



Ultraspeed centrifuges

# Rotor guide for Sorvall WX+ Ultracentrifuge Series

# Find the excellent fit for your application

## With a comprehensive rotor portfolio

| Thermo Scientific™ Rotor                                    | Max. speed (rpm) | Max. RCF (x g) <sup>1</sup>   | K Factor <sup>2</sup>   | Capacity: No. tubes x mL |
|---|------------------|-------------------------------|-------------------------|--------------------------|
| <b>Fixed angle</b>  |                  |                               |                         |                          |
| Thermo Scientific™ Fiberlite™ F65L-6x13.5 Rotor             | 65,000           | 324,000                       | 70                      | 6 x 13.5                 |
| Thermo Scientific™ Fiberlite™ F50L-8x39 Rotor               | 50,000           | 266,000                       | 80.2                    | 8 x 39                   |
| Thermo Scientific™ Fiberlite™ F50L-24x1.5 Rotor             | 50,000           | 280,000                       | 33                      | 24 x 1.5                 |
| Thermo Scientific™ Fiberlite™ F37L-8x100 Rotor              | 37,000           | 182,460                       | 168                     | 8 x 100                  |
| Thermo Scientific™ T-8100 Rotor                             | 100,000          | 802,006                       | 17.7                    | 8 x 6.5                  |
| Thermo Scientific™ T-890 Rotor                              | 90,000           | 692,149                       | 25.1                    | 8 x 12.5                 |
| Thermo Scientific™ TFT-80.4 Rotor                           | 80,000           | 468,246                       | 25.8                    | 10 x 4.4                 |
| Thermo Scientific™ TFT-80.2 Rotor                           | 80,000           | 429,643                       | 22.6                    | 12 x 2                   |
| Thermo Scientific™ T-1270 Rotor                             | 70,000           | 448,811                       | 36.3                    | 12 x 12.5                |
| Thermo Scientific™ T-865 Rotor                              | 65,000           | 429,459                       | 51.7                    | 8 x 36                   |
| Thermo Scientific™ T-1250 Rotor                             | 50,000           | 301,032                       | 68.7                    | 12 x 36                  |
| Thermo Scientific™ T-647.5 Rotor                            | 47,500           | 250,259                       | 121                     | 6 x 100                  |
| Thermo Scientific™ TFT-45.6 Rotor                           | 45,000           | 238,859/ 204,252 <sup>†</sup> | 41.1/ 49.6 <sup>‡</sup> | 40 x 6.0                 |
| Thermo Scientific™ A-621 Rotor                              | 21,000           | 204,252                       | 751                     | 6 x 250                  |
| <b>Swinging bucket</b>                                      |                  |                               |                         |                          |
| Thermo Scientific™ TH-660 Rotor                             | 60,000           | 488,576                       | 44.4                    | 6 x 4.4                  |
| Thermo Scientific™ AH-650 Rotor                             | 50,000           | 296,005                       | 53                      | 6 x 5                    |
| Thermo Scientific™ TH-641 Rotor                             | 41,000           | 287,660                       | 114                     | 6 x 13.2                 |
| Thermo Scientific™ SureSpin™ 632 (17 mL) Rotor              | 32,000           | 191,759                       | 221                     | 6 x 17                   |
| Thermo Scientific™ SureSpin™ 632 (38.5 mL) Rotor            | 32,000           | 187,295                       | 194                     | 6 x 38.5                 |
| Thermo Scientific™ SureSpin™ 630 (17 mL) Rotor <sup>§</sup> | 30,000           | 166,880                       | 268                     | 6 x 17                   |
| Thermo Scientific™ SureSpin™ 630 (36 mL) Rotor <sup>§</sup> | 30,000           | 166,880                       | 219                     | 6 x 36                   |
| Thermo Scientific™ AH-629 (17 mL) Rotor                     | 29,000           | 155,846                       | 284                     | 6 x 17                   |
| Thermo Scientific™ AH-629 (36 mL) Rotor                     | 29,000           | 151,243                       | 242                     | 6 x 36                   |
| <b>Vertical</b>   |                  |                               |                         |                          |
| Thermo Scientific™ StepSaver™ 70V6 Rotor                    | 70,000           | 467,420                       | 8.7                     | 8 x 6                    |
| Thermo Scientific™ StepSaver™ 65V13 Rotor                   | 65,000           | 400,671                       | 12.9                    | 8 x 13.5                 |
| Thermo Scientific™ StepSaver™ 50V39 Rotor                   | 50,000           | 241,831                       | 35.8                    | 8 x 39                   |
| Thermo Scientific™ TV-1665 Rotor                            | 65,000           | 414,357                       | 9.8                     | 16 x 6                   |
| Thermo Scientific™ TV-860 Rotor                             | 60,000           | 340,596                       | 25.2                    | 8 x 35                   |
| <b>Neo angle</b>  |                  |                               |                         |                          |
| Thermo Scientific™ TN-890 Rotor                             | 90,000           | 645,101                       | 10                      | 8 x 5                    |
| Thermo Scientific™ TN-1065 Rotor                            | 65,000           | 401,614                       | 23                      | 10 x 12                  |
| Thermo Scientific™ TN-1865 Rotor                            | 65,000           | 430,874                       | 15                      | 18 x 5                   |

\* Zonal and continuous flow rotors are also available. Please contact your sales representative for more information.

\*\* RCF calculated for maximum rotor radius.

† K factor calculated assuming the maximum volume in a sealed tube.

‡ Outer row/inner row.

§ These rotors have been replaced by SureSpin 632 6 x 17 mL and 6 x 38.5 mL ultracentrifuge rotors. Please contact your sales representative to inquire about the availability of related accessories and labware.



Thermo Scientific™ Sorvall™ WX+ Ultracentrifuge

# Thermo Scientific™ Fiberlite™ F65L-6x13.5 Fixed Angle Rotor



## Fiberlite F65L-6 x 13.5 rotor specifications

|                         |                        |               |
|-------------------------|------------------------|---------------|
| Type                    | Fixed angle            |               |
| Material                | Carbon fiber composite |               |
| Capacity                | 6 x 13.5 mL            |               |
| Maximum speed           | 65,000 rpm             |               |
| Maximum sample density  | 1.2 g/mL               |               |
| Tube dimensions (Ø x L) | 16 x 76 mm             |               |
| Angle                   | 30°                    |               |
| K factor                | 70                     |               |
| Net weight              | 4.31 kg/9.5 lb         |               |
| Warranty                | 15 years               |               |
|                         | <b>RCF</b>             | <b>Radius</b> |
| Maximum                 | 324,000 x g            | 68.4 mm       |
| Minimum                 | 99,372 x g             | 21 mm         |

## Fiberlite F65L-6 x 13.5 rotor package (Cat. No. 096-067135)

| Description  | Cat. No.   |
|--|------------|
| Rotor lid assembly   | 099-067135 |
| O-Ring refresher kit (5 o-rings, 3 vacuum grease packets, 3 lubricant packets) | 021-067135 |
| Lid fastening tool   | 014-2455   |
| PC bottle assembly (3 pkg. of 2)   | 010-0128   |
| Tube removal tool  | 097-1469   |
| Rotor stand  | 20048993   |
| Vacuum grease  | 76003500   |
| Lubricant  | 70006692   |
| Ultraspeed rotor log book  | 52384      |
| Extra overspeed decal (65,000 rpm)   | 014-2903   |

## Labware ordering information

| Tube vol. (mL) | Fill vol. (mL) | Description                | Cat. No. | Qty./pkg. | Tubes/rotor | Max. speed (rpm) | Max. RCF* (x g) | Ø x L (mm) | Required tube closures, adapters, tools, and accessories |          |           |                           |
|----------------|----------------|----------------------------|----------|-----------|-------------|------------------|-----------------|------------|--|----------|-----------|---------------------------|
|                |                |                            |          |           |             |                  |                 |            | Type   | Cat. No. | Qty./pkg. | Description               |
| 13.5           | 10.4           | PC bottle assembly         | 010-1382 | 2         | 6           | 65,000           | 324,000         | 16 x 76    | Closure  | Included | 2         | Aluminum sealing assembly |
|                |                |                            |          |           |             |                  |                 |            | Tool   | 097-1469 | 1         | Removal tool              |
| 13.5           | 10.4           | PC bottle only             | 010-1380 | 6         | 6           | 65,000           | 324,000         | 16 x 76    | –  | –        | –         | –                         |
| 13.5           | 8.9            | OptiSeal™ polyallomer tube | 010-1262 | 56        | 6           | 65,000           | 324,000         | 16 x 60    | Closure  | 010-1355 | 2         | Spacer                    |
|                |                |                            |          |           |             |                  |                 |            | Tool   | 017-0045 | 1         | Spacer removal tool       |
|                |                |                            |          |           |             |                  |                 |            | Tool   | 017-0044 | 1         | Tube extraction tool      |

# Thermo Scientific™ Fiberlite™ F50L-8x39 Fixed Angle Rotor



## Fiberlite F50L-8 x 39 rotor specifications

|                         |                        |               |
|-------------------------|------------------------|---------------|
| Type                    | Fixed angle            |               |
| Material                | Carbon fiber composite |               |
| Capacity                | 8 x 39 mL              |               |
| Maximum speed           | 50,000 rpm             |               |
| Maximum sample density  | 1.2 g/mL               |               |
| Tube dimensions (Ø x L) | 25 x 89 mm             |               |
| Angle                   | 23°                    |               |
| K factor                | 80.2                   |               |
| Net weight              | 8.39 kg/18.5 lb        |               |
| Warranty                | 15 years               |               |
|                         | <b>RCF</b>             | <b>Radius</b> |
| Maximum                 | 266,000 x g            | 95.07 mm      |
| Minimum                 | 109,200 x g            | 43 mm         |

## Fiberlite F50L-8 x 39 rotor package (Cat. No. 096-087051)

| Description  | Cat. No.   |
|--|------------|
| Rotor lid assembly   | 099-087051 |
| O-Ring refresher kit (5 o-rings, 3 vacuum grease packets, 3 lubricant packets) | 021-087051 |
| Lid fastening tool   | 014-2455   |
| PC bottle assembly (4 pkg. of 2)   | 010-1371   |
| Tube removal tool  | 097-1469   |
| Rotor stand  | 20048993   |
| Vacuum grease  | 76003500   |
| Lubricant  | 70006692   |
| Ultraspeed rotor log book  | 52384      |
| Extra overspeed decal (50,000 rpm)   | 014-2902   |

## Labware ordering information

| Tube vol. (mL) | Fill vol. (mL) | Description                | Cat. No. | Qty./pkg. | Tubes/rotor | Max. speed (rpm) | Max. RCF* (x g) | Ø x L (mm) | Required tube closures, adapters, tools, and accessories |          |           |                           |
|----------------|----------------|----------------------------|----------|-----------|-------------|------------------|-----------------|------------|--|----------|-----------|---------------------------|
|                |                |                            |          |           |             |                  |                 |            | Type   | Cat. No. | Qty./pkg. | Description               |
| 39             | 26.3           | PC bottle assembly         | 010-1371 | 2         | 8           | 50,000           | 266,000         | 25 x 89    | Closure  | Included | 2         | Aluminum sealing assembly |
|                |                |                            |          |           |             |                  |                 |            | Tool   | 097-1469 | 1         | Removal tool              |
| 39             | 26.3           | PC bottle only             | 010-1370 | 6         | 6           | 50,000           | 266,000         | 25 x 89    | -  | -        | -         | -                         |
| 39             | 32.4           | OptiSeal™ polyallomer tube | 010-1289 | 56        | 6           | 50,000           | 266,000         | 25 x 77    | Closure  | 010-1356 | 2         | Spacer                    |
|                |                |                            |          |           |             |                  |                 |            | Tool   | 017-0045 | 1         | Spacer removal tool       |
|                |                |                            |          |           |             |                  |                 |            | Tool   | 017-0044 | 1         | Tube extraction tool      |

# Thermo Scientific™ Fiberlite™ F50L-24x1.5 Fixed Angle Rotor



## Fiberlite F50L-24 x 1.5 rotor specifications

|                         |                        |               |
|-------------------------|------------------------|---------------|
| Type                    | Fixed angle            |               |
| Material                | Carbon fiber composite |               |
| Capacity                | 24 x 1.5 mL            |               |
| Maximum speed           | 50,000 rpm             |               |
| Maximum sample density  | 1.2 g/mL               |               |
| Tube dimensions (Ø x L) | 11 x 40 mm             |               |
| Angle                   | 45°                    |               |
| K factor                | 33                     |               |
| Net weight              | 5.3 kg/11.5 lb         |               |
| Warranty                | 15 years               |               |
|                         | <b>RCF</b>             | <b>Radius</b> |
| Maximum                 | 280,000 x g            | 100 mm        |
| Minimum                 | 201,600 x g            | 72 mm         |

## Fiberlite F50L-24 x 1.5 rotor package (Cat. No. 096-247028)

| Description  | Cat. No.   |
|--|------------|
| Rotor lid assembly   | 099-247028 |
| O-Ring refresher kit (5 o-rings, 3 vacuum grease packets, 3 lubricant packets) | 021-247028 |
| Lid fastening tool   | 014-2455   |
| 1.5 mL polyallomer microtubes (1 pkg. of 100)                                  | 314352H01  |
| Rotor stand  | 20048993   |
| Vacuum grease  | 76003500   |
| Lubricant  | 70006692   |
| Ultraspeed rotor log book  | 52384      |
| Extra overspeed decal (65,000 rpm)   | 014-2902   |

## Labware ordering information

| Tube vol. (mL) | Fill vol. (mL) | Description             | Cat. No.  | Qty./pkg. | Tubes/rotor | Max. speed (rpm) | Max. RCF* (x g) | Ø x L (mm) | Required tube closures, adapters, tools, and accessories |          |           |               |
|----------------|----------------|-------------------------|-----------|-----------|-------------|------------------|-----------------|------------|--|----------|-----------|---------------|
|                |                |                         |           |           |             |                  |                 |            | Type   | Cat. No. | Qty./pkg. | Description   |
| 1.5            | 1.5            | Polyallomer microtubes* | 314352H01 | 100       | 24          | 50,000           | 280,000         | 11 x 40    | Closure  | Included | –         | Snap-on seals |

\* Polyallomer microtubes may be centrifuged at maximum speed when partially full (0.2–1.5 mL per tube).

# Thermo Scientific™ Fiberlite™ F37L-8x100 Rotor



## Fiberlite F37L-8 x 100 rotor specifications

|                         |                        |               |
|-------------------------|------------------------|---------------|
| Type                    | Fixed angle            |               |
| Material                | Carbon fiber composite |               |
| Capacity                | 8 x 100 mL             |               |
| Maximum speed           | 37,000 rpm             |               |
| Maximum sample density  | 1.2 g/mL               |               |
| Tube dimensions (Ø x L) | 38 x 102 mm            |               |
| Angle                   | 25°                    |               |
| K factor                | 168                    |               |
| Net weight              | 11.34 kg/25 lb         |               |
| Warranty                | 15 years               |               |
|                         | <b>RCF</b>             | <b>Radius</b> |
| Maximum                 | 182,460 x g            | 119 mm        |
| Minimum                 | 73,600 x g             | 48 mm         |

## Fiberlite F37L-8 x 100 rotor package (Cat. No. 096-087056)

| Description   | Cat. No.   |
|---|------------|
| Rotor lid assembly  | 099-087056 |
| O-Ring refresher kit (5 o-rings, 3 vacuum grease packets) | 021-087056 |
| Lid fastening tool  | 014-2455   |
| PC bottle assembly (1 pkg. of 8)                          | 010-1333   |
| Tube removal tool   | 097-1469   |
| Rotor stand   | 20048993   |
| Vacuum grease   | 017-0025   |
| Ultraspeed rotor log book                                 | 52384      |
| Extra overspeed decal (37,000 rpm)                        | 014-2889   |

## Labware ordering information

| Tube vol.<br>(mL) | Fill vol.<br>(mL) | Description        | Cat. No. | Qty./<br>pkg. | Tubes/<br>rotor | Max. speed<br>(rpm) | Max. RCF<br>(x g) | Ø x L<br>(mm) | Required tube closures, adapters, tools,<br>and accessories |          |               |                                 |
|-------------------|-------------------|--------------------|----------|---------------|-----------------|---------------------|-------------------|---------------|---|----------|---------------|---------------------------------|
|                   |                   |                    |          |               |                 |                     |                   |               | Type  | Cat. No. | Qty./<br>pkg. | Description                     |
| 100               | 70                | PC bottle assembly | 010-1333 | 8             | 8               | 37,000              | 182,460           | 38 x 102      | Closure   | Included | 8             | Aluminum sealing assembly       |
|                   |                   |                    |          |               |                 |                     |                   |               | Tool  | 097-1469 | 1             | Removal tool                    |
| 100               | 70                | PC bottle only     | 010-1331 | 8             | 8               | 37,000              | 182,460           | 38 x 102      | -   | -        | -             | -                               |
| 39                | 26.3              | PC bottle assembly | 010-1371 | 2             | 8               | 30,000              | 119,950           | 25 x 89       | Adapter   | 010-0189 | 2             | 1 Place/<br>adapter             |
|                   |                   |                    |          |               |                 |                     |                   |               | Closure   | Included | 2             | Aluminum<br>sealing<br>assembly |
|                   |                   |                    |          |               |                 |                     |                   |               | Tool  | 097-1469 | 1             | Removal tool                    |
| 39                | 26.3              | PC bottle only     | 010-1370 | 6             | 8               | 30,000              | 119,950           | 25 x 89       | -   | -        | -             | -                               |
| 13.5              | 10.4              | PC bottle assembly | 010-1382 | 2             | 8               | 30,000              | 119,950           | 16 x 76       | Adapter   | 010-0191 | 2             | 1 Place/<br>adapter             |
|                   |                   |                    |          |               |                 |                     |                   |               | Closure   | Included | 2             | Aluminum<br>sealing<br>assembly |
|                   |                   |                    |          |               |                 |                     |                   |               | Tool  | 097-1469 | 1             | Removal tool                    |
| 13.5              | 10.4              | PC bottle only     | 010-1380 | 6             | 8               | 30,000              | 119,950           | 16 x 76       | -   | -        | -             | -                               |



