

## Evaporation Loss of Lubricating Oils - wood metal free NOACK VP4000 (automatic)

ASTM D 5800-B, DIN 51581-1, IP 421-B, CEC L-40-A-93

**Product group(s):** Oil

**User group(s):** Oil

**Scope:** This test method covers three procedures for determining the evaporation loss of lubricating oils (particularly engine oils).

Procedure B:

uses the automated non-Wood's metal Noack evaporative apparatus.

The test method relates to one set of operating conditions but may be readily adapted to other conditions when required.

**Features:**

- wood metal free
- automatic test start
- automatic pressure and temperature control



**Evaporation Loss Test Equipment**

to be composed of:

- Automatic Evaporation Tester - Noack VP 4000
- Glassware Set
- Metal Rack

**Technical Data**

Temperature Range: 100 - 300 °C, Accuracy: ± 0.2 °C  
Pressure Range: up to 21 mm WS  
Accuracy: ± 0.01 mm WS  
Weight: 16 kg

**Main Unit**

<b>16-2010</b>	<b>Automatic Evaporation Tester - Noack VP 4000</b> wood metal free and with automatic pressure regulation  DIN 51581-1 - similar to ASTM D 5800-B - IP 421-B - CEC L-40-A-93  <u>Consisting of:</u> Aluminum heating block, wood metal free, with automatic crucible fixation, PID-regulated electric heating and pressure, over temperature protection, automatic vacuum regulator. Digital or bargraphic display of temperature, pressure and test time. Audio signal for test readiness and test ending. The digital timing system will be started automatically after the crucible was inserted.  <u>Supplied with:</u> 1 stainless steel evaporation crucible, 5 test balls (3.5 mm), vacuum pump, jet-cleaner, lifting handle, tools and gloves.  Power supply: 230 V, 50/60 Hz, 1000 W
<b>16-2011</b>	<b>Automatic Evaporation Tester - Noack VP 4000</b> Like 16-2010 but: Power supply: 115 V, 60 Hz
<b>16-1137</b>	<b>Glassware Set</b> <u>Consisting of:</u> 1 set of hose connectors (glass tubes 1 each 100° & 90° & 80° angle & Y-shape), 2 Woufff flasks (2 l) with screw closure, 2x 1 m of silicon hose
<b>16-1138</b>	<b>Metal Rack</b> with inclined manometer (0...30: 0.2 mm) and needle valve

## Options & Accessories

16-1114	<b>Reference Liquid - Type: RL 208</b> Content: 1 liter for CEC L-40-A-93 (DIN 51 381) (Noack Evaporation)
16-2022	<b>Documentation Unit</b> to record the progress of vacuum and temperature of Noack evaporation tests and print out the data. <u>Consisting of:</u> measurement printer, data transmission and mains cords Power supply: 110/230 V, 50/60 Hz
16-2012	<b>Cool-Down Unit for evaporation crucible</b> Power supply: 230 V, 50 Hz
16-2013	<b>Cool-Down Unit for evaporation crucible</b> Power supply: 115 V, 60 Hz
16-2025	<b>Balance, range: max. 600 g, resolution: 0.01 g</b> Power supply: 230 V, 50 Hz
16-2026	<b>Balance, range: max. 600 g, resolution: 0.01 g</b> Power supply: 115 V, 60 Hz

## Spare Parts

12-0338	<b>Thermometer</b> Range: +40 to +260 : 1 °C Length: 300 mm, Immersion: 48 mm, Ø 9.5 mm
12-0339	<b>Thermometer</b> Range: +40 to +260 : 1 °C (officially certified)
12-0340	<b>Thermometer</b> Range: +190 to +410 : 1 °C
12-0341	<b>Thermometer</b> Range: +190 to +410 : 1 °C (officially certified)
16-0793	<b>Evaporation Crucible with lid &amp; pipe</b>
16-0800	<b>Woulff Flask, 2 liter, with screw closure</b>
16-1072	<b>Gasket for pipe</b>
16-1078	<b>Jet Cleaner, 2 mm</b>
16-1105	<b>Inclined Manometer,</b> 0-50 mm water column Ø 0.2 mm on metal-plate, density: 0,82 g/ccm
16-1109	<b>Test Balls, pack of 5</b>
16-1134	<b>Heat-Protection Gloves</b>
16-2027	<b>Heater Cartridge; 230 V, 125 W</b>
16-2030	<b>Vacuum Pump, Power supply: 230 V, 50 Hz</b>
16-2031	<b>Vacuum Pump, Power supply: 115 V, 50 Hz</b>

## Order