

## 9 Technical data

### 9.1 Power supply

#### Centrifuge 5430

Mains/power connection	230 V, 50 to 60 Hz 120 V, 50 to 60 Hz 100 V, 50 to 60 Hz
Current consumption	3 A (230 V) 6 A (120 V) 7 A (100 V)
Power consumption	Maximum 475 W
EMC: Noise emission (radio interference)	230 V: EN 61326-1/EN 55011 – Class A 120 V: CFR 47 FCC Part 15 – Class A 100 V: EN 61326-1/EN 55011 - Class A
EMC: Noise immunity	EN 61326-1
Overvoltage category	II
Protection class	1
Fuses	250 V 4 A T HBC (230 V) 250 V 8 A T HBC (120 V) 250 V 8 A T HBC (100 V)
Pollution degree	2

#### Centrifuge 5430 R

Mains/power connection	230 V, 50 to 60 Hz 120 V, 50 to 60 Hz 100 V, 50 to 60 Hz
Current consumption	6 A (230 V) 12 A (120 V) 12 A (100 V)
Power consumption	Maximum 1050 W
EMC: Noise emission (radio interference)	230 V: EN 61326-1/EN 55011 – Class A 120 V: CFR 47 FCC Part 15 – Class A 100 V: EN 61326-1/EN 55011 – Class A
EMC: Noise immunity	EN 61326-1
Overvoltage category	II
Protection class	1
Pollution degree	2

## 9.2 Ambient conditions

Environment	For indoor use only. The surroundings must not be moist.
Ambient temperature	5430: 4 °C – 40 °C 5430 R: 10 °C – 35 °C
Relative humidity	10 % – 75 %, non-condensing.
Atmospheric pressure	79,5 kPa – 106 kPa

## 9.3 Weight/dimensions

### Centrifuge 5430

Dimensions	Width: 335 mm Depth: 415 mm Height: 250 mm
Weight without rotor	29 kg

### Centrifuge 5430 R

Dimensions	Width: 380 mm Depth: 640 mm Height: 296 mm
Weight without rotor	56 kg

\*) The noise level was measured frontally in a sound measuring room with accuracy class 1 at a distance of 1 m from the device and at lab bench height.

Rotor weights:		Accessories without caps:	
S-24-11-AT	1340 g	Bucket	27 g
FA-45-48-11	2110 g		
F-45-48-11	1770 g		
FA-45-16-17	2050 g		
FA-45-30-11	1500 g		
FA-45-24-11-Kit	1600 g		
F-45-30-11	1020 g		
FA-45-24-11-HS	2800 g		
F-35-6-30	3900 g		
F-45-64-5-PCR	1230 g		
F-45-18-17-Cryo	1080 g		
A-2-MTP	3100 g	Bucket	540 g

## 9.4 Noise level

The noise level was measured in a sound measuring room with accuracy class 1 (DIN EN ISO 3745), frontally, at a distance of 1 m from the device and at lab bench height.

Noise level	< 56 dB(A)
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## 9.5 Application parameters

Run time	30 s to 99:59 h, infinity ( $\infty$ ) Adjustable to 10 min in 0.5 min increments, then increments of 1 min.
Temperature of 5430 R	-11°C to 40°C
Relative centrifugal force (or rcf)	1 to 30,130 x g Adjustable in increments of 10 x g up to 3,000 x g, then in increments of 100 x g
Rotational speed	100 to 17,500 rpm Adjustable in increments of 10 rpm up to 5,000 rpm, then in increments of 100 rpm
Maximum load	48 tubes with 2.0 mL each or 6 conical tubes with 50 mL each
Maximum kinetic energy	10,000 J
Compulsory test log book	No
Permitted density of the material for centrifuging at max. g-force/rpm and max. load	1.2 g/mL

