himac
EPPENDORF GROUP

eppendorf
welcomes Himac as a new member of the Eppendorf Group

CP-NX SERIES

Ultracentrifuge

Ultracentrifuge

himac EPPENDORF GROUP

CP-NX SERIES

CP100NX / CP90NX / CP80NX

Truly User-friendly Design

LED Indicator – Operation status is at a glance !

LED Indicator of 47cm length is mounted in front of table. This indicates its operating status by selectable light in colors, luminous patterns, and levels of brightness. So operating status is at a glance with this LED Indicator. These are :

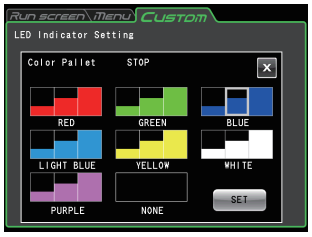
Status of operating:
Stop, acceleration, running at set speed, deceleration, vacuum holding, economy mode, acceleration in zonal mode, deceleration in zonal mode, or alert.

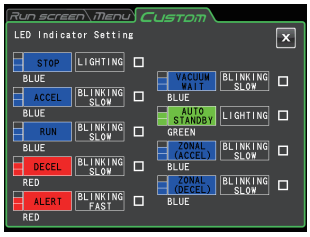
Color:
Blue, red, green, light blue, yellow, white or pink

Brightness:
Three levels

Luminous pattern:
Solid lighting, slow and fast blinking, or fading

* Actual color of LED Indicator may be different from the photos on this information, brochure and website due to printing conditions.





Touch-sensitive LCD panel with intelligible screen design

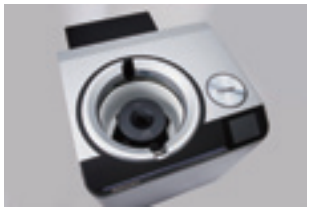
The control panel, 6.5-inch size touch-sensitive color LCD panel, is located in a front part of the machine. You do not need to stretch your arm to operate the centrifuge.
The intelligible screen designs, such as a wide indication of basic parameters, many icons for selecting function, folder colors with each symbol for program management, offer user-friendly operation, like operating a smart phone, to all users.

Multilingual Display

You can select a language from 11 languages, English, German, French, Spanish, Italian, Portuguese, Nederlands, Russian, Chinese (simplified), Korean and Japanese.

Low table height with smooth sliding door for easy loading / unloading the rotor

The table height of the CP-NX is 863mm. The low table height enables users to load / unload the rotor easier. The rotor is automatically locked by the centrifugal force once the rotation is started by the “self-locking rotor system”. So it is not necessary to fix the rotor by screwing the rotor onto the drive shaft or push the button to lock/unlock the rotor any more. In addition, the improved door structure design based on the latest structure analysis technology makes the door thickness 5mm thinner than the one of our former model. The lighter door offers the same protection as the before and makes door-sliding movement (back and forth) smoother than before.



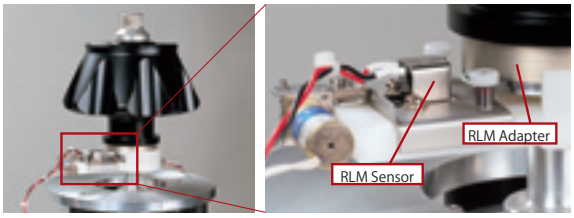
Advanced Technologies, Features & Functions

Automatic Rotor Life Management System

Automatic Rotor Life Management System, RLM automatically manages an operating record of a rotor to accumulate totals of run times and operating hours by each rotor.

RLM rotor has a magnetic memory on its rotor itself as RLM Adapter. This system is original only for himac; the memory is read out and over-written by RLM sensor with a himac ultracentrifuge.

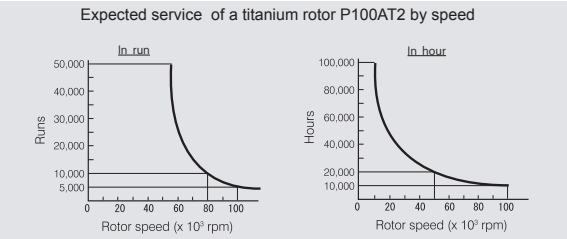
himac ultracentrifuge reads out a record of run times and operating hours of rotor from its memory during acceleration to accumulate the both times and hours by RLM adapter and sensor. While the rotor decelerates, the totals of the run times and hours are accumulated and updated by centrifuge, the latest accumulated record are overwritten into memory on RLM adapter of the rotor.



