

# FALEX

## FALEX PIN & VEE BLOCK

Tests a wide variety of applications!



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. Custom test pieces are available from other materials to better match field conditions.

The equipment rotates a 1/4 inch diameter test pin (journal) against two 1/2 inch diameter vee blocks. A four-line contact region is established as load is applied through a mechanical gage by a ratchet wheel and an eccentric arm.

- ☑ Provides controlled load and temperature
- ☑ Programmable user-defined and standard test load programs
- ☑ Programmable loads and temperature for automatic maintenance of test loads
- ☑ Integrated computer touchscreen

### Used in Standard Test Methods

- » ASTM D2625, D2670, D3233, D5620
- » Federal Test Methods FTM-791-3807.1, FTM-791-3812.1
- » Chrysler Corporation 461-C-84-01, 461-C-84-02, 461-C-84-03
- » Ford Motor Company FMC-BJ1-1
- » Institute for Petroleum IP 241

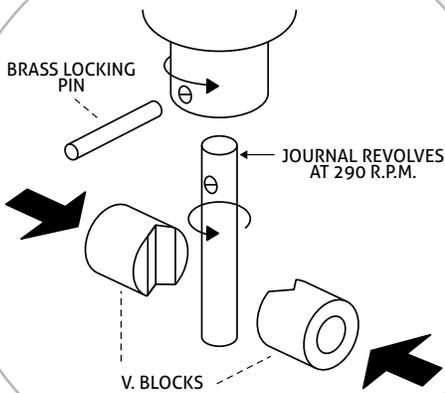
### Test Applications

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

## Falex Pin & Vee Block Machine Overview



### PIN & VEE BLOCK CONFIGURATION



DRIP TRAY

RACHET WHEEL LOADER

### High Pressure Machine Option!

Falex High Pressure Machine amplifies the Falex Pin & Vee with a sealed chamber surrounding the test area and a fluid reservoir for performing evaluations of test oil saturated with refrigerant or other gases. The chamber eliminates escape of gases during testing. Capable of initial temperatures from ambient room temperature to 150°C (302°F) and pressures from atmospheric to 225 psig. Pressure source not included.

## Specifications

<b>Load</b>	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.
<b>Speed</b>	Shaft speed: 290 rpm $\pm 10$ rpm (18.98 ft/min)
<b>Wear</b>	Ratchet wheel system allows rate of wear measurement during test and total wear. 14.4 ratchet teeth = 0.001 inch (0.025 mm)
<b>Torque</b>	0 to 100 in-lb load cell with digital display. Accuracy $\pm 2\%$ full scale
<b>Environment</b>	Dry or lubricated Pin & Vee Block Test Area

## Pin and Vee Block Utilities & Dimensions

<b>Power Requirements</b>	220 V, 50-60 Hz, Single Phase, 8 Amps		
<b>Shipping Information</b>	Standard Pin & Vee	Shipping weight	130 lbs (68 kg)
		Dimensions	36" L x 36" W x 36" H
	Shipping weights & dimensions are typical and may vary depending options ordered.		
<b>Space Requirements</b>	Standard Pin & Vee	30 in x 24 in x 24 in (76 cm x 61 cm x 61 cm)	
	High Pressure Model	60 in x 24 in x 24 in (152 cm x 61 cm x 61 cm)	



## Ordering Information

### Part Number Description

000-001-305	Falex Pin & Vee Block Machine
000-001-304	High Pressure Falex Pin & Vee Machine

### Standard Test Specimens for ASTM D2625, D2670, D3253, and D5620

000-500-002	Complete Sets with #8 Test Pin	50/box
Includes two (2) Standard Vee Blocks (AISI 1137 Steel), one (1) #8 Test Pin (SAE 3135 Steel), and One (1) Brass Shear Pin		
000-560-010	Complete Test Sets with #10 Test Pin	50/box
Includes (2) Standard Vee Blocks (AISI 1137 Steel), one (1) #10 Test Pin (SAE 3135 Steel), and one (1) Brass Shear Pin		

### Additional Specimens

000-560-100	Standard Falex Vee Block	100/box
AISI 1137 Steel, 96° block angle, Rc 20-24, 10 rms maximum		
000-560-108	Standard Falex #8 Test Pin	50/box
SAE 3135 steel, Rb 87-91, 10 rms maximum		
000-560-110	Standard Falex #10 Test Pin	50/box
SAE 3135 steel, Rb 100-104, 10 rms maximum		
000-097-003	Standard Falex Shear Pins	50/bag
1/2 hard yellow brass (ASTM spec. B-16)		

### Part Number Description

<i>Reference Fluids</i>		
657-000-008	Reference Fluid, Blend A	0.5 L
657-000-009	Reference Fluid, Blend B	0.5 L

### Accessories and Spare Parts

000-040-023	Reaming Tool
Used to remove debris from inside test machine shaft at end of test	
000-097-004	Shear Pin Clip and Puller
Clip holds shear pin secure during test and puller facilitates removal of clip	
100-105-024	Ratchet Wheel Assembly
000-105-060	Test Cup for Fluid Recirculation System
000-105-009	Oil Cup Assembly
000-107-001	Load Cell Assembly, Torque
100-109-045	Thermocouple Assembly, Chamber Temp, Type J
100-109-081	Thermocouple Assembly, Specimen Temp, Type J
100-200-023	Digital Scar Measurement System
Binocular microscope with CCD camera for on screen measurement to 0.01 mm.	
650-105-047	Digital Calibration Meter, Multi-Function
000-107-002	Electronic Load and Torque Calibration Fixtures
Includes high precision digital meter for displaying load and torque values and load cells and fixturing for calibration of test load and torque (also requires P/N 650-105-047)	

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

Distributed by:

