1) **Sorvall WX100 Floor Ultracentrifuge**

**Manufacturer:** Thermo Scientific

**Catalogue no.:** 46902

**Description:** WX100 Ultra Centrifuge; Max Speed/RCF: 100,000rpm/802,010 x g, 200-240V 50/60Hz, 16/20A, Single Phase

**Principle of Operation:**

Centrifugation involves the use of centrifugal force, so as to increase the effective gravitational force on the components of a mixture, in order to separate them. The rate of centrifugation of a particle in a mixture is specified by the acceleration applied to the sample measured in revolutions per minute (rpm). The settling velocity of the particle is a function of its size and shape, viscosity of the medium, besides other factors.

The ultracentrifuge is optimized for spinning a rotor at very high speeds, capable of generating acceleration as high as 1,000,000 g (9,800 km/s²). These high centrifugal forces are used to isolate very small particles, including ribosomes, proteins, viruses and to study membrane fractionation.

**Specifications**

- **Capacity:** 6 x 250mL
- **Speed Control:** Variable, 1000rpm to max. speed ±10rpm, 100rpm increments
- **Motor Drive:** Imbalance-tolerant direct drive
- **Acceleration/Braking:** 10/11
- **Control Type:** Microprocessor
- **User Interface:** Color LCD Touch screen
- **Features:** Automatic RCF, Integrator, \(W^2dt\) Real Time Control, Controlled Access, Rotor Life Management
- **Programmability:** 20 programs, Step-Run
- **Refrigeration System:** Solid-state thermoelectric refrigeration; CFC-free
- **Temperature Range:** 0° to +40°C
- **Temperature Accuracy:** ±0.5°C
- **Vacuum:** Oil-free rotary vacuum pump with moisture removal function and oil
<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>diffusion pump (0.13 Pa)</td>
<td></td>
</tr>
<tr>
<td>Heat Output</td>
<td>&lt;1kw/hr</td>
</tr>
<tr>
<td>Noise Level</td>
<td>53dBA</td>
</tr>
<tr>
<td>Dimensions (L x W x H)</td>
<td>27.2 x 31.1 x 39.4 in.; Height to top of deck: 33.4 in. (69 x 79 x 100cm; Height to top of deck: 85.0cm)</td>
</tr>
<tr>
<td>Height to top of deck</td>
<td>33.4 in. (85cm)</td>
</tr>
<tr>
<td>Net Weight</td>
<td>881.8 lb. (400kg)</td>
</tr>
</tbody>
</table>

**Picture of the Sorvall WX100 Floor Ultracentrifuge**
Accessories:

i) **Surespin 630/36**
   - Top loading Swinging Bucket Titanium rotor and buckets
   - Catalogue No.: 79368
   - Capacity: 6*36 ml
   - Max speed: 30,000 rpm
   - Max. RCF: 166,880*g
   - Quantity: 1

ii) **Tubes 30 ml (pack of 25)**
    - Catalogue no.: 03141
    - Quantity: 4

iii) **30 ml buckets for existing Surespin 630/36 rotor**
    - Quantity: 1 set

1) **Sorvall MTX 150 Micro-Ultracentrifuge**

   **Manufacturer:** Thermo Scientific
   **Catalogue no.:** 46963
   **Description:** MTX 150 Micro-Ultra Centrifuge; 230V 50/60Hz, 6A single phase

**Principle of Operation:**

Centrifugation involves the use of centrifugal force, so as to increase the effective gravitational force on the components of a mixture, in order to separate them. The rate of centrifugation of a particle in a mixture is specified by the acceleration applied to the sample measured in revolutions per minute (rpm). The settling velocity of the particle is a function of its size and shape, viscosity of the medium, besides other factors.

The ultracentrifuge is optimized for spinning a rotor at very high speeds, capable of generating acceleration as high as 1,000,000 g (9,800 km/s²). These high centrifugal forces are used to isolate very small particles, including ribosomes, proteins, viruses and to study membrane fractionation.
### Technical Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Benchtop Model</td>
</tr>
<tr>
<td>Capacity</td>
<td>Fixed-Angle: 6 x 30mL (0.18L), w/S50A rotor</td>
</tr>
<tr>
<td></td>
<td>Swinging Bucket: 4 x 7mL (0.03L), w/S50ST rotor</td>
</tr>
<tr>
<td>Max. Speed</td>
<td>150,000rpm</td>
</tr>
<tr>
<td>Max. RCF</td>
<td>1,048,680 x g</td>
</tr>
<tr>
<td>Profile</td>
<td>9 Acceleration/9 deceleration, brake off</td>
</tr>
<tr>
<td>Speed Control Accuracy</td>
<td>±50rpm</td>
</tr>
<tr>
<td>Program Memory</td>
<td>20, Each with up to 9 steps</td>
</tr>
<tr>
<td>Refrigeration System</td>
<td>Solid-state thermoelectric cooling</td>
</tr>
<tr>
<td>Set Temperature Range</td>
<td>0° to 40°C in 1°C increments</td>
</tr>
<tr>
<td>Ambient Operating Temperature Range</td>
<td>5° to 35°C (41° to 95°F)</td>
</tr>
<tr>
<td>Heat Output</td>
<td>0.7kW/2400 BTU/hr.</td>
</tr>
<tr>
<td>D x W x H</td>
<td>22.9 x 23.2 x 16.1 in. (58.2 x 59 x 40.8cm)</td>
</tr>
<tr>
<td>Weight</td>
<td>213 lb. (97kg)</td>
</tr>
</tbody>
</table>

- Regulatory standards: cCSAus, CE, IEC61010-2-020, EN61326-1 2006
- Simple operation
- The Sorvall MTX 150 microultracentrifuge provides user-friendly, reliable operation to simplify rotor loading, instrument setup, and instrument operation. The Sorvall MTX 150 also offers visual tube balancing for enhanced ease of use.
- Self locking rotor system automatically secures the rotor to the drive shaft. This innovation eliminates the need to manually secure the rotor, facilitation rotor installation and enhancing safety.
- GMP/GLP Data compliance and Management
- The Sorvall MTX 150 offers traceability and quality control for biopharmaceutical processing needs. A USB port allows connectivity to a memory stick, facilitating output of operating data in CSV format.

**Picture of Sorvall MTX 150 Micro-Ultracentrifuge**

![Picture of Sorvall MTX 150 Micro-Ultracentrifuge](image-url)
Accessories:

i) **S55-S Swinging bucket Rotor**  
   Catalogue No.: 45594  
   Capacity (#places*volume): 4*2.2 ml  
   Max speed: 55,000 rpm  
   Max RCF: 258,826*g  
   K Factor: 44  
   Includes 100 tubes  
   Quantity: 1

ii) **S80-AT2 Fixed angle rotor**  
    Catalogue no.: 45589  
    Capacity (#places *volume): 30*0.5 ml  
    Max speed: 80,000 rpm  
    Max RCF: 357,440*g  
    K Factor: 14.0  
    Includes 100 tubes  
    Quantity: 1

iii) **S52-ST Swinging bucket rotor**  
    Catalogue No.: 45977  
    Capacity (#places *volume): 4*5 ml  
    Max speed: 52,000 rpm  
    Max RCF: 275,458*g  
    K Factor: 79  
    Includes 100 tubes  
    Quantity: 1