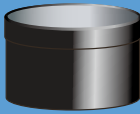
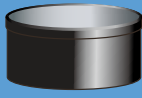
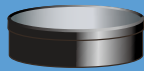




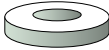



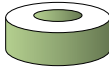
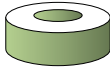

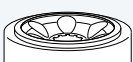
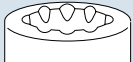
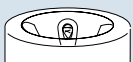


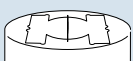



Rotors & Accessories Selection Guide

Rack-in-Rotors for MDX-310 / 210 / 110


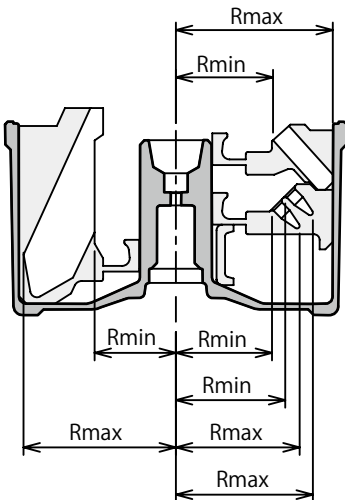


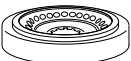




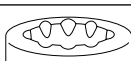
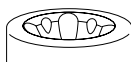



▼ Rack	▼ Rack-in-Rotor		
	 CA-300 Click Here	 CA-200 Click Here	 CA-100 Click Here
8-Strip PCR tube × 8 15,000rpm / 18,120G AR002-64 310 210 110 			
0,5ml × 24 15,000rpm / 19,880G AR005-24 310 210 110 	 3 racks	 2 racks	 1 rack
2ml × 24 15,000rpm / 20,380G AR015-24 310 210 110 			
2ml × 24 *1 15,000rpm / 20,380G AR015-SC24 310 210 			
5ml × 12 *2 15,000rpm / 20,130G AR050-12 310 210 	 1 racks	 1 rack	—
14ml × 8 15,000rpm / 20,380G AR141-08 310 210 			
30ml × 6 15,000rpm / 20,380G AR300-06 310 210 			
15ml conical tube × 4 15,000rpm / 20,380G AR150-08 310 			
50 or 14ml × 4 *3 15,000rpm / 20,130G AR501-04 310 			
50 or 15ml conical tube × 4 *3 15,000rpm / 20,380G AR510-04 310 	 1 rack	—	—
96 well PCR plate × 2 Adapter (Set of 2) 14,000rpm (Optional adapter A96-01PC is required.) PCR96-02 310  			

*1 Rack for spin column tube. *2 Recommend Tube : TOMY 5ml tube, PT0050-11. *3 Do not load different type of tubes at the same time.

110 Can be used for MDX-110. 210 Can be used for MDX-210. 310 Can be used for MDX-310.

CA-300

Applicable model	MDX-310
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Rack-in-Rotor	Rack capacity/Rack	Max. speed [rpm]	Max. RCF [G]	Radius[mm]		Remarks	
				Rmax	Rmin		
<p>CA-300</p>  	2ml×24 AR015-24 	15,000	20,380	81	51	*1	
	PCR 8-well tube strip×4 (Outer line) PCR 8-well tube strip×4 (inner line) AR002-64 	15,000	18,120 (outer line)	72	59		
	16,350 (inner line)		65	52			
	0.5ml×24 AR005-24 	15,000	19,880	79	55	*2	
	2ml Spin column tube×24 AR015-SC24 	15,000	20,380	81	51		
	5ml conical tube×12 AR050-12 	15,000	20,130	80	43		
	14ml×8 AR141-08 	15,000	20,380	81	43		
	30ml×6 AR300-06 	15,000	20,380	81	43		
	15 ml conical tube×8 AR150-08 	15,000	20,380	81	43		
	50ml×4 14ml×4 AR501-04 	15,000	20,130	80	43		*2
	50 ml conical tube×4 15 ml conical tube×4 AR510-04 	15,000	20,380	81	43		*3
	96 well PCR plate×2 PCR96-02 	14,000	10,740 (Center of plate)	49	30	*2	
	(Adapter : A96-01PC) 		15,340 (Edge of plate)	70	58	*4	





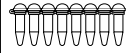








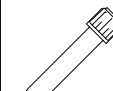
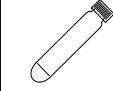


*1 These racks can be stacked in two or three piles.

