The MFW120 system is a Micro Scale Wear Tester ideal for evaluating the resistance characteristics for newly developed nano, bio, ultrathin coatings, metal, non-metal, and plastic materials since it can handle very low loads and is designed to perform tests using simple specimens.

A spherical pin or ball is generally used as the counter material on the rotating disc. A diverse range of tests can be performed by simply changing the jig. The two-jaw disc can work with round or rectangular type discs. Adjusting the heat and humidity for the test environment is controlled via a connected computer with data acquisition software to collect the raw data. The pressure load is set using dead weights on the lever to apply a load range from a minimum of 1 gf (0.01 N) to a maximum of 1 kgf (10N). Additional options include a chamber and lubrication deposition system to test a variety of lubricated conditions, temperature control, humidity control, and custom jigs to accommodate various sample sizes and shapes.

### Test Modes
- Spherical Pin-on-Disc
- Ball-on-Disc
- Spherical Pin

### Control Parameters
- Rotation speed (rpm)
- Temperature (°C)
- Time (sec)
- Load (N)
- Humidity (%)
- Cycle

### Recorded Parameters
- Rotation speed (rpm)
- Sliding speed (m/sec)
- Temperature (°)
- Test cycle (cycle)
- Friction force (N)
- Sliding distance (m)
- Test time (sec)
- Friction coefficient (µ)

### System Software & Graphic Display
- User-friendly screen configuration
- Average and peak curve readings
- Real-time data display and storage

### Recorded Parameters

<table>
<thead>
<tr>
<th>Test Load Range</th>
<th>1 gf – 1 kgf (0.01 N – 10 N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPM</td>
<td>10 – 400 rpm</td>
</tr>
<tr>
<td>Temperature</td>
<td>R.T. to 100°C ± 2°C</td>
</tr>
<tr>
<td>Pin Size</td>
<td>Spherical pin Ø 5 × L 20 mm</td>
</tr>
<tr>
<td>Ball Size</td>
<td>Ø 1/8”, Ø 1/4”, Ø 1/2”</td>
</tr>
<tr>
<td>System Size</td>
<td>500 x 300 x 440 mm</td>
</tr>
<tr>
<td>Power</td>
<td>1kW, 220V, 50/60Hz</td>
</tr>
<tr>
<td>Weight</td>
<td>~25 kg</td>
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</tbody>
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