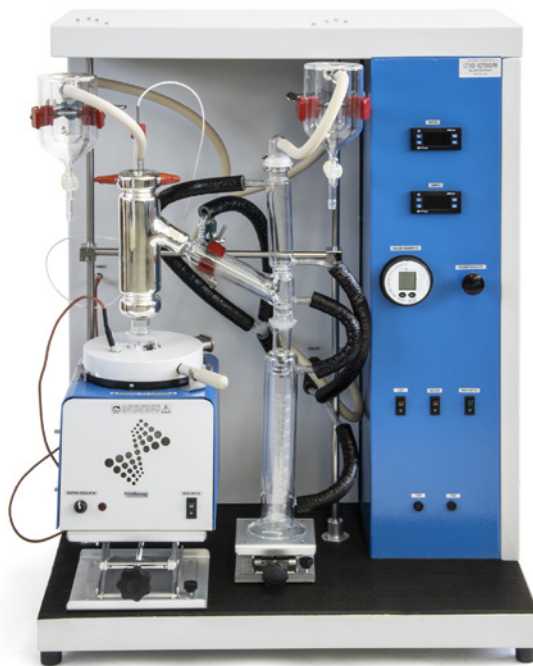




Vacuum Distillation



LT/VD-107000/M



LAB-0005-784



Vacuum Pump

ASTM D1160

Distillation of Petroleum Products at Reduced Pressure

This test method covers the determination, at reduced pressures, of the range of boiling points for petroleum products that can be partially or completely vaporized at a maximum liquid temperature of 400°C.

LT/VD-107000/M

Distillation of Petroleum Products at Reduced Pressure Apparatus (Vacuum Distillation) ASTM D1160

- Compact and lighter structure painted with epoxy product.
- 500 ml distillation flask with insulating mantle.
- Vacuum jacketed distillation column of borosilicate glass enclosed in a completely silvered glass vacuum jacket with a permanent vacuum of less than 10–5 Pa (10–7 mm Hg).
- 200 ml jacket receiver and two cold traps.
- Vacuum connections and vacuum pump capable of maintaining the pressure constant within 1 % over the full range of operating pressures.
- Electric heater with electronic regulator.
- Digital indicator temperature with PT100 probe for measurement of vapour temperature.
- Pressure regulating system capable of maintaining the pressure of the system constant within 0.01 kPa at pressures of 1 kPa absolute and below and within 1 % of the absolute pressure at 1 kPa.
- Vacuum manometer.
- Support with relevant clamps and stands with illumination system.
- Supplied with connections tubing with relevant insulation material.
- Power consumption: heating 500 W, vacuum pump 750 W.
- Include 1 × vacuum grease and 1 × silver chain.

LT/VD-107500/M

Semi-automatic Distillation of Petroleum Products at Reduced Pressure Apparatus (Vacuum Distillation) ASTM D1160

- Compact and lighter structure painted with epoxy product with anti-vibrating foot.
- Illumination system, clamp and rod for glassware correct position.
- Heating mantle for heating the 500 ml round bottom flask.
- Vacuum jacketed distillation column of borosilicate glass enclosed in a completely silvered glass vacuum jacket with a permanent vacuum of less than 10–5 Pa (10–7 mm Hg).
- Condenser and 200 ml jacket receiver.
- Vacuum pump with automatic suction regulation capable of maintaining the pressure constant within 1 % over the full range of operating pressures and manometer displaying the vacuum.
- Integrated panel-pc/ TFT touch screen displaying temperature, rate, distillation time.
- Supplied with connections tubing with relevant insulation material.
- On-board cooling system for maintain the cooling temperature between +15°C and +100°C.
- Temperature is monitored by PT100 Class A probe and thermocouple.
- Distillation detection manual/visual by operator.
- Safety systems: overheating protection and vacuum loos protection.
- Power consumption: heating 500 W, vacuum pump 750 W, cooling 1500 W.
- Include 1 × vacuum grease and 1 × silver chain.

Heating Power

- 500 W approx.

Dimensions

- LT/VD-107000/M: 80 × 54 × 94 cm
- Vacuum pump: 30 × 53 × 30 cm
- LT/VD-107500/M: 120 × 54 × 94 cm (cryostat + pump integrated)

Generated Vacuum

- Ultimate 0.5 mBar

Displayed Vacuum

- LT/VD-107000/M: analog / digital as option

Vacuum release system

- By needle valve made in stainless steel AISI 316L with 0.37 Cv and relating stem with possibility to connect a low pressure nitrogen source

Common Spare Parts

- LAB-101-073: silver chain
- LAB-101-074: flask 500 ml
- LAB-101-075: distillation column
- LAB-101-077: receiver
- LAB-101-078: cold trap
- LAB-101-079: clamp set
- LAB-101-080: vacuum grease
- LAB-101-081: stopper
- LAB-101-082: glass joint
- LAB-101-083: tubes set
- LAB-140-001: PT100 probe
- LAB-160-001: digital thermoregulator

Common Accessories

For cooling down the cold traps

- LAB-0005-784; dry ice maker, need external connection to CO₂ source

For reduce vacuum fluctuations

- LAB-101-555; vacuum bottle 5 litres

Accessories for LT/VD-107000/M

- LT/CB-40800-M/10: cryostatic bath for temperatures from -10°C to +99°C, capable of supplying cooling to the condensing system and receiver within ±3°C in a range of +30°C to +80°C

