

# APPARENT VISCOSITY OF ENGINE OILS



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BOHEMIA, NEW YORK • HOUSTON, TEXAS

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## Test Method

Determines the measurement of the Yield Stress, Apparent Viscosity and Borderline Pumping Temperature (BPT) of engine oils. Borderline pumping temperature is a measure of the lowest temperature at which an engine oil can be continuously and adequately supplied to the oil pump inlet of an automotive engine. Provides a correlation between the temperature at which the viscosity of engine oils reaches a critical value and the borderline pumping failure temperature in engines at the test method specified shear stress.

## Mini-Rotary Viscometer

- Testing capacity of up to 10 samples.
- Microprocessor temperature controllers store all testing profiles in memory.
- Unique design is fully self-contained - no external refrigeration or heating apparatus needed.
- Advanced direct refrigeration technology eliminates the need for liquid cooling mediums such as methanol.
- Removable test cells allow for easy cleaning, sample agitation and advance sample preparation.
- New rotor design eliminates possible interference with water and ice.
- Internal hermetic refrigeration system provides direct instant cooling.
- Power-saver feature allows testing profile to resume in the event of a brief power interruption.
- Internal gas system provides a continuous blanket of dry gas over samples to eliminate moisture buildup.
- Rotor stator rack supplied for convenient cleaning, drying, and storage.
- Safety features include high pressure cutout and high temperature limits.
- 5 Rotor stator sets required for instrument. Additional sets up to 10 readily available.
- Software Package Required

## Specifications

Conforms to the specifications of:

ASTM D4684; SAE J300; ILSAC GF3-GF4-GF5-GF6

In accordance with the specifications of:

ASTM D3829, D6821\*, D6896

\* With available Drive Line equipment sold separately

Cabinet Material: Stainless steel and durable thermoplastic

Temperature Range: +80°C to -40°C (176°F to -40°F)

Bath Design: Solid, direct cooling without liquids

Cooling Rate: Single Unit: 5.0°C per minute maximum

Refrigerant: R-507

Compressor Size: 1/3 Horsepower

Electrical Requirements:

115V 50/60Hz, 15A

220V 50/60Hz, 7A

Temperature Control: +/- 0.1°C, digital readout

Heating Capacity: 600 Watts

Testing Capacity: 10 samples



K38500 Mini-Rotary Viscometer

## Shipping Information

Shipping Weight: 143 lbs (64.86 kg)

Dimensions: 23 x 19 x 27 in (58.4 x 48.3 x 68.6 cm)

## Dimensions

WxDxH, in.(cm)

15.5x12.5x13.5 (39x32x34)

Net Weight: 105 lbs (47.6 kg)

## Included Accessories

Rotor/Stator Holding Rack

Stator Removal Tool

Moisture Cover

Set of Weights & Strings

Port Plugs for unoccupied stator ports

Air Filter Dryer and Desiccant

## Ordering Information

### Catalog No.

K38500 Mini-Rotary Viscometer, 115V 50/60Hz

K38590 Mini-Rotary Viscometer, 220V 50/60Hz

### Accessories

K38500-1 Stator Insertion/Removal Tool (SIRT)

K38500-2 Moisture Cover

K38500-3 Rotor/Stator Set (1 Set)

K38500-4 Rotor/Stator Set (Set of 5)

K38500-5 Carriage Wheel Assembly

K38500-6 Stainless Steel Thumb Nut

K38500-7 Air Filter Dryer with Desiccant

K38500-8 Rotor/Stator Holding Rack

K38500-9 MRV Weight Set - Standard

K38500-10 NLNP-5 Reference Oil (Pint)

K38500-11 MRV String Set (Qty 10)

K38500-12 MRV Driveline Rotor (for D6821) MRV

K38500-13 Weight Set - Driveline (for D6821)

K38500-SFW MRV Software Package