Rotor	Lowest achievable temperature -11°C set 23°C ambient temperature 60 min run time	Speed to safely maintain 4°C sample temperature 4°C set 23 °C ambient temperature
FA-45-48-11	< 0 °C	12 700 rpm
F-45-48-11	< 0 °C	12700 rpm
FA-45-30-11	< 0 °C	14 000 rpm
F-45-30-11	< 0 °C	14000 rpm
FA-45-24-11-HS	< 5 °C	17 500 rpm
FA-45-24-11-Kit	< 0 °C	13200 rpm
F-45-64-5-PCR	< 0 °C	11800 rpm
F-45-18-17-Cryo	< 0 °C	8900 rpm
FA-45-16-17	< 0 °C	14200 rpm
F-35-6-30	< 0 °C	7830 rpm
A-2-MTP	< 0 °C	4680 rpm
S-24-11-AT	< 0 °C	12700 rpm

## 9.6 Acceleration and deceleration times

The following table contains acceleration times and deceleration times for the rotors of the Centrifuge 5430 / 5430 R. The details were determined with the rotor at maximum load, for swing-bucket rotors with round bucket. Fluctuations may occur depending on the condition of the device and the load.

- Level 9: shortest acceleration time/deceleration time
- Level 0: longest acceleration time/deceleration time (with the brake off)

Rotor	Acceleration time/Deceleration time Without soft ramp		
	Acceleration time/Deceleration time With soft ramp		
	230 V	120 V	100 V
FA-45-48-11	≤ 20 s/20 s	≤ 20 s/20 s	≤ 27 s/20 s
F-45-48-11	≤ 61 s/65 s (SOFT)	≤ 61 s/65 s (SOFT)	≤ 61 s/65 s (SOFT)
FA-45-30-11	≤ 15 s/15 s	≤ 15 s/15 s	≤ 20 s/15 s
F-45-30-11	≤ 61 s/65 s (SOFT)	≤ 61 s/65 s (SOFT)	≤ 61 s/65 s (SOFT)
FA-45-24-11-Kit	≤ 15 s/16 s ≤ 78 s/90 s (SOFT)	≤ 15 s/16 s ≤ 78 s/90 s (SOFT)	≤ 20 s/16 s ≤ 78 s/90 s (SOFT)
FA-45-16-17	≤ 20 s/20 s ≤ 61 s/66 s (SOFT)	≤ 20 s/20 s ≤ 61 s/66 s (SOFT)	≤ 30 s/20 s ≤ 61 s/66 s (SOFT)
S-24-11-AT	≤ 13 s/16 s ≤ 61 s/66 s (SOFT)	≤ 13 s/16 s ≤ 61 s/66 s (SOFT)	≤ 16 s/16 s ≤ 61 s/66 s (SOFT)
FA-45-24-11-HS	≤ 21 s/16 s ≤ 60 s/65 s (SOFT)	≤ 21 s/16 s ≤ 60 s/65 s (SOFT)	≤ 30 s/16 s ≤ 60 s/65 s (SOFT)
F-45-64-5-PCR	≤ 12 s/15 s ≤ 62 s/65 s (SOFT)	≤ 12 s/15 s ≤ 62 s/65 s (SOFT)	≤ 15 s/15 s ≤ 62 s/65 s (SOFT)
F-45-18-17-Cryo	≤ 8 s/11 s ≤ 77 s/85 s (SOFT)	≤ 8 s/11 s ≤ 77 s/85 s (SOFT)	≤ 8 s/11 s ≤ 77 s/85 s (SOFT)
F-35-6-30	≤ 23 s/23 s ≤ 62 s/67 s (SOFT)	≤ 23 s/23 s ≤ 62 s/67 s (SOFT)	≤ 27 s/27 s ≤ 62 s/67 s (SOFT)
A-2-MTP	≤ 18 s/21 s ≤ 63 s/67 s (SOFT)	≤ 18 s/21 s ≤ 63 s/67 s (SOFT)	≤ 18 s/21 s ≤ 63 s/67 s (SOFT)