# Thermo Scientific™ T-8100 Fixed Angle Rotor



## T-8100 rotor specifications

|                         |               |               |
|-------------------------|---------------|---------------|
| Type                    | Fixed angle   |               |
| Material                | Titanium      |               |
| Capacity                | 8 x 6.5 mL    |               |
| Maximum speed           | 100,000 rpm   |               |
| Maximum sample density  | 1.2 g/mL      |               |
| Tube dimensions (Ø x L) | 13 x 64 mm    |               |
| Angle                   | 26°           |               |
| K factor                | 17.7          |               |
| Net weight              | 3.7 kg/8.2 lb |               |
| Warranty                | 7 years       |               |
|                         | <b>RCF</b>    | <b>Radius</b> |
| Maximum                 | 802,006 x g   | 71.8 mm       |
| Average                 | 599,829 x g   | 53.7 mm       |
| Minimum                 | 397,652 x g   | 35.6 mm       |

## Ordering information

| Description                         | Cat. No. |
|-------------------------------------|----------|
| <b>T-8100 rotor package</b>         |          |
| T-8100 Fixed Angle Rotor            | 45621    |
| Rotor cover o-ring (2)              | 45657    |
| Rotor cover locking nut o-ring (5)  | 45658    |
| Rotor cover tool                    | 20490312 |
| Rotor stand                         | 20048993 |
| Vacuum grease                       | 76003500 |
| Lubricant                           | 70006692 |
| Extra overspeed decal (100,000 rpm) | 45659    |
| Ultracentrifuge rotor log book      | 52384    |
| Instruction manual                  | 45623    |
| <b>Accessories</b>                  |          |
| Ultracrimp/clearcrimp sealing tool  | 03920    |
| Crimp gauge replacement             | 03919    |
| Extra plugs and caps                | 03999    |
| Tube rack                           | 03921    |
| Rotor cap                           | 45662    |
| Tube cap vise                       | 52176    |
| Tube removal tool                   | 52177    |

# Thermo Scientific™ T-8100 Fixed Angle Rotor - continued

## Labware ordering information

| Tube vol. (mL) | Fill vol. (mL) | Description         | Cat. No. | Qty./pkg. | Tubes/rotor | Max. speed (rpm) | Max. RCF (x g) | Ø x L (mm) | Required tube closures, adapters, tools, and accessories |          |           |                              |
|----------------|----------------|---------------------|----------|-----------|-------------|------------------|----------------|------------|--|----------|-----------|------------------------------|
|                |                |                     |          |           |             |                  |                |            | Type   | Cat. No. | Qty./pkg. | Description                  |
| 6.0            | 5.7            | PA ultracrimp tube  | 03945    | 50        | 8           | 100,000          | 802,006        | 13 x 66    | Closure  | Included | 50        | Ultracrimp plugs and caps    |
|                |                |                     |          |           |             |                  |                |            | Closure  | 45662    | 1         | Rotor cap                    |
|                |                |                     |          |           |             |                  |                |            | Accessory  | 03921    | 1         | Tube rack                    |
|                |                |                     |          |           |             |                  |                |            | Tool   | 03920    | 1         | Ultracrimp sealing tool      |
| 6.0            | 5.7            | PET clearcrimp tube | 01086    | 50        | 8           | 100,000          | 802,006        | 13 x 66    | Closure  | Included | 50        | Ultracrimp plugs and caps    |
|                |                |                     |          |           |             |                  |                |            | Closure  | 45662    | 1         | Rotor cap                    |
|                |                |                     |          |           |             |                  |                |            | Accessory  | 03921    | 1         | Tube rack                    |
|                |                |                     |          |           |             |                  |                |            | Tool   | 03920    | 1         | Ultracrimp sealing tool      |
| 6.5            | 5.8            | PA thin-walled tube | 45660    | 50        | 8           | 80,000           | 513,284        | 13 x 64    | Closure  | 45801    | 1         | Multipiece Titanium assembly |
|                |                |                     |          |           |             |                  |                |            | Tool   | 52176    | 1         | Tube cap vise                |
|                |                |                     |          |           |             |                  |                |            | Tool   | 52177    | 1         | Tube removal tool            |



# Thermo Scientific™ T-890 Fixed Angle Rotor



## T-890 rotor specifications

|                         |               |               |
|-------------------------|---------------|---------------|
| Type                    | Fixed angle   |               |
| Material                | Titanium      |               |
| Capacity                | 8 x 12.5 mL   |               |
| Maximum speed           | 90,000 rpm    |               |
| Maximum sample density  | 1.2 g/mL      |               |
| Tube dimensions (Ø x L) | 16 x 80 mm    |               |
| Angle                   | 25°           |               |
| K factor                | 25.1          |               |
| Net weight              | 4.5 kg/9.9 lb |               |
| Warranty                | 7 years       |               |
|                         | <b>RCF</b>    | <b>Radius</b> |
| Maximum                 | 692,149 x g   | 76.5 mm       |
| Average                 | 500,790 x g   | 55.3 mm       |
| Minimum                 | 309,431 x g   | 34.2 mm       |

## Ordering information

| Description   | Cat. No. |
|---|----------|
| <b>T-890 rotor package</b>  |          |
| T-890 Fixed Angle Rotor   | 11690    |
| Rotor stand   | 20048993 |
| Vacuum grease   | 76003500 |
| Lubricant   | 70006692 |
| Extra overspeed decal (90,000 rpm)  | 11696    |
| Rotor cover   | 70050436 |
| Rotor cover o-ring (2)  | 20290464 |
| Rotor cover locking nut   | 70048779 |
| Rotor cover locking nut o-ring (5)  | 91910    |
| Rotor cover tool  | 20490312 |
| Ultracentrifuge rotor log book  | 52384    |
| Instruction manual  | 11656    |
| <b>Accessories</b>  |          |
| Ultracrimp/clearcrimp sealing tool  | 03920    |
| Crimp gauge replacement   | 03919    |
| Extra plugs and caps  | 03999    |
| Tube racks (2)  | 03922    |
| Wrench for reseal tubes   | 75000478 |
| Tube removal tool for reseal tubes  | 75000479 |
| Tool kit for multipiece assembly (tube cap vise, tube removal tool, torque wrench, 7/16 in. wrench) | 52609    |

# Thermo Scientific™ T-890 Fixed Angle Rotor - continued

## Labware ordering information

| Tube vol. (mL) | Fill vol. (mL) | Description          | Cat. No. | Qty./ pkg. | Tubes/ rotor | Max. speed (rpm) | Max. RCF (x g) | Ø x L (mm) | Required tube closures, adapters, tools, and accessories |          |            |                                    |
|----------------|----------------|----------------------|----------|------------|--------------|------------------|----------------|------------|--|----------|------------|------------------------------------|
|                |                |                      |          |            |              |                  |                |            | Type   | Cat. No. | Qty./ pkg. | Description                        |
| 12.5           | 11.8           | PA thin-walled tube  | 03128    | 50         | 8            | 75,000           | 480,659        | 16 x 76    | Closure  | 52634    | 1          | Multipiece titanium seal assembly* |
|                |                |                      |          |            |              |                  |                |            | Accessories  | 52609    | 1          | Tool kit for multipiece assembly   |
| 11.5           | 11.5           | PA ultracrimp tube   | 03987    | 50         | 8            | 90,000           | 692,149        | 16 x 76    | Closure  | Included | 50         | Plug and cap                       |
|                |                |                      |          |            |              |                  |                |            | Closure  | 03993    | 1          | Rotor cap                          |
|                |                |                      |          |            |              |                  |                |            | Accessory  | 03922    | 1          | Tube racks                         |
|                |                |                      |          |            |              |                  |                |            | Tool   | 03920    | 1          | Crimp sealing tool                 |
| 11.5           | 11.5           | PET clearcrimp tube  | 01087    | 50         | 8            | 90,000           | 692,149        | 16 x 76    | Closure  | Included | 50         | Plug and cap                       |
|                |                |                      |          |            |              |                  |                |            | Closure  | 03993    | 1          | Rotor cap                          |
|                |                |                      |          |            |              |                  |                |            | Accessory  | 03922    | 1          | Tube racks                         |
|                |                |                      |          |            |              |                  |                |            | Tool   | 03920    | 1          | Crimp sealing tool                 |
| 10.0           | 6.8            | PA thick-walled tube | 03238    | 50         | 8            | 45,000           | 173,037        | 16 x 71    | -  | -        | -          | -                                  |
| 10.0           | 6.8            | PC thick-walled tube | 03237    | 50         | 8            | 65,000           | 361,028        | 16 x 71    | -  | -        | -          | -                                  |
| 10.0           | 9.1            | PP oak ridge tube**  | 03929    | 50         | 8            | 50,000           | 213,626        | 16 x 80    | Closure  | 03613    | 25         | Nylon screw cap                    |
| 10.0           | 9.1            | PC oak ridge tube†   | 03020    | 25         | 8            | 65,000           | 361,028        | 16 x 80    | Closure  | 03613    | 25         | Nylon screw cap                    |
| 6.3            | 6.5            | PA Cone-Top™ tube    | 75000450 | 50         | 8            | 80,000           | 546,883        | 16 x 45    | Closure  | 75000452 | 1          | 16 mm crown‡                       |
|                |                |                      |          |            |              |                  |                |            | Closure  | 75000451 | 10         | Stainless steel plug               |
|                |                |                      |          |            |              |                  |                |            | Tool   | 75000478 | 1          | Wrench                             |
|                |                |                      |          |            |              |                  |                |            | Tool   | 75000479 | 1          | Tube removal tool                  |

\* Requires either an aluminum closure rated to 65,000 rpm or a titanium closure rated to 75,000 rpm.

\*\* Rated to 21,000 rpm when partially full.

† Rated to 50,000 rpm when partially full.

‡ Must order one crown for each place in the rotor.

# Thermo Scientific™ TFT-80.4 Fixed Angle Rotor



## TFT-80.4 rotor specifications

|                         |               |               |
|-------------------------|---------------|---------------|
| Type                    | Fixed angle   |               |
| Material                | Titanium      |               |
| Capacity                | 10 x 4.4 mL   |               |
| Maximum speed           | 80,000 rpm    |               |
| Maximum sample density  | 1.2 g/mL      |               |
| Tube dimensions (Ø x L) | 11 x 60 mm    |               |
| Angle                   | 25°           |               |
| K factor                | 25.8          |               |
| Net weight              | 3.5 kg/7.7 lb |               |
| Warranty                | 7 years       |               |
|                         | <b>RCF</b>    | <b>Radius</b> |
| Maximum                 | 468,246 x g   | 65.5 mm       |
| Average                 | 356,010 x g   | 49.8 mm       |
| Minimum                 | 243,774 x g   | 34.1 mm       |

## Ordering information

| Description  | Cat. No.  |
|--|-----------|
| <b>T-80.4 rotor package</b>  |           |
| T-80.4 Fixed Angle Rotor   | 54356     |
| Rotor cover  | 750050436 |
| Rotor cover tool   | 20490312  |
| Rotor cover locking nut  | 70048779  |
| Rotor cover o-ring (5)   | 20290464  |
| Rotor cover locking nut o-ring (5)                                     | 11551     |
| Rotor stand  | 20048993  |
| Vacuum grease  | 76003500  |
| Lubricant  | 70006692  |
| Extra overspeed decal (80,000 rpm)                                     | 11628     |
| Ultracentrifuge rotor log book   | 52384     |
| Instruction manual   | 54355     |
| <b>Accessories</b>   |           |
| Ultracrimp/clearcrimp sealing tool                                     | 03920     |
| Crimp gauge replacement  | 03919     |
| Extra plugs and caps   | 03999     |
| Rotor cap  | 03091     |
| Tube racks   | 03773     |
| Wrench   | 75000478  |
| Tube removal tool  | 75000479  |
| Cone-Top™ Re-Seal™ tube vise 13 mm                                     | 75000481  |
| Tool kit for multipiece assembly (tube cap vise and tube removal tool) | 54380     |

# Thermo Scientific™ TFT-80.4 Fixed Angle Rotor - continued

## Labware ordering information

| Tube vol. (mL) | Fill vol. (mL) | Description              | Cat. No. | Qty./pkg. | Tubes/rotor | Max. speed (rpm) | Max. RCF (x g) | Ø x L (mm) | Required tube closures, adapters, tools, and accessories |          |           |                                   |
|----------------|----------------|--------------------------|----------|-----------|-------------|------------------|----------------|------------|--|----------|-----------|-----------------------------------|
|                |                |                          |          |           |             |                  |                |            | Type   | Cat. No. | Qty./pkg. | Description                       |
| 4.4            | 3.3            | PA thin-walled tube      | 03955    | 50        | 10          | 80,000           | 468,246        | 11 x 60    | Closure  | 54366    | 1         | Multipiece Aluminum assembly      |
|                |                |                          |          |           |             |                  |                |            | Tool   | 52176    | 1         | Tube cap vise                     |
|                |                |                          |          |           |             |                  |                |            | Tool   | 11557    | 1         | Tube removal tool                 |
| 3.5            | 3.5            | PA ultracrimp tube       | 03905    | 50        | 10          | 80,000           | 468,246        | 11 x 60    | Closure  | Included | 50        | Ultracrimp plugs and caps         |
|                |                |                          |          |           |             |                  |                |            | Closure  | 03091    | 1         | Rotor cap                         |
|                |                |                          |          |           |             |                  |                |            | Accessory  | 03773    | 1         | Tube rack                         |
|                |                |                          |          |           |             |                  |                |            | Tool   | 03920    | 1         | Ultracrimp sealing tool           |
| 2.0            | 2.0            | PA Cone-Top Re-Seal tube | 75000459 | 50        | 10          | 80,000           | 468,246        | 11 x 32    | Closure  | 75000460 | 1         | 11 mm Noryl™ cone-top tube crown* |
|                |                |                          |          |           |             |                  |                |            | Closure  | 75000451 | 10        | Stainless steel plug              |
|                |                |                          |          |           |             |                  |                |            | Tool   | 75000478 | 1         | Wrench                            |
|                |                |                          |          |           |             |                  |                |            | Tool   | 75000479 | 1         | Tube removal tool                 |
|                |                |                          |          |           |             |                  |                |            | Tool   | 75000481 | 1         | Tube vise                         |

\* Must order one crown for each place in the rotor.

# Thermo Scientific™ TFT-80.2 Fixed Angle Rotor



## TFT-80.2 rotor specifications

|                         |               |               |
|-------------------------|---------------|---------------|
| Type                    | Fixed angle   |               |
| Material                | Titanium      |               |
| Capacity                | 12 x 2.0 mL   |               |
| Maximum speed           | 80,000 rpm    |               |
| Maximum sample density  | 1.2 g/mL      |               |
| Tube dimensions (Ø x L) | 8 x 51 mm     |               |
| Angle                   | 25°           |               |
| K factor                | 22.6          |               |
| Net weight              | 2.5 kg/5.5 lb |               |
| Warranty                | 7 years       |               |
|                         | <b>RCF</b>    | <b>Radius</b> |
| Maximum                 | 429,643 x g   | 60.1 mm       |
| Average                 | 335,994 x g   | 47.0 mm       |
| Minimum                 | 242,344 x g   | 33.9 mm       |

## Ordering information

| Description                        | Cat. No. |
|------------------------------------|----------|
| <b>T-80.2 rotor package</b>        |          |
| TFT-80.2 Fixed Angle Rotor         | 54456    |
| Rotor cover                        | 70051388 |
| Rotor cover locking nut            | 70048779 |
| Rotor cover tool                   | 20490312 |
| Rotor cover o-ring (5)             | 20290479 |
| Rotor cover locking nut o-ring (5) | 11551    |
| Rotor stand                        | 20048993 |
| Vacuum grease                      | 76003500 |
| Lubricant                          | 70006692 |
| Extra overspeed decal (80,000 rpm) | 11628    |
| Ultracentrifuge rotor log book     | 52384    |
| Instruction manual                 | 54462    |
| <b>Accessories</b>                 |          |
| Tube removal tool                  | 11557    |

## Labware ordering information

| Tube vol.<br>(mL) | Fill vol.<br>(mL) | Description            | Cat. No. | Qty./<br>pkg. | Tubes/<br>rotor | Max. speed<br>(rpm) | Max.<br>RCF (x g) | Ø x L (mm) | Required tube closures, adapters, tools,<br>and accessories |          |               |   |
|-------------------|-------------------|------------------------|----------|---------------|-----------------|---------------------|-------------------|------------|---|----------|---------------|---|
|                   |                   |                        |          |               |                 |                     |                   |            | Type  | Cat. No. | Qty./<br>pkg. | Description                                     |
| 2.0               | 1.3               | PA thin-walled<br>tube | 54460    | 50            | 12              | 80,000              | 429,643           | 8 x 51     | Closure   | 54459    | 1             | Multipiece<br>aluminum<br>assembly <sup>1</sup> |
|                   |                   |                        |          |               |                 |                     |                   |            | Tool  | 11557    | 1             | Tube removal<br>tool                            |

<sup>1</sup>Rated up to 65,000 rpm only.

