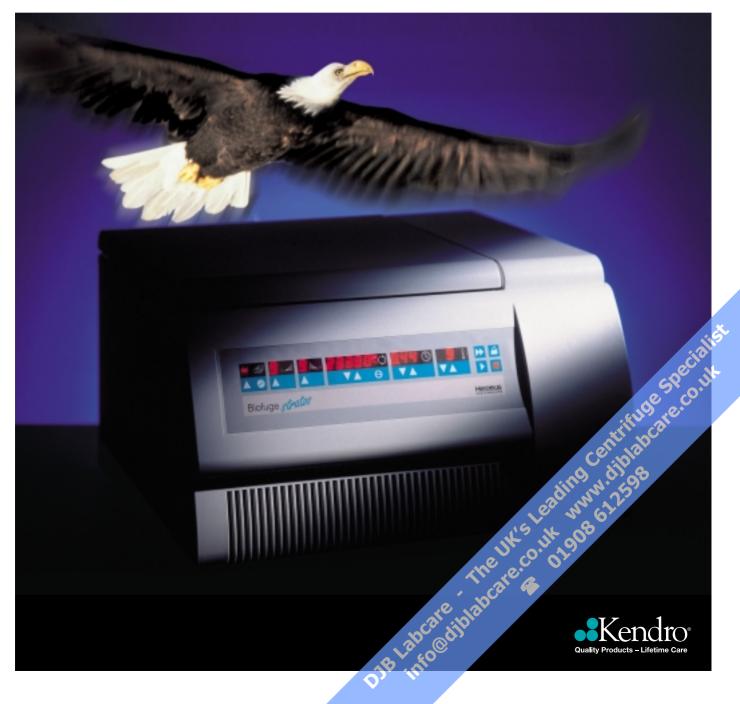
# Heraeus

## BIOFUGE® STRATOS HIGHSPEED TABLE TOP CENTRIFUGE

Intelligent centrifugation



## INTELLIGENT

Until now, intelligent technology has been reserved for floor standing centrifuges but, for the first time, it has now been used in the design of a refrigerated highspeed table top centrifuge – Biofuge stratos by Kendro Laboratory Products. Intelligent technology guarantees greatest benefits for the demanding user of a highspeed centrifuge.



#### Lid closed – fully automatic

Gentle pushing of the lid automatically engages two locks – rapidly and safely.

### Balancing by eye

The Biofuge stratos is characterised by minimum noise, maximum imbalance stability and extreme reliability. An innovative drive with "active damping" was specifically designed for highspeed applications (see also page 6). The unique spindle drive offers many benefits.

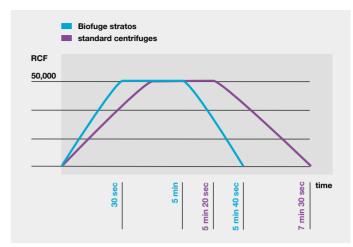
- Your samples can be simply balanced by eye.
- Loud rotors and resuspended sediments become a thing of the past.
- Service costs for broken drive needles are avoided.



## Safety in case of sample loss

The patented electronic imbalance recognition system is ideally matched to every rotor. It recognises imbalance even during a run.

- Large sample losses are detected during a run. The Biofuge stratos brakes automatically.
- Only imbalances caused by incorrect loading lead to error messages – false alarms are avoided.
- Inadmissible imbalances are detected specifically for every rotor. This protects the centrifuge's drive.



#### No waiting

A powerful drive accelerates the Biofuge stratos' rotors in record times: 50,000 x g in 30 seconds. The extremely short braking and acceleration times save a lot of time and allow increased sample throughput.



#### Clear

The new Easycontrol user panel makes your work as simple as possible.

- Clear display of all values no hidden functions
- Internationally recognised symbols
- Nine programs to save the most important run parameters
- "Pretemp" program for rapid pre-cooling

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Within a few seconds the automatic rotor recognition system detects if the programmed speed is too high. The Biofuge strates' display signals the maximum permissible value for the rotor used. You can contine this value by pressing the START key or you can enter a new value.





## **FLEXIBLE**

The Biofuge stratos' extensive range of rotors is outstanding. Ten rotors – fixed angle, microlitre, swingout and continuous flow rotors are at your disposal. All common types of tube from 0.2 to 180 ml can be spun in the Biofuge stratos.

The new aerosol tight rotors and buckets offer the greatest possible user safety. During the rotors' development we have improved the sealing mechanism. The safe biological centrifugation with the Biofuge stratos' rotors was certified by the independent CAMR test institute in Porton-Down, Great Britain, using a microbiological test procedure.

Additional safety is provided by tubes with sealed lids. For this reason, Kendro has extended its range of accessories to include these tubes.



