-SR3, D-SO3
Speed	0~140 rpm	0~60 rpm	0~250 rpm (AD-SR) / 0~350 rpm (AD-SO)		
Shaking angle	0~15°	±11°	-		
Display	Digital LED		Digital LED		
Max. load	3.0 kg	2.0 kg	100 mL x 16	100 mL x 36	100 mL x 60
			250/500 mL x 9	250 mL x 25	250 mL x 40
			500 mL x 16	500 mL x 24	
			1,000 mL x 4	1,000 mL x 9	1,000 mL x 15
			2,000 mL x 2	2,000 mL x 4	2,000 mL x 8
Time control	99H : 59M, continuous		999.9H		
Platform area, mm	295W x 295D	270W x 176D	350W x 320D	450W x 450D	760W x 470D
Dimensions, mm	360W x 360D x 257H	300W x 250D x 154H	360W x 360D x 110H	470W x 490D x 115H	745W x 490D x 115H
Net weight	8.2 kg	5.8 kg	20 kg	28 kg	40 kg
Power requirement	30 W		40 W		
Cat. No.	D-SD	D-ST	D-SR1 (reciprocal) D-SO1 (orbital)	D-SR2 (reciprocal) D-SO2 (orbital)	D-SR3 (reciprocal) D-SO3 (orbital)

Roller Mixer

ARA Roller Mixer, D-R8 / D-RT6

- An essential lab equipment to provide a uniform mixing with rotating rotors
- Accurate mixing is possible by adjusting RPM depending on the sample's viscosity



Rolling
D-R8



Rolling and Tilting
D-RT6

Technical Specifications

	Rolling Mixer	Rolling and Tilting Mixer
Number of tube rollers	8 rollers	6 rollers
Maximum capacity	14 x 50 mL Tubes	10 x 50 mL Tubes
Speed	Variable, 3 to 80 rpm	
Speed accuracy	±5	
Speed steps	1 rpm	
Rolling angle & Tilting angle	Rolling : ±3°	Rolling : ±3°, Tilting : ±5°
Time control	Timed < 100 hour or Continuous	
Dimensions	334W x 420D x 103.5H, mm	300W x 326.5D x 135H, mm
Net weight	6.1 kg	7.5 kg
Power requirement	10 W	11 W
Cat. No.	D-R8	D-RT6

Vortex Mixer

ARA Vortex Mixer, D-VM1 / D-VM2

- Applications for smooth mixing to cell pellet resuspending
- Diverse vortex heads available from single tube to microplate



D-VM1



D-VM21

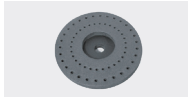
Head Accessories of D-VM2



Platform



Microplate Kit



Multi sample plate Kit

Technical Specifications

	Vortex Mixer mini	Vortex Mixer
Max. speed	4,500 rpm	3,000 rpm
Operation mode	Touch on	Touch on or Continuous
Head	Max. Φ30 mm tube	Mixing cup, multi-cup, microplate, etc.
Dimensions	100W x 100D x 67H, mm	130W x 155D x 155H, mm
Net weight	550 g	3 kg
Power requirement	20 W	
Cat. No.	D-VM1	D-VM2

Magnetic Stirrer

- Homogenous mixing of samples
- Compact design with minimized control knob and display



Technical Specifications

Magnetic Stirrer	
Max. speed	0 ~ 2,500 rpm
Max. stirring capacity	3,000 mL
Protection class acc. to DIN EN 60529	IP 54
Dimension of working area	Φ 130 mm
Dimensions	150W x 185D x 51H, mm
Net weight	440 g
Power requirement	9 W
Cat. No.	D-MS2

Heating Magnetic Stirrer

Single

- Homogeneous mixing of samples with smooth and strong mixing function
- Maximum drive up to 550°C / 1,500 rpm
- Excellent resistance to chemicals and fast thermal conductivity with glass ceramic plate
- The lamp lights up to protect the user, when the plate temp. is over 50°C



Technical Specifications

Heating Magnetic Sitrer	
Speed range	100 ~ 1,500 rpm
Temperature range	RT ~ 550°C
Work plate dimension	184 x 184 mm (7 inch)
Stirring position	1
Max. stirring capacity (H ₂ O)	20 L
Dimensions (W x D x H)	215 x 360 x 112 mm
Net weight	5.3 kg
IP Protection class	IP21
Power requirement	1,050 W
Cat. No.	D-HMS550

Heating Magnetic Stirrer

4-Position

- 4 plates can be controlled independently
- Suitable model for heating and mixing of multiple samples
- LCD display of actual temperature and speed
- Excellent chemical resistance with ceramic coated stainless steel plate
- Precise and stable temperature control up to 340°C with PID controller
- Excellent speed control with powerful brushless DC motor



Technical Specifications

Heating Magnetic Stirrer Multi 4-Position	
Speed range	200-1,500 rpm
Temperature range	25 ~ 340°C
Work plate dimension	Φ 135 mm (5 inch)
Stirring positions	4
Max. stirring capacity (H ₂ O)	3 L x 4 (10 L for single plate)
Dimensions (W x D x H)	698 × 270 × 128 mm
Net weight	9.5 kg
IP Protection class	IP21
Power requirement	515 W x 4
Cat. No.	D-HMS340-M4

