

FALEX

FALEX TIMKEN TEST MACHINE

The most widely recognized EP tester!

The Falex Timken Extreme Pressure Test Rig is one of the first commercially manufactured and most widely recognized testers for evaluating the load carrying capacity of extreme pressure lubricants. Originally developed in the 1930's by The Timken Company, this tester evaluates fluid lubricants and greases containing extreme-pressure additives.

Manufactured by Falex Corporation since 1982, the Falex Timken Test Rig is supplied as a complete system to conduct ASTM Standard Test Methods D2509 and D2782.

Improvements include controlled rate test load and mechanical grease feeder systems, a test fluid recirculation system with temperature control, and an automatic fluid flow interrupter. Optional accessories include a variable speed motor and reservoir cooling system to improve versatility and performance.

Standard Test Methods

ASTM D2509 - Standard Test Method for Measurement of Load-Carrying Capacity of Lubricating Grease (Timken Method)

ASTM D2782 - Standard Test Method for Measurement of Extreme-Pressure Properties of Lubricating Fluids (Timken Method)



Specifications & Features

Speed & Velocity	Variable Speed (850 rpm max), Unidirectional, 2 HP Motor with RPM Indicator.	Automatic Grease Feeder	Electro/mechanical System to feed test grease at 45 ± 9 grams per minute.
Load	Dead Weight Load applied through 10 : 1 Lever Arm.	Automatic Loading Device	Pneumatic System to lower test weights at 2 to 3 lbs/sec
Maximum Test Pressure	Timken test block pressure (.022 in. Scar width): 92,300 psi.	Cabinetry	Heavy construction steel with electro/mechanical compartment, weight storage area, accessory drawer, and instrumentation panel.
Temperature Control	Digital Temperature Control for Test Fluid Circulating System (80° C max) Oil Reservoir Jacket for use with optional refrigerated system to cool test oil.	Wear	Measurement of scar width at specified load.
Fluid Circulating System	3 liter reservoir with heater, oil pump and control valve.	Friction	Friction Lever System and weights (optional)

Ordering Information

Part Number Description

System Description

002-001-003	Falex Timken Test Machine Standard Items include: <ul style="list-style-type: none"> • Timken Lubricant Test Machine (1750), 220 VAC, 60 Hz Pneumatic Loading Device (2 to 3 lbs/sec) Air required Load Lever Arm Assembly • Variable Drive Motor with RPM Indicator (850 rpm max) Temperature Controller (80oC max) • Oil Reservoir Jacket • Grease Feeder (45 ± 9 grams g/min) • Test Weight Set (114 lbs) • Test Cabinet
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System Options

002-040-001	Inspection and Alignment Kit For inspection and alignment of Timken Test Rig; Includes: <ul style="list-style-type: none"> • Dial Indicator (Shaft Run-out and Bearing End-play) Magnetic Base (For use with Dial Indicator) • Insert Tool (Stud Insert to Shaft Taper) • Lever Level (Knife Edge to Shaft) • Digital RPM Indicator • Nozzle Tool (Nozzle to Shaft and Shaft Wear) Tool Storage Case
002-101-001	Friction Lever Group Complete Friction Lever Assembly, including: Friction Lever and Sliding Weight, Friction Lever Block, Stud Insert, and Friction Lever Stop.
6057-061-003	Circulation Chiller Model LWM-016 230V, 50/60 Hz, Working temperature range: -10 to 40o C For use with Test Oil Cooling System

Part Number Description

Options & Accessories

100-200-009	High Precision Scar Measurement System Binocular microscope with X-Y base and digital micrometer. 0.001 mm display.
100-200-023	Digital Scar Measurement System Binocular microscope with CCD camera and Falex software™ for image capture and scar measurement. 0.001 mm display.
002-200-004	Test Weight Set Calibrated Weight Set for Test Load Application
002-101-001	Friction Lever Group Complete Friction Lever Assembly, including: Friction Lever and Sliding Weight, Friction Lever Block, Stud Insert, and Friction Lever Stop.
002-101-002	Loat Lever Group Complete Load Lever Assembly, including: Load Lever, Load Lever Weight Hanger, Load Lever Spring, and Top and Bottom Load Lever Inserts.
002-102-003	Load Lever Weight Hanger
002-027-002	Load Lever Spring
002-105-006	Friction Lever Block
002-011-011	Stud Insert (Knife Edge Support)
002-015-002	Friction Lever Stop
002-011-006	Load Lever Insert (Knife Edge) - Top
002-011-007	Load Lever Insert (Knife Edge) - Bottom

Ordering Information (contd.)

Part Number Description

002-011-008	Friction Lever Insert
002-100-001	Bushing, Test Shaft
002-016-001	Test Ring Lock-Nut
659-200-070	Spanner Wrench for Test Ring Lock-Nut
002-105-109	Control Valve Assembly
002-007-003	Timken Size Crescent Guide for Liquid or Grease
002-028-002	Oil Splash Guard
002-021-004	Grease Splash Guard
100-105-011	Fluid Thermal Reservoir
002-105-013	Falex Standalone Timken Air Loader
100-200-008	Falex Standalone Timken Grease Feeder
002-008-013	Grease Feeder Tube
002-008-014	Grease Feeder End Eap (Top)
002-103-001	Spanner Wrench for Grease Feeder

Test Specimens

002-560-002	Falex Timken Test Block formerly F-45349 or F-25001) Conforms to ASTM D 2782 and D 2509 Carburized Steel, 58 to 62 HRC, four ground test surfaces 0.485 ± 0.002 in. Wide and 0.750 ± 0.016 in. Long, 20 to 30 μ m.	Box of 10 Blocks
002-560-001	Falex Timken Test Ring (Cup) (formerly F-48651 or F-25061) Conforms to ASTM D 2782 and D 2509 Carburized Steel, 58 to 62 HRC, axial surface roughness 20 to 30 μ m. 0.514 ± 0.002 in. Wide and $1.938 + 0.001, - 0.005$ in. Diameter, maximum radial run-out of 0.0005 in.	Box of 25 Rings



Falex Corporation follows a policy of continuous product improvement. Specifications are subject to change without notice.

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