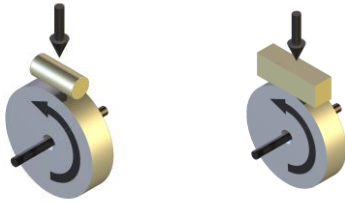
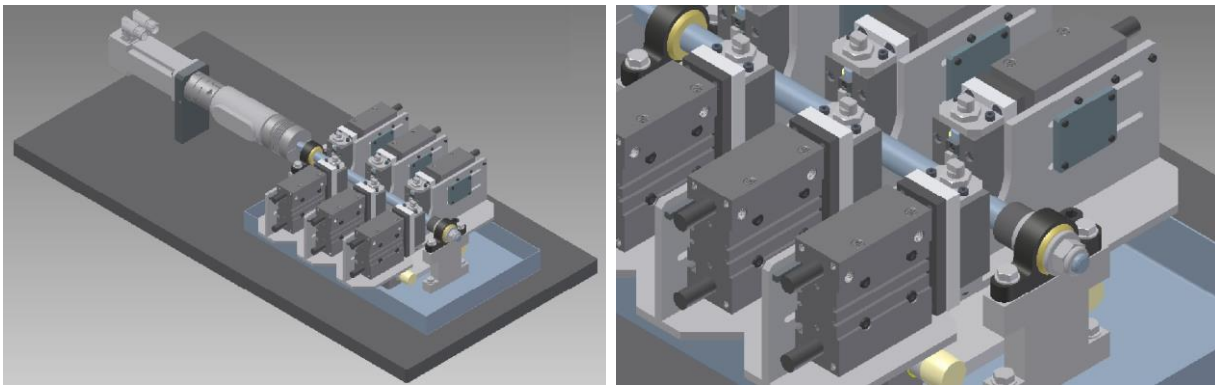


HTP 040 Six Station Cross Cylinder/Block on Ring High Throughput Tribometer



- Single function
- Multi-station
- Easy to Operate
- Control via PLC
- Data exported on USB stick



Description

This instrument is a development of an earlier machine, which use a standard lathe as the basic platform.



Load is applied to each test station by means of pneumatic cylinders, connected in parallel. Pressure to the cylinders is manually controlled by means of a precision pressure regulator.

An in-line torque transducer is included for sensing the total friction torque generated by the six test samples. Note that test stations can be removed for friction experiments on fewer specimen pairs, if required.

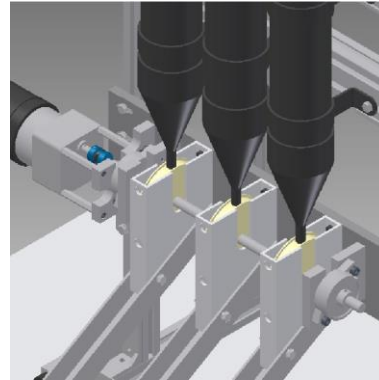
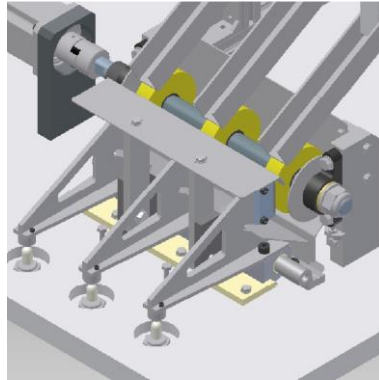
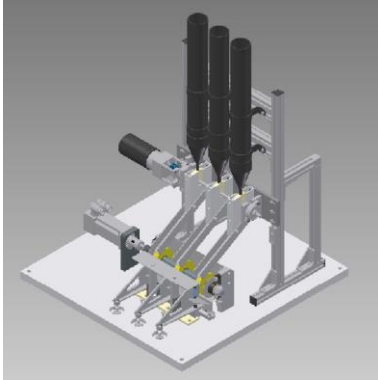
The machine is designed to be bench-mounted, with installation footprint kept to a minimum. It is simple to operate, so requires minimal training. Control is implemented with a PLC, with inputs via touch-screen. Data is stored by the device and exported on USB stick.