# Thermo Scientific™ T-1270 Fixed Angle Rotor



## T-1270 rotor specifications

|                         |                |               |
|-------------------------|----------------|---------------|
| Type                    | Fixed angle    |               |
| Material                | Titanium       |               |
| Capacity                | 12 x 12.5 mL   |               |
| Maximum speed           | 70,000 rpm     |               |
| Maximum sample density  | 1.2 g/mL       |               |
| Tube dimensions (Ø x L) | 16 x 80 mm     |               |
| Angle                   | 24°            |               |
| K factor                | 36.3           |               |
| Net weight              | 5.9 kg/13.0 lb |               |
| Warranty                | 7 years        |               |
|                         | <b>RCF</b>     | <b>Radius</b> |
| Maximum                 | 448,811 x g    | 82.0 mm       |
| Average                 | 335,513 x g    | 61.3 mm       |
| Minimum                 | 222,216 x g    | 40.6 mm       |

## Ordering information

| Description  | Cat. No. |
|--|----------|
| <b>T-1270 rotor package</b>  |          |
| TFT-1270 Fixed Angle Titanium Rotor  | 08259    |
| Rotor cover  | 08336    |
| Rotor cover locking nut  | 08253    |
| Rotor cover o-ring (1)   | 67932    |
| Rotor cover locking nut o-ring (1)   | 64667    |
| Rotor cover tool   | 20490312 |
| Rotor stand  | 20048993 |
| Vacuum grease  | 76003500 |
| Lubricant  | 70006692 |
| Extra overspeed decal (70,000 rpm)   | 08254    |
| Ultracentrifuge rotor log book   | 52384    |
| Instruction manual   | 08255    |
| Washer for locking nut   | 51301    |
| <b>Accessories</b>   |          |
| Ultracrimp/clearcrimp sealing tool   | 03920    |
| Crimp gauge replacement  | 03919    |
| Extra plugs and caps   | 03999    |
| Tool kit for multipiece assembly (tube cap vise, tube removal tool, torque wrench, and 7/16" wrench) | 52609    |
| Rotor cap  | 03993    |
| Tube racks   | 03922    |
| Wrench   | 75000478 |
| Tube removal tool  | 75000479 |

# Thermo Scientific™ T-1270 Fixed Angle Rotor - continued

## Labware ordering information

| Tube vol.<br>(mL) | Fill vol.<br>(mL) | Description              | Cat. No. | Qty./<br>pkg. | Tubes/<br>rotor | Max. speed<br>(rpm) | Max.<br>RCF (x g) | Ø x L (mm) | Required tube closures, adapters, tools,<br>and accessories |          |               |                           |
|-------------------|-------------------|--------------------------|----------|---------------|-----------------|---------------------|-------------------|------------|---|----------|---------------|---------------------------|
|                   |                   |                          |          |               |                 |                     |                   |            | Type  | Cat. No. | Qty./<br>pkg. | Description               |
| 12.5              | 11.8              | PA thin-walled tube      | 03128    | 50            | 12              | 70,000              | 448,811           | 16 x 76    | Closure   | 52634    | 1             | Multipiece titanium seal  |
|                   |                   |                          |          |               |                 |                     |                   |            | Tool  | 52609    | 1             | Tool kit                  |
| 11.5              | 11.5              | PA ultracrimp tube       | 03987    | 50            | 12              | 70,000              | 448,811           | 16 x 76    | Closure   | Included | 50            | Ultracrimp plugs and caps |
|                   |                   |                          |          |               |                 |                     |                   |            | Closure   | 03993    | 1             | Rotor cap                 |
|                   |                   |                          |          |               |                 |                     |                   |            | Accessory   | 03922    | 1             | Tube racks                |
|                   |                   |                          |          |               |                 |                     |                   |            | Tool  | 03920    | 1             | Ultracrimp sealing tool   |
| 11.5              | 11.5              | PET clearcrimp tube      | 01087    | 50            | 12              | 70,000              | 448,811           | 16 x 76    | Closure   | Included | 50            | Ultracrimp plugs and caps |
|                   |                   |                          |          |               |                 |                     |                   |            | Closure   | 03993    | 1             | Rotor cap                 |
|                   |                   |                          |          |               |                 |                     |                   |            | Accessory   | 03922    | 1             | Tube racks                |
|                   |                   |                          |          |               |                 |                     |                   |            | Tool  | 03920    | 1             | Ultracrimp sealing tool   |
| 10.0              | 6.8               | PA thick-walled tube     | 03238    | 50            | 12              | 45,000              | 185,478           | 16 x 71    | –   | –        | –             | –                         |
| 10.0              | 6.8               | PC thick-walled tube     | 03237    | 50            | 12              | 65,000              | 386,985           | 16 x 71    | –   | –        | –             | –                         |
| 10.0              | 9.1               | PP oak ridge tube*       | 03929    | 50            | 12              | 50,000              | 228,985           | 16 x 80    | Closure   | 03613    | 25            | Nylon screw cap           |
| 10.0              | 9.1               | PC oak ridge tube**      | 03020    | 25            | 12              | 65,000              | 386,985           | 16 x 80    | Closure   | 03613    | 25            | Nylon screw cap           |
| 6.5               | 6.5               | PA cone-top re-seal tube | 75000450 | 50            | 12              | 70,000              | 448,811           | 16 x 45    | Closure   | 75000452 | 1             | 16 mm Noryl crown†        |
|                   |                   |                          |          |               |                 |                     |                   |            | Closure   | 75000451 | 10            | Stainless steel plug      |
|                   |                   |                          |          |               |                 |                     |                   |            | Tool  | 75000478 | 1             | Wrench                    |
|                   |                   |                          |          |               |                 |                     |                   |            | Tool  | 75000479 | 1             | Tube removal tool         |

\* Tube is limited to 21,000 rpm when partially full.

\*\* Rated to 50,000 rpm when partially full.

† Must order one crown for each place in the rotor.



# Thermo Scientific™ T-865 Fixed Angle Rotor



## T-865 rotor specifications

|                         |                |               |
|-------------------------|----------------|---------------|
| Type                    | Fixed angle    |               |
| Material                | Titanium       |               |
| Capacity                | 8 x 36 mL      |               |
| Maximum speed           | 65,000 rpm     |               |
| Maximum sample density  | 1.2 g/mL       |               |
| Tube dimensions (Ø x L) | 25 x 97 mm     |               |
| Angle                   | 23.5°          |               |
| K factor                | 51.7           |               |
| Net weight              | 8.3 kg/18.3 lb |               |
| Warranty                | 7 years        |               |
|                         | <b>RCF</b>     | <b>Radius</b> |
| Maximum                 | 429,459 x g    | 91.0 mm       |
| Average                 | 305,340 x g    | 64.7 mm       |
| Minimum                 | 181,222 x g    | 38.4 mm       |

## Ordering information

| Description  | Cat. No. |
|--|----------|
| <b>T-865 rotor package</b>   |          |
| T-865 Fixed Angle Rotor  | 51411    |
| Rotor cover  | 51380    |
| Rotor cover locking nut  | 51338    |
| Rotor cover o-ring (2)   | 64666    |
| Rotor cover locking nut o-ring (2)   | 64667    |
| Rotor cover tool   | 20490312 |
| Rotor stand  | 20048993 |
| Vacuum grease  | 76003500 |
| Lubricant  | 70006692 |
| Extra overspeed decal (65,000 rpm)   | 51345    |
| Ultracentrifuge rotor log book   | 52384    |
| Instruction manual   | 52266    |
| Washer for locking nut   | 51301    |
| <b>Accessories</b>   |          |
| Ultracrimp/clearcrimp sealing tool   | 03920    |
| Crimp gauge replacement  | 03919    |
| Extra plugs and caps   | 03999    |
| Tool kit for multipiece assembly (tube cap vise, tube removal tool, torque wrench) | 52610    |
| Rotor cap  | 03996    |
| Tube racks   | 03935    |
| Tube removal tool  | 314353   |

# Thermo Scientific™ T-865 Fixed Angle Rotor - continued

## Labware ordering information

| Tube vol. (mL) | Fill vol. (mL) | Description          | Cat. No. | Qty./pkg. | Tubes/rotor | Max. speed (rpm) | Max. RCF (x g) | Ø x L (mm) | Required tube closures, adapters, tools, and accessories |          |           |                              |
|----------------|----------------|----------------------|----------|-----------|-------------|------------------|----------------|------------|--|----------|-----------|------------------------------|
|                |                |                      |          |           |             |                  |                |            | Type   | Cat. No. | Qty./pkg. | Description                  |
| 36.0           | 33.0           | PA thin-walled tube  | 03141    | 25        | 8           | 65,000           | 429,459        | 25 x 89    | Closure  | 52572    | 1         | Multipiece aluminum assembly |
|                |                |                      |          |           |             |                  |                |            | Tool   | 52610    | 1         | Tool kit                     |
| 35.0           | 35.0           | PA ultracrimp tube   | 03989    | 25        | 8           | 65,000           | 429,459        | 25 x 97    | Closure  | Included | 50        | Plug and cap                 |
|                |                |                      |          |           |             |                  |                |            | Accessory  | 03996    | 1         | Rotor cap                    |
|                |                |                      |          |           |             |                  |                |            | Accessory  | 03935    | 1         | Tube racks                   |
|                |                |                      |          |           |             |                  |                |            | Tool   | 03920    | 1         | Ultracrimp sealing tool      |
| 30.0           | 23.0           | PP oak ridge tube*   | 314349   | 25        | 8           | 45,000           | 205,835        | 25 x 94    | Closure  | 314347   | 1         | Aluminum sealing cap         |
|                |                |                      |          |           |             |                  |                |            | Tool   | 314353   | 1         | Tube removal kit             |
| 30.0           | 23.0           | PC oak ridge tube**  | 314348   | 25        | 8           | 65,000           | 429,459        | 25 x 94    | Closure  | 314347   | 1         | Aluminum sealing cap         |
|                |                |                      |          |           |             |                  |                |            | Tool   | 314353   | 1         | Tube removal kit             |
| 11.5           | 11.5           | PA ultracrimp tube   | 03987    | 50        | 8           | 30,000           | 91,482         | 16 x 76    | Closure  | Included | 50        | Plug and cap                 |
|                |                |                      |          |           |             |                  |                |            | Adapter  | 00399    | 1         | Adapter                      |
|                |                |                      |          |           |             |                  |                |            | Accessory  | 03993    | 1         | Rotor cap                    |
|                |                |                      |          |           |             |                  |                |            | Accessory  | 03922    | 1         | Tube rack                    |
|                |                |                      |          |           |             |                  |                |            | Tool   | 03920    | 1         | Ultracrimp sealing tool      |
| 11.5           | 11.5           | PET clearcrimp tube  | 01087    | 50        | 8           | 30,000           | 91,482         | 16 x 76    | Closure  | Included | 50        | Plug and cap                 |
|                |                |                      |          |           |             |                  |                |            | Adapter  | 00399    | 1         | Adapter                      |
|                |                |                      |          |           |             |                  |                |            | Accessory  | 03993    | 1         | Rotor cap                    |
|                |                |                      |          |           |             |                  |                |            | Accessory  | 03922    | 1         | Tube rack                    |
|                |                |                      |          |           |             |                  |                |            | Tool   | 03920    | 1         | Ultracrimp sealing tool      |
| 10.0           | 6.8            | PA thick-walled tube | 03238    | 50        | 8           | 30,000           | 91,482         | 16 x 71    | Adapter  | 00399    | 1         | Adapter                      |
| 10.0           | 6.8            | PC thick-walled tube | 03237    | 50        | 8           | 30,000           | 91,482         | 16 x 71    | Adapter  | 00399    | 1         | Adapter                      |
| 10.0           | 9.1            | PP oak ridge tube†   | 03929    | 50        | 8           | 30,000           | 91,482         | 16 x 80    | Closure  | 03613    | 25        | Nylon screw cap              |
|                |                |                      |          |           |             |                  |                |            | Adapter  | 00399    | 1         | Adapter                      |
| 10.0           | 9.1            | PC oak ridge tube    | 03020    | 25        | 8           | 30,000           | 91,482         | 16 x 80    | Closure  | 03613    | 25        | Nylon screw cap              |
|                |                |                      |          |           |             |                  |                |            | Adapter  | 00399    | 1         | Adapter                      |

\* Tube must be full.

\*\* Rated to 45,000 rpm when partially full.

† Rated to 21,000 rpm when partially full.

# Thermo Scientific™ T-1250 Fixed Angle Rotor



## T-1250 rotor specifications

|                         |                 |               |
|-------------------------|-----------------|---------------|
| Type                    | Fixed angle     |               |
| Material                | Titanium        |               |
| Capacity                | 12 x 36 mL      |               |
| Maximum speed           | 50,000 rpm      |               |
| Maximum sample density  | 1.2 g/mL        |               |
| Tube dimensions (Ø x L) | 25 x 97 mm      |               |
| Angle                   | 24°             |               |
| K factor                | 68.7            |               |
| Net weight              | 11.1 kg/24.5 lb |               |
| Warranty                | 7 years         |               |
|                         | <b>RCF</b>      | <b>Radius</b> |
| Maximum                 | 301,032 x g     | 108.0 mm      |
| Average                 | 227,030 x g     | 81.3 mm       |
| Minimum                 | 152,750 x g     | 54.7 mm       |

## Ordering information

| Description  | Cat. No. |
|--|----------|
| <b>T-1250 rotor package</b>  |          |
| T-1250 Fixed Angle Rotor   | 11713    |
| Rotor cover  | 11716    |
| Rotor cover locking nut  | 11715    |
| Rotor cover o-ring (1)   | 11549    |
| Rotor cover locking nut o-ring (1)   | 11550    |
| Rotor cover tool   | 20490312 |
| Rotor stand  | 20048993 |
| Vacuum grease  | 76003500 |
| Lubricant  | 70006692 |
| Extra overspeed decal (65,000 rpm)   | 51349    |
| Ultracentrifuge rotor log book   | 52384    |
| Instruction manual   | 11718    |
| <b>Accessories</b>   |          |
| Ultracrimp/clearcrimp sealing tool   | 03920    |
| Crimp gauge replacement  | 03919    |
| Extra plugs and caps   | 03999    |
| Tool kit for multipiece assembly (tube cap vise, tube removal tool, torque wrench) | 52610    |
| Rotor cap  | 03996    |
| Tube racks   | 03935    |
| Tube removal tool  | 314353   |

# Thermo Scientific™ T-1250 Fixed Angle Rotor - continued

## Labware ordering information

| Tube vol. (mL) | Fill vol. (mL) | Description          | Cat. No. | Qty./ pkg. | Tubes/ rotor | Max. speed (rpm) | Max. RCF (x g) | Ø x L (mm) | Required tube closures, adapters, tools, and accessories |          |            |                              |
|----------------|----------------|----------------------|----------|------------|--------------|------------------|----------------|------------|--|----------|------------|------------------------------|
|                |                |                      |          |            |              |                  |                |            | Type   | Cat. No. | Qty./ pkg. | Description                  |
| 36.0           | 33.0           | PA thin-walled tube  | 03141    | 25         | 12           | 50,000           | 301,032        | 25 x 89    | Closure  | 52572    | 1          | Multipiece aluminum assembly |
|                |                |                      |          |            |              |                  |                |            | Tool   | 52610    | 1          | Tool kit                     |
| 35.0           | 35.0           | PA ultracrimp tube   | 03989    | 25         | 12           | 50,000           | 301,032        | 25 x 97    | Closure  | Included | 50         | Plug and cap                 |
|                |                |                      |          |            |              |                  |                |            | Closure  | 03996    | 1          | Rotor cap                    |
|                |                |                      |          |            |              |                  |                |            | Accessory  | 03935    | 1          | Tube racks                   |
|                |                |                      |          |            |              |                  |                |            | Tool   | 03920    | 1          | Ultracrimp sealing tool      |
| 30.0           | 23.0           | PP oak ridge tube*   | 314349   | 25         | 12           | 37,000           | 164,845        | 25 x 94    | Closure  | 314347   | 1          | Aluminum sealing cap         |
|                |                |                      |          |            |              |                  |                |            | Tool   | 314353   | 1          | Tube removal kit             |
| 30.0           | 23.0           | PC oak ridge tube**  | 314348   | 25         | 12           | 50,000           | 301,032        | 25 x 94    | Closure  | 314347   | 1          | Aluminum sealing cap         |
|                |                |                      |          |            |              |                  |                |            | Tool   | 314353   | 1          | Tube removal kit             |
| 11.5           | 11.5           | PA ultracrimp tube   | 03987    | 50         | 12           | 27,500           | 91,062         | 16 x 76    | Closure  | Included | 50         | Plug and cap                 |
|                |                |                      |          |            |              |                  |                |            | Adapter  | 00399    | 1          | Adapter                      |
|                |                |                      |          |            |              |                  |                |            | Closure  | 03993    | 1          | Rotor cap                    |
|                |                |                      |          |            |              |                  |                |            | Accessory  | 03922    | 1          | Tube rack                    |
|                |                |                      |          |            |              |                  |                |            | Tool   | 03920    | 1          | Ultracrimp sealing tool      |
| 11.5           | 11.5           | PET clearcrimp tube  | 01087    | 50         | 12           | 27,500           | 91,062         | 16 x 76    | Closure  | Included | 50         | Plug and cap                 |
|                |                |                      |          |            |              |                  |                |            | Adapter  | 00399    | 1          | Adapter                      |
|                |                |                      |          |            |              |                  |                |            | Closure  | 03993    | 1          | Rotor cap                    |
|                |                |                      |          |            |              |                  |                |            | Accessory  | 03922    | 1          | Tube rack                    |
|                |                |                      |          |            |              |                  |                |            | Tool   | 03920    | 1          | Ultracrimp sealing tool      |
| 10.0           | 6.8            | PA thick-walled tube | 03238    | 50         | 12           | 27,500           | 91,062         | 16 x 71    | Adapter  | 00399    | 1          | Adapter                      |
| 10.0           | 6.8            | PC thick-walled tube | 03237    | 50         | 12           | 27,500           | 91,062         | 16 x 71    | Adapter  | 00399    | 1          | Adapter                      |
| 10.0           | 9.1            | PP oak ridge tube    | 03929    | 50         | 12           | 21,000           | 53,102         | 16 x 80    | Closure  | 03613    | 25         | Nylon screw cap              |
|                |                |                      |          |            |              |                  |                |            | Adapter  | 00399    | 1          | Adapter                      |
| 10.0           | 9.1            | PC oak ridge tube    | 03020    | 25         | 12           | 27,500           | 91,062         | 16 x 80    | Closure  | 03613    | 25         | Nylon screw cap              |
|                |                |                      |          |            |              |                  |                |            | Adapter  | 00399    | 1          | Adapter                      |

\* Tube must be full.

