

## 2.3 Features

The compact and easy-to-use Centrifuge 5418 / 5418 R has a capacity of 18 x 2 ml and reaches a maximum of 16,873 x g / 14,000 rpm. The microcentrifuge is equipped with an aerosol-tight standard rotor for centrifugation of the following tubes:

- Micro test tubes (0.2 to 2.0 ml)
- Microtainers (0.6 ml)
- Spin columns (1.5/2.0 ml)

The Centrifuge 5418 R has an additional temperature control function for centrifugation between 0°C and +40°C. The **fast temp** function can be used to start a temperature control run without samples to adjust the rotor chamber incl. rotor and adapters quickly to the set target temperature.

## 2.4 Rotor FA-45-18-11

Before using tubes, observe the manufacturer's recommended specifications on resistance to centrifugation (max. g-force).

|                          | Max. capacity  | Max. g-force (rcf) or speed (rpm) without adapter                       | Max. load per rotor bore <sup>(1)</sup> | Notes  |
|--------------------------|--|---|---|--|
|                          |  | Acceleration/deceleration time <sup>(2)</sup>                           |   |  |
| <b>Rotor FA-45-18-11</b> | 18 micro test tubes of 1.5/2.0 ml each or spin columns.<br>With adapters:<br>• 0.2 mL PCR tubes<br>• 0.4 ml/0.5 ml micro test tubes<br>• 0.6 mL Microtainers | 16,873 x g / 14,000 rpm<br><br>5418: 16 s / 18 s<br>5418 R: 13 s / 13 s | 3.75 g                                  | • Aerosol-tight <sup>(3)</sup> rotor lid (aluminum). |

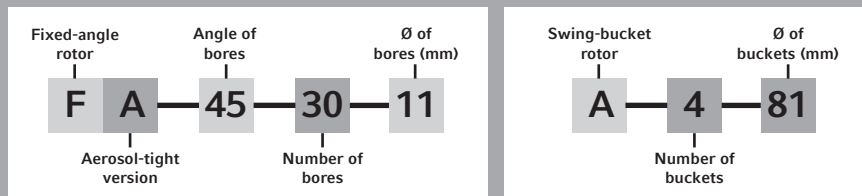
(1) Maximum load per rotor bore for adapter + tube + contents.

(2) According to DIN 58 970 (device version: 230 V, 50 to 60 Hz).

(3) Aerosol tightness tested and certified by the Centre of Emergency Preparedness and Response, Health Protection Agency, Porton Down (UK) (see certificates at the end of this operating manual).

### Rotor code:

All Eppendorf® rotors are identified using a simple, alphanumeric format that represents the technical specifications in a uniform series of letters and numbers.



**Product description**

Centrifuge 5418 / 5418 R  
English (EN)

## 2.4.1 rcf display and calculation



Use the **rpm/rcf** key to switch the display of centrifugation speed between rcf and rpm.  
**Only 5418 R:** For speeds  $\leq 800$  rpm only the lowest adjustable g-force (100 x g) is displayed upon switching. The exact g-force (rcf) can be determined using the formula given below.

Ensure that the g-force (rcf) displayed upon switching is standardized to suit the rotor without an adapter. You can achieve the following maximum g-forces (rcf) at maximum speed (rpm) when adapters are used:

| Adapter                     | Max. centrifugation radius $r_{\max}$ [cm] | Max. g-force (rcf) |
|-----------------------------|--|--------------------|
| Without adapter             | 7.7  | 16,873             |
| for 0.2 mL PCR tubes        | 5.6  | 12,271             |
| for 0.4 mL micro test tubes | 7.7  | 16,873             |
| for 0.5 mL micro test tubes | 6.6  | 14,462             |
| for 0.6 mL Microtainers     | 7.7  | 16,873             |

To determine the g-force (rcf) for a special adapter, you can perform a calculation according to DIN 58 970 with the following formula:

$$\text{rcf} = 1.118 \cdot 10^{-5} \cdot n^2 \cdot r_{\max}$$

n: Revolutions per minute (rpm)

$r_{\max}$ : Max. centrifugation radius in cm

**Example:**

The 0.2 ml adapter has a maximum radius of 5.6 cm. At 5,000 rpm a maximum g-force of 1,565 x g is reached.