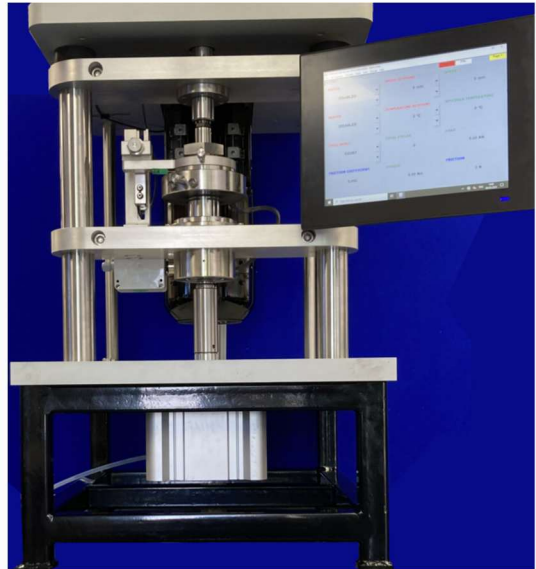
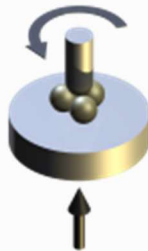


STANDARD TEST – FOUR BALL

Value engineered tribometer for four ball wear and EP tests



Features

- Touch screen PC for data logging and control of speed and temperature
- Low and high load range pneumatic cylinders
- Precision regulator for manual control of load
- Air bearing mounted load and friction assembly

Standard Tests

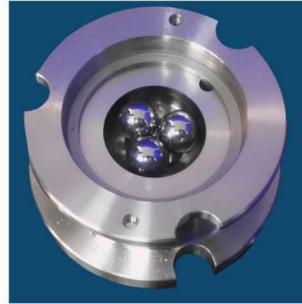
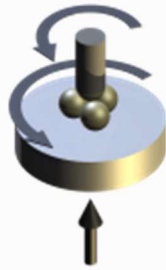
- ASTM D2266 Wear Preventive Characteristics of Lubricating Greases
- ASTM D4172 Wear Preventive Characteristics of Lubricating Fluid
- ASTM D2596 Extreme Pressure Properties of Lubricating Greases
- ASTM D2783 Extreme Pressure Properties of Lubricating Fluid
- ASTM D5183 Standard Test Method for Determination of the Coefficient of Friction of Lubricants Using the Four-Ball Wear Test Machine
- IP 239 Extreme Pressure Properties: Friction and Wear Test for Lubricants
- DIN 51350/1-4 Testing Lubricants: Testing in the Shell Four-Ball Tester
- ISO/CD 11008 Petroleum Products and Lubricants - Determination of Extreme Pressure Properties of Lubricating Greases - Four Ball Method

High Resolution Microscope Assembly

- Range 2 mm with 0.01 mm divisions
- Range 4 mm with 0.02 mm divisions

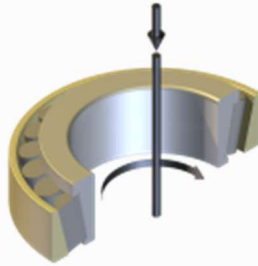
Optional Tests

Rolling Four Ball



- IP 300 Rolling Contact Fatigue Tests for Fluids in a Modified Four-Ball Machine

Shear Stability



- DIN 51350/6 Testing of Shear Stability of Lubricating Oils Containing Polymers
- CEC L-45-A-99 Viscosity Shear Stability of Transmission Lubricants (Taper Roller Bearing Rig)
- ISO 26422:2014 Determination of shear stability of lubricating oils containing polymers - Method using a tapered roller bearing

Order as:

- ST-FB Four Ball Wear & Extreme Pressure Test Machine
- ST-FB/DM Digital Microscope with Camera & PC Image Capture Software
- ST-FB/R4B Rolling Four Ball Test Assembly
- ST-FB/KRL Shear Stability Test Adapter
- ST-FB/SM Temperature Control Service Module for KRL Test

Technical Specifications

Size of Test Balls:	12.7 mm (0.5") diameter
Load Range:	10 to 8,000 N
Loading Method:	Pneumatic
Load Ranges:	20 to 750 N (@ 6 bar air pressure) 50 to 8,000 N (@ 4 bar air pressure)
Load Measurement:	Pressure transducer
Load Control:	Precision pressure regulator
Friction Measurement:	Strain gauge transducer
Torque Reaction Mounting:	Air bearing
Rotational Speed:	60 to 1,800 rpm
Temperature Range:	Ambient to 200°C
Temperature Sensor:	k-type thermocouple
Motor:	1.5 kW a.c. vector motor
Control & Data Acquisition:	Touch-screen PC & Interface
Data Export:	USB Stick

Pre-programmed Test Sequences

ASTM D2266 Wear Preventive Characteristics of Lubricating Greases
ASTM D4172 Wear Preventive Characteristics of Lubricating Fluid
ASTM D2596 Extreme Pressure Properties of Lubricating Greases
ASTM D2783 Extreme Pressure Properties of Lubricating Fluid
IP 239 Extreme Pressure Properties: Friction and Wear Test for Lubricants
DIN 51350/1-5 Testing Lubricants: Testing in the Shell Four-Ball Tester

Automatically Controlled Parameters

Rotational Speed
Temperature
Test Duration

Manually Controlled Parameters

Load

Measured Parameters

Rotational Speed
Load
Friction Torque
Temperature
Test Duration
Friction Coefficient

Services

Electricity: 220/240V, single phase, 50/60 Hz, 3.0 kW
Clean, dry air: 4 cfm at 8 bar (120 psi)