\*\* Rated to 37,000 rpm when partially full.

# Thermo Scientific™ T-647.5 Fixed Angle Rotor



## T-647.5 rotor specifications

|                         |               |               |
|-------------------------|---------------|---------------|
| Type                    | Fixed angle   |               |
| Material                | Titanium      |               |
| Capacity                | 6 x 100 mL    |               |
| Maximum speed           | 47,500 rpm    |               |
| Maximum sample density  | 1.2 g/mL      |               |
| Tube dimensions (Ø x L) | 39 x 107 mm   |               |
| Angle                   | 22.5°         |               |
| K factor                | 121           |               |
| Net weight              | 11 kg/24.3 lb |               |
| Warranty                | 7 years       |               |
|                         | <b>RCF</b>    | <b>Radius</b> |
| Maximum                 | 250,259 x g   | 99.3 mm       |
| Average                 | 167,847 x g   | 66.6 mm       |
| Minimum                 | 85,436 x g    | 33.9 mm       |

## Ordering information

| Description                             | Cat. No. |
|---|----------|
| <b>T-647.5 rotor package</b>            |          |
| T-647.5 Fixed Angle Rotor               | 08322    |
| Rotor cover                             | 08333    |
| Rotor cover tool                        | 20490312 |
| Rotor cover o-ring (1)                  | 64668    |
| Rotor cover locking nut o-ring (1)      | 64667    |
| Rotor stand                             | 20048993 |
| Vacuum grease                           | 76003500 |
| Lubricant                               | 70006692 |
| Locking nut                             | 08331    |
| Extra overspeed decal (80,000 rpm)      | 51350    |
| Ultracentrifuge rotor log book          | 52384    |
| Instruction manual                      | 08326    |
| Washer for locking nut                  | 51301    |
| <b>Accessories</b>                      |          |
| Ultracrimp/clearcrimp sealing tool      | 03920    |
| Crimp gauge replacement                 | 03919    |
| Extra plugs and caps                    | 03999    |
| Rotor cap                               | 03998    |
| Tube rack                               | 03940    |
| Tube removal tool                       | 314353   |
| Replacement o-ring for sealing assembly | 314463   |

# Thermo Scientific™ T-647.5 Fixed Angle Rotor - continued

## Labware ordering information

| Tube vol.<br>(mL) | Fill vol.<br>(mL) | Description           | Cat. No. | Qty./<br>pkg. | Tubes/<br>rotor | Max. speed<br>(rpm) | Max. RCF<br>(x g) | Ø x L (mm) | Required tube closures, adapters, tools,<br>and accessories |          |               |                            |
|-------------------|-------------------|-----------------------|----------|---------------|-----------------|---------------------|-------------------|------------|---|----------|---------------|----------------------------|
|                   |                   |                       |          |               |                 |                     |                   |            | Type  | Cat. No. | Qty./<br>pkg. | Description                |
| 90.0              | 89.0              | PA ultracrimp<br>tube | 03990    | 25            | 6               | 47,500              | 250,259           | 39 x 107   | Closure   | Included | 25            | Plug and cap               |
|                   |                   |                       |          |               |                 |                     |                   |            | Closure   | 03998    | 1             | Rotor cap                  |
|                   |                   |                       |          |               |                 |                     |                   |            | Accessory   | 03940    | 1             | Tube rack                  |
|                   |                   |                       |          |               |                 |                     |                   |            | Tool  | 03920    | 1             | Ultracrimp<br>sealing tool |
| 75.0              | 68.0              | PC oak ridge<br>tube* | 314460   | 6             | 6               | 47,500              | 250,259           | 39 x 107   | Closure   | 314462   | 1             | Aluminum<br>sealing lid    |
|                   |                   |                       |          |               |                 |                     |                   |            | Tool  | 314353   | 1             | Tube removal<br>kit        |

\* Rated to 41,000 rpm when partially full.

# Thermo Scientific™ TFT-45.6 Fixed Angle Rotor



## TFT-45.6 rotor specifications

|                         |                                |                               |
|-------------------------|--------------------------------|-------------------------------|
| Type                    | Fixed angle                    |                               |
| Material                | Titanium                       |                               |
| Capacity                | 40 x 6 mL                      |                               |
| Maximum speed           | 45,000 rpm                     |                               |
| Maximum sample density  | 1.2 g/mL                       |                               |
| Tube dimensions (Ø x L) | 13 x 66 mm                     |                               |
| Angle                   | 20°                            |                               |
| K factor                | 41.4 outer row, 49.6 inner row |                               |
| Net weight              | 10.9 kg/24.3 lb                |                               |
| Warranty                | 7 years                        |                               |
|                         | <b>RCF<br/>Outer/inner</b>     | <b>Radius<br/>Outer/inner</b> |
| Maximum                 | 238,859 x g/204,252 x g        | 105.6 mm/90.3 mm              |
| Average                 | 205,383 x g/170,775 x g        | 90.8 mm/75.5 mm               |
| Minimum                 | 171,906 x g/137,299 x g        | 76.0 mm/60.7 mm               |

## Ordering information

| Description                        | Cat. No. |
|------------------------------------|----------|
| <b>T-45.6 rotor package</b>        |          |
| TFT-45.6 Fixed Angle Rotor         | 11637    |
| Rotor stand                        | 20048993 |
| Vacuum grease                      | 76003500 |
| Lubricant                          | 70006692 |
| Rotor cover                        | 70048671 |
| Rotor cover locking nut            | 70048348 |
| Rotor cover tool                   | 20490312 |
| Rotor cover o-ring (5)             | 11547    |
| Rotor cover locking nut o-ring (5) | 11551    |
| Rotor cover tool                   | 20490312 |
| Extra overspeed decal (45,000 rpm) | 51351    |
| Ultracentrifuge rotor log book     | 52384    |
| Instruction manual                 | 11512    |
| <b>Accessories</b>                 |          |
| Ultracrimp sealing tool            | 03920    |
| Crimp gauge replacement            | 03919    |
| Extra plugs and caps               | 03999    |
| Rotor cap                          | 03992    |
| Tube rack                          | 03921    |
| Wrench                             | 75000478 |
| Tube removal tool                  | 75000479 |
| Cone-Top Re-Seal tube vise 13 mm   | 75000481 |



# Thermo Scientific™ TFT-45.6 Fixed Angle Rotor - continued

## Labware ordering information

| Tube vol.<br>(mL) | Fill vol.<br>(mL) | Description                    | Cat. No. | Qty./<br>pkg. | Tubes/<br>rotor | Max.<br>speed<br>(rpm) | Max. RCF<br>(x g) | Ø x L (mm) | Required tube closures, adapters, tools,<br>and accessories |          |               |                            |
|-------------------|-------------------|--------------------------------|----------|---------------|-----------------|------------------------|-------------------|------------|---|----------|---------------|----------------------------|
|                   |                   |                                |          |               |                 |                        |                   |            | Type  | Cat. No. | Qty./<br>pkg. | Description                |
| 6.0               | 5.7               | PA ultracrimp<br>tube          | 03945    | 50            | 40              | 45,000                 | 238,859           | 13 x 66    | Closure   | Included | 50            | Plug and cap               |
|                   |                   |                                |          |               |                 |                        |                   |            | Closure   | 03992    | 1             | Rotor cap                  |
|                   |                   |                                |          |               |                 |                        |                   |            | Accessory   | 03921    | 1             | Tube rack                  |
|                   |                   |                                |          |               |                 |                        |                   |            | Tool  | 03920    | 1             | Ultracrimp<br>sealing tool |
| 6.0               | 5.7               | PET<br>clearcrimp<br>tube      | 01086    | 50            | 40              | 45,000                 | 238,859           | 13 x 66    | Closure   | Included | 50            | Plug<br>and cap            |
|                   |                   |                                |          |               |                 |                        |                   |            | Closure   | 03992    | 1             | Rotor cap                  |
|                   |                   |                                |          |               |                 |                        |                   |            | Accessory   | 03921    | 1             | Tube rack                  |
|                   |                   |                                |          |               |                 |                        |                   |            | Tool  | 03920    | 1             | Ultracrimp<br>sealing tool |
| 3.5               | 3.1               | PA cone-top<br>re-seal tube    | 75000456 | 50            | 40              | 45,000                 | 238,859           | 13 x 32    | Closure   | 75000457 | 1             | 13 mm<br>Noryl crown*      |
|                   |                   |                                |          |               |                 |                        |                   |            | Closure   | 75000451 | 10            | Stainless steel<br>plug    |
|                   |                   |                                |          |               |                 |                        |                   |            | Tool  | 75000478 | 1             | Wrench                     |
|                   |                   |                                |          |               |                 |                        |                   |            | Tool  | 75000481 | 1             | Tube vise                  |
| 2.0               | 2.0               | PA re-seal<br>cone-top<br>tube | 75000458 | 50            | 40              | 45,000                 | 238,859           | 13 x 25    | Closure   | 75000457 | 1             | 13 mm<br>Noryl crown*      |
|                   |                   |                                |          |               |                 |                        |                   |            | Closure   | 75000451 | 10            | Stainless steel<br>plug    |
|                   |                   |                                |          |               |                 |                        |                   |            | Tool  | 75000478 | 1             | Wrench                     |
|                   |                   |                                |          |               |                 |                        |                   |            | Tool  | 75000481 | 1             | Tube vise                  |
|                   |                   |                                |          |               |                 |                        |                   |            | Tool  | 75000479 | 1             | Tube removal<br>tool       |

\* Must order one crown for each place in the rotor.

# Thermo Scientific™ A-621 Fixed Angle Rotor



| A-621 rotor specifications |                 |          |
|----------------------------|-----------------|----------|
| Type                       | Fixed angle     |          |
| Material                   | Aluminum        |          |
| Capacity                   | 6 x 250 mL      |          |
| Maximum speed              | 21,000 Rpm      |          |
| Maximum sample density     | 1.2 g/mL        |          |
| Tube dimensions Ø x L      | 61 x 153 mm     |          |
| Angle                      | 23°             |          |
| K factor                   | 751             |          |
| Net weight                 | 13.6 kg/30.1 lb |          |
| Warranty                   | 7 years         |          |
|                            | RCF             | Radius   |
| Maximum                    | 66,993 x g      | 136.0 mm |
| Average                    | 42,536 x g      | 86.4 mm  |
| Minimum                    | 18,078 x g      | 36.7 mm  |

## Ordering information

| Description                        | Cat. No. |
|------------------------------------|----------|
| <b>A-621 rotor package</b>         |          |
| A-621 Fixed Angle Rotor            | 11876    |
| Rotor cover                        | 11967    |
| Rotor cover locking nut            | 11999    |
| Rotor cover o-ring (6)             | 92233    |
| Rotor cover locking nut o-ring (6) | 90793    |
| Rotor cover tool                   | 20490312 |
| Rotor stand                        | 20048993 |
| Vacuum grease                      | 76003500 |
| Lubricant                          | 70006692 |
| Extra overspeed decal (21,000 rpm) | 52277    |
| Ultracentrifuge rotor log book     | 52384    |
| Instruction manual                 | 11872    |
| Retaining ring pliers              | 65614    |

## Labware ordering information

| Tube vol.<br>(mL) | Fill vol.<br>(mL) | Description            | Cat. No.  | Qty./<br>pkg. | Tubes/<br>rotor | Max. speed<br>(rpm) | Max. RCF<br>(x g) | Dimensions<br>Ø x L (mm) | Required tube closures, adapters,<br>tools, and accessories |           |               |              |
|-------------------|-------------------|------------------------|-----------|---------------|-----------------|---------------------|-------------------|--------------------------|---|-----------|---------------|--------------|
|                   |                   |                        |           |               |                 |                     |                   |                          | Type  | Cat. No.  | Qty./<br>pkg. | Description  |
| 250.0             | 200.0             | PA oak<br>ridge bottle | 314250H01 | 4             | 6               | 21,000              | 66,993            | 61 x 120                 | Closure   | 314249H01 | 1             | Screw<br>cap |

# Thermo Scientific™ TH-660 Swinging Bucket Rotor



## TH-660 rotor specifications

|                         |                 |               |
|-------------------------|-----------------|---------------|
| Type                    | Swinging bucket |               |
| Material                | Titanium        |               |
| Capacity                | 6 x 4.4 mL      |               |
| Maximum speed           | 60,000 rpm      |               |
| Maximum sample density  | 1.2 g/mL        |               |
| Tube dimensions (Ø x L) | 11 x 60 mm      |               |
| Angle                   | 90°             |               |
| K factor                | 44.4            |               |
| Net weight              | 5.8 kg/12.8 lb  |               |
| Warranty                | 5 years         |               |
|                         | <b>RCF</b>      | <b>Radius</b> |
| Maximum                 | 488,576 x g     | 121.5 mm      |
| Average                 | 374,173 x g     | 93.1 mm       |
| Minimum                 | 259,770 x g     | 64.6 mm       |

## Ordering information

| Description                        | Cat. No. |
|------------------------------------|----------|
| <b>TH-660 rotor package</b>        |          |
| TH-660 Swinging Bucket Rotor       | 10502    |
| Rotor stand                        | 20048993 |
| Vacuum grease                      | 76003500 |
| Lubricant                          | 70006692 |
| Extra overspeed decal (60,000 rpm) | 51346    |
| 4.4 mL buckets (6)                 | 10509    |
| Bucket o-ring (ea.)                | 63713    |
| Bucket rack                        | 52243    |
| Bucket cap tool                    | 20048389 |
| Instruction manual                 | 10506    |
| Ultracentrifuge rotor log book     | 52384    |
| <b>Accessories</b>                 |          |
| Conical adapter removal tool       | 75000480 |
| 11 x 32 mm tube vise               | 75000481 |
| Wrench                             | 75000478 |
| Tube removal tool                  | 75000479 |

# Thermo Scientific™ TH-660 Swinging Bucket Rotor - continued

## Labware ordering information

| Tube vol.<br>(mL) | Fill vol.<br>(mL) | Description                           | Cat. No. | Qty./<br>pkg. | Tubes/<br>rotor | Max. speed<br>(rpm) | Max. RCF<br>(x g) | Ø x L (mm) | Required tube closures, adapters, tools,<br>and accessories |          |               |                                    |
|-------------------|-------------------|---------------------------------------|----------|---------------|-----------------|---------------------|-------------------|------------|---|----------|---------------|------------------------------------|
|                   |                   |                                       |          |               |                 |                     |                   |            | Type  | Cat. No. | Qty./<br>pkg. | Description                        |
| 4.4               | 4.0               | PA thin-walled<br>tube                | 03955    | 50            | 6               | 60,000              | 488,576           | 11 x 60    | –   | –        | –             | –                                  |
| 4.0               | 4.0               | PA cone-top<br>re-seal tube           | 75000483 | 50            | 6               | 57,000              | 440,940           | 11 x 57    | Closure   | 75000460 | 1             | 11 mm Noryl<br>crown*              |
|                   |                   |                                       |          |               |                 |                     |                   |            | Closure   | 75000451 | 10            | Stainless<br>steel plug            |
|                   |                   |                                       |          |               |                 |                     |                   |            | Tool  | 75000478 | 1             | Wrench                             |
|                   |                   |                                       |          |               |                 |                     |                   |            | Tool  | 75000481 | 1             | Tube vise                          |
| 3.4               | 3.4               | PET<br>thin-walled<br>UltraCone™ tube | 75000469 | 50            | 6               | 60,000              | 488,576           | 11 x 57    | Adapter   | 75000470 | 1             | Conical tube<br>adapter            |
|                   |                   |                                       |          |               |                 |                     |                   |            | Tool  | 75000480 | 1             | Conical<br>adapter<br>removal tool |
| 3.4               | 3.4               | PA<br>thin-walled<br>UltraCone tube   | 75000472 | 50            | 6               | 60,000              | 488,576           | 11 x 57    | Adapter   | 75000470 | 1             | Conical tube<br>adapter            |
|                   |                   |                                       |          |               |                 |                     |                   |            | Tool  | 75000480 |               | Conical<br>adapter<br>removal tool |
| 2.0               | 2.0               | PA cone-top<br>re-seal tube           | 75000459 | 50            | 6               | 60,000              | 488,576           | 11 x 32    | Closure   | 75000460 | 1             | 11 mm Noryl<br>crown*              |
|                   |                   |                                       |          |               |                 |                     |                   |            | Closure   | 75000451 | 10            | Stainless<br>steel plug            |
|                   |                   |                                       |          |               |                 |                     |                   |            | Tool  | 75000478 | 1             | Wrench                             |
|                   |                   |                                       |          |               |                 |                     |                   |            | Tool  | 75000479 | 1             | Tube<br>removal tool               |
|                   |                   |                                       |          |               |                 |                     |                   |            | Tool  | 75000481 | 1             | Tube vise                          |

\* Must order one crown for each place in the rotor.