Specification

Motion	Rotary	
Load	20 to 400	N
Diameter	20	mm
Speed	6 to 600	rpm
Temperature	Ambient	°C
Test Stations	6	
Manually Set Parameters		
Load	Yes - pneumatic	
Rotational Speed	Yes	
Test Duration	Yes	
Data Logged Parameters		
Load	Pressure Transducer	
Friction Force	Sum total for all samples	

HTP 050 Three Station Sand - Wheel Abrasion - Dry & Wet
 Evolution: TE 65 Sand/Wheel Abrasion Tester



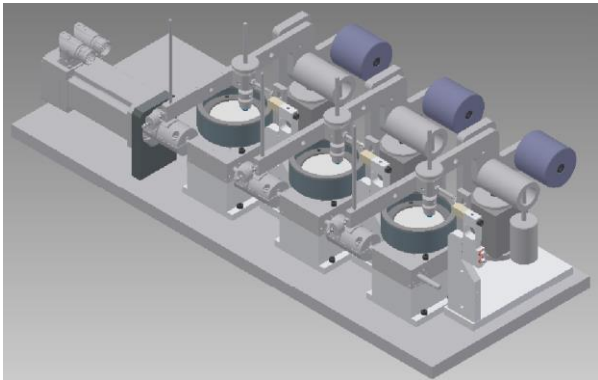
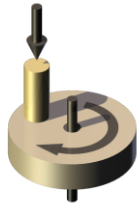
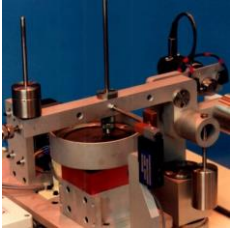
A standard urethane covered conveyer roller, with an outside diameter of 80 mm, and hardness of Shore A50, A70 or A90, can be purchased for less than 1/10th the cost of manufacture of a standard ASTM G65 wheel. Using these rollers results in a reduced cost per data point.

A precision abrasion feed system enhances control giving a range of constant feed rates and producing an even monolayer of particles on the wheel in front of the contact. The abrasant is fed from a hopper to a rotating drum with a shallow groove on its surface. The feed rate is varied by adjusting the speed of the slotted drum. For wet tests, water can be introduced on to the wheel surface, just behind the chute. This means that fully wet tests can be carried out, with the mass flow of abrasant well controlled.

Specification	Sand - Wheel Abrasion - Dry & Wet	
Motion	Rotary	
Load	5 to 100	N
Diameter	80	mm
Speed	30 to 150	rpm
Temperature	Ambient	°C
Test Stations	3	
Manually Set Parameters		
Load	Yes - Pneumatic	
Rotational Speed	Yes	
Test Duration	Yes	
Data Logged Parameters	N/A	

HTP 060 Three Station Pin on Disc

Evolution: TE 79 Multi-Axis Tribology Machine



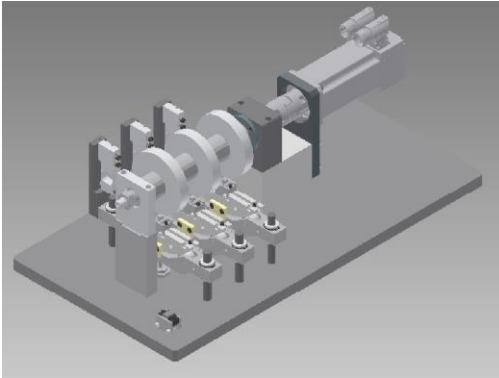
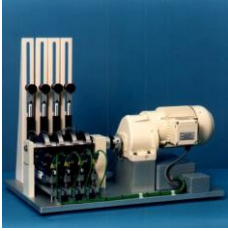
This unit incorporates three conventional pin on disc test assemblies, generally in compliance with ASTM G99.

A rotating fluid bath is a simple solution for lubricated testing, as it avoids the requirement for rotating seals, however, it does not facilitate contact heating of the disc sample. Non-contact heating of the underside of the rotating bath is thus implemented using quartz halogen heating rings.

Specification	Pin on Disc	
Motion	Rotary	
Load	1 to 60	N
Diameter	75	mm
Speed	2 to 200	rpm
Temperature	Ambient to 150	°C
Test Stations	3	
Manually Set Parameters		
Load	Yes - dead-weight	
Rotational Speed	Yes	
Temperature	Yes	
Test Duration	Yes	
Data Logged Parameters		
Temperature	Yes - each sample	
Friction Force	Yes - each sample	

HTP 070 Three Station Block on Ring Friction

Evolution: TE 56 Multi Station Block on Ring Machine



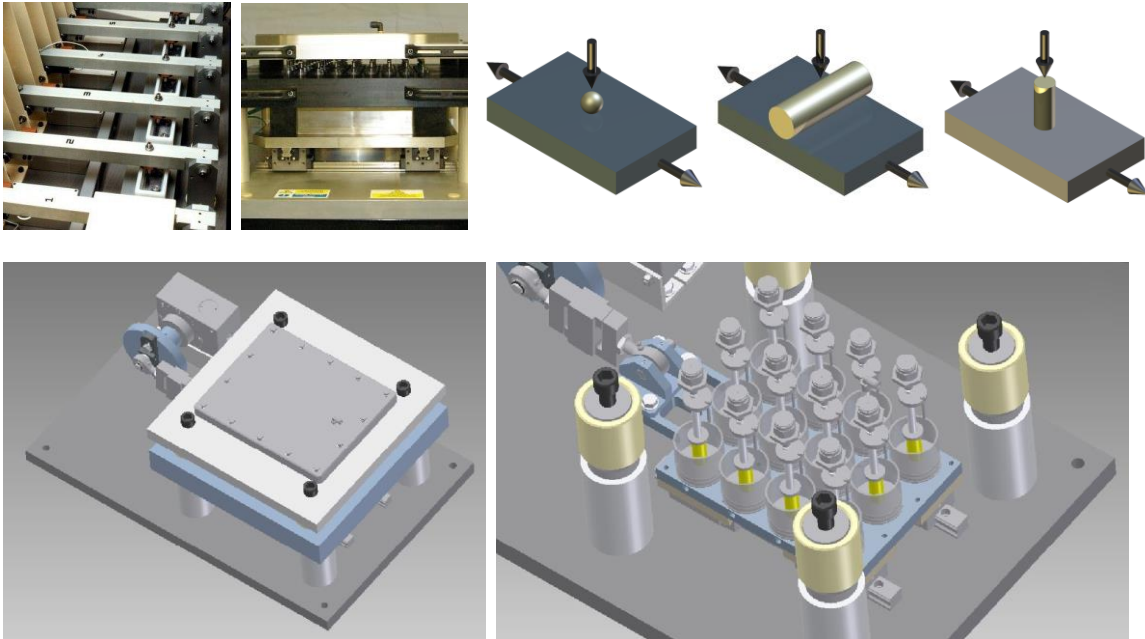
This wear and friction test machine uses simple test specimens offering conforming and non-conforming block-on-ring contact geometry. The machine meets and exceeds the requirements of ASTM G 137. Relocating block specimen holders provide for accurate re-positioning of the specimens after weighing; this enables wear to be measured during tests.

Load is applied to each test station by means of pneumatic cylinders, connected in parallel. Pressure to the cylinders is manually controlled by means of a precision pressure regulator.

Specification	Block on Ring Friction	
Motion	Rotary	
Load	5 to 150	N
Diameter	100	mm
Speed	10 to 380	rpm
Temperature	Ambient	°C
Test Stations	3	
Manually Set Parameters		
Load	Yes - Pneumatic	
Rotational Speed	Yes	
Test Duration	Yes	
Data Logged Parameters		
Load	Pressure Transducer	
Friction Force	Yes - each sample	
Temperature	Yes - each sample	

HTP 080 Twelve Station Long Stroke Pin on Reciprocating Plate

Evolution: TE 87 Circular Translation Pin on Disc + TE 88 Friction & Wear Tester



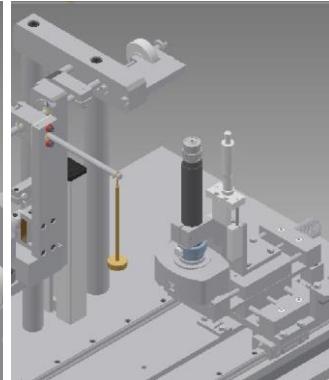
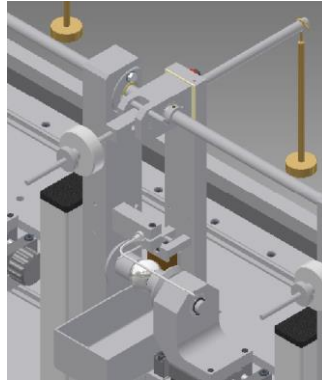
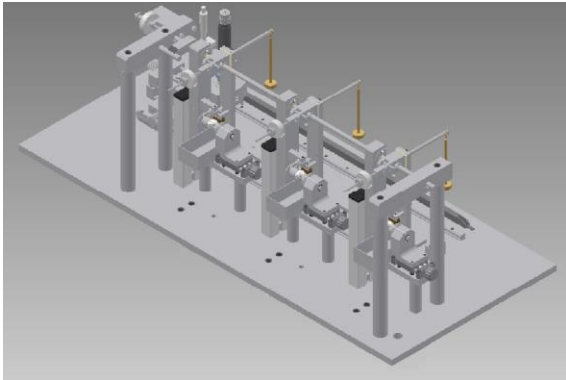
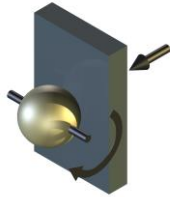
Load is applied to each test station by means of pneumatic cylinders, connected in parallel. Pressure to the cylinders is manually controlled by means of a precision pressure regulator.

An in-line force transducer is included for sensing the total friction generated by the twelve test samples. Note that test stations can be disabled for friction experiments on fewer specimens, if required.

Specification	Long Stroke Pin on Reciprocating Plate	
Motion	Reciprocating	
Load	5 to 100	N
Stroke	25	mm
Frequency	1 to 3	Hz
Temperature	Ambient to 150	°C
Test Stations	12	
Manually Set Parameters		
Load	Yes - pneumatic	
Frequency	Yes	
Temperature	Yes	
Test Duration	Yes	
Data Logged Parameters		
Load	Pressure Transducer	
Temperature	Yes	
Friction Force	Sum total for all samples	

HTP 090 Three Station Ball Cratering/Microscale Abrasion

Evolution: TE 66 Micro Scale Abrasion Tester

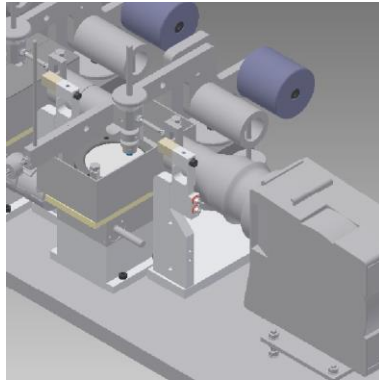
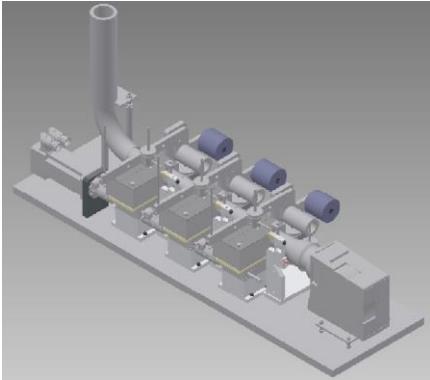
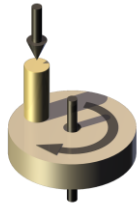
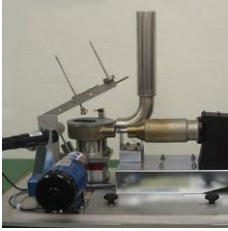


This is a three station version of the standard TE 66 Micro Scale Abrasion Tester and is used to determine the wear coefficient of hard and soft coatings and monolithic materials by abrasive wear in a ball on plate contact configuration, in accordance with BS EN 1071-6. The instrument may also be used as a crater-generating tool on coated surfaces for coating thickness determination.

Specification	Ball Cratering/Microscale Abrasion	
Motion	Rotary	
Load	0.1 to 5	N
Diameter	25	mm
Speed	30 to 150	rpm
Temperature	Ambient	°C
Test Stations	3	
Manually Set Parameters		
Load	Yes - dead-weight	
Rotational Speed	Yes	
Test Duration	Yes	
Data Logged Parameters	N/A	

HTP 100 Three Station High Temperature Pin on Disc

Evolution: TE 98 High Temperature Pin on Disc Machine



This unit incorporates three conventional pin on disc test assemblies, generally in compliance with ASTM G99. It is designed for running dry pin on disc tests at temperature from ambient to 500°C

Non-contact heating of the specimens is provided by an electrically heated hot air gun.

Specification	High Temperature Pin on Disc	
Motion	Rotary	
Load	1 to 60	N
Diameter	75	mm
Speed	2 to 200	rpm
Temperature	Ambient to 500	°C
Test Stations	3	
Manually Set Parameters		
Load	Yes - dead-weight	
Rotational Speed	Yes	
Temperature	Yes	
Test Duration	Yes	
Data Logged Parameters		
Temperature	Yes	
Friction Force	Yes - each sample	