*2 Do not stack these racks. Only one rack should be used in the rotor.

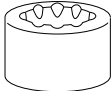

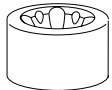




*3 3×50ml tube and 4×15(14) ml tube should not be accommodated together in the rack for the operation.

*4 When spinning the PCR plate, set the temperature at 4°C or lower. Centrifuging the plate at a high temperature may cause damage to the plate.





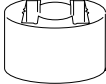

Applicable Tube to CA-300 ①

Rack	Tube						Actual capacity [ml]	Max. Number × Places	Max. Allowable speed [rpm]	Max.RCF [G] (Radius[mm])	Remarks
	Nominal capacity [ml]	Mfr abbr.	Model Name(Material)	Bottom Shape	Tube Dimension (φ × L [mm])	Max. Allowable RCF[G]					
 AR015-24	 2		2ml (PP)	C	φ 11×42	—	2	24	15,000	20,380 (81)	
	 1.5		1.5ml (PP)	C	φ 11×41	—	1.5	24	15,000	20,380 (81)	
 AR002-64	 0.2		0.2ml 8 well PCR tube strip (PP)	C	—	—	0.2	outer line 8 well tube stripx4	15,000	18,120 (72)	
									inner line 8 well tube stripx4	15,000	16,350 (65)
 AR005-24	 0.5		0.5ml (PP)	C	φ 7.9×31	—	0.5	24	15,000	19,880 (79)	
 AR015-SC24	—		Spin column tube	—	φ 11×46	—	—	24	15,000	20,380 (81)	
	 2		2ml (PP)	C	φ 11×42	—	2	24	15,000	20,380 (81)	
	 1.5		1.5ml (PP)	C	φ 11×41	—	1.5	24	15,000	20,380 (81)	
 AR050-12	 5	TOM	PT0050-11 (PP)	C	φ 15×59	20,130	3.5	12	15,000	20,130 (80)	
 AR141-08	 14	FLC	352006 (PP)	R	φ 17×100	3,000	9.8	8	5,700	2,940 (81)	
			352001 (PS)	R	φ 17×100	1,400	9.8	8	3,900	1,380 (81)	
	 10	NAL	3119-0010 (PPCO)	R	φ 16×81.4	50,000	7	8	15,000	20,380 (81)	
			3118-001 0(PC)	R	φ 16.1×81.7	50,000	7	8	15,000	20,380 (81)	
 AR300-06	 30	NAL	3119-0030 (PPCO)	R	φ 25.5×94.3	50,000	21	6	15,000	20,380 (81)	

Applicable Tube to CA-300 ②

Rack	Tube						Actual capacity [ml]	Max. Number × Places	Max. Allowable speed [rpm]	Max.RCF [G] (Radius[mm])	Remarks
	Nominal capacity [ml]	Mfr abbr.	Model Name(Material)	Bottom Shape	Tube Dimension ($\phi \times L$ [mm])	Max. Allowable RCF[G]					
AR150-08 	 15	COR	430766 (PP)	C	$\phi 16 \times 120$	12,000	10.5	8	11,500	11,980 (81)	
		COR	430791 (PP)	C	$\phi 16 \times 120$	12,000	10.5	8	11,500	11,980 (81)	
		FLC	352196 (PP)	C	$\phi 17 \times 120$	6,000	10.5	8	8,100	5,940 (81)	
		COR	430053 (PET)	C	$\phi 16 \times 120$	3,600	10.5	8	6,300	3,600 (81)	
		FLC	352095 (PS)	C	$\phi 17 \times 120$	1,800	10.5	8	4,400	1,750 (81)	
AR501-04 	 50	NAL	3118-0050 (PC)	R	$\phi 28.8 \times 107$	50,000	35	4	15,000	20,130 (80)	
			3119-0050 (PPCO)	R	$\phi 28.8 \times 106.7$	50,000	35	4	15,000	20,130 (80)	
	 14	FLC	352006 (PP)	R	$\phi 17 \times 100$	3,000	9.8	4	5,700	2,910 (80)	
			352001 (PS)	R	$\phi 17 \times 100$	1,400	9.8	4	3,900	1,360 (80)	
	 13	AST	No.60.541 (PP)	R	$\phi 16.5 \times 105$	4,000	9.1	4	7,400	4,900 (80)	
	 10	NAL	3118-0010 (PC)	R	$\phi 16.1 \times 81.7$	50,000	7	4	15,000	20,130 (80)	
			3119-0010 (PPCO)	R	$\phi 16.0 \times 81.4$	50,000	7	4	15,000	20,130 (80)	

