Multi-Purpose Wear Test System – MPW110

General Information

The **MPW110** system is a Macro Scale Wear Tester and while used to primarily perform Pin-on-Disc or Ball-on-Disc tests, it can also be used to perform Thrust Washer, Four-Ball, Ball-on-Flat, and oscillating tests as well. The temperature and humidity within the test environment is set prior to the test and can even be adjusted during testing. Temperature is precisely controlled up to ±1°using PID control.

The equipment is manufactured to evaluate the friction and wear characteristics for various materials including metal, ceramic, composites, coatings, nano, and bio materials.

To adjust the load application range from light load to heavy load, the pressure load is configured by a two-stage lever.

The system is configured to measure wear loss and friction coefficient in real time during testing and the results can be simultaneously stored in a computer.

Standard MPW110 Configuration

Control Parameters

- Rotation Speed (rpm)
- Load (kgf)
- Temperature (°)
- Humidity (%)
- Time (sec)
- Cycle
- Lubricant Chamber Temperature
- Microsoft Windows XP Compatible
- User-friendly screen configuration
- Average and Peak Curve Readings
- Real Time Data Display and Storage
- Can modify parameters during test

Recorded Parameters

- Rotation speed (rpm)
- Friction force (N)
- Sliding speed (m/sec)
- Wear loss (㎛)
- Sliding distance (m)
- Temperature (stage, specimen surface: °)
- Test time (sec)
- Test cycle (cycle)
- Friction coefficient (μ)

High Temperature Furnace Type

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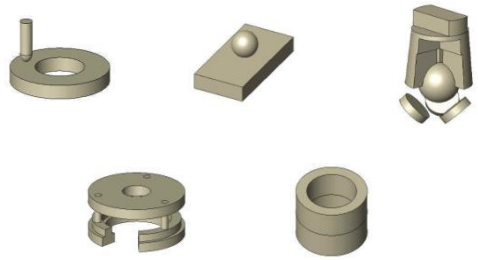
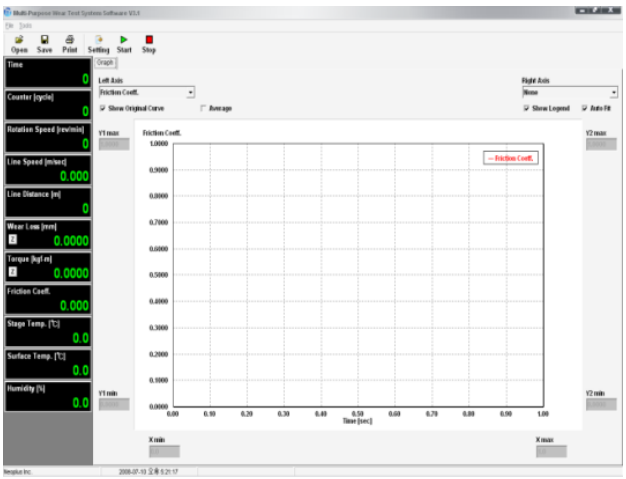
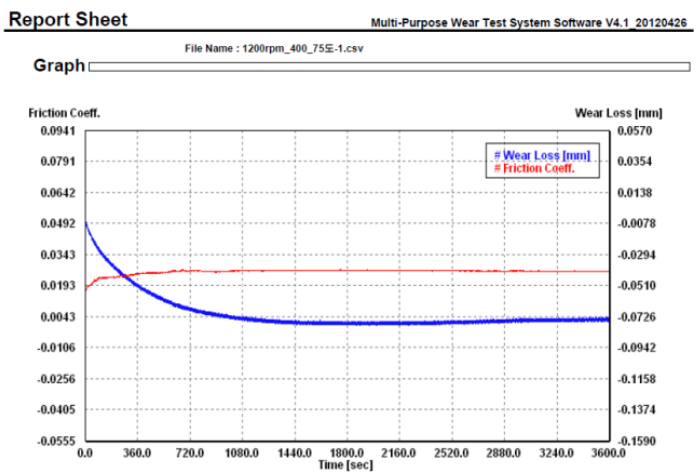
Test Modes

- Pin-on-Disc (One Pin or Three Pin)
  (ISO 7148, ASTM G99)
- Ball-on-Disc (One Ball or Three Ball) (ISO 7148)
- Thrust Washer (ASTM D3702)
- Ball-on-Flat Test (ASTM G133)



Software





Specifications

Max. Load Capacity	1,000 N (optional 10,000 N)
Min. Load Capacity	2 N
Friction Sensor	50 N or 200 N
Wear Loss Measuring Sensor	±0.5 ㎛
Rotation Speed	1 – 1,500 rpm (optional 3,000 rpm)
Heating Range	RT150°C (optional 1100°C)
Humidity Control Range	30 – 90% R.H ±5%
End Mode	Time, cycle, friction
Power	AC 220 V, single phase
Size	W 700 X D 450 X H 700 mm (adjustable)
Weight	≈ 200 kg

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