

## VISCOSITY

### ●● HF62.05

#### Standard Tar Viscometer (Gas Heated)

IS : 1206-1958 IP 72/58

For determining the viscosity of cut back bitumen and road tar.

It has a cup known as 10 mm cup. The cup is a cylindrical brass tube with a dished bottom. An orifice is provided in the centre of the base which can be closed with a ball valve. A cylindrical copper water bath 160 mm dia x 105 mm with a side heating tube is mounted on a stand with levelling feet. A stirrer with a curved shield and four vertical vanes with an insulating handle and a thermometer support is provided.

### ●● HF62.10

#### Standard Tar Viscometer (Electrically Heated)

Same as HF60.02 but the gas heating element is replaced by an immersion heating element and an auto transformer for controlling the temperature is provided.

Suitable for operation on 220V, 50 Hz, single phase supply.

HF62.05/1 Cup with 4 mm Orifice.

HF62.15 Tar Viscometer Thermometers

Cat.No.	Type	Range
HF62.15/1	IP 8 C	0° -44° C
HF62.15/2	IP 9 C	37.8° - 82° C
HF62.15/3	IP 10 C	76° - 122° C.



HF 62.10

### ●● HF62.20

#### Engler Viscometer (Gas Heated) IP 212, BS 434, ASTM D-1665

For determining the viscosity of lubricating and fuel oils.

It has an oil cup with a lid carrying thermometer socket. The cup is fitted with a stainless steel jet, mounted in a highly polished spun brass water bath. The bath is fitted with a thermometer clip. The whole system is placed on the tripod stand with adjustable feet. Complete with a plug valve for the jet and a stirring device.

### ●● HF62.25

#### Engler Viscometer (Electrically Heated)

Same as HF62.20 but with an electric immersion heater and auto transformer. Suitable for operation on 220 V, 50 Hz, single phase supply.

### ●● HF62.30

#### Engler Viscometer Thermometer

It is a thermometer used in Engler Viscometer tests.

Cat. No.	Type	Range
HF62.30.1	IP 8C	0° -44°C.

### ●● HF62.35

#### Sliding Plate Viscometer

For the determination of viscosity of paving grade asphalt having viscosities in the range of  $10^5$  to  $10^{10}$  poises. Suitable for testing materials having either Newtonian or non-Newtonian flow properties.

The apparatus meets the requirements of "proposed method of test for viscosity of asphalt at controlled rates of shear" and is under the jurisdiction of ASTM committee D-4 on Road and Paving Materials.

The apparatus consists of the following :-

One loading unit with eight constant rates of cross head speeds i.e. 5 mm/min, 2.5mm/min, 1.25mm/min, 0.5 mm/min, 0.25 mm/min, 0.125 mm/min, 0.0625 mm/min and 0.025 mm/min.

One refrigerated water bath, one matched pair of glass plates 30 x 20 x 6 mm size, two clamps, one micrometer, one hot plate and one thermometer for testing at temperatures from 4°C to 15.6°C.

### ●● HF62.40

#### Ring and Ball Apparatus

IS : 1205, IP:58/63

The determining the softening point of bitumen. The apparatus consists of two steel balls (9.5 mm dia), two tapered rings in brass, two ball centring guides, a ring holder and a bath 8.5 cm dia x 12 cm deep approx.



HF 62.40