# AH-650 Swinging Bucket Rotor



## AH-650 rotor specifications

|                         |                    |               |
|-------------------------|--------------------|---------------|
| Type                    | Swinging bucket    |               |
| Material                | Aluminum           |               |
| Capacity                | 6 x 5 mL           |               |
| Maximum speed           | 60,000 rpm         |               |
| Maximum sample density  | 1.2 g/mL           |               |
| Tube dimensions (Ø x L) | 13 x 51 mm         |               |
| Angle                   | 90°                |               |
| K factor                | 53                 |               |
| Net weight              | 3.0 kg/6.6 lb      |               |
| Warranty                | 5 years            |               |
|                         | <b>RCF</b>         | <b>Radius</b> |
| Maximum                 | 296,005 x <i>g</i> | 106.0 mm      |
| Average                 | 235,687 x <i>g</i> | 84.4 mm       |
| Minimum                 | 175,369 x <i>g</i> | 62.8 mm       |

## Ordering information

| Description                        | Cat. No. |
|------------------------------------|----------|
| <b>AH-650 rotor package</b>        |          |
| AH-650 Swinging Bucket Rotor       | 54294    |
| Rotor stand                        | 20048993 |
| Vacuum grease                      | 76003500 |
| Lubricant                          | 70006692 |
| Extra overspeed decal (50,000 rpm) | 51349    |
| 5 mL buckets (6)                   | 52072    |
| Bucket cap tool                    | 52258    |
| Bucket o-ring (ea.)                | 63713    |
| Bucket rack                        | 52243    |
| Instruction manual                 | 52274    |
| Ultracentrifuge rotor log book     | 52384    |
| <b>Accessories</b>                 |          |
| Conical adapter removal tool       | 75000480 |
| Conical adapter                    | 75000468 |
| Cone-top re-seal tube vise 13 mm   | 75000481 |
| Wrench                             | 75000478 |

# AH-650 Swinging Bucket Rotor - continued

## Labware ordering information

| Tube vol. (mL) | Fill vol. (mL) | Description              | Cat. No. | Qty./ pkg. | Tubes/ rotor | Max. speed (rpm) | Max. RCF (x g) | Ø x L (mm) | Required tube closures, adapters, tools, and accessories |          |            |                              |
|----------------|----------------|--------------------------|----------|------------|--------------|------------------|----------------|------------|--|----------|------------|------------------------------|
|                |                |                          |          |            |              |                  |                |            | Type   | Cat. No. | Qty./ pkg. | Description                  |
| 5.0            | 5.0            | PA thin-walled tube      | 03127    | 50         | 6            | 50,000           | 296,005        | 13 x 51    | -  | -        | -          | -                            |
| 4.0            | 4.0            | PA cone-top re-seal tube | 75000482 | 50         | 6            | 49,000           | 284,283        | 13 x 48    | Closure  | 75000457 | 1          | 13 mm Noryl crown*           |
|                |                |                          |          |            |              |                  |                |            | Closure  | 75000451 | 10         | Stainless steel plug         |
|                |                |                          |          |            |              |                  |                |            | Tool   | 75000478 | 1          | Wrench                       |
|                |                |                          |          |            |              |                  |                |            | Tool   | 75000481 | 1          | Tube vise                    |
| 3.5            | 3.4            | PA UltraCone tube        | 75000473 | 50         | 6            | 50,000           | 296,005        | 13 x 48    | Adapter  | 75000468 | 1          | Conical tube adapter         |
|                |                |                          |          |            |              |                  |                |            | Tool   | 75000480 | 1          | Conical adapter removal tool |
| 3.5            | 3.4            | PET UltraCone tube       | 75000467 | 50         | 6            | 50,000           | 296,005        | 13 x 48    | Adapter  | 75000468 | 1          | Conical tube adapter         |
|                |                |                          |          |            |              |                  |                |            | Tool   | 75000480 | 1          | Conical adapter removal tool |
| 3.5            | 3.1            | PA cone-top re-seal tube | 75000456 | 50         | 6            | 50,000           | 296,005        | 13 x 32    | Closure  | 75000457 | 10         | 13 mm Noryl crown*           |
|                |                |                          |          |            |              |                  |                |            | Closure  | 75000451 | 1          | Stainless steel plug         |
|                |                |                          |          |            |              |                  |                |            | Tool   | 75000478 | 1          | Wrench                       |
|                |                |                          |          |            |              |                  |                |            | Tool   | 75000479 | 1          | Tube removal tool            |
|                |                |                          |          |            |              |                  |                |            | Tool   | 75000481 | 1          | Tube vise                    |
| 2.0            | 2.0            | PA cone-top re-seal tube | 75000458 | 50         | 6            | 50,000           | 296,005        | 13 x 25    | Closure  | 75000460 | 1          | 13 mm Noryl crown*           |
|                |                |                          |          |            |              |                  |                |            | Closure  | 75000451 | 10         | Stainless steel plug         |
|                |                |                          |          |            |              |                  |                |            | Tool   | 75000478 | 1          | Wrench                       |
|                |                |                          |          |            |              |                  |                |            | Tool   | 75000479 | 1          | Tube removal tool            |
|                |                |                          |          |            |              |                  |                |            | Tool   | 75000481 | 1          | Tube vise                    |

\* Must order one crown for each place in the rotor.

# TH-641 Swinging Bucket Rotor



| TH-641 rotor specifications |                 |          |
|-----------------------------|-----------------|----------|
| Type                        | Swinging bucket |          |
| Material                    | Titanium        |          |
| Capacity                    | 6 x 13.2 mL     |          |
| Maximum speed               | 41,000 rpm      |          |
| Maximum sample density      | 1.2 g/mL        |          |
| Tube dimensions (Ø x L)     | 14 x 89 mm      |          |
| Angle                       | 90°             |          |
| K factor                    | 114             |          |
| Net weight                  | 5.6 kg/12.3 lb  |          |
| Warranty                    | 5 years         |          |
|                             | RCF             | Radius   |
| Maximum                     | 287,660 x g     | 153.2 mm |
| Average                     | 211,333 x g     | 112.6 mm |
| Minimum                     | 135,005 x g     | 71.9 mm  |

## Ordering information

| Description                        | Cat. No. |
|------------------------------------|----------|
| <b>TH-641 rotor package</b>        |          |
| TH-641 Swinging Bucket Rotor       | 54295    |
| Rotor stand                        | 20048993 |
| Vacuum grease                      | 76003500 |
| Lubricant                          | 70006692 |
| Extra overspeed decal (41,000 rpm) | 51353    |
| 13.2 mL buckets (6)                | 08225    |
| Bucket rack                        | 52243    |
| Bucket cap tool                    | 11556    |
| Bucket o-ring (ea.)                | 08232    |
| Instruction manual                 | 52243    |
| Ultracentrifuge rotor log book     | 52384    |
| <b>Accessories</b>                 |          |
| Conical adapter removal tool       | 75000480 |
| Conical adapter                    | 75000466 |
| Tube removal tool                  | 75000479 |
| Wrench                             | 75000478 |



# TH-641 Swinging Bucket Rotor - continued

## Labware ordering information

| Tube vol.<br>(mL) | Fill vol.<br>(mL) | Description                    | Cat. No. | Qty./<br>pkg. | Tubes/<br>rotor | Max. speed<br>(rpm) | Max.<br>RCF (x g) | Ø x L (mm) | Required tube closures, adapters, tools,<br>and accessories |          |               |                              |
|-------------------|-------------------|--------------------------------|----------|---------------|-----------------|---------------------|-------------------|------------|---|----------|---------------|------------------------------|
|                   |                   |                                |          |               |                 |                     |                   |            | Type  | Cat. No. | Qty./<br>pkg. | Description                  |
| 13.2              | 10.0              | PA thin-walled tube            | 03699    | 50            | 6               | 41,000              | 287,660           | 14 x 89    | -   | -        | -             | -                            |
| 12.0              | 12.0              | PET thin-walled tube           | 06752    | 50            | 6               | 41,000              | 287,660           | 14 x 89    | -   | -        | -             | -                            |
| 11.0              | 11.0              | PA cone-top re-seal tube       | 75000411 | 50            | 6               | 41,000              | 287,660           | 14 x 88    | Closure   | 75000455 | 1             | 14 mm Noryl crown*           |
|                   |                   |                                |          |               |                 |                     |                   |            | Closure   | 75000451 | 10            | Stainless steel plug         |
|                   |                   |                                |          |               |                 |                     |                   |            | Tool  | 75000478 | 1             | Wrench                       |
| 9.1               | 9.1               | PET thin-walled UltraCone tube | 75000465 | 50            | 6               | 41,000              | 287,660           | 14 x 84    | Adapter   | 75000466 | 1             | Conical tube adapter         |
|                   |                   |                                |          |               |                 |                     |                   |            | Tool  | 75000480 | 1             | Conical adapter removal tool |
| 9.0               | 9.0               | PA thin-walled UltraCone tube  | 75000474 | 50            | 6               | 41,000              | 287,660           | 14 x 84    | Adapter   | 75000466 | 1             | Conical tube adapter         |
|                   |                   |                                |          |               |                 |                     |                   |            | Tool  | 75000480 | 1             | Conical adapter removal tool |
| 5.9               | 5.9               | PA cone-top re-seal tube       | 75000454 | 50            | 6               | 41,000              | 287,660           | 14 x 47    | Closure   | 75000455 | 1             | 14 mm Noryl crown*           |
|                   |                   |                                |          |               |                 |                     |                   |            | Closure   | 75000451 | 10            | Stainless steel plug         |
|                   |                   |                                |          |               |                 |                     |                   |            | Tool  | 75000478 | 1             | Wrench                       |
|                   |                   |                                |          |               |                 |                     |                   |            | Tool  | 75000479 | 1             | Tube removal tool            |

\*Must order one crown for each place in the rotor.

# SureSpin 632 (17 mL) Swinging Bucket Rotor



## SureSpin 632 (17 mL) rotor specifications

|                         |                    |               |
|-------------------------|--------------------|---------------|
| Type                    | Swinging bucket    |               |
| Material                | Titanium           |               |
| Capacity                | 6 x 17 mL          |               |
| Maximum speed           | 32,000 rpm         |               |
| Maximum sample density  | 1.2 g/mL           |               |
| Tube dimensions (Ø x L) | 16 x 102 mm        |               |
| Angle                   | 90°                |               |
| K factor                | 221                |               |
| Net weight              | 7.4 kg/16.2 lb     |               |
| Warranty                | 5 years*           |               |
|                         | <b>RCF</b>         | <b>Radius</b> |
| Maximum                 | 191,759 x <i>g</i> | 153.2 mm      |
| Minimum                 | 78,421 x <i>g</i>  | 68.5 mm       |

\* Subject to a maximum cycle life of 1200 cycles. This rotor must be retired upon reaching the end of its cycle life. Exceeding the maximum number of cycles can result in rotor failure with subsequent damage to the centrifuge.

## Ordering information

| Description                                | Cat. No. |
|--|----------|
| <b>SureSpin 632 (17 mL) rotor package</b>  |          |
| SureSpin 632 (17 mL) Swinging Bucket Rotor | 75003031 |
| Rotor stand                                | 20048993 |
| Vacuum grease                              | 76003500 |
| Lubricant                                  | 70006692 |
| Extra overspeed decal (32,000 rpm)         | 51359    |
| 17 mL buckets (6)                          | 75003036 |
| Bucket o-ring (6)                          | 75003039 |
| Bucket rack                                | 52240    |
| Instruction manual                         | 50153788 |
| Ultracentrifuge rotor log book             | 52384    |
| <b>Optional accessories</b>                |          |
| 38.5 mL buckets (6)                        | 75003037 |

# SureSpin 632 (17 mL) Swinging Bucket Rotor - continued

## Labware ordering information

| Tube vol. (mL) | Fill vol. (mL) | Description                    | Cat. No. | Qty./pkg. | Tubes/rotor | Max. speed (rpm) | Max. RCF (x g) | Ø x L (mm) | Required tube closures, adapters, tools, and accessories |          |           |                              |
|----------------|----------------|--------------------------------|----------|-----------|-------------|------------------|----------------|------------|--|----------|-----------|------------------------------|
|                |                |                                |          |           |             |                  |                |            | Type   | Cat. No. | Qty./pkg. | Description                  |
| 17.0           | 17.0           | PET thin-walled tube           | 06750-AV | 50        | 6           | 32,000           | 191,759        | 16 x 102   | -  | -        | -         | -                            |
| 17.0           | 16.0           | Pa thin-walled tube            | 03126    | 50        | 6           | 32,000           | 191,759        | 16 x 102   | -  | -        | -         | -                            |
| 15.0           | 15.0           | PA re-seal cone-top tube       | 75000414 | 50        | 6           | 32,000           | 191,759        | 16 x 100   | Closure  | 75000452 | 1         | 16 mm Noryl crown*           |
|                |                |                                |          |           |             |                  |                |            | Closure  | 75000451 | 10        | Stainless steel plug         |
|                |                |                                |          |           |             |                  |                |            | Tool   | 75000478 | 1         | Wrench                       |
| 13.0           | 12.7           | PET thin-walled UltraCone tube | 75000463 | NA        | 6           | 32,000           | 191,759        | 16 x 96    | Adapter  | 75000464 | 1         | 1 place/adapter              |
|                |                |                                |          |           |             |                  |                |            | Tool   | 75000480 | 1         | Conical adapter removal tool |
| 13.0           | 12.3           | PA thin-walled UltraCone tube  | 75000475 | NA        | 6           | 32,000           | 191,759        | 16 x 96    | Adapter  | 75000464 | 1         | 1 place/adapter              |
|                |                |                                |          |           |             |                  |                |            | Tool   | 75000480 | 1         | Conical adapter removal tool |

\* Must order one crown for each place in the rotor.

# SureSpin 632 (38.5 mL) Swinging Bucket Rotor



## SureSpin 632 (38.5 mL) rotor specifications

|                         |                 |               |
|-------------------------|-----------------|---------------|
| Type                    | Swinging bucket |               |
| Material                | Titanium        |               |
| Capacity                | 6 x 38.5 mL     |               |
| Maximum speed           | 32,000 rpm      |               |
| Maximum sample density  | 1.2 g/mL        |               |
| Tube dimensions (Ø x L) | 25 x 89 mm      |               |
| Angle                   | 90°             |               |
| K factor                | 194             |               |
| Net weight              | 7.2 kg/15.9 lb  |               |
| Warranty                | 5 years*        |               |
|                         | <b>RCF</b>      | <b>Radius</b> |
| Maximum                 | 187,295 x g     | 163.6 mm      |
| Minimum                 | 85,404 x g      | 74.6 mm       |

\* Subject to a maximum cycle life of 1,200 cycles. This rotor must be retired upon reaching the end of its cycle life. Exceeding the maximum number of cycles can result in rotor failure and damage the centrifuge.