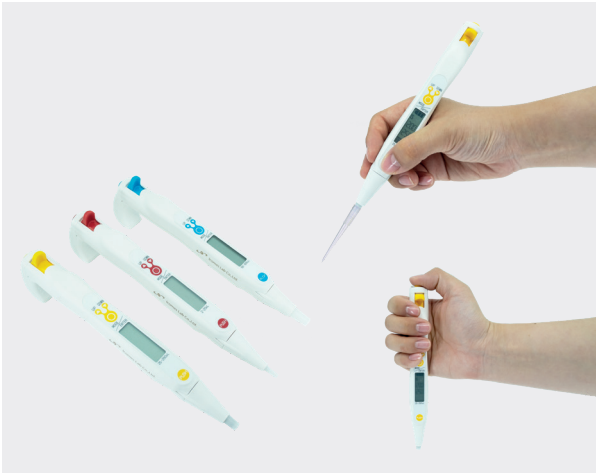
Accessories for Heating Magnetic Stirrer (D-HMS550 / D-HMS340-M4)

Optional accessories to use various types of glassware



ARA Handy® Pipetty

- Ultra-compact, ultra-lightweight (approx. 75 g) single electronic pipette
- Can be gripped as conventional or pen-type
- Improved dispensing errors due to hand warming with an internal temperature sensor
- Operates with one battery (AAA size)
- General pipette tips can be used to reduce the cost of consumables



Technical Specifications

	Pipetty 20 uL	Pipetty 250 uL	Pipetty 1,000 uL
Dispensing capacity	0.1 - 20 uL	1 - 250 uL	5 - 1,000 uL
Accuracy warrant range	2 - 20 uL	25 - 250 uL	100 - 1,000 uL
Dimension (W x D x H)	25 x 54 x 185 mm	25 x 54 x 181 mm	25 x 54 x 181 mm
Net weight	about 75 g (battery included)		
Power	AAA nickel-hydride battery and charger included		
Continuous times	1,000 times over		
Cat. No.	APT-MSIC01-02-20	APT-MSIC01-02-250	APT-MSIC01-02-1000

ARA Handy® Pipette Aid

- Compatible with most plastic and glass pipettes from 0.1 - 100 mL
- 8 steps of speed control
- Lightweight and ergonomic design
- Less hand fatigue even after long hours of work
- Can be used for more than 8 hours after being charged by large-capacity Li battery
- Can be used while charging



Technical Specifications

	Pipette Aid
Aspiration speed	25 mL < 5s (8 shift)
Dispensing speed	Motor (8 shift) / Gravity
Battery	Lithium-ion (3.7 V, 1,100 mA)
Battery service life	More than 8 Hours of Intermittence Use
Charging time	2-3 hours
Pipette types	Glass or Plastic Pipette (0.1 - 100 mL), Pasteur Pipettes
Filter	0.45 µm Hydrophobic
Net weight	200 g
Power supply / consumption	Input AC 100 - 240 V / Output voltage 4.2 V, 500 mA
Cat. No.	APD-AID

ARA Anti Microbial Drop

for microbial decontamination

- Reduces the risks of contamination and infection with bacteria, viruses and other microorganisms
- Even when the water decreases, it works effectively due to its thin designing
- Since silver ions are not scattered in the air, it keeps water clean without affecting cultured cells
- Tested for Staphylococcus aureus, E.coli and virus (sterilization effect within 8 hours)

Specifications of ARA Drop

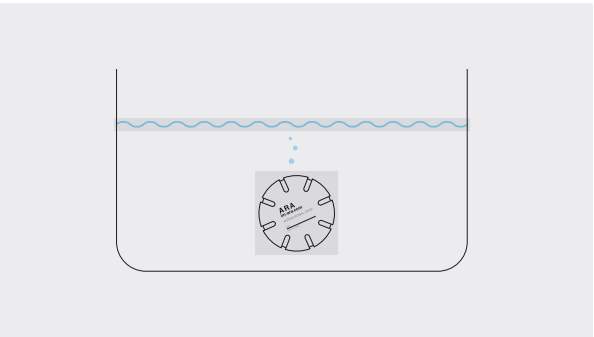


Cat. No. AG-04

Φ60 x 18T, mm

4 ea/box

Recommended to use
6 months (1 ea)



ARA Conical Tubes

for storage and centrifugation

- Non-pyrogenic / Non-cytotoxic
- DNase/RNase-free, Human DNA-free
- Tight sealing screw cap
- External gradual labeling with marking area
- Packed in zipper bags (15 mL-50ea/bag, 50 mL-25ea/bag)
- Cap: High-density Polyethylene
- Body: Polypropylene



Specifications of ARA Conical Tube



Cat. No. ARA-0015C

15 mL

Max. 13,000 xg
17D x 120H, mm
50/bag, 500/box



Cat. No. ARA-0050C

50 mL

Max. 14,000 xg
30D x 115H, mm
25/bag, 500/box

ARA

hanil

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