Applicable Tube to CA-300 ③

Rack	Tube						Actual capacity [ml]	Max. Number × Places	Max. Allowable speed [rpm]	Max.RCF [G] (Radius[mm])	Remarks
	Nominal capacity [ml]	Mfr abbr.	Model Name(Material)	Bottom Shape	Tube Dimension (φ × L [mm])	Max. Allowable RCF[G]					
 AR510-04	 50	COR	430291 (PP)	C	φ 29 × 116	15,500	35	4	15,000	20,380 (81)	*1 *2
			430304 (PET)	C	φ 29 × 116	3,600	35	4	6,300	3,600 (81)	*1 *2
			430829 (PP)	C	φ 29 × 116	15,500	35	4	15,000	20,380 (81)	*1 *2
		FLC	352098 (PP)	C	φ 30 × 115	9,400	35	4	15,000	20,380 (81)	*1 *2
			352070 (PP)	C	φ 30 × 115	9,400	35	4	15,000	20,380 (81)	*1 *2
			352077 (PP)	C	φ 30 × 115	9,400	35	4	15,000	20,380 (81)	*1 *3
		IWA	2343-050 (PP)	C	φ 29 × 117	9,400	35	4	15,000	20,380 (81)	*1 *3
		NUC	339652 (PP)	C	φ 30 × 115	17,000	35	4	15,000	20,380 (81)	*1 *4
			362696 (PP)	C	φ 26.6 × 113.7	9,500	35	4	15,000	20,380 (81)	*1 *2
		SUM	MS-56500 (PP)	C	φ 30 × 115	9,400	35	4	15,000	20,380 (81)	*1 *2
		INA	3182-345 (PP)	C	φ 29 × 115	15,000	35	4	15,000	20,380 (81)	*1 *2
			3181-345 (PP)	C	φ 29 × 115	15,000	35	4	15,000	20,380 (81)	*1 *2
	 35	NAL	3148-0050 (PPCO)	C	φ 28.6 × 113.8	50,000	24.5	4	15,000	20,380 (81)	*1 *2
			3146-0050 (PC)	C	φ 28.8 × 114.1	50,000	24.5	4	15,000	20,380 (81)	
	 15	COR	430766 (PP)	C	φ 16 × 120	12,000	10.5	4	15,000	20,380 (81)	*1 *3
			430791 (PP)	C	φ 16 × 120	12,000	10.5	4	15,000	20,380 (81)	*1 *3
		FLC	352196 (PP)	C	φ 17 × 120	6,000	10.5	4	15,000	20,380 (81)	*1 *4
		COR	430053 (PET)	C	φ 16 × 120	3,600	10.5	4	6,300	3,600 (81)	
		FLC	352095 (PS)	C	φ 17 × 120	1,800	10.5	4	4,400	1,750 (81)	
		NUC	339650 (PP)	C	φ 17 × 120	10,500	10.5	4	10,700	10,370 (81)	
INA		3132-345 (PP)	C	φ 17 × 118	15,000	10.5	4	15,000	20,380 (81)	*1 *2	
		3131-345 (PP)	C	φ 17 × 118	15,000	10.5	4	15,000	20,380 (81)	*1 *2	
  (Adapter : A96-01PC)	2x 96PCR plate	ABI	N801-0560 (PP)	C	φ 126 × 85	—	—	Plate center	14,000	10,740 (49)	
								Plate side	14,000	15,340 (70)	

*1 Tube strength may be degraded under some use conditions, such as solvent, set temperature, manufacturer outside recommendation and operation frequency, which can cause damage to the tube. Perform a trial run under actual operating conditions before use and verify that tubes are in good condition with no cracks or damage.

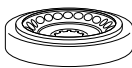

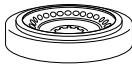


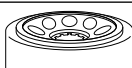
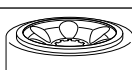
*2 When centrifuging at 15,000rpm, set temperature should not exceed 20°C.

*3 When centrifuging at 15,000rpm, set temperature should not exceed 10°C.

*4 When centrifuging at 15,000rpm, set temperature should not exceed 15°C.

CA-200





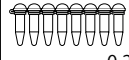












Applicable model	MDX-210
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Rack-in-Rotor	Rack capacity/Rack	Max. speed [rpm]	Max. RCF [G]	Radius[mm]		Remarks
				Rmax	Rmin	
<p>CA-200</p>	2ml×24 AR015-24 	15,000	20,380	81	51	* 1
	PCR 8-well tube strip×4 (Outer line) PCR 8-well tube strip×4 (inner line) AR002-64 	15,000	18,120 (outer line)	72	59	
	16,350 (inner line)		65	52		
	0.5ml×24 AR005-24 	15,000	19,880	79	55	* 2
	2ml Spin column tube×24 AR015-SC24 	15,000	20,380	81	51	
	5ml conical tube×12 AR050-12 	15,000	20,130	80	43	
	14ml×8 AR141-08 	15,000	20,380	81	43	
30ml×6 AR300-06 	15,000	20,380	81	43		

* 1 Stack up to 2 racks.

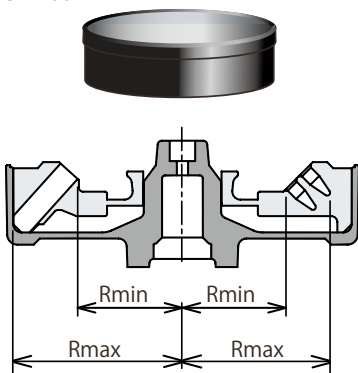
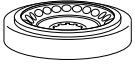

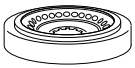
* 2 Do not stack these racks. Only one rack should be used in the rotor.

Applicable Tube to CA-200

Rack	Tube						Actual capacity [ml]	Max. Number × Places	Max. Allowable speed [rpm]	Max.RCF [G] (Radius[mm])	Remarks
	Nominal capacity [ml]	Mfr abbr.	Model Name(Material)	Bottom Shape	Tube Dimension (φ × L [mm])	Max. Allowable RCF[G]					
 AR015-24	 2		2ml (PP)	C	φ 11×42	—	2	24	15,000	20,380 (81)	
	 1.5		1.5ml (PP)	C	φ 11×41	—	1.5	24	15,000	20,380 (81)	
 AR002-64	 0.2		0.2ml 8 well PCR tube strip (PP)	C	—	—	0.2	outer line 8 well tube strip×4	15,000	18,120 (72)	
									inner line 8 well tube strip×4	15,000	16,350 (65)
 AR005-24	 0.5		0.5ml (PP)	C	φ 7.9×31	—	0.5	24	15,000	19,880 (79)	
 AR015-SC24	—		Spin column tube	—	φ 11×46	—	—	24	15,000	20,380 (81)	
	 2		2ml (PP)	C	φ 11×42	—	2	24	15,000	20,380 (81)	
	 1.5		1.5ml (PP)	C	φ 11×41	—	1.5	24	15,000	20,380 (81)	
 AR050-12	 5	TOM	PT0050-11 (PP)	C	φ 15×59	20,130	3.5	12	15,000	20,130 (80)	
 AR141-08	 14	FLC	352006 (PP)	R	φ 17×100	3,000	9.8	8	5,700	2,940 (81)	
			352001 (PS)	R	φ 17×100	1,400	9.8	8	3,900	1,380 (81)	
	 10	NAL	3119-0010 (PPCO)	R	φ 16×81.4	50,000	7	8	15,000	20,380 (81)	
			3118-001 0(PC)	R	φ 16.1×81.7	50,000	7	8	15,000	20,380 (81)	
 AR300-06	 30	NAL	3119-0030 (PPCO)	R	φ 25.5×94.3	50,000	21	6	15,000	20,380 (81)	





