



THELKIN
Know the Difference

THELKIN Systems

SIX-STATION PIN-ON-DISK TESTER



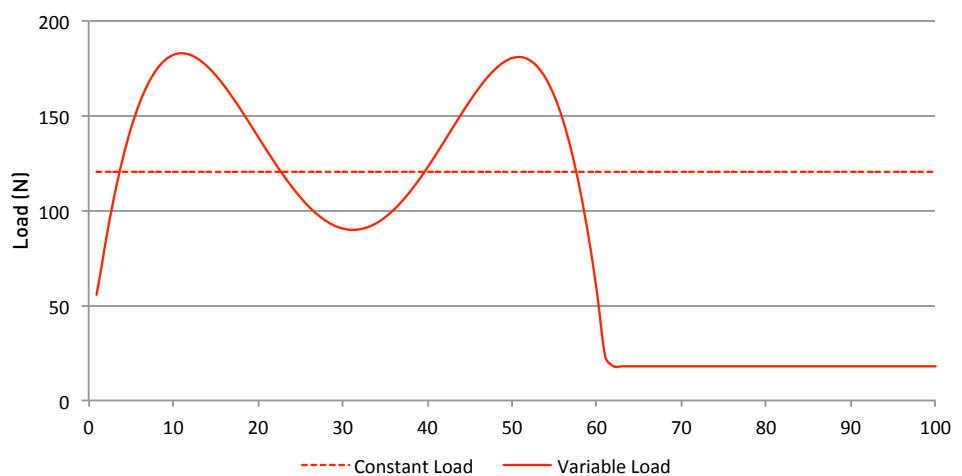
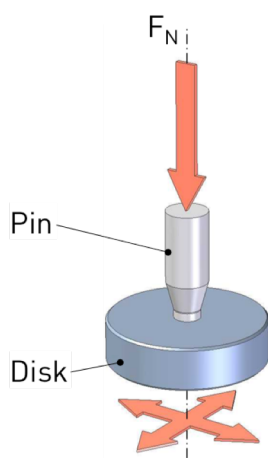
BACKGROUND

The reduction of friction and wear within a tribological system is of great importance for many technical applications. Friction and wear performance of two bodies in contact can be assessed using simplified testing configurations, including samples with geometries of reduced complexity, that allow for the screening of a range of parameter variations. One common wear investigation setup is the pin-on-disk layout: a cylindrical pin with flat or rounded contact surface actuates against a flat or dished disk. Operating parameters such as sliding velocity, sliding distance, contact pressure, and lubrication conditions can be controlled and investigated. This layout further allows for compact multi-station configurations to obtain sample groups with statistically significant sizes.

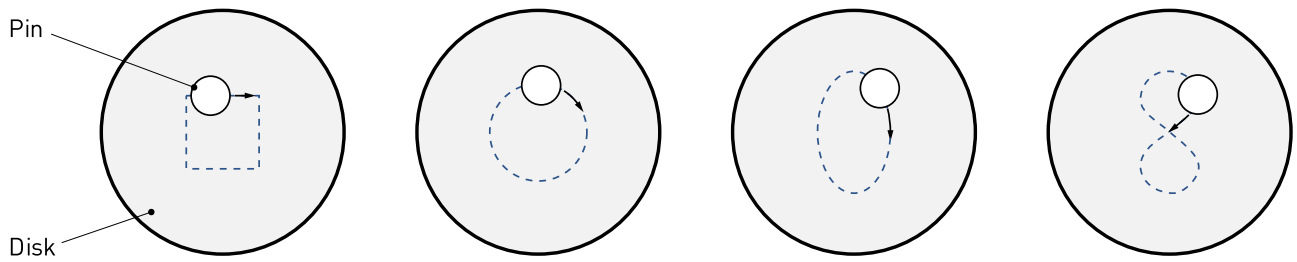
SYSTEM DESIGN

THELKIN offers a compact, robust and flexible testing apparatus for the investigation of the wear performance of various material pairings. The Pin-On-Disk Wear Tester is a table-top device with a bank of six stations, arranged in one row. The system is easy to set up, use, and maintain, with easy access to each station. The mounting design of disks and pins allows for quick mount/dismount of the test samples, while accurate re-positioning of samples after disassembly is guaranteed. All fixturing parts are corrosion resistant and easy to clean. The system is fully electrically driven, no additional power supply (pneumatics or hydraulics) is required.

Each station experiences the same vertical load and horizontal motions. Heating of the test chambers (up to 50°C) is provided through integrated heating of the base plate. Load and motions are individually controlled and programmed through an easy-to-use and versatile software interface.



Pin-on-disk testing setup (left) and load profile examples (right).



Individually programmable motion profiles.

SPECIFICATIONS

Number of stations		6
Vertical force	N	400
Horizontal stroke	mm	±25
Frequency	Hz	2
Environment	<ul style="list-style-type: none"> - Dry or lubricated - Room temperature or heated up to 37°C 	

Pin dimensions ¹	mm	
- Diameter		10
- Height		20
Disk dimensions ¹	mm	
- Diameter		50
- Height		10
Electrical power	VAC	115 / 230

¹Typical values, can be changed to user requirements.

