



PIN & VEE BLOCK

Testing Friction and Wear Everywhere!

The Falex Pin and Vee Block tester, designed by Fritz Faville—the founder of Falex Corporation—marked the beginning of the company's legacy and pioneering role in tribology. The machine took two years to develop, with the first prototype produced in 1927, Falex's founding year. Although the Pin and Vee has evolved over its nearly 100 years of life, the core technology has consistently maintained the quality and consistency that define the Falex name.



The versatile, Falex Pin and Vee Block Machine is used to evaluate wear, friction, and extreme pressure properties of lubricants, coatings, and materials in a multitude of applications. The latest model features an integrated touchscreen computer system for easy operation, calibration, data acquisition, and test reports.

Applications

- Fluid and Dry Lubricants
- Additive Packages and Base Stocks
- Dry Film Bonded Coatings
- Materials
- Hardface Coatings
- Metal Working Lubricants
- Refrigeration Lubricants

Standard Testing Methods

The Falex Pin & Vee Block can be configured to meet any or all of the following standard test methods:

ASTM D2625	Standard Test Method for Endurance (Wear) Life and Load-Carrying Capacity of Solid Film Lubricants	FTM-791-3807.1	Wear Life of Dry, Solid-Film Lubricants
ASTM D2670	Standard Test Method for Measuring Wear Properties of Fluid Lubricants	FTM-791-3812.1	Extreme Pressure (EP) Properties of Lubricants, coatings, and materials
ASTM D3233	Standard Test Methods for Measurement of Extreme Pressure Properties of Fluid Lubricants	461-C-84-01	Load Carrying Capacity Test on EP Lubricants
ASTM D5620	Standard Test Method for Evaluating Thin Film Fluid Lubricants in a Drain and Dry Mode Using a Pin and Vee Block Test Machine	461-C-84-02	Wear Test for Chemical Activity or Abrasiveness of EP Lubricants
IP 241	Extreme Pressure, Anti-Wear, Friction and Corrosion Protection Properties of Fluid Lubricants	461-C-84-03	Test for Potential Corrosiveness of Gear Lubricants
		FMC-BJ1-1	Quality Laboratory and Chemical Engineering Physical Test Methods-Extreme Pressure Test on Oils

Specifications

- **Load:** Load is applied to the vee blocks against a rotating test pin by use of a ratchet wheel mechanism and a digital load cell. The Falex Dual Range Load Gage applies from 200 to 3000 lbs direct load (4500 lbs reference load) $\pm 2\%$ full scale accuracy, up to 300 psi average initial Hertzian stress.
- **Speed:** Shaft speed: 290 rpm ± 10 rpm (18.98 ft/min)
- **Wear:** Ratchet wheel system allows rate of wear measurement during test and total wear. 14.4 ratchet teeth = 0.001 inch (0.025 mm)
- **Torque:** 0 to 100 in-lb load cell with digital display. Accuracy $\pm 2\%$ full scale
- **Environment:** Dry or lubricated Pin & Vee Block Test Area