#### High sample throughput

80 x 2 ml tubes can be spun in the drum rotor.

New: a rack with a 60 ° angle converts the drum into a 48-place fixed angle rotor – with an identical RCF value for all samples.





### highspeed fixed angle rotors

- All fixed angle rotors are aerosol tight.
- Reduced acceleration and braking times through reduced weight.
- A lid for all fixed angle and microlitre rotors avoids any possibility of confusion.



General purpose swing-out rotors

180 ml.

A swing-out rotor for DIN, blood, conical and other tubes up to

■ The bucket is suitable for extra

 long tubes up to 138 mm.
A vertical swing-out rotor for microlitre plates ensures optimum sedimentation.

#### Only at Heraeus<sup>®</sup>: continuous flow operation on a table top

- The Contifuge stratos provides time savings of several hours for sample volumes in excess of 20 l.
- The high RCF value guarantees the quantitative sedimentation in the field of bio-technology and for water sample examination.
- Titanium rotor for maximum chemical resistance.





### 50,000 x g for 24 samples

A 24-place rotor provides high performance for 1.5 ml micro tubes.

Acceleration in excess of 50,000 x g in only 30 seconds.



#### Indefinitely autoclavable

The 24 x 2 ml rotor is particularly suitable for infectious samples. The special alloy rotor is indefi-

nitely autoclavable.



#### A new principle – Highconic<sup>®</sup>

10,000 x g for conical (Falcon<sup>®</sup> type) and highspeed tubes.

- As a result of the 45 ° angle, the sediment remains at the botton of the tube.
- The flat angle prevents sate loss at the rim of the type.

## RELIABLE AND USER FRIENDLY

Kendro has set a new technological standard for highspeed table top centrifuges with the new spindle drive.

- high RCF values for all types of rotor
- extremely short acceleration and braking times
- balancing by eye
- extremely quiet run conditions
- outstandingly sturdy for everyday laboratory work
- very flexible as a result of an extensive range of rotors

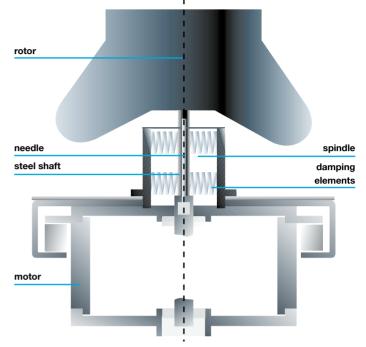
### Limited – the common needle drive

With a centrifuge, the motor's driving power is transferred to the rotor via a shaft. Common high-speed centrifuges achieve this via a flexible needle ("needle drive"), which is inexpensive and quite sufficient for the operation of high-speed fixed angle rotors up to 6 x 94 ml. The needle drive is not suitable when different rotors with high g-forces and very short acceleration and braking times are used:

- The needles often break when used for very short acceleration and braking times.
- Swing-out rotors are just as damaging.
- The needle drive is very sensitive to imbalance.
- Sample whirling can occur during braking at resonance speed.

#### Intelligent – the Biofuge stratos' spindle drive

The spindle drive, which is unique for a table top centrifuge, features an elastic needle which is damped ("active damping", see illustration). The motor is totally independent from the rotor and does not feel any of the pressure and movements that the rotor causes. The spindle drive therefore offers indispensable benefits for the sophisticated user of a highspeed centrifuge.



| Benefit   | Customer usage  |
|---|---|
| The spindle drive relieves the drive shaft from the weight of the rotor | Very short acceleration and<br>braking times,<br>no needle breakage                     |
| The sensitivity to imbalance<br>is reduced                              | Exact balancing is not<br>necessary (visual balancing)                                  |
| Rotor resonance is damped   | Sample sediments are not whirled<br>during braking process                              |
| Rotor disturbance is reduced  | No disturbing noises,<br>extremely quiet operation,<br>no damage to the motor bearing C |
| The spindle tolerates the<br>"hard" lowering of the rotors              | The Biofuge stratos is very study<br>for everyday laboratory work                       |
| The spindle is supplied<br>as a complete set including sensors          | The entire spindle is easy to fit and service   |

are of that care.

## ECONOMICAL AND SPACE SAVING

#### Flexible - the rotor diversity

With a selection of ten different rotors and numerous adaptors, the Biofuge stratos has the most flexible range of accessories on the table top centrifuge market. It is therefore a compact and application orientated centrifuge for every application in molecular biology, biochemical and medical research. The table shows that some of the highspeed centrifuges available in the market cannot offer the Biofuge stratos' flexibility (centrifuge 1, 2 of the table). It is now possible to upgrade the Biofuge stratos with further rotors at any time. When on a limited budget, this is definitely more economical than purchasing an additional centrifuge with new rotors.