Though a RLM rotor installed on and run by himac's another centrifuge with RLM system, an operating record of a RLM rotor is kept as the rotor's latest of the accumulated running run times and hours. Because the accumulated record is always updated and overwritten into memory of RLM rotor.

Longer service of Rotor

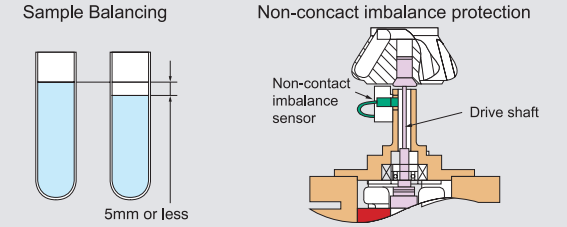
Automatic Rotor Life Management System tracks a rotor running precisely in times and hours. It is more accurate than management manualy by the rotor log book and its conventional calculation.
When a rotor runs lower speed than the maxiumum, and furthermore, its running time is less than an hour, this RLM system evaluates its accumurated record to be less than actual runnning in time and hour, corresponding its smaller load on the rotor. Consquently, the rotor's expected service is much longer in time and hour by this system, compared with management by log book.



If a rotor speed is lowered from 100,000 rpm to 80,000 rpm by 20% less, its expected services are increased from 5,000 runs to 10,000 runs as a double.
If a rotor speed is lowered from 100,000 rpm to 50,000 rpm as a half, its expected service hours are increased from 10,000 hours to 20,000 hours as a double.

Balancing by non-contact imbalance sensor

Easy to balance all the sample by balancing them within 5 mm among the all tubes and bottles to be set in a rotor.
Non-contact imbalance sensor always monitors of both the rotor and shaft vibrating. When the both vibrate unusually, the centrifuge automatically stops the rotor.
Remark: This feature does not applied with rotor P21A2.



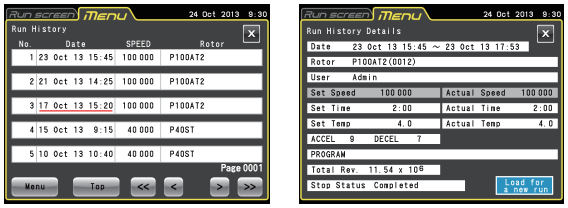
Economy mode* for energy saving

Stand-by electricity consumption reduced to a half **, compared with our former model, by deeming LCD backlight, stopping cool system and its fans when the control panel untouched over the set period in 1 to 180 minutes.

* This economy mode works while drive unit and vacuum pump are stopped.
** Under in-house test condition

Operating History : 5,120 logs

5,120 run histories recorded automatically and reuseable in user program. A run history exportable through USB interface in CSV format.



Programmed Operation : 1,000 programs

1,000 use-programable operations with file folders in 4 selective color.

User Administration with User Lockout

50 users can be classified into 3 levels in access: Administrator, Supervisor, and User, secured by passwords to enter log-in system for each access level and its functions.

Quiet and Fast

Quiet operation

Operating noise level 51 dB(A) under running at maximum speed.
As of Jan. 2014, under in-house test condition

Quick start-up

6 seconds and ready to operate system after power-on.

Faster vacuum

Evacuation time 15 minutes to reach high vacuum.
The CP-NX series has reduced 5 minutes to reach the high vacuum, compared with our former model.

As of Jan. 2014, by our investigation
No condensation in a rotor chamber before starting vacuum

Intelligible Screen Design

RUN Screen

Program Button
To set, select and manage programs for programmed operation

RCF Button
To display and set RCF

ω^2T Button
To set ω^2T operation

RTC Button
To set timer (RTC : Real-Time Control) operation

Vacuum Button
To start and stop vacuum, also shows vacuum level

Start Button
To start operation

Stop Button
To stop operation

MENU Screen

Run History
Automatically record operation log up to 5,120 runs for past runs.

Rotor Catalog
To browse available rotors, their specifications and accessories

Zonal Setting
To switch between normal and zonal operation

Defrost Function
To defrost rotor chamber

Customize
To enter Customizing Screen

Manager (Admin)
To enter Administration Screen

ID/Contact
To key-in instrument's ID and service contact information

CUSTOM Screen

Zoom
To enlarge Speed and Time indication on RUN screen during the running

Stop Signal
To select sound of stop signal

Volume
To adjust sound volume of the stop signal

Backlight
To adjust backlight of LCD panel

Language
To select display language from 11 languages (English, German, French, Spanish, Italian, Portuguese, Nederlands, Russian, Chinese, Korean and Japanese)

Schedule
To record usage schedule up to 40 schedules

Date/Time
To set date and time

LED Indicator
To set LED Indicator for each operating status (colors, luminous patterns, brightness)

Economy Mode
To set economy mode for energy saving

ADMIN Screen

User Management
To register, manage and delete users

User Lockout
To limit access of users

Rotor Management
To manage total number of run and run time of registered rotors

Run Time Indication
To change run time indication between Elapsed Time or Remaining Time

Actual Run Timer
To set actual run timer (excluding acceleration time from run time)

Vacuum Level
To set vacuum level of acceleration from vacuum stand-by to set speed

Zonal Speed
To set zonal speed between 2,000 to 3,000rpm with 100rpm increments

LAN Communications
To connect or disconnect LAN communications

Data Communication and Log Management Software

USB (device) x 1, USB (host) x 1 and LAN x 1 are equipped as an interface for the data communication. Operating histories, up to 5,120 logs, can be exported in CSV format through USB (host) port.

himac LogManager ver. 5.0 for windows® (network edition) – optional log management software

himac LogManager ver.5.0 for Windows® (network edition) is a useful and convenient software to manage real-time operating log of himac CP-NX series, CP-WX series, CS150NX, CS150FNX, CR30NX, CR22N and CR7N. Maximum 16 units of the above-mentioned centrifuges can be registered to the software and monitored by the software at the same time. The software is installed into the PC and data communication between the centrifuges and the PC is done via LAN or Ethernet. You can easily establish the network configuration and relocation with commercially available LAN devices. (optional LAN board is required for himac CP-WX series, CS150NX, CS150FNX, CR22N and CR7N.) It means you can manage the operation log at the different location from the installation site of the centrifuges.

The software is real-time log management software; recording interval period is selectable from 10 seconds to 5 minutes. Of course, the software supports U.S. FDA 21 CFR Part 11, following functions are available;

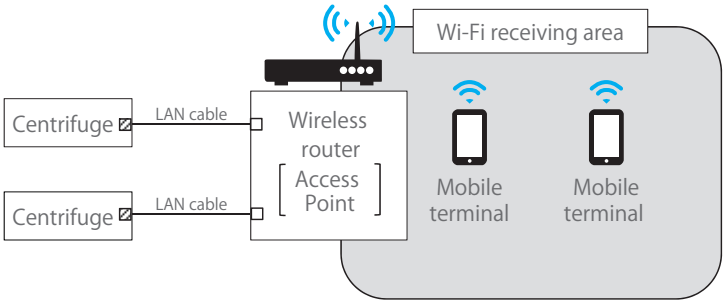
Digital Signature
Audit Trail
Encrypted Data Files

Required Operating System :
Windows®8 and Windows®10

Windows®, Windows®8 and Windows®10 are registered trademarks of Microsoft Corporation in the United States and other countries.
Ethernet is a registered trademark of Xerox Corporation in the Unites States and other countries.

Remote monitoring System himac View

Remote monitoring application “himac View” is available for CP-NX series, **CS150NX, CS150FNX** and CR30NX.
"himac View" monitors, operates or stops a centrifuge with iPhone™ or Android ™ Phone via Wi-Fi®.
Download “himac View” from Apple™ store or Google play™.
“himac View” monitors up to 16 units of CP-NX **series, CS150NX, CS150FNX** or CR30NX in the LAN access network.




Alert screen


Running screen


Acceleration screen

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Google, Android, and Google Play are trademarks of Google Inc.
Wi-Fi® is a registered trademark of Wi-Fi Alliance.
Windows® is a registered trademark of Microsoft Corporation in the United States and/or other countries.

Simulation Software “himac ASSIST”
– centrifugation simulation software

himac ASSIST is simulation and calculation software of centrifugal condition and can be installed in your Window®-based PC. CD-ROM of the himac ASSIST is included in the standard accessories. You can simulate whether the centrifugal condition is appropriate before the centrifugation, also can simulate optimal centrifugal condition of a sample, based on your CP-NX series ultracentrifuge and rotor.

himac ASSIST has following functions;

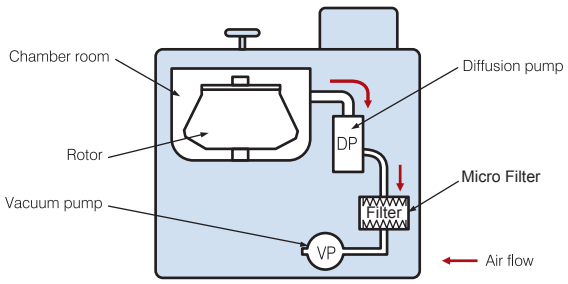
Calculations of K-factor and pelleting time
Calculation of the allowable rpm with high-density liquid
Rate zonal centrifugation simulation
Isopycnic centrifugation simulation
Solvent concentration conversion
Mutual conversion of molecular parameters
Rotor database

Example : Simulation of isopycnic separation

Plasmid DNA separation
with P100VT vertical rotor
CsCl+EtBr : initial density = 1.55g/ml
Speed : 100,000rpm

Biosafety Option

The biosafety is always priority in laboratories. In order to prevent from exhausting bio-hazardous sample into a room, a Micro filter can be assembled in a vacuum line at option. For details, please contact us.



New Rotor

Swing Bucket Rotors

Top loading of Titanium rotor

Bucket
made of Titanium

Top Loading

Max Speed 32,000 rpm

Application :
- Separation of virus particle
- Preparation of exosome analysis
- Density gradient centrifugation of intermediate volume samples

P32ST

P32ST2

Specifications

Model	P32ST	P32ST2
Max. Speed	32,000 rpm	32,000 rpm
Max. RCF	180,000 xg	193,000 xg
K-factor at max speed	198	216
Nominal Capacity	40 mL x 6 tubes	16 mL x 6 tubes
Loading	Top loading	Top loading
Rotor Weight	7.1 kg	7.2 kg
Accessory included	100 tubes of 40PA Tube 6 pairs of titanium buckets and caps	100 tubes of 16PA Tube 6 pairs of titanium buckets and caps
Material No.	**5720214003**	**5720214004**
Applicable centrifuges	CP-NX, CP-WX and CP-MX series*	CP-NX, CP-WX and CP-MX series*

Fixed Angled Rotor

P21A2

Application for large volume centrifugation
Nominal capacity 230 mL x 6 bottles

Specifications

Model	P21A2
Max. Speed	21,000 rpm
Max. RCF	71,000 xg
K-factor at max speed	486
Nominal Capacity	230 mL x 6 tubes
Angle of tube cavity	26 degree
Rotor Weight	11.4 kg
Accessory included	6 pairs of 230PA Bottle and Cap
Material No.	**5720211205**
Applicable centrifuges	CP-NX, CP-WX and CP-MX series*

Note: Visual balancing of sample surface difference is within 2mm between the all tubes for rotor P21A2.

Exclusive 230PA Bottle for P21A2

Thick walled for high centrifugal force
- Made of PPCO, Polypropylene Copolymer for high resistance against cemilcals
- Inner cap made of POM, Polyacetal

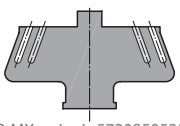
Description	Quantity	**Material** No.	Remarks
230PA Bottle	10 bottles	**5720411169**	Excluding cap.
AL Cap (2)	2 caps	**5720411170**	Exclusive cap for rotor P21A2 and 230PA Bottle. Including O-ring.
O-Ring	10 rings	**5720411174**	As a spare of AL Cap (2)

Remarks :
* To use these new rotors with himac former ultracentrifuges, CP-WX or CP-MX series, ROM in CP-WX or CP-MX series may be exchanged based on its manufacureing number. Please inform us model name and the number of your ultracentrifuge to check if the ROM should be exchanged or not before placing the rotor.

Rotor List

Type	Model	Material No. (w/RLM Adapter)	Max. Speed (rpm)	Max. RCF (xg)	Nominal Capacity (ml x tubes)	K-factor	Main Purpose
Fixed Angle Rotor	P100AT2*	5720211101	100,000	803,000	6.5 x 8	18	Separation of microscopic particles and lipoprotein
	P90AT*	5720211102	90,000	700,000	12 x 8	25	Separation of cell organelles, Plasmid DNA and RNA Rapid separation of intermediate volume sample
	P80AT*	5720211103	80,000	615,000	12 x 8	27	
	P70AT2*	5720211104	70,000	452,000	12 x 12	36	
	P70AT*	5720211105	70,000	505,000	40 x 8	44	Rapid separation of intermediate-to-large volume sample
	P65A*†	5720211201	65,000	370,000	12 x 10	48	Separation of cell organelles, Plasmid DNA and RNA
	P50AT4 †	5720211202	50,000	316,000**	6.5 x 44	32**	Separation of lipoprotein
	P50AT2*	5720211107	50,000	303,000	40 x 12	70	Rapid separation of intermediate-to-large volume sample
	P50A3	5720211108	50,000	252,000	1.5 x 24	33	Rapid pelleting micro volume samples
	P45AT*	5720211109	45,000	235,000	94 x 6	130	Rapid separation of large volume samples
	P42AT †	5720211203	42,000	223,000	0.23 x 72	12	Rapid separation of lipoprotein for examination
	P32AT*†	5720211204	32,000	111,000	12 x 32	186	Simultaneous processing of many specimens
	P27A †	5720211206	27,000	106,000	160 x 6	352	Separation of large volume samples
	P21A2	5720211205	21,000	71,000	230 x 6	486	
Neo Angle Rotor	P90NT*†	5720212201	90,000	646,000	5 x 8	10	Rapid separation of Plasmid DNA and RNA
	P65NT*†	5720212202	65,000	402,000	12 x 10	23	
	P65NT2*†	5720212203	65,000	431,000	5 x 18	15	Processing of many tubes of Plasmid DNA
Vertical Rotor	P100VT*	5720213001	100,000	700,000	5 x 8	6	Rapid separation of Plasmid DNA
	P65VT2*†	5720213101	65,000	416,000	5 x 16	10	Separation of plasmid DNA by the sedimentation equilibrium centrifugation
	P65VT3*†	5720213102	65,000	402,000	12 x 10	13	
	P50VT2*†	5720213103	50,000	243,000	40 x 8	36	Density gradient centrifugation of large volume samples
Swinging Bucket Rotor	P65ST †	5720214101	65,000	419,000	5 x 3	48	Density gradient centrifugation of Protein, DNA and RNA
	P56ST †	5720214102	56,000	409,000	4 x 6	54	Density gradient centrifugation of micro volume samples
	P55ST2	5720214001	55,000	366,000	5 x 6	50	
	P40ST	5720214002	40,000	284,000	13 x 6	139	Density gradient centrifugation of intermediate volume samples
	P32ST	5720214003	32,000	180,000	40 x 6	198	Density gradient centrifugation of large volume samples
	P32ST2	5720214004	32,000	193,000	16 x 6	216	Density gradient centrifugation of medium volume samples
	P28S	5720214005	28,000	141,000	40 x 6	252	Density gradient centrifugation of intermediate volume samples
Zonal Rotor	P32ZT	5720215101	32,000	102,000	1,690ml	363	Large-scale purification of protein and virus particles by density gradient centrifugation
Continuous Flow Rotor	P32CT †	*** 5720216101	32,000	102,000	430ml	42	Continuous concentration of large virus particles

Remarks
1) * Tubes, caps and adapters are excluded in the standard accessories. Please order them separately.
2) † The rotor is made-to-order item.
3) ** : Rotor P50AT4 has cavities located in outer and inner. See its cross-area. K factors are 32 for outer and 38 for inner.
4) Carbon fiber rotors cannot be used with CP-NX series.
5) *** : To use P32CT with CP-NX or other former models, optional accessory assy is mandatory required (sold separately).
Material number of the optional accessory assy for CP-NX series is **5720410108**, material number of the optional accessory assy for CP-WX and CP-MX series is **5720850525**.
6) Rotors with model names including the letter T are made of titanium alloy. The other rotors with names excluding the letter T are made of aluminum alloy.
All buckets for swinging bucket rotors are made of titanium alloy.
7) To use zonal rotor model P32ZT, seal attachment assy model RPZ-S (Material No. 5720410109) is required. (order separately)
8) When using a seal tube in the above rotors, tube sealer and respective tube rack are required. (order separately)
9) Capacities of tube and bottle show their nominal. Actual capacity may not be the same to its nominal, depending on rotor structure, tube shape.



Rotor Accessories

Tube Sealer model STF3

The STF3 is heat-welding tube sealer to use the seal tubes with fixed angle rotors, vertical rotors and neo angle rotors.

Features

◇ Easy & Simple Usage
1. Set seal tubes in the appropriate tube rack then set the tube rack on the rack guide of the STF3.
2. Adjust position of the tube rack in order the tube inlet comes under a heater of the STF3.
3. Pull the handle down to contact the heater the tube inlet and hold the handle for 1 to 2 seconds. Then pull the handle down to the end and wait until the HEAT Lamp goes off. (It takes about 40 seconds.)

◇ HEAT Lamp indicates the status of the heater.
◇ Tube racks are compatible with our former model STF2.

Specifications

Model	STF3
Seal Method	Direct welding by the molding heater
Dimensions (mm)	132 (W) x 225 (D) x 260 (H) <when raising the handle : 320 (H)>
Weight (kg)	8.0
Power	110-120V version : 99 - 132 VAC, 2A, 50/60Hz 200-240V version : 180 - 264 VAC, 2A, 50/60Hz
Material Number	5720310010 for 110-120V version 5720310020 for 200-240V version

Tube Rack (sold separately)

Material Number	Description	Tube Size
5720410000	Tube Rack (G2)	1.5PA seal tube
5720410001	Tube Rack (G)	2PA seal tube
5720410002	Tube Rack (B2)	3.5PA seal tube
5720410003	Tube Rack (B3)	4PA seal tube
5720410004	Tube Rack (B)	5PA seal tube
5720410005	Tube Rack (B4)	6.5PA seal tube
5720410006	Tube Rack (C2)	8PA seal tube
5720410007	Tube Rack (C)	12PA seal tube
5720410008	Tube Rack (E)	40PA seal tube
5720410009	Tube Rack (F2)	94PA seal tube
5720410010	Multi Rack*	

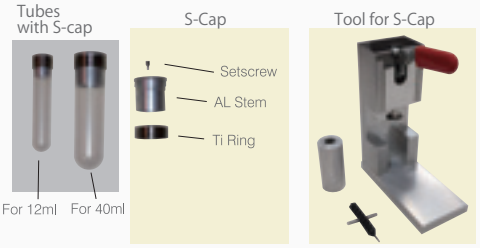
* For 2, 4, 5, 6.5, 12 and 40PA seal tubes.
* Tubes sold separately as optional.

S-Cap Series

himac original S-cap series offer simple and easy operation of the tube cap for open-top (thin-walled) tubes. The unique system requires just three components and three steps to assemble the cap to the tube.

* No consumables, such as O-ring
* Easy cleaning

Three assembling steps
1. Fill sample into the tube up to 80% volume and insert aluminum, AL Stem into the tube by the tool.
2. Assemble titanium, Ti Ring on the tube and tighten AL Stem and Ti Ring by the tool.
3. Fill the sample into the tube by an injector and close stem by Setscrew.



Disassemble procedure after the centrifugation.
1. Remove Setscrew and withdraw 20% supernatant from the center hole of AL Stem by the injector.
2. Remove Ti Ring to downwards manually.
3. Connect tube setter into the center hole of AL Stem and remove the AL Stem by moving the tube setter left and right slowly and gradually pulling up AL Stem.

Material Number	Descriptions	S-Cap	Tool for S-Cap	Applicable Tubes
5720410101	S-12AL Cap Assy	1 pair	No	12PA tube and 12PE tube
5720410102	S-40AL Cap Assy	1 pair	No	40PA tube and 40PE tube
5720410103	Tool for S-Cap	No	1 set	
5720410104	S-12AL Cap Tool Set	8 pairs	1 set	12PA tube and 12PE tube
5720410105	S-12AL Cap Tool Set	12 pairs	1 set	12PA tube and 12PE tube
5720410106	S-40AL Cap Tool Set	8 pairs	1 set	40PA tube and 40PE tube
5720410107	S-40AL Cap Tool Set	12 pairs	1 set	40PA tube and 40PE tube

* S-cap consitis of Setscrew, Al stem and Ti Ring as a pair. * Tube excluded and sold separately.

Rotors for Density Gradient Centrifugation

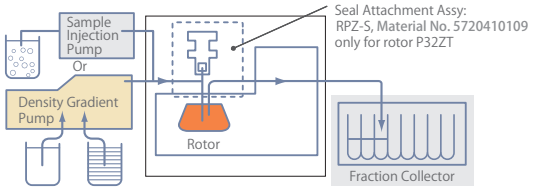
The density gradient centrifugation is useful to separate multiple nano-sized particles simultaneously in the density gradient solution. We offer exclusive rotors, zonal rotor model P32ZT and continuous flow rotor model P32CT, for larger volume process.

Zonal centrifugation system : By rotor P32ZT

P32ZT
Material No. 5720215101

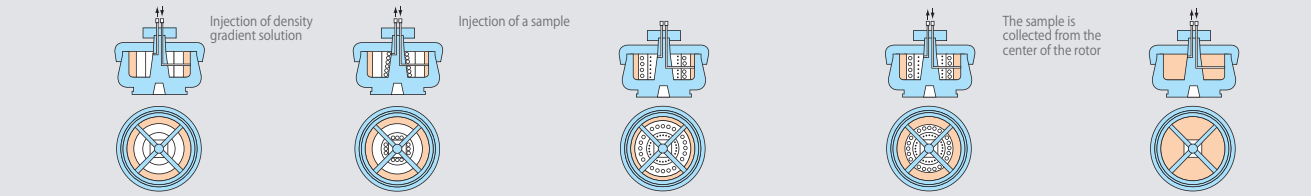
In zonal centrifugation, a density gradient is developed within the zonal rotor running at low speed. Next, the samples to be separated are loaded through the center of the zonal rotor. Then increase the speed to the preset high speed to separate the sample into the respective band in the density gradient in the rotor. After separation, separated sample with the density gradient solution is collected through the center by injecting the highest density gradient solution from the outside wall of the zonal rotor while the rotor is running at low speed.
Collected sample with the density gradient solution is separated into the fractions. Optical density of each fraction is checked by the spectrophotometer to find the fractions containing the separated samples.

System flow diagram



Rotor P32ZT:
Excluding Seal Attachment Assy, RPZ-S, Material No. 5720410109 (sold separately).
Density Gradient Pump required for density gradient centrifugation as optional.
Sample Injection Pump, Density Gradient Pump and Fraction Collector not supplied from us.
For detail, contact us.

Separation Procedures



Continuous flow centrifugation system : By rotor P32CT

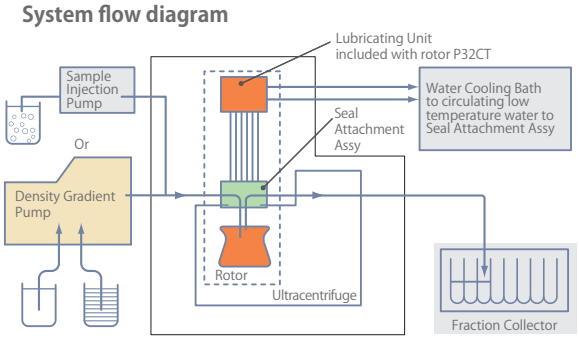
P32CT
Material No. 5720216101

The continuous flow rotor model P32CT, designed for use with himac ultracentrifuges, enables you to perform highly efficient continuous flow separation and purification of large volume samples under high centrifugal force using differential pelleting or the density gradient centrifugation technique.

Optional 940mL Core Assy (2)
(Material No. 5720411304)

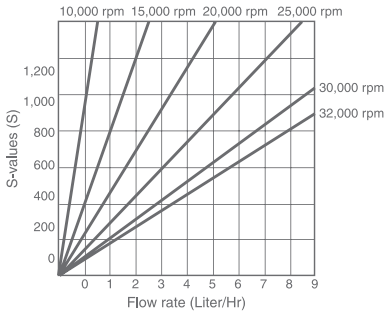
For separating samples containing much sediment or performing separation after increasing the density gradient, the optional 940mL Core Assy (2) increases the rotor capacity from 430mL to 940mL. The flow volume performance is about 35% less than that of standard core for 430mL capacity.

System flow diagram



Components within dotted lines are included in the standard accessory of P32CT and Optional Accesorry Kit (sold separately).

Flow rate characteristics



Rotor: P32CT rotor body with 430mL Core, Lubricating Unit, Seal Assembly, Tools (Torque wrench ,etc.), O-ring, Packing, Grease and Logbook (only P32CT with optical adapter).
Seal Attachment Assy required : To use P32CT with CP-NX, the optional accessory kit is mandatory required (sold separately).

Optional Accessory Kit exclusively for CP-NX series
(Material No. 5720410108)
Including: Door Assy, Rear Panel and Unit Base.
Excluding: Sample Injection Pump, Water Cooling Bath, Density Gradient Pump and Fraction Collector. These are not supplied from us.

Density Gradient Pump:
Required for density gradient centrifugation as optional.
This pump not supplied from us.

For details of the above, contact us. Optional Accessory Kit for CP-WX and CP-MX series, Material No. 5720850525.

Specifications

Model	CP100NX	CP90NX	CP80NX
Maximum Speed	100,000 rpm	90,000 rpm	80,000 rpm
Maximum RCF by optional rotor	803,000 xg P100AT2	700,000 xg P90AT	615,000 xg P80AT
Speed Control Accuracy	+/- 2rpm (1,000rpm – max. speed)		
ACCEL/DECEL Mode	ACCEL : 10 / DECEL : 11 (10 and coasting)		
Set Speed Range	1,000rpm to max. speed with 100rpm increments		
Timer	1 min to 999 hours 59 min (with 1 min increments) with HOLD function		
Set Temperature Range	0℃ to 40℃ with 1℃ increments (Accuracy : +/- 0.5℃)		
Vacuum System	Oil rotary vacuum pump and oil diffusion pump		
Noise Level	51dB(A) (running at max. speed, under in-house test condition)		
Heat Radiation Into a Room	1kW or below		
Cooling System	Thermo-module cooling system (CFC/HCFC/HFC-free)		
Brake System	Regenerative Braking (with energy recovery)		
Control Panel	Touch-sensitive color LCD panel (6.5 inch)		
Data Communication	USB : Host x 1, Device x 1 / LAN x 1		
Rotor Life Management	Automatic Rotor Life Management for rotors with RLM adapter Registered by serial number to the system for rotors with optical overspeed disk		
Dimensions	Width 790 x depth 690 x height 880 mm (depth 890 mm including door cover) From floor, height 925 mm to top of door handle, and 863 mm to table		
Floor area	0.81 m^2 (900 x 900 mm)		
Weight	390 kg		
Power Requirements	Single phase, AC200V, 208V and 220V +/-10%, max. 20A (normally 8A) Single phase, AC230V and 240V +/-10%, max. 16A (normally 7A)		
Installation Environment	Ambient temperature for operation : 2℃ to 40℃ Ambient temperature for performance guarantee : 10℃ to 30℃		
Warranty of Drive Unit	10 years after the shipment		
Material No. (Asia/Pacific/Middle East)	5720110011	5720109011	5720108011
Material No. (EU market)	5720110012	5720109012	5720108012
Material No. (US/Canada)	5720110013	5720109013	5720108013

Remarks :
1) * For detail of standard, contact us.
2) CP-NX series is not registered as medical device in Japan.
3) Due to safety reasons, installation environments, operation environments and conditions may be restricted.

CAUTION:
For safety and proper use of your machine, carefully read and follow the instruction manual.

- This catalogue is for international reference and not intended for a specific country.
- Orders are subject to product-availability in each country.
- All specifications are subject to change without advanced notice.
- Actual color may vary from the color of the photos on this catalogue, due to printing conditions.
- Due to safety reasons, installation environments, operating environments and conditions may be restricted.
- Unless specially mentioned, products and/or operation panel of the photos are standard specifications.
- For further information, please contact us.

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EHT-1C | 2022.10