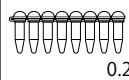


CA-100

Applicable model	MDX-110
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Rack-in-Rotor	Rack capacity/Rack	Max. speed [rpm]	Max. RCF [G]	Radius[mm]	
				Rmax	Rmin
CA-100 	2ml × 24 AR015-24 	15,000	20,380	81	51
	PCR 8-well tube strip × 4 (Outer line) PCR 8-well tube strip × 4 (inner line) AR002-64 	15,000	18,120 (outer line)	72	59
	16,350 (inner line)		65	52	
0.5ml × 24 AR005-24 	15,000	19,880	79	55	

* Do not stack these racks. Only one rack should be used in the rotor.

Applicable Tube to CA-100

Rack	Tube					Actual capacity [ml]	Max. Number × Places	Max. Allowable speed [rpm]	Max. RCF [G] (Radius[mm])	Remarks
	Nominal capacity [ml]	Model Name(Material)	Bottom Shape	Tube Dimension (φ × L [mm])	Max. Allowable RCF[G]					
AR015-24 	 2 2ml (PP)	C	φ 11 × 42	—	2	24	15,000	20,380 (81)		
	 1.5 1.5ml (PP)	C	φ 11 × 41	—	1.5	24	15,000	20,380 (81)		
AR002-64 	 0.2 0.2ml 8 well PCR tube strip (PP)	C	—	—	0.2	outer line 8 well tube strip × 4	15,000	18,120 (72)		
						inner line 8 well tube strip × 4	15,000	16,350 (65)		
AR005-24 	 0.5 0.5ml (PP)	C	φ 7.9 × 31	—	0.5	24	15,000	19,880 (79)		

Symbols in the Table

Manufacturer Abbreviation

BDC : Becton, Dickinson and Company.
BEC : BECKMAN COULTER ,INC.
COR : CORNING INTERNATIONAL CORP.
EIK : EIKEN CHEMICAL CO., LTD.
EPP : EPPENDORF AG
FLC : Falcon/CORNING INTERNATIONAL CORP.
HER : Herolab GmbH Laborgeraete
HIT : Eppendorf Himaс Technologies CO., LTD.
IED : IEDA TRADING CORPORATION
INA : Ina-optika corporation.
IWA : Iwaki/AGC TECHNO GLASS CO., LTD.
NAL : NALGENE/ Thermo Fisher Scientific K.K.
NEG : NICHIDEN-RIKA GLASS CO., LTD.
NIP : NIPRO CORPORATION
NUC : NUNC / Thermo Fisher Scientific K.K.
SEK : SEKISUI MEDICAL CO., LTD.
SIO : SHIONOGI & CO., LTD.
SUM : SUMITOMO BAKELITE COMPANY LIMITED
TER : TERUMO CORPORATION
TOM : TOMY SEIKO CO., LTD.
TRE : TOHO KK.
WAT : WATSON CO., LTD.

Materials

FEP : Teflon FEP	G : Glass	HDPE : High-density Polyethylene
PA : Polyallomer	PC : Polycarbonate	PET : Polyethylene Terephthalate
PP : Polypropylene	PS : Polystyrene	PPCO : Polypropylene Copolymer
PSF : Polysulfone	SS : Stainless Steel	

Bottom shape

C : Conical F : Flat R : Round

* The specifications of the tube listed in the applicable tube table indicate the nominal value of the manufacturer.

* If the specifications of the tube have been changed by the manufacturer, it may not be able to fulfill all the conditions stated in the tables. For the latest specifications of the tube, please ask the manufacturer.