#### Use of rotor types in highspeed table top centrifuges

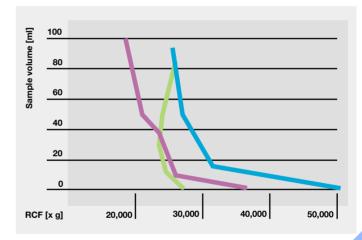
| Rotor type   | Biofuge<br>stratos | centri-<br>fuge 1 | centri-<br>fuge 2 | centri-<br>fuge 3 | centri-<br>fuge 4 |
|--|--------------------|-------------------|-------------------|-------------------|-------------------|
| Microlitre rotor   |                    |                   |                   |                   |                   |
| Highspeed rotor  |                    |                   |                   |                   |                   |
| Falcon <sup>®</sup> fixed angle rotor                      |                    | <b>1</b>          |                   | 1                 | 1                 |
| Swing-out rotor<br>(Falcon <sup>®</sup> , DIN, blood tubes | ■<br>)             |                   | •                 | •                 | •                 |
| Microtitre plate rotor                                     |                    |                   |                   |                   |                   |
| Continuous flow rotor                                      |                    |                   |                   |                   |                   |

<sup>1</sup> Only partly suitable for Falcon<sup>®</sup> tubes due to steep angle

#### Powerful - the RCF values

The Biofuge stratos' extreme flexibility is characterised by high RCF values for all rotors. Centrifuges with virtually comparable flexibility (centrifuge 3, 4 of the table/graph) are, however, considerably less powerful because they do not have the Biofuge stratos' pioneering spindle drive.

### Highspeed angle rotors' RCF values and volumes



Biofuge<sup>®</sup> stratos
centrifuge 3 (table 1)
centrifuge 4 (table 1)

#### Time saving – the run times

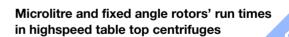
Short run times save time and consequently costs and they also increase the throughput of samples.

The graph opposite illustrates to which extent the Biofuge stratos' high RCF values and short braking times reduce the centrifuge's overall run time.

At maximum speed, a 8 x 50 ml rotor was operated for 30 minutes and a 24 x 1.5 ml rotor was spun for 15 minutes in the Biofuge stratos. After adding the braking times, the entire centrifugation process' run time is established, as graphically illustrated.

Centrifuge 3 and 4 require a considerably longer run time to achieve the same separation results. This is due to the lower RCF values and partly the longer braking times.





Runtime Topo Top

## **BIOLOGICALLY SAFE** CENTRIFUGATION

In accordance with EN 61 010, when working with toxic and infectious materials, "it has to be guaranteed... depending on the biological agents' risk potential, that aerosols are either not created or cannot reach the work area's atmosphere". For centrifugation this results in the compelling necessity that both, tubes with sealed lid and rotors or swing-out buckets must be used with an aerosol tight cap.

#### Sealed tubes

The Biofuge stratos' range of accessories was consistently designed for biologically safe centrifugation. New tubes with sealed lids for highspeed applications were included in the tube range (page 13 ff).

### Rotors – safe down to the smallest detail

The design of swing-out buckets and all fixed angle and microlitre rotors ensures a maximum seal.

At highspeeds the seals generally loose their effect when leaked liquid exerts a direct influence on them. At 50,000 x g, 1 ml of liquid puts a strain of 50 kg on the seals.

#### **Test guidelines**

Every user is obliged to regularly check their centrifugation accessories. Kendro assists with a test procedure, described in the operating instructions, which is in accordance with British standards.

#### **Certified safety**

The Biofuge stratos' aerosol tightness was certified by the independent CAMR test institute in Porton-Down, Great Britain, using a microbiological test procedure.

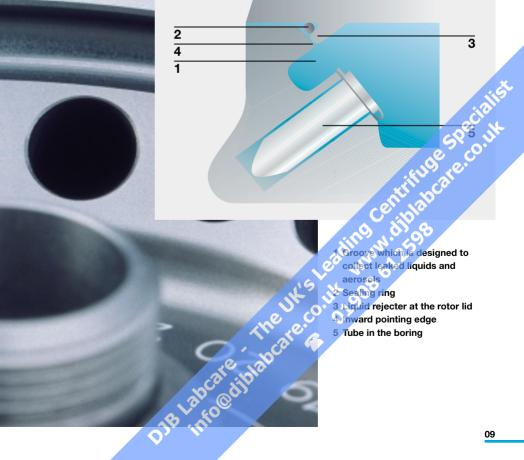




Angle rotors have a surrounding groove (1) above the tube boring which collects leaked liquids and aerosols which therefore cannot have an effect on the seal (2). The risk of spilling liquids is thus limited. This effect is supported by a liquid rejecter at the rotor lid (3) which, at the same time, holds the sealing ring.