## Ordering information

| Description                                  | Cat. No. |
|--|----------|
| <b>SureSpin 632 (38.5 mL) rotor package</b>  |          |
| SureSpin 632 (38.5 mL) Swinging Bucket Rotor | 75003032 |
| Rotor stand                                  | 20048993 |
| Vacuum grease                                | 76003500 |
| Lubricant                                    | 70006692 |
| Extra overspeed decal (32,000 rpm)           | 51359    |
| 38.5 mL buckets (6)                          | 75003037 |
| Bucket o-ring (1)                            | 75003038 |
| Bucket rack                                  | 52240    |
| Instruction manual                           | 50153788 |
| Ultracentrifuge rotor log book               | 52384    |
| <b>Optional accessories</b>                  |          |
| 17 mL buckets (6)                            | 75003036 |

# SureSpin 632 (38.5 mL) Swinging Bucket Rotor - continued

## Labware ordering information

| Tube vol. (mL) | Fill vol. (mL) | Description              | Cat. No. | Qty./ pkg. | Tubes/ rotor | Max. speed (rpm) | Max. RCF (x g) | Ø x L (mm) | Required tube closures, adapters, tools, and accessories |          |            |                              |
|----------------|----------------|--------------------------|----------|------------|--------------|------------------|----------------|------------|--|----------|------------|------------------------------|
|                |                |                          |          |            |              |                  |                |            | Type   | Cat. No. | Qty./ pkg. | Description                  |
| 38.5           | 38.5           | PET thin-walled tube     | 75000471 | 50         | 6            | 32,000           | 187,295        | 25 x 88    | -  | -        | -          | -                            |
| 36.0           | 35.0           | PA thin-walled tube      | 03141    | 25         | 6            | 32,000           | 187,295        | 25 x 89    | -  | -        | -          | -                            |
| 31.0           | 31.0           | PA re-seal cone-top tube | 75000427 | 50         | 6            | 29,000           | 153,823        | 25 x 81    | Closure  | 75000428 | 1          | 25 mm Noryl crown*           |
|                |                |                          |          |            |              |                  |                |            | Closure  | 75000451 | 10         | Stainless steel plug         |
|                |                |                          |          |            |              |                  |                |            | Tool   | 75000478 | 1          | Wrench                       |
| 28.0           | 28.0           | PA UltraCone tube        | 75000476 | 50         | 6            | 32,000           | 187,295        | 25 x 84    | Adapter  | 75000462 | 1          | Conical tube adapter         |
|                |                |                          |          |            |              |                  |                |            | Tool   | 75000480 | 1          | Conical adapter removal tool |
| 28.0           | 28.0           | PET UltraCone tube       | 75000461 | 50         | 6            | 32,000           | 187,295        | 25 x 84    | Adapter  | 75000462 | 1          | Conical tube adapter         |
|                |                |                          |          |            |              |                  |                |            | Tool   | 75000480 | 1          | Conical adapter removal tool |

\* Must order one crown for each place in the rotor.

# SureSpin 630 (17 mL) Swinging Bucket Rotor

(no longer available\*)



## SureSpin 630 (17 mL) Rotor specifications

|                         |                 |               |
|-------------------------|-----------------|---------------|
| Type                    | Swinging bucket |               |
| Material                | Titanium        |               |
| Capacity                | 6 x 17 mL       |               |
| Maximum speed           | 30,000 rpm      |               |
| Maximum sample density  | 1.2 g/mL        |               |
| Tube dimensions (Ø x L) | 16 x 102 mm     |               |
| Angle                   | 90°             |               |
| K factor                | 268             |               |
| Net weight              | 8 kg/17.6 lb    |               |
| Warranty                | 5 years         |               |
|                         | <b>RCF</b>      | <b>Radius</b> |
| Maximum                 | 166,880 x g     | 166 mm        |
| Minimum                 | 64,339 x g      | 64 mm         |

## Ordering information

| Description                               | Cat. No. |
|---|----------|
| <b>SureSpin 630 (17 mL) rotor package</b> |          |
| SureSpin 630 (17 mL) Rotor*               | 79363    |
| Rotor stand                               | 51942    |
| Vacuum grease                             | 76003500 |
| Lubricant                                 | 70006692 |
| 17 mL buckets (6)                         | 79364    |
| Extra overspeed decal (30,000 rpm)        | 51361    |
| Bucket o-ring (6)                         | 79370    |
| Bucket rack                               | 52240    |
| Instruction manual                        | 79369    |
| Ultracentrifuge rotor log book            | 52384    |
| <b>Accessories</b>                        |          |
| 17 mL buckets (6)                         | 79364    |
| Conical adapter removal tool              | 75000480 |
| Conical adapter                           | 75000464 |

\* This rotor has been replaced by the SureSpin 632 (17 mL) Swing-out Ultracentrifuge Rotor (Cat. No. 75003031).

# SureSpin 630 (17 mL) Swinging Bucket Rotor - continued

(no longer available\*)

## Labware ordering information

| Tube vol.<br>(mL) | Fill vol.<br>(mL) | Description                  | Cat. No. | Qty./<br>pkg. | Tubes/<br>rotor | Max.<br>speed<br>(rpm) | Max.<br>RCF (x g) | Ø x L (mm) | Required tube closures, adapters, tools,<br>and accessories |          |               |                                 |
|-------------------|-------------------|------------------------------|----------|---------------|-----------------|------------------------|-------------------|------------|---|----------|---------------|---------------------------------|
|                   |                   |                              |          |               |                 |                        |                   |            | Type  | Cat. No. | Qty./<br>pkg. | Description                     |
| 17.0              | 17.9              | PET thin-walled<br>tube      | 06750-AV | 50            | 6               | 30,000                 | 166,880           | 16 x 102   | -   | -        | -             | -                               |
| 17.0              | 16.0              | Pa thin-walled<br>tube       | 03126    | 25            | 6               | 30,000                 | 166,880           | 16 x 102   | -   | -        | -             | -                               |
| 15.0              | 15.0              | PA re-seal<br>cone- top tube | 75000414 | 50            | 6               | 30,000                 | 166,880           | 16 x 100   | Closure   | 75000452 | 1             | 16 mm<br>Noryl<br>crown*        |
|                   |                   |                              |          |               |                 |                        |                   |            | Closure   | 75000451 | 10            | Stainless<br>steel plug         |
|                   |                   |                              |          |               |                 |                        |                   |            | Tool  | 75000478 | 1             | Wrench                          |
| 13.0              | 12.7              | PA UltraCone<br>tube         | 75000463 | N/A           | 6               | 30,000                 | 166,880           | 16 x 96    | Adapter   | 75000464 | 1             | 1 place/adapter                 |
|                   |                   |                              |          |               |                 |                        |                   |            | Tool  | 75000480 | 1             | Conical adapter<br>removal tool |
| 13.0              | 12.3              | PET UltraCone<br>tube        | 75000475 | N/A           | 6               | 30,000                 | 166,880           | 16 x 96    | Adapter   | 75000464 | 1             | 1 place/adapter                 |
|                   |                   |                              |          |               |                 |                        |                   |            | Tool  | 75000480 | 1             | Conical adapter<br>removal tool |

\* Must order one crown for each place in the rotor.



# SureSpin 630 (36 mL) Swinging Bucket Rotor

(no longer available\*)



## SureSpin 630 (36 mL) Rotor specifications

|                         |                    |               |
|-------------------------|--------------------|---------------|
| Type                    | Swinging bucket    |               |
| Material                | Titanium           |               |
| Capacity                | 6 x 36 mL          |               |
| Maximum speed           | 30,000 Rpm         |               |
| Maximum sample density  | 1.2 g/mL           |               |
| Tube dimensions (Ø x L) | 25 x 89 mm         |               |
| Angle                   | 90°                |               |
| K factor                | 219                |               |
| Net weight              | 7.9 kg/17.4 lb     |               |
| Warranty                | 5 years            |               |
|                         | <b>RCF</b>         | <b>Radius</b> |
| Maximum                 | 166,880 x <i>g</i> | 166 mm        |
| Average                 | 121,792 x <i>g</i> | 121.2 mm      |
| Minimum                 | 76,704 x <i>g</i>  | 76.3 mm       |

## Ordering information

| Description                               | Cat. No. |
|---|----------|
| <b>SureSpin 630 (36 mL) rotor package</b> |          |
| SureSpin 630 (36 mL) Rotor*               | 79368    |
| Rotor stand                               | 20048993 |
| Vacuum grease                             | 76003500 |
| Lubricant                                 | 70006692 |
| 36 mL buckets (6)                         | 75007936 |
| Extra overspeed decal (30,000 rpm)        | 51361    |
| Bucket o-ring (1)                         | 79374    |
| Bucket rack                               | 52240    |
| Instruction manual                        | 79369    |
| Ultracentrifuge rotor log book            | 52384    |
| <b>Accessories</b>                        |          |
| 36 mL buckets (6)                         | 75007936 |
| Conical adapter removal tool              | 75000480 |
| Conical adapter                           | 75000462 |
| Wrench                                    | 75000478 |

\* This rotor has been replaced by the SureSpin 632 (38.5 mL) Swing-out Ultracentrifuge Rotor (Cat. No. 75003032).

## SureSpin 630 (36 mL) Swinging Bucket Rotor - continued

(no longer available\*)

### Labware ordering information

| Tube vol. (mL) | Fill vol. (mL) | Description             | Cat. No. | Qty./ pkg. | Tubes/ rotor | Max. speed (rpm) | Max. RCF (x g) | Ø x L (mm) | Required tube closures, adapters, tools, and accessories |          |            |                              |
|----------------|----------------|-------------------------|----------|------------|--------------|------------------|----------------|------------|--|----------|------------|------------------------------|
|                |                |                         |          |            |              |                  |                |            | Type   | Cat. No. | Qty./ pkg. | Description                  |
| 36.0           | 38.1           | PET thin-walled tube    | 75000471 | 50         | 6            | 30,000           | 166,880        | 25 x 88    | -  | -        | -          | -                            |
| 36.0           | 35.0           | PA thin-walled tube     | 03141    | 25         | 6            | 30,000           | 166,880        | 25 x 89    | -  | -        | -          | -                            |
| 31.0           | 31.0           | PA reseal Cone-Top tube | 75000427 | 50         | 6            | 29,000           | 155,940        | 25 x 81    | Closure  | 75000428 | 1          | 25 mm Noryl crown*           |
|                |                |                         |          |            |              |                  |                |            | Closure  | 75000451 | 10         | Stainless steel plug         |
|                |                |                         |          |            |              |                  |                |            | Tool   | 75000478 | 1          | Wrench                       |
| 28.0           | 29.4           | PA UltraCone tube       | 75000476 | 50         | 6            | 30,000           | 166,880        | 25 x 84    | Adapter  | 75000462 | 1          | Conical tube Adapter         |
|                |                |                         |          |            |              |                  |                |            | Tool   | 75000480 | 1          | Conical adapter removal tool |
| 28.0           | 28.7           | PET UltraCone tube      | 75000461 | 50         | 6            | 30,000           | 166,880        | 25 x 84    | Adapter  | 75000464 | 1          | Conical tube adapter         |
|                |                |                         |          |            |              |                  |                |            | Tool   | 75000480 | 1          | Conical adapter removal tool |

\* Must order one crown for each place in the rotor.

# AH-629 (17 mL) Swinging Bucket Rotor



## AH-629 (17 mL) rotor specifications

|                         |                 |               |
|-------------------------|-----------------|---------------|
| Type                    | Swinging bucket |               |
| Material                | Titanium        |               |
| Capacity                | 6 x 17 mL       |               |
| Maximum speed           | 29,000 rpm      |               |
| Maximum sample density  | 1.2 g/mL        |               |
| Tube dimensions (Ø x L) | 16 x 102 mm     |               |
| Angle                   | 90°             |               |
| K factor                | 284             |               |
| Net weight              | 6.2 kg/13.7 lb  |               |
| Warranty                | 5 years         |               |
|                         | <b>RCF</b>      | <b>Radius</b> |
| Maximum                 | 155,846 x g     | 165.9 mm      |
| Average                 | 108,219 x g     | 115.2 mm      |
| Maximum                 | 60,591 x g      | 64.5 mm       |

## Ordering information

| Description                          | Cat. No. |
|--------------------------------------|----------|
| <b>AH-629 (17 mL) rotor package</b>  |          |
| AH-629 (17 mL) Swinging Bucket Rotor | 54285    |
| Rotor stand                          | 20048993 |
| Vacuum grease                        | 76003500 |
| Lubricant                            | 70006692 |
| Extra overspeed decal (29,000 rpm)   | 51362    |
| 17 mL buckets (6)                    | 52030    |
| Bucket o-ring (ea.)                  | 63712    |
| Bucket rack                          | 52240    |
| Instruction manual                   | 54276    |
| Ultracentrifuge rotor log book       | 52384    |
| <b>Accessories</b>                   |          |
| 17 mL buckets (6)                    | 52030    |
| Conical adapter removal tool         | 75000480 |
| Conical adapter                      | 75000464 |
| Tube removal tool                    | 75000479 |

# AH-629 (17 mL) Swinging Bucket Rotor - continued

## Labware ordering information

| Tube vol. (mL) | Fill vol. (mL) | Description                    | Cat. No. | Qty./ pkg. | Tubes/ rotor | Max. speed (rpm) | Max. RCF (x g) | Ø x L (mm) | Required tube closures, adapters, tools, and accessories |          |            |                              |
|----------------|----------------|--------------------------------|----------|------------|--------------|------------------|----------------|------------|--|----------|------------|------------------------------|
|                |                |                                |          |            |              |                  |                |            | Type   | Cat. No. | Qty./ pkg. | Description                  |
| 17.0           | 17.9           | PET thin-walled tube           | 06750    | 50         | 6            | 29,000           | 155,846        | 16 x 102   | -  | -        | -          | -                            |
| 17.0           | 16.0           | PA thin-walled tube            | 03126    | 50         | 6            | 29,000           | 155,846        | 16 x 102   | -  | -        | -          | -                            |
| 15.0           | 15.0           | PA re-seal cone-top tube       | 75000414 | 50         | 6            | 29,000           | 155,846        | 16 x 100   | Closure  | 75000452 | 1          | 16 mm Noryl crown*           |
|                |                |                                |          |            |              |                  |                |            | Closure  | 75000451 | 10         | Stainless steel plug         |
|                |                |                                |          |            |              |                  |                |            | Tool   | 75000478 | 1          | Wrench                       |
| 13.0           | 12.7           | PET thin-walled UltraCone tube | 75000463 | 50         | 6            | 29,000           | 155,846        | 16 x 96    | Adapter  | 75000464 | 1          | Conical tube adapter         |
|                |                |                                |          |            |              |                  |                |            | Tool   | 75000480 | 1          | Conical adapter removal tool |
| 13.0           | 12.3           | PA thin-walled UltraCone tube  | 75000475 | 50         | 6            | 29,000           | 155,846        | 16 x 96    | Adapter  | 75000464 | 1          | Conical tube adapter         |
|                |                |                                |          |            |              |                  |                |            | Tool   | 75000480 | 1          | Conical adapter removal tool |

\* Must order one crown for each place in the rotor.

# AH-629 (36 mL) Swinging Bucket Rotor



## AH-629 (36 mL) rotor specifications

|                         |                 |               |
|-------------------------|-----------------|---------------|
| Type                    | Swinging bucket |               |
| Material                | Aluminum        |               |
| Capacity                | 6 x 36 mL       |               |
| Maximum speed           | 29,000 rpm      |               |
| Maximum sample density  | 1.2 g/mL        |               |
| Tube dimensions (Ø x L) | 25 x 89 mm      |               |
| Angle                   | 90°             |               |
| K factor                | 242             |               |
| Net weight              | 6.4 kg/14.1 lb  |               |
| Warranty                | 5 years         |               |
|                         | <b>RCF</b>      | <b>Radius</b> |
| Maximum                 | 151,243 x g     | 161.0 mm      |
| Average                 | 109,487 x g     | 116.6 mm      |
| Maximum                 | 67,731 x g      | 72.1 mm       |

## Ordering information

| Description                          | Cat. No. |
|--------------------------------------|----------|
| <b>AH-629 (36 mL) rotor package</b>  |          |
| AH-629 (36 mL) Swinging Bucket Rotor | 54284    |
| Rotor stand                          | 20048993 |
| Vacuum grease                        | 76003500 |
| Lubricant                            | 70006692 |
| Extra overspeed decal (29,000 rpm)   | 51362    |
| 36 mL buckets (6)                    | 52035    |
| Bucket o-ring (ea.)                  | 64667    |
| Bucket rack                          | 52240    |
| Instruction manual                   | 54276    |
| Ultracentrifuge rotor log book       | 52384    |
| <b>Accessories</b>                   |          |
| 36 mL buckets (6)                    | 52035    |
| Conical adapter removal tool         | 75000480 |
| Conical adapter                      | 75000462 |

## AH-629 (36 mL) Swinging Bucket Rotor - continued

### Labware ordering information

| Tube vol. (mL) | Fill vol. (mL) | Description                   | Cat. No. | Qty./ pkg. | Tubes/ rotor | Max. speed (rpm) | Max. RCF (x g) | Ø x L (mm) | Required tube closures, adapters, tools, and accessories |          |            |                              |
|----------------|----------------|-------------------------------|----------|------------|--------------|------------------|----------------|------------|--|----------|------------|------------------------------|
|                |                |                               |          |            |              |                  |                |            | Type   | Cat. No. | Qty./ pkg. | Description                  |
| 36.0           | 38.1           | PET thin-walled tube          | 75000471 | 50         | 6            | 29,000           | 151,243        | 25 x 88    | -  | -        | -          | -                            |
| 36.0           | 35.0           | PA thin-walled tube           | 03141    | 25         | 6            | 29,000           | 151,243        | 25 x 89    | -  | -        | -          | -                            |
| 31.0           | 31.0           | PA re-seal cone-top tube      | 75000427 | 50         | 6            | 29,000           | 151,243        | 25 x 81    | Closure  | 75000428 | 1          | 25 mm Noryl crown*           |
|                |                |                               |          |            |              |                  |                |            | Closure  | 75000451 | 10         | Stainless steel plug         |
|                |                |                               |          |            |              |                  |                |            | Tool   | 75000478 | 1          | Wrench                       |
| 28.0           | 29.4           | PA thin-walled UltraCone tube | 75000476 | 50         | 6            | 29,000           | 151,243        | 25 x 84    | Adapter  | 75000462 | 1          | Conical tube adapter         |
|                |                |                               |          |            |              |                  |                |            | Tool   | 75000480 | 1          | Conical adapter removal tool |
| 28.0           | 28.7           | PA thin-walled UltraCone tube | 75000461 | 50         | 6            | 29,000           | 151,243        | 25 x 84    | Adapter  | 75000462 | 1          | Conical tube adapter         |
|                |                |                               |          |            |              |                  |                |            | Tool   | 75000480 | 1          | Conical adapter removal tool |

\* Must order one crown for each place in the rotor.

# StepSaver 70V6 Vertical Rotors



## StepSaver 70V6 rotor specifications

|                         |                |               |
|-------------------------|----------------|---------------|
| Type                    | Vertical       |               |
| Material                | Titanium       |               |
| Capacity                | 8 x 6 mL       |               |
| Maximum speed           | 70,000 rpm     |               |
| Tube dimensions (Ø x L) | 13 x 66 mm     |               |
| Angle                   | 0°             |               |
| K factor                | 8.7            |               |
| Net weight              | 7.6 kg/16.8 lb |               |
| Warranty                | 7 years        |               |
|                         | <b>RCF</b>     | <b>Radius</b> |
| Maximum                 | 467,420 x g    | 85.4 mm       |
| Average                 | 431,022 x g    | 78.8 mm       |
| Minimum                 | 67,731 x g     | 72.1 mm       |

## Ordering information

| Description  | Cat. No. |
|--|----------|
| <b>StepSaver 70V6 rotor package (6 mL)</b>               |          |
| StepSaver 70V6 Vertical Rotor (6 mL)                     | 79240    |
| Rotor stand  | 20048993 |
| Extra overspeed decal (70,000 rpm)                       | 08254    |
| PA ultracrimp tube, 6 mL (1 pkg. of 50)                  | 79273    |
| 6 mL ultracrimp cartridge set (8)                        | 79286    |
| Tube racks (2)   | 03921    |
| Instruction manual                                       | 79231    |
| Ultracentrifuge rotor log book                           | 52384    |
| <b>StepSaver 70V6 rotor package (2 mL)</b>               |          |
| StepSaver 70V6 Vertical Rotor (2 mL)                     | 79274    |
| Rotor stand  | 20048993 |
| Extra overspeed decal (70,000 rpm)                       | 08254    |
| PA ultracrimp tube, 2 mL (1 pkg. of 50)                  | 79251    |
| 2 mL ultracrimp cartridge set (8)                        | 79289    |
| Tube racks (2)   | 79242    |
| Instruction manual                                       | 79231    |
| Ultracentrifuge rotor log book                           | 52384    |
| <b>StepSaver 70V6 rotor package (5.1 mL Quick-Seal™)</b> |          |
| StepSaver 70V6 Vertical Rotor (5.1 mL Quick-Seal)        | 79280    |
| Rotor stand  | 20048993 |
| Extra overspeed decal (70,000 rpm)                       | 08254    |
| 5.1 mL Quick-Seal cartridge set (8)                      | 79291    |
| Instruction manual                                       | 79231    |
| Ultracentrifuge rotor log book                           | 52384    |

# StepSaver 70V6 Vertical Rotors - continued

## Ordering information (cont.)

| Description                              | Cat. No. |
|--|----------|
| <b>Accessories</b>                       |          |
| Ultracrimp/clearcrimp sealing tool       | 03920    |
| Crimp gauge replacement                  | 03919    |
| Extra plugs and caps                     | 03999    |
| 6 mL ultracrimp tube rack                | 03921    |
| 2 mL ultracrimp tube rack                | 79242    |
| 6 mL ultracrimp cartridge set (8)        | 79286    |
| 2 mL ultracrimp cartridge set (8)        | 79289    |
| 5.1 mL Quick-Seal cartridge set (8)      | 79291    |
| 6 mL ultracrimp individual cartridge (1) | 79241    |
| 2 mL ultracrimp individual cartridge (1) | 79261    |

## Labware ordering information

| Tube vol. (mL) | Fill vol. (mL) | Description         | Cat. No. | Qty./pkg. | Tubes/rotor | Max. speed (rpm) | Max. RCF (x g) | Ø x L (mm) | Required tube closures, adapters, tools, and accessories |          |           |                               |
|----------------|----------------|---------------------|----------|-----------|-------------|------------------|----------------|------------|--|----------|-----------|-------------------------------|
|                |                |                     |          |           |             |                  |                |            | Type   | Cat. No. | Qty./pkg. | Description                   |
| 6.0            | 5.7            | PA ultracrimp tube  | 79273    | 50        | 8           | 70,000           | 467,420        | 13 x 66    | Closure  | Included | 50        | Ultracrimp plugs and caps     |
|                |                |                     |          |           |             |                  |                |            | Closure  | 79286    | 8         | 6 mL ultracrimp cartridge set |
|                |                |                     |          |           |             |                  |                |            | Accessory  | 03921    | 1         | 6 mL ultracrimp tube rack     |
|                |                |                     |          |           |             |                  |                |            | Tool   | 03920    | 1         | Ultracrimp sealing tool       |
| 2.0            | 2.0            | PA ultracrimp tube  | 79251    | 50        | 8           | 70,000           | 467,420        | 13 x 45    | Closure  | Included | 8         | Ultracrimp plugs and caps     |
|                |                |                     |          |           |             |                  |                |            | Closure  | 79289    | 8         | 2 mL ultracrimp cartridge set |
|                |                |                     |          |           |             |                  |                |            | Accessory  | 79242    | 1         | Tube rack                     |
|                |                |                     |          |           |             |                  |                |            | Tool   | 03920    | 1         | Ultracrimp sealing tool       |
| 2.0            | 2.0            | PET clearcrimp tube | 79292    | 50        | 8           | 70,000           | 467,420        | 13 x 45    | Closure  | Included | 50        | Ultracrimp plugs and caps     |
|                |                |                     |          |           |             |                  |                |            | Closure  | 79289    | 8         | 2 mL ultracrimp cartridge set |
|                |                |                     |          |           |             |                  |                |            | Accessory  | 79242    | 1         | Tube rack                     |
|                |                |                     |          |           |             |                  |                |            | Tool   | 03920    | 1         | Ultracrimp sealing tool       |

\* Tubes must be purchased from manufacturer.



# StepSaver 65V13 Vertical Rotors



## StepSaver 65V13 rotor specifications

|                         |                         |                     |
|-------------------------|-------------------------|---------------------|
| Type                    | Vertical                |                     |
| Material                | Titanium                |                     |
| Capacity                | 8 x 13.5 mL             |                     |
| Maximum speed           | 65,000 rpm              |                     |
| Tube dimensions (Ø x L) | 13 x 66 mm              |                     |
| Angle                   | 0°                      |                     |
| K factor                | 12.9                    |                     |
| Net weight              | 9.7 kg/21.4 lb          |                     |
| Warranty                | 7 years                 |                     |
|                         | <b>RCF</b>              | <b>Radius</b>       |
|                         | <b>13.5 mL/6 mL</b>     | <b>13.5 mL/6 mL</b> |
| Maximum                 | 400,671 x g/393,120 x g | 84.9 mm/83.3 mm     |
| Average                 | 361,972 x g/361,972 x g | 76.7 mm/76.7 mm     |
| Minimum                 | 323,274 x g/330,825 x g | 68.5 mm/70.1 mm     |

## Ordering information

| Description   | Cat. No. |
|---|----------|
| <b>StepSaver 65V13 rotor package (13.5 mL)</b>            |          |
| StepSaver 65V13 Vertical Rotor (13.5 mL)                  | 79243    |
| Rotor stand   | 20048993 |
| Extra overspeed decal (65,000 rpm)                        | 51345    |
| Pa ultracrimp tube, 13.5 mL (1 pkg. of 50)                | 79246    |
| 13.5 mL ultracrimp cartridge set (8)                      | 79296    |
| Tube racks (2)  | 79247    |
| Instruction manual  | 79231    |
| Ultracentrifuge rotor log book                            | 52384    |
| <b>StepSaver 65V13 rotor package (13.5 mL Quick-Seal)</b> |          |
| StepSaver 65V13 Vertical Rotor (13.5 mL Quick-Seal)       | 79285    |
| Rotor stand   | 20048993 |
| Extra overspeed decal (65,000 rpm)                        | 51345    |
| 13.5 mL Quick-Seal cartridge set (8)                      | 79298    |
| Instruction manual  | 79231    |
| Ultracentrifuge rotor log book                            | 52384    |
| <b>StepSaver 65V13 rotor package (6 mL)</b>               |          |
| StepSaver 65V13 Vertical Rotor (6 mL)                     | 79290    |
| Rotor stand   | 20048993 |
| Extra overspeed decal (65,000 rpm)                        | 51345    |
| Pa ultracrimp tube, 6 mL (1 pkg. of 50)                   | 79231    |
| 6 mL ultracrimp cartridge set (8)                         | 79297    |
| Tube racks (2)  | 03921    |
| Instruction manual  | 79231    |
| Ultracentrifuge rotor log book                            | 52384    |

# StepSaver 65V13 Vertical Rotors - continued

## Ordering information (cont.)

| Description                                 | Cat. No. |
|---|----------|
| <b>Accessories</b>                          |          |
| Ultracrimp/clearcrimp sealing tool          | 03920    |
| Crimp gauge replacement                     | 03919    |
| Extra plugs and caps                        | 03999    |
| 13.5 mL ultracrimp tube racks               | 79247    |
| 6 mL ultracrimp tube rack                   | 03921    |
| 13.5 mL ultracrimp cartridge set (8)        | 79296    |
| 13.5 mL ultracrimp cartridge set (8)        | 79298    |
| 13.5 mL Quick-Seal cartridge set (8)        | 79298    |
| 6 mL ultracrimp cartridge set (8)           | 79297    |
| 13.5 mL ultracrimp individual cartridge (1) | 79244    |
| 6 mL ultracrimp individual cartridge (1)    | 79260    |

## Labware ordering information

| Tube vol. (mL) | Fill vol. (mL) | Description         | Cat. No. | Qty./pkg. | Tubes/rotor | Max. speed (rpm) | Max. RCF (x g) | Ø x L (mm) | Required tube closures, adapters, tools, and accessories |          |           |                                  |
|----------------|----------------|---------------------|----------|-----------|-------------|------------------|----------------|------------|--|----------|-----------|----------------------------------|
|                |                |                     |          |           |             |                  |                |            | Type   | Cat. No. | Qty./pkg. | Description                      |
| 13.5           | 13.8           | PA ultracrimp tube  | 79246    | 50        | 8           | 65,000           | 400,617        | 16 x 93    | Closure  | Included | 50        | Ultracrimp plugs and caps        |
|                |                |                     |          |           |             |                  |                |            | Closure  | 79286    | 8         | 13.5 mL ultracrimp cartridge set |
|                |                |                     |          |           |             |                  |                |            | Accessory  | 79247    | 1         | Ultracrimp tube rack             |
|                |                |                     |          |           |             |                  |                |            | Tool   | 03920    | 1         | Ultracrimp sealing tool          |
| 13.5           | 13.5           | PET clearcrimp tube | 79294    | 50        | 8           | 65,000           | 467,420        | 13 x 51    | Closure  | Included | 50        | Ultracrimp plugs and caps        |
|                |                |                     |          |           |             |                  |                |            | Closure  | 79286    | 8         | 13.5 mL ultracrimp cartridge set |
|                |                |                     |          |           |             |                  |                |            | Accessory  | 79247    | 1         | Ultracrimp tube rack             |
|                |                |                     |          |           |             |                  |                |            | Tool   | 03920    | 1         | Ultracrimp sealing tool          |
| 6.0            | 5.7            | PA ultracrimp tube  | 79273    | 50        | 8           | 65,000           | 393,120        | 13 x 66    | Closure  | Included | 50        | Ultracrimp plugs and caps        |
|                |                |                     |          |           |             |                  |                |            | Closure  | 79297    | 8         | 6 mL ultracrimp cartridge set    |
|                |                |                     |          |           |             |                  |                |            | Accessory  | 03921    | 1         | Tube rack                        |
|                |                |                     |          |           |             |                  |                |            |  | 03920    | 1         | Ultracrimp sealing tool          |
| 2.0            | 2.0            | PET clearcrimp tube | 79292    | 50        | 8           | 65,000           | 393,120        | 13 x 45    | Closure  | Included | 50        | Ultracrimp plugs and caps        |
|                |                |                     |          |           |             |                  |                |            | Closure  | 79297    | 8         | 6 mL ultracrimp cartridge set    |
|                |                |                     |          |           |             |                  |                |            | Accessory  | 03921    | 1         | Tube rack                        |
|                |                |                     |          |           |             |                  |                |            | Tool   | 03920    | 1         | Ultracrimp sealing tool          |

\* Tubes must be purchased from manufacturer.

# StepSaver 50V39 Vertical Rotors



## StepSaver 50V39 rotor specifications

|                       |                         |                      |
|-----------------------|-------------------------|----------------------|
| Type                  | Vertical                |                      |
| Material              | Titanium                |                      |
| Capacity              | 8 x 39 mL               |                      |
| Maximum speed         | 50,000 rpm              |                      |
| Tube dimensions Ø x L | 25 x 113 mm             |                      |
| Angle                 | 0°                      |                      |
| K factor              | 38.5                    |                      |
| Net weight            | 10.3 kg/22.7 lb         |                      |
| Warranty              | 7 years                 |                      |
|                       | <b>RCF</b>              | <b>Radius</b>        |
|                       | <b>39 mL/13.5 mL</b>    | <b>39 mL/13.5 mL</b> |
| Maximum               | 205,807 x g/205,807 x g | 73.7 mm/73.7 mm      |
| Average               | 169,784 x g/169,784 x g | 60.8 mm/60.8 mm      |
| Minimum               | 205,807 x g/205,807 x g | 73.7 mm/73.7 mm      |

## Ordering information

| Description                                    | Cat. No. |
|--|----------|
| <b>StepSaver 50V39 (39 mL) rotor package</b>   |          |
| StepSaver 50V39 Vertical Rotor (39 mL)         | 79245    |
| Rotor stand                                    | 20048993 |
| Extra overspeed decal (50,000 rpm)             | 51349    |
| PA ultracrimp tube, 39 mL (1 pkg. of 50)       | 79253    |
| 39 mL ultracrimp cartridge set (8)             | 79299    |
| Tube racks (2)                                 | 79249    |
| Instruction manual                             | 79231    |
| Ultracentrifuge rotor log book                 | 52384    |
| <b>StepSaver 50V39 (13.5 mL) rotor package</b> |          |
| StepSaver 50V39 Vertical Rotor (13.5 mL)       | 79277    |
| Rotor stand                                    | 20048993 |
| Extra overspeed decal (50,000 rpm)             | 51349    |
| PA ultracrimp tube, 13.5 mL (1 pkg. of 50)     | 79246    |
| 13.5 mL ultracrimp cartridge set (8)           | 79300    |
| Tube racks (2)                                 | 79247    |
| Instruction manual                             | 79231    |
| Ultracentrifuge rotor log book                 | 52384    |

# StepSaver 50V39 Vertical Rotors - continued

## Ordering information (cont.)

| Description                                 | Cat. No. |
|---|----------|
| <b>Accessories</b>                          |          |
| Ultracrimp/clearcrimp sealing tool          | 03920    |
| Crimp gauge replacement                     | 03919    |
| Extra plugs and caps                        | 03999    |
| 39 mL ultracrimp tube racks                 | 79249    |
| 13.5 mL ultracrimp tube rack                | 79247    |
| 39 mL ultracrimp cartridge set (8)          | 79299    |
| 13.5 mL ultracrimp cartridge set (8)        | 79300    |
| 13.5 mL ultracrimp individual cartridge (1) | 79263    |

## Labware ordering information

| Tube vol. (mL) | Fill vol. (mL) | Description         | Cat. No. | Qty./ pkg. | Tubes/ rotor | Max. speed (rpm) | Max. RCF (x g) | Ø x L (mm) | Required tube closures, adapters, tools, and accessories |          |            |                                  |
|----------------|----------------|---------------------|----------|------------|--------------|------------------|----------------|------------|--|----------|------------|----------------------------------|
|                |                |                     |          |            |              |                  |                |            | Type   | Cat. No. | Qty./ pkg. | Description                      |
| 39.0           | 38.9           | PA ultracrimp tube  | 79253    | 50         | 8            | 50,000           | 241,831        | 25 x 113   | Closure  | Included | 50         | Ultracrimp plugs and caps        |
|                |                |                     |          |            |              |                  |                |            | Closure  | 79299    | 8          | 39 mL ultracrimp cartridge set   |
|                |                |                     |          |            |              |                  |                |            | Accessory  | 79249    | 1          | Tube rack                        |
|                |                |                     |          |            |              |                  |                |            | Tool   | 03920    | 1          | Ultracrimp closure tool          |
| 39.0           | 38.9           | PET clearcrimp tube | 79295    | 50         | 8            | 50,000           | 241,831        | 25 x 113   | Closure  | Included | 50         | Ultracrimp plugs and caps        |
|                |                |                     |          |            |              |                  |                |            | Closure  | 79299    | 8          | 39 mL ultracrimp cartridge set   |
|                |                |                     |          |            |              |                  |                |            | Accessory  | 79249    | 1          | Tube rack                        |
|                |                |                     |          |            |              |                  |                |            | Tool   | 03920    | 1          | Ultracrimp sealing tool          |
| 13.5           | 13.8           | PA ultracrimp tube  | 79246    | 50         | 8            | 50,000           | 228,706        | 16 x 93    | Closure  | Included | 50         | Ultracrimp plugs and caps        |
|                |                |                     |          |            |              |                  |                |            | Closure  | 79300    | 8          | 13.5 mL ultracrimp cartridge set |
|                |                |                     |          |            |              |                  |                |            | Accessory  | 79247    | 1          | Tube rack                        |
|                |                |                     |          |            |              |                  |                |            | Tool   | 03920    | 1          | Ultracrimp sealing tool          |
| 13.5           | 13.8           | PET clearcrimp tube | 79294    | 50         | 8            | 50,000           | 228,706        | 16 x 93    | Closure  | Included | 50         | Ultracrimp plugs and caps        |
|                |                |                     |          |            |              |                  |                |            | Closure  | 79300    | 8          | 13.5 mL ultracrimp cartridge set |
|                |                |                     |          |            |              |                  |                |            | Accessory  | 79247    | 1          | Tube rack                        |
|                |                |                     |          |            |              |                  |                |            | Tool   | 03920    | 1          | Ultracrimp sealing tool          |

# TV-1665 Vertical Rotor



## TV-1665 rotor specifications

|                       |                 |               |
|-----------------------|-----------------|---------------|
| Type                  | Vertical        |               |
| Material              | Titanium        |               |
| Capacity              | 16 x 6 mL       |               |
| Maximum speed         | 65,000 rpm      |               |
| Tube dimensions Ø x L | 13 x 66 mm      |               |
| Angle                 | 0°              |               |
| K factor              | 9.8             |               |
| Net weight            | 9.07 kg/19.9 lb |               |
| Warranty              | 7 years         |               |
|                       | <b>RCF</b>      | <b>Radius</b> |
| Maximum               | 414,357 x g     | 87.8 mm       |
| Average               | 383,209 x g     | 81.2 mm       |
| Minimum               | 352,062 x g     | 74.6 mm       |

## Ordering information

| Description  | Cat. No. |
|--|----------|
| <b>TV-1665 rotor package</b>   |          |
| TV-1665 Vertical Rotor   | 11672    |
| Rotor stand  | 20048993 |
| Lubricant  | 70006692 |
| Extra overspeed decal (65,000 rpm)   | 51345    |
| Instruction manual   | 11670    |
| Ultracentrifuge rotor log book   | 52384    |
| <b>Accessories</b>   |          |
| Ultracrimp/clearcrimp sealing tool   | 03920    |
| Crimp gauge replacement  | 03919    |
| Extra plugs and caps   | 03999    |
| Tube rack  | 03921    |
| Rotor cap  | 03991    |
| Tool kit for ultracrimp sealing system (rotor holding fixture, torque wrench, and socket cap wrench) | 12770    |
| Tool kit for 5 mL thin-walled tube (rotor holding fixture and wrench)                                | 52598    |

# TV-1665 Vertical Rotor - continued

## Labware ordering information

| Tube vol. (mL) | Fill vol. (mL) | Description           | Cat. No. | Qty./pkg. | Tubes/rotor | Max. speed (rpm) | Max. RCF (x g) | Ø x L (mm) | Required tube closures, adapters, tools, and accessories |          |           |  |
|----------------|----------------|-----------------------|----------|-----------|-------------|------------------|----------------|------------|--|----------|-----------|--|
|                |                |                       |          |           |             |                  |                |            | Type   | Cat. No. | Qty./pkg. | Description                            |
| 6.0            | 5.7            | PA ultracrimp tube    | 03945    | 50        | 16          | 65,000           | 414,357        | 13 x 66    | Closure  | Included | 50        | Ultracrimp plugs and caps              |
|                |                |                       |          |           |             |                  |                |            | Accessory  | 03921    | 1         | 6 mL ultracrimp tube rack              |
|                |                |                       |          |           |             |                  |                |            | Accessory  | 03991    | 1         | Rotor cap                              |
|                |                |                       |          |           |             |                  |                |            | Tool   | 12770    | 1         | Tool kit for ultracrimp sealing system |
|                |                |                       |          |           |             |                  |                |            | Tool   | 03920    | 1         | Ultracrimp sealing tool                |
| 6.0            | 5.7            | PET clearcrimp tube   | 01086    | 50        | 16          | 65,000           | 414,357        | 13 x 66    | Closure  | Included | 50        | Ultracrimp plugs and caps              |
|                |                |                       |          |           |             |                  |                |            | Accessory  | 03921    | 1         | 6 mL ultracrimp tube rack              |
|                |                |                       |          |           |             |                  |                |            | Tool   | 12770    | 1         | Tool kit for ultracrimp sealing system |
|                |                |                       |          |           |             |                  |                |            | Tool   | 03920    | 1         | Ultracrimp sealing tool                |
| 5.0            | 4.4            | PA thin-walled tubes* | 03127    | 50        | 16          | 65,000           | 414,357        | 13 x 51    | Closure  | 52521    | 1         | Body cap                               |
|                |                |                       |          |           |             |                  |                |            | Closure  | 52522    | 1         | Plugs                                  |
|                |                |                       |          |           |             |                  |                |            | Tool   | 52598    | 1         | Tool kit for 5 mL thin-walled tube     |

\* Must use caps and plugs together.

# TV-860 Vertical Rotor



## TV-860 rotor specifications

|                       |                 |               |
|-----------------------|-----------------|---------------|
| Type                  | Vertical        |               |
| Material              | Titanium        |               |
| Capacity              | 8 x 35 mL       |               |
| Maximum speed         | 60,000 rpm      |               |
| Tube dimensions Ø x L | 25 x 97 mm      |               |
| Angle                 | 0°              |               |
| K factor              | 25.2            |               |
| Net weight            | 11.4 kg/25.1 lb |               |
| Warranty              | 7 years         |               |
|                       | <b>RCF</b>      | <b>Radius</b> |
| Maximum               | 340,596 x g     | 84.7 mm       |
| Average               | 289,325 x g     | 72.0 mm       |
| Minimum               | 238,055 x g     | 59.2 mm       |

## Ordering information

| Description  | Cat. No. |
|--|----------|
| <b>TV-860 rotor package</b>  |          |
| TV-860 Vertical Rotor  | 53289    |
| Rotor stand  | 20048993 |
| Lubricant  | 70006692 |
| Extra overspeed decal (60,000 rpm)   | 51346    |
| Instruction manual   | 53292    |
| Ultracentrifuge rotor log book   | 52384    |
| Tool kit for ultracrimp sealing system (rotor holding fixture and torque wrench) | 12771    |
| <b>Accessories</b>   |          |
| Ultracrimp/clearcrimp sealing tool   | 03920    |
| Crimp gauge replacement  | 03919    |
| Extra plugs and caps   | 03999    |
| Tube rack  | 03935    |
| Rotor cap  | 03994    |
| Tool kit for ultracrimp sealing system (rotor holding fixture and torque wrench) | 12771    |

## Labware ordering information

| Tube vol.<br>(mL) | Fill vol.<br>(mL) | Description           | Cat. No. | Qty./<br>pkg. | Tubes/<br>rotor | Max.<br>speed<br>(rpm) | Max. RCF<br>(x g) | Ø x L (mm) | Required tube closures, adapters, tools,<br>and accessories |          |               |                              |   |  |
|-------------------|-------------------|-----------------------|----------|---------------|-----------------|------------------------|-------------------|------------|---|----------|---------------|------------------------------|---|--|
|                   |                   |                       |          |               |                 |                        |                   |            | Type  | Cat. No. | Qty./<br>pkg. | Description                  |   |  |
| 35.0              | 35.0              | PA ultracrimp<br>tube | 03989    | 25            | 8               | 60,000                 | 340,596           | 25 x 97    | Closure   | Included | 50            | Ultracrimp plugs<br>and caps |   |  |
|                   |                   |                       |          |               |                 |                        |                   |            |   |          |               | 03994                        | 1 | Rotor cap                                    |
|                   |                   |                       |          |               |                 |                        |                   |            |   |          |               | 03935                        | 1 | Tube rack                                    |
|                   |                   |                       |          |               |                 |                        |                   |            |   |          |               | 12771                        | 1 | Tool kit for<br>ultracrimp<br>sealing system |

# TN-890 Neo Angle Rotor



## TN-890 rotor specifications

|                       |                |               |
|-----------------------|----------------|---------------|
| Type                  | Neo angle      |               |
| Material              | Titanium       |               |
| Capacity              | 8 x 5 mL       |               |
| Maximum speed         | 90,000 rpm     |               |
| Tube dimensions Ø x L | 13 x 53 mm     |               |
| Angle                 | 10°            |               |
| K factor              | 10             |               |
| Max. sample density   | 1.7 g/mL       |               |
| Net weight            | 4.9 kg/10.8 lb |               |
| Warranty              | 5 years        |               |
|                       | <b>RCF</b>     | <b>Radius</b> |
| Maximum               | 645,101 x g    | 71.3 mm       |
| Average               | 554,624 x g    | 61.3 mm       |
| Minimum               | 463,657 x g    | 51.2 mm       |

## Ordering information

| Description  | Cat. No. |
|--|----------|
| <b>TN-890 rotor package</b>  |          |
| TN-890 Neo Angle Rotor   | 75003033 |
| Caps (8)   | 4880992  |
| Cap O-Rings (54)   | 84521049 |
| Cap handle   | S401062A |
| Optical speed disc (2)   | 34644424 |
| Rotor stand  | 216715   |
| Lubricant  | 70006692 |
| Vacuum grease  | 76003500 |
| Log book   | 52384    |
| Instruction manual   | —        |
| <b>Accessories</b>   |          |
| PA seal tube kit for 5 mL tube (100 5 mL PA tubes, 8 spacers, tools) | 50146080 |
| Tube rack for 5 mL PA tubes  | 50146076 |
| STF3 tube sealer, 110 V (CSA)  | 50146078 |
| STF3 tube sealer, 200–240 V (CE mark)                                | 50146079 |

## Labware ordering information

| Tube vol. (mL) | Fill vol. (mL) | Description  | Cat. No. | Qty./pkg. | Tubes/rotor | Max. speed (rpm) | Max. RCF (x g) | Ø x L (mm) | Required tube closures, adapters, tools, and accessories |          |           |                                 |
|----------------|----------------|--------------|----------|-----------|-------------|------------------|----------------|------------|--|----------|-----------|---------------------------------|
|                |                |              |          |           |             |                  |                |            | Type   | Cat. No. | Qty./pkg. | Description                     |
| 5.0            | 5.1            | PA seal tube | 50146014 | 50        | 8           | 90,000           | 645,101        | 13 x 53    | PA seal tube kit*  | 50146080 | 1         | PA seal tube kit for 5 mL tubes |

\* 50146078 or 50146079 required.



# TN-1065 Neo Angle Rotor



## TN-1065 rotor specifications

|                       |                |               |
|-----------------------|----------------|---------------|
| Type                  | Neo angle      |               |
| Material              | Titanium       |               |
| Capacity              | 10 x 12 mL     |               |
| Maximum speed         | 65,000 rpm     |               |
| Tube dimensions Ø x L | 16 x 78 mm     |               |
| Angle                 | 10°            |               |
| K factor              | 23             |               |
| Max. sample density   | 1.7 g/mL       |               |
| Net weight            | 9.6 kg/21.1 lb |               |
| Warranty              | 5 years        |               |
|                       | <b>RCF</b>     | <b>Radius</b> |
| Maximum               | 401,614 x g    | 85.1 mm       |
| Average               | 337,903 x g    | 71.6 mm       |
| Minimum               | 274,438 x g    | 58.1 mm       |

## Ordering information

| Description  | Cat. No. |
|--|----------|
| <b>TN-1065 rotor package</b>   |          |
| TN-1065 Neo Angle Rotor  | 75003034 |
| Caps (10)  | S402308  |
| Cap O-Rings (30)   | S409653A |
| Cap handle   | S401062A |
| Optical speed disc (2)   | 3464443  |
| Rotor stand  | 216715   |
| Lubricant  | 70006692 |
| Vacuum grease  | 76003500 |
| Log book   | 52384    |
| Instruction manual   | -        |
| <b>Accessories</b>   |          |
| PA seal tube kit for 12 mL tubes (100 12 mL PA tubes, 10 spacers, tools) | 50146081 |
| Tube rack for 12 mL PA tubes   | 50146077 |
| STF3 tube sealer, 110 V (CSA)  | 50146078 |
| STF3 tube sealer, 200–240 V (CE mark)                                    | 50146079 |

## Labware ordering information

| Tube vol. (mL) | Fill vol. (mL) | Description  | Cat. No. | Qty./pkg. | Tubes/rotor | Max. speed (rpm) | Max. RCF (x g) | Ø x L (mm) | Required tube closures, adapters, tools, and accessories |          |           |                                  |
|----------------|----------------|--------------|----------|-----------|-------------|------------------|----------------|------------|--|----------|-----------|----------------------------------|
|                |                |              |          |           |             |                  |                |            | Type   | Cat. No. | Qty./pkg. | Description                      |
| 12.0           | 13.5           | PA seal tube | 50146075 | 50        | 10          | 65,000           | 401,614        | 16 x 78    | PA seal tube kit*  | 50146081 | 1         | PA seal tube kit for 12 mL tubes |

\* 50146078 or 50146079 required.

# TN-1865 Neo Angle Rotor



## TN-1865 rotor specifications

|                       |                |               |
|-----------------------|----------------|---------------|
| Type                  | Neo angle      |               |
| Material              | Titanium       |               |
| Capacity              | 18 x 5 mL      |               |
| Maximum speed         | 65,000 rpm     |               |
| Tube dimensions Ø x L | 13 x 53 mm     |               |
| Angle                 | 10°            |               |
| K factor              | 15             |               |
| Max. sample density   | 1.7 g/mL       |               |
| Net weight            | 8.7 kg/19.1 lb |               |
| Warranty              | 5 years        |               |
|                       | <b>RCF</b>     | <b>Radius</b> |
| Maximum               | 430,874 x g    | 85.1 mm       |
| Average               | 383,681 x g    | 81.3 mm       |
| Minimum               | 336,317 x g    | 71.2 mm       |

## Ordering information

| Description  | Cat. No. |
|--|----------|
| <b>TN-1865 rotor package</b>   |          |
| TN-1865 Neo Angle Rotor  | 75003035 |
| Caps (18)  | 4880992  |
| Cap O-Rings (54)   | 84521049 |
| Cap handle   | S401062A |
| Optical speed disc (2)   | 3464443  |
| Rotor stand  | 216715   |
| Lubricant  | 70006692 |
| Vacuum grease  | 76003500 |
| Log book   | 52384    |
| Instruction manual   | –        |
| <b>Accessories</b>   |          |
| PA seal tube kit for 5 mL tubes (100 5 mL PA tubes, 18 spacers, tools) | 50146082 |
| Tube rack for 12 mL PA tube  | 50146076 |
| STF3 tube sealer, 110 V (CSA)  | 50146078 |
| STF3 tube sealer, 200–240 V (CE mark)                                  | 50146079 |

## Labware ordering information

| Tube vol. (mL) | Fill vol. (mL) | Description  | Cat. No. | Qty./pkg. | Tubes/rotor | Max. speed (rpm) | Max. RCF (x g) | Ø x L (mm) | Required tube closures, adapters, tools, and accessories |          |           |                                 |
|----------------|----------------|--------------|----------|-----------|-------------|------------------|----------------|------------|--|----------|-----------|---------------------------------|
|                |                |              |          |           |             |                  |                |            | Type   | Cat. No. | Qty./pkg. | Description                     |
| 5.0            | 5.1            | PA seal tube | 50146014 | 50        | 18          | 90,000           | 645,101        | 13 x 53    | PA seal tube kit*  | 50146081 | 1         | PA seal tube kit for 5 mL tubes |

\* 50146078 or 50146079 required.

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