

# CENTRIFUGE

# CENTRIC 400R

## ADVANCED CENTRIFUGES

### MAIN ADVANTAGES:

- > Robust Design, QUIET RUNNING
- > Brushless Drive System, MAINTENANCE FREE
- > Safety features: Automatic Rotor Recognition System, Automatic Speed Limitation System, Imbalance, 2 point lid lock, Errors displayed with sound alarms
- > Microprocessor Controlled Functions of Cover, Time, Speed and Temperature
- > Adjustable Acceleration and Braking System
- > Special START - STOP Features
- > Fast Spin & Quick-COOLING® Features
- > Constant Temperature Fan System
- > Up to 10 Programs



Centrifuge **CENTRIC 400R** (mark R means with re-  
frigerating system) is universal laboratory centrifuge,  
designed for use in medical, industrial and scientific  
laboratories for separating substances with different  
relative densities by centrifugal force. The maximum  
rotational speed of **18.000 RPM** gives the centrifugal  
force of **30.000 x g**.

A wide usage of programming options and an electronic  
operation control allow a trouble-free use of the  
centrifuge. With a special drive, quiet maintenance-free  
operation without any carbon dust pollution is  
guaranteed.

Device is equipped with user-friendly options which  
make the operation and standard settings easier for you.  
Built-in error detecting functions keep the user from  
entering incorrect values and check the complete  
operation.

The centrifuge has the possibility to save programs. In  
the program store you can save up to 10 different data  
sets. The centrifuge always keeps the last run program in  
its memory for an unlimited amount of time allowing the  
program to be restarted at any time - even if the  
centrifuge was turned off during operation. All important  
operation parameters can be seen at a glance.













The settings are executed with knobs and keys on the  
control panel. The interior of the centrifuge is also easy  
to clean. We are able to offer you a device that combines  
functional variety with practical applications.

### TECHNICAL SPECIFICATIONS

Model	CENTRIC 400R	
Code	457.3.500	
Power supply	230V / 50-60Hz	
Power requirement	centrifuge compressor	500W 600W
Fuses	2x10A T 2x16A T	
Isolation category	I	
Max. rotation speed	500 to 18.000 rpm, in steps of 10 rpm	
Max. centrifugal force	30.000 x g	
Max. load	4 x 200ml	
Max. kinetic energy	6.200Nm	
Max. density of material to be centrifuged	1,2g/ml	
Time	0 - 99 min, HOLD function	
Program settings	10 programs	
Acceleration	0 - 9 levels	
Deceleration	0 - 9 levels	
Noise level	~ 58dB	
Range of control for refrigeration	-9°C to +40°C	
Low temperature option	»Lo« -10°C	
Refrigeration time »fast cool«	+20°C to +4°C in app. 20min	
Sample temperature at max. speed	0°C (at ambient temp. +20°C)	
Cooling medium	R 404 A	
Permitted ambient temperature	+2°C to +35°C	
Permitted max. relative air humidity	75%	
Communication	RS-232	
Dimensions (H x W x D)	350 x 650 x 545 mm	
Weight	79kg	


## Accessories for CENTRIC 400 R

<b>FOUR PLACE SWING OUT ROTOR RS 4/100</b> Code No. 457.200  <b>ROTOR RS 4/200</b> Code No. 457.xxx		<b>BUCKET</b> (set of 4)  Code No. 462.200		<b>SEALED BUCKET</b> (set of 4)  Code No. 464.200		<b>BUCKET</b> (set of 4)  Code No. 473.301		<b>ROUND BUCKET</b> (set of 4)  Code No. 21 14 601-01-S	
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INSERTS												
Insert Code No.	462.203	462.203	462.203	462.203	473.303	462.240	462.208	464.220	462.213	462.218	462.218	462.224
Red. plate Code No. (set of 4)	464.203	464.205	464.207							462.222		
Tube capacity (ml)	0.25	0.5	1.5	5-7	7	5-7	10-12	15	25	50	50	100
Places in insert	12	12	12	12	12	7	6	2	2	1	1	1
Max. No. of tubes	48	48	48	48	48	28	24	8	8	4	4	4
Tube dimension $\varnothing \times d$ (mm)	6 x 30 6 x 45	8 x 32	11 x 40	12 x 75	13 x 105 Vacutainer	12 x 75 Vacutainer	16 x 110 Vacutainer	16 x 120 Falcon	24 x 100	29 x 115 Falcon	36 x 100	44 x 100
Max. tube dimension $\varnothing \times d$ (mm)	6 x 45	8 x 45	11 x 45	12,5x100	13 x 105	12,5x100 cap $\varnothing$ 17	16,5x105	16,5x121 cap $\varnothing$ 35	25 x 110	29 x 115 cap $\varnothing$ 35	36 x 110	44 x 100
Max. radius (mm)	138/151	138	144	151	151	151	148	151	148	148	148	148
Max. speed (RPM)	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000
Max. RCF (g)	3857/4220	3857	4024	4220	4220	4220	4136	4220	4136	4136	4136	4136

Various angle rotors can accept up to 30 tubes arranged in one or two concentric rows. Tubes are placed in angle of 45°. Have in mind that the outer row has greater RCF.	<b>ANGLE ROTOR RA 30/12</b> Code No. 457.300					<b>ANGLE ROTOR RA 6/50</b> Code No. 457.320	
							
Shields Code No. (set of 30)	464.280					464.295	464.325 (set of 6)
Adapter Code No. (1 pcs)	454.141	454.147	454.151	-	-	-	-
Adapter capacity (ml)	5	7	10	12	15	50	
No. Of tubes per rotor	30	30	30	30	30	6	
Max. tube dimension $\varnothing \times d$ (mm)	12 x 75 Vacutainer	12 x 100 Vacutainer	16 x 100 Vacutainer	16 x 100 Vacutainer	16 x 120	29 x 115 Falcon	
Max. radius (mm)	113 / 69	130 / 115	121 / 106	130 / 115	145 / 130	125	
Max. speed (RPM)	5000	5000	5000	5000	5000	5000	
Max. RCF (g)	3158/1928	3633/3214	3381/2962	3633/3214	4052/3633	3493	

	<b>ANGLE ROTOR RA 24</b> incl. aluminium lid Code No. 456.600	<b>ANGLE ROTOR RA 30</b> incl. aluminium lid Code No. 456.620	<b>TWO-PLACE SWING OUT ROTOR</b> Code No. 457.340	<b>MICROTITER PLATE CARRIER</b> (set of 2) Code No. 464.310
				
Max. capacity (ml)	24 x 2.0	30 x 2.0		
Max. speed (RPM)	18.000	14.000		
Max. centrifugal force (x g)	30.000	21.457		
Radius (mm)	86	98	No. of plates per rotor	6 micro plates or 2 deep well
Acceleration to max. speed (s)	18	15	Size of plate (mm)	86 x 128
Braking from max. speed (s)	16	14	Max. radius (mm)	132
			Max. speed (RPM)	3000
			Max. RCF (g)	1320

<b>PCR strip ROTOR</b> Code No. 457.380		Vial dimensions $\varnothing \times l$ (mm)	6 x 20
		Max. no. of vials	48 (6 x 8)
		Max. speed (RPM)	14.000
		Max. centrifugal force (x g)	19.500
		Radius (mm)	86
		Acceleration to max. speed (s)	30
Braking from max. speed (s)	30		

On special request we can provide special custom tube adapter.

\* Special dimensioned buckets and inserts