An important detail is the inward pointing upper rotor edge (4). During a run the sealing ring presses against the centrifugal force and therefore actively supports the sealing effect. Furthermore, unscrewing the lid is very easy because the rotor lid including sealing ring lies on this edge.

The diagram illustrates the Biofuge stratos' angle rotor sealing principle.



## **TECHNICAL DATA/ORDER NUMBERS**









### Fixed angle rotors

| Fixed angle rotors        |     | 6 x 94 ml        | 8 x 50 ml        | 16 x 16 ml       | Highco <i>ni</i> c®<br>rotor                         |
|---------------------------|-----|------------------|------------------|------------------|--|
| Order no.                 |     | 75003334         | 75003335         | 75003336         | 75003046   |
| Angle                     | 0   | 26               | 34               | 23               | 45   |
| Max. speed                | rpm | 15,000 (13,000)* | 15,000 (13,000)* | 17,000 (14,000)* | 8,500  |
| Max. RCF                  |     | 25,410 (19,083)* | 26,920 (20,217)* | 31,660 (21,475)* | 10,015   |
| Max. capacity             | ml  | 6 x 94           | 8 x 50           | 16 x 16          | 6 x 50   |
| Acceleration/braking time | S   | 70/60            | 75/60            | 60/55            | 35/40  |
| Min. temp. at max. speed  | °C  | -5 (-10)*        | -1 (-8)*         | 2 (-9)*          | -18 (-14)*   |
| Max. speed at 4 °C        |     | 15,000           | 15,000           | 17,000           | 8,500  |
| Max./min. radius          | cm  | 10.1/6.3         | 10.7/5.6         | 9.8/6.4          | 12.4/6.0   |
| k-factor                  |     | 531 (707)*       | 729 (970)*       | 373 (551)*       | 2,545  |
| Distinctive features      |     | aerosol tight    | aerosol tight    | aerosol tight    | aerosol tight, indefinitely<br>autoclavable (121 °C) |

\* ( ) for use with Biofuge stratos 120 V/60 Hz version



### Adaptors for fixed angle rotors

| Volume | Max. tube | e size | Rotor 7500         | )3334                | Rotor 750          | 03335                | Rotor 750          | 03336                |
|--------|-----------|--------|--------------------|----------------------|--------------------|----------------------|--------------------|----------------------|
|        | D (mm)    | L (mm) | Tubes<br>per rotor | Order no.<br>adaptor | Tubes<br>per rotor | Order no.<br>adaptor | Tubes<br>per rotor | Order no.<br>adaptor |
| 1.5 ml | 11        | 51     | 24                 | 76002905             | 24                 | 76002902             | 16                 | 76002900             |
| 3.5 ml | 11        | 91     | 24                 | 75003091             | 24                 | 76002903             | 16                 | 76002901             |
| 6.5 ml | 13        | 108    | 12                 | 75003092             | 8                  | 75003097             | 16                 | 75003079             |
| 12 ml  | 16        | 89     | 12                 | 75003093             | 8                  | 75003098             | -                  | -                    |
| 16 ml  | 18        | 114    | 6                  | 76002906             | 8                  | 76002904             | 16                 | without ad.          |
| 38 ml  | 25        | 104    | 6                  | 75003094             | 8                  | 75003099             | -                  | -                    |
| 50 ml  | 29        | 114    | 6                  | 75003014             | 8                  | without ad.          | -                  | -                    |
| 94 ml  | 38        | 114    | 6                  | without ad.          | -                  | -                    | -                  | -                    |

### Adaptors for Highconic® rotor 75003046

| D (mm)       4 x 1.5 ml     11       4 x 3.5 ml     11       2 x 6.5 ml     13       2 x 12 ml     16 | L (mm)<br>58<br>103<br>115 | 24<br>24<br>12 | Adaptor<br>76002905<br>75003091 |
|---|----------------------------|----------------|---------------------------------|
| 4 x 3.5 ml   11     2 x 6.5 ml   13   | 103                        | 24             | 75003091                        |
| <b>2 x 6.5 ml</b> 13  |                            |                |                                 |
|   | 115                        | 12             |                                 |
| <b>2 x 12 ml</b> 16   |                            | 12             | 75003092                        |
|   | 96                         | 12             | 75003093                        |
| <b>1 x 16 ml</b> 18   | 124                        | 6              | 76002906                        |
| <b>1 x 38 ml</b> 25   | 112                        | 6              | 75003094                        |
| <b>1 x 50 ml</b> 29   | 118                        | 6              | 75003014                        |
| <b>1 x 15 ml Falcon®</b> 16.5   | 120                        | 6              | 75003095                        |
| <b>1 x 50 ml Falcon<sup>® 1)</sup> 30</b>   | 117                        | 6              | 75003096                        |

## **TECHNICAL DATA/ORDER NUMBERS**

### Microlitre rotors



\* ( ) for use with Biofuge stratos 120 V/60 Hz version

### Adaptor sets for microlitre rotors 75003332 and 75003331

| Adaptor sets with 24 reducer sleeves | Colour    | Rotor 3332<br>Order no. | Rotor 3331<br>Order no. |
|--------------------------------------|-----------|-------------------------|-------------------------|
| for 0.5/0.6 ml microlitre tubes      | turquoise | 76003758                | 76003252                |
| for 0.25/0.4 ml microlitre tubes     | red       | 76003759                | 76003251 <sup>1)</sup>  |
| for 0.2 ml PCR tubes                 | grey      | 76003750                | 76003250                |

<sup>1)</sup> Only suitable for 0.25 ml tubes

### Racks for the drum rotor 75003044

| Rack for                               | Amount pe | er    | Colour | Order no. |
|--|-----------|-------|--------|-----------|
|  | adaptor   | Rotor |        |           |
| 1.5 ml microlitre tubes                | 10        | 80    | yellow | 76001499  |
| 1.5/2 ml microlitre tubes              | 10        | 80    | red    | 76001244  |
| 0.3 ml microcapillary tubes            | 8         | 64    | blue   | 76001246  |
| 0.5/0.6 ml microlitre tubes            | 15        | 120   | green  | 76001247  |
| 0.25/0.4 ml microlitre tubes           | 20        | 160   | yellow | 76001248  |
| 1.5/2 ml microlitre tubes (60 ° angle) | 6         | 48    | white  | 75001498  |
| PCR strips (each 8 tubes)              | 3         | 12    | white  | 76001587  |

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## **TECHNICAL DATA/ORDER NUMBERS**



### Swing-out rotors

| Swing-out rotors               |     | 4 x 180 ml     | 2 x microtitre           |
|--------------------------------|-----|----------------|--------------------------|
| Order no.                      |     | 75003047       | 75003048                 |
| Order no. round bucket         |     | 75008172       | _                        |
| Order no. aerosol tight cap    |     | 75008173       | -                        |
| Max. speed                     | rpm | 5,000 (4,500)* | 3,000                    |
| Max. RCF                       |     | 4,863 (3,939)* | 1,370                    |
| Max. capacity                  | ml  | 4 x 180        | 2 microtitre plate       |
| Acceleration/braking time      | S   | 45/55          | 30/35                    |
| Min. temp. at n <sub>max</sub> | °C  | -15 (-14)*     | -19 (-15)*               |
| Max./min. radius               | cm  | 17.4/9.4       | 13.6/-                   |
| Distinctive features           |     | aerosol tight  | max. shelf height 5.7 cm |

\* ( ) for use with Biofuge stratos 120 V/60 Hz version

# Adaptor for the round bucket 75008172 in swing-out rotor 75003047

| Adaptor for                   | Max. tub | e size (mm)     |      | Tube  | Colour       | Order no. |
|-------------------------------|----------|-----------------|------|-------|--------------|-----------|
|                               | D        | L <sup>1)</sup> | Lid  | Rotor |              | adaptor   |
| 12 x 1.5/2 ml                 | 11       | 42              | 13.6 | 48    | black        | 75008190  |
| 9 x 7 ml DIN                  | 13       | 125/135         | 15.2 | 36    | yellow       | 75008189  |
| 7 x 7 ml blood collection     | 13       | 126/135         | 18.5 | 28    | grey         | 75008188  |
| 7 x 15 ml DIN                 | 18       | 126/135         | 18.5 | 28    | red          | 75008186  |
| 4 x 15 ml blood collection    | 18       | 129/135         | 20   | 16    | white        | 75008185  |
| 3 x 15 ml Falcon <sup>®</sup> | 17       | 133/135         | 23.7 | 12    | brown        | 75008187  |
| 1 x 25 ml DIN                 | 25       | 126/135         | 27   | 4     | orange       | 75008184  |
| 1 x 25 ml universal container | 26       | 121/130         | 53   | 4     | green        | 75008196  |
| 1 x 50 ml Falcon®             | 30       | 133/138         | 39   | 4     | green/yellow | 75008183  |
| 1 x 50 ml DIN                 | 36       | 132/138         | 39   | 4     | green        | 75008182  |
| 1 x 100 ml                    | 45       | 128/133         | 47.5 | 4     | blue         | 75008181  |
| 2 x US urine                  | 17       |                 |      | 8     | brown/red    | 75008195  |



<sup>1)</sup> Length with/without aerosol tight cap

D = max. diameter; L = max. tube length; cap = max. cap diameter



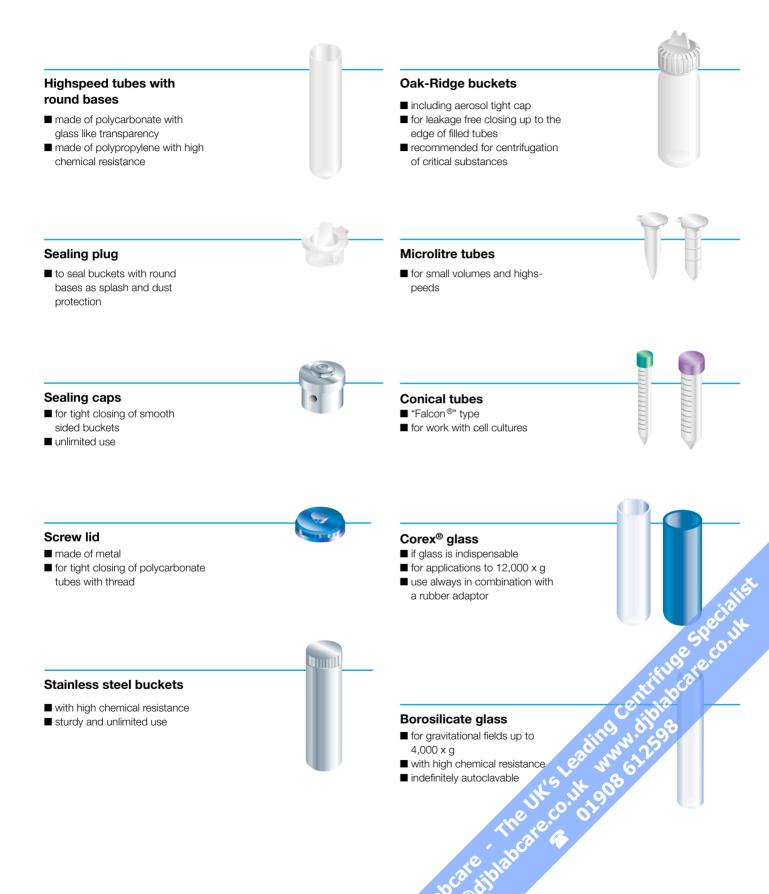
### Continuous flow rotor

| Continuous flow rotor order | no. | 75003049              | 75003054              |
|-----------------------------|-----|-----------------------|-----------------------|
| Max. speed                  | rpm | 17,000                | 10,000                |
| Max. RCF                    |     | 25,040                | 8,665                 |
| Max. capacity               | ml  | 400 ml sediment       | 400 ml sediment       |
| Acceleration/braking time   | S   | 80/60                 | 36/35                 |
| Max./min. radius            | cm  | 7.75/5.0              | 7.75/5.0              |
| Distinctive features        |     | indefinitely          | indefinitely          |
|                             |     | autoclavable (121 °C) | autoclavable (121 °C) |
| Material                    |     | titan                 | coated aluminium      |

### Continuous flow rotor accessories

High performance insert for HCT 22,300 rotor

### CENTRIFUGE TUBES AND TOPS



### **CENTRIFUGE TUBES AND TOPS**

#### Micro tubes for microlitre rotors order no. 75003331, 75003332 and drum rotor order no. 75003044

Centrifuge tubes for the swing-out rotor order no. 75003047

| Capacity | Туре                                | Packed/unit | Order no. |
|----------|-------------------------------------|-------------|-----------|
| 0.4 ml   | Microlitre tube, PE, with snap lid  | 1,000       | 76001166  |
| 1.5 ml   | Microlitre tube, PE, with snap lid  | 500         | 76001163  |
|          | Microlitre tube, PP, with screw lid | 500         | 76001148  |
| 2.0 ml   | Microlitre tube, PE, with snap lid  | 500         | 76001169  |



|            | Туре  | Packed/unit                          | Order no.  |
|------------|---|--------------------------------------|--|
| 1.5/2 ml   | for adaptor order no. 75008190:                 |                                      |  |
|            | 1.5 ml microlitre tube, PE, with snap lid       | 500                                  | 76001163   |
|            | 1.5 ml microlitre tube, PP, with screw lid      | 500                                  | 76001148   |
|            | 2.0 ml microlitre tube, PE, with snap lid       | 500                                  | 76001169   |
| 3.5 ml     | for adaptor order no. 75008189:                 |                                      |  |
|            | tube with round base, PPCO, 3.5 ml              | 10                                   | 75002994   |
|            | tube with round base, PC, 3.5 ml                | 10                                   | 75003068   |
|            | sealing plug, PP                                | 20                                   | 75003069   |
| 7 ml       | for adaptor order no. 75008189:                 |                                      |  |
|            | borosilicate glass, DIN                         | 100                                  | 76009001   |
| 15 ml      | for adaptor order no. 75008186:                 |                                      |  |
|            | borosilicate glass, DIN                         | 100                                  | 76009003   |
|            | borosilicate glass, DIN, graduated              | 1                                    | 75001137   |
|            | borosilicate glass, conical, 12.5 ml            | 100                                  | 76009002   |
|            | borosilicate glass, conical, graduated, 12.5 ml | 1                                    | 75001136   |
|            | tube with round base, PP                        | 1                                    | 76009080   |
| 15 ml con. | for adaptor order no. 75008187:                 |                                      |  |
|            | "Falcon <sup>®</sup> " type                     | 125                                  | 76002845   |
| 25 ml      | for adaptor order no. 75008184:                 |                                      |  |
|            | borosilicate glass, DIN                         | 50                                   | 76009006   |
|            | borosilicate glass, DIN, graduated              | 1                                    | 75001143   |
| 0 ml       | for adaptor order no. 75008182:                 |                                      |  |
|            | borosilicate glass, DIN                         | 10                                   | 76009005   |
|            | borosilicate glass, DIN, graduated              | 1                                    | 75001138   |
|            | tube with round base, graduated, PC             | 1                                    | 76009093   |
|            | tube with round base, PP                        | 1                                    | 76009082   |
|            | rubber pad for tube 76009093 and 76009082       | 1                                    | 76001805   |
| 0 ml con.  | for adaptor order no. 75008183:                 |                                      | 76009005<br>75001138<br>76009093<br>76009082<br>76001805<br>76002844 |
|            | "Falcon <sup>®</sup> " type                     | 25                                   | 76002844   |
| 00 ml      | for adaptor order no. 75008181:                 |                                      |  |
|            | borosilicate glass, DIN                         | 10                                   | 76009007   |
|            | borosilicate glass, DIN, graduated              | 1                                    | 75001146   |
|            | tube with round base, graduated, PC             | 1                                    | 76009095   |
|            |   |                                      |  |
|            | use without adaptor:                            | 1<br>1<br>necopolymer, PE - Dolyetay | Nº V   |
| 80 ml      |   |                                      |  |

#### Centrifuge tubes for fixed angle rotors order no. 75003046,75003334, 75003335, 75003336

| Capacity    | Туре  | Packed/unit           | Order no.  |
|-------------|---|-----------------------|--|
| 3.5 ml      | tube with round base, PPCO                                  | 10                    | 75002994   |
|             | tube with round base, PC                                    | 10                    | 75003068   |
|             | sealing plug, PP  | 20                    | 75003069   |
| 6.5 ml      | tube with round base, PC                                    | 10                    | 75003071   |
|             | tube with round base, PPCO                                  | 10                    | 75003072   |
|             | sealing plug, PP  | 20                    | 75003073   |
| 12 ml       | tube with round base. PC                                    | 1                     | 76002804   |
|             | tube with round base, PPCO                                  | 1                     | 76002856   |
|             | tube with round base, PC, with thread                       | 1                     | 75002805   |
|             | screw lid for tube 2805                                     | 1                     | 75001559   |
|             | Oak-Ridge tube, PC, incl. aerosol tight cap                 | 10                    | 75003074   |
|             | Oak-Ridge tube, PPCO, incl. aerosol tight cap               | 10                    | 75003075   |
| 15 ml con.* | "Falcon <sup>®</sup> " type                                 | 125                   | 76002845   |
| 16 ml       | tube with round base, PC                                    | 10                    | 75002950   |
|             | tube with round base, PPCO                                  | 10                    | 75002951   |
|             | sealing plug, PP  | 10                    | 75002957   |
|             | tube with round base, stainless steel                       | 1                     | 75002955   |
|             | incl. screw lid   |                       |  |
|             | Oak-Ridge tube, PC, incl. aerosol tight cap                 | 10                    | 75003076   |
|             | Oak-Ridge tube, PPCO, incl. aerosol tight cap               | 10                    | 75003077   |
| 38 ml       | tube with round base, PC                                    | 1                     | 76002809   |
|             | tube with round base, PPCO                                  | 1                     | 76002871   |
|             | sealing cap for tube 2809 and 2871                          | 1                     | 76001528   |
|             | tube with round base, PC, with thread                       | 1                     | 75002828   |
|             | screw lid for tube 2828                                     | 1                     | 75001547   |
|             | Oak-Ridge tube, PC, incl. aerosol tight cap                 | 10                    | 75003078   |
|             | Oak-Ridge tube, PPCO, incl. aerosol tight cap               | 10                    | 75003086   |
| 50 ml       | tube with round base, PC                                    | 10                    | 75002958   |
|             | tube with round base, PPCO                                  | 10                    | 75002959   |
|             | sealing plug, PP  | 20                    | 75002974   |
|             | bucket with round base, stainless steel,<br>incl. screw lid | 1                     | 75002968   |
|             | Oak-Ridge tube, PC, incl. aerosol tight cap                 | 10                    | 75003087   |
|             | Oak-Ridge tube, PPCO, incl. aerosol tight cap               | 10                    | 75003088   |
|             | Oak-Ridge tube, Teflon, incl. screw lid                     | 2                     | 75002966   |
|             | Corex <sup>®</sup> glass, 15 ml                             | 1                     | 75002954   |
|             | rubber adaptor for Corex <sup>®</sup> glass 2954            | 2                     | 75002971   |
|             | Corex® glass, 25 ml with screw lid                          | 1                     | 75002970   |
|             | rubber adaptor for Corex <sup>®</sup> glass 2970            | 2                     | 75002973   |
|             | Corex <sup>®</sup> glass, 30 ml                             | 1                     | 75002969   |
|             | rubber adaptor for Corex <sup>®</sup> glass 2969            | 2                     | 75002972   |
| 50 ml con.* | "Falcon <sup>®</sup> " type                                 | 25                    | 76002844   |
| 94 ml       | tube with round base, PC                                    | 1                     | 76002810   |
|             | sealing cap for tube 2810                                   | 1                     | 75001568   |
|             | tube with round base, PC, with thread                       | 1                     | 75002829   |
|             | screw lid for 94 ml tube 2829                               | 1                     | 75001540   |
|             | tube with round base, PPCO thick                            | 1                     | 76002872   |
|             | tube with round base, PPCO thin                             | 25                    | 75002829<br>75001540<br>76002872<br>76002837<br>75002885<br>75001869<br>75001869<br>75002976 |
|             | tube with round base, stainless steel                       | 1                     | 75002883   |
|             | sealing cap for tubes 2837 and 2883                         | 1<br>10<br>DIB Labcat | 75001569   |
|             | Oak-Ridge tube, 85 ml PC                                    | 10                    | 75002976   |







trifuge Spectul blabcare.co.ul

## FAST AND PRECISE SERVICE



Fast response times and competent solutions is our performance promise to our customers all over the world. Our comprehensive service package does not only include repairs and maintenance.

For us, service means technological competence, advice on applications and excellent logistics. The basis for this is our equipment's outstanding quality.

For these reasons, your decision to work together with Kendro is also the first step towards a reliable and reassuring service partnership.

## FAST AND TECHNICAL DATA/ORDER NUMBERS

### Biofuge stratos and Contifuge stratos

| Drive                       |     | induction drive without carbon brushes                           |
|-----------------------------|-----|--|
| Control                     |     | microprocessor control through Easycontrol II                    |
| Min./max. speed             | rpm | 300/23,300, adjustable in increments of 10                       |
| Max. RCF                    |     | 50,377   |
| Max. capacity               | ml  | 4 x 180  |
| Braking/accel. curves       |     | 9/9  |
| Programs                    |     | 9 + 1 pre-cooling program  |
| Noise at max. speed         | dB  | < 60   |
| Run time                    |     | 0 – 9 hrs 59 mins, continuous operation                          |
| Temperature range           | °C  | -19 to +40   |
| Functions                   |     | RCF selection, Quick-run   |
| Rotor recognition           |     | automatic  |
| Imbalance recognition       |     | electronic, depending on speed and ideally suited to every rotor |
| Construction                |     | galvanised steel chassis with armoured chamber                   |
| Equipment safety            |     | lid lock and interlock (two automatic locks)                     |
| External dimensions (hxwxd) | mm  | 395 x 640 x 595  |
| Weight (excluding rotor)    | kg  | 134  |
| Power consumption           | W   | 1,400 W (cooling system ca. 900 W)                               |
| Test standards              |     | manufactured and tested in accordance with EN 61 010-1,          |
|                             |     | EN 61 010-2-020, EN 50 081-1, EN 50 082-1                        |
|                             |     | Requiring approval in accordance with UVV VBG 7z                 |
|                             |     |  |

| Туре              | Equipment           | Order no. |
|-------------------|---------------------|-----------|
| Biofuge stratos   | 230 V, 50/60 Hz     | 75005282  |
|                   | 200/208 V, 50/60 Hz | 75005284  |
|                   | 120 V/60 Hz         | 75005286  |
| Contifuge stratos | 230 V, 50/60 Hz     | 75005283  |
|                   | 200/208 V, 50/60 Hz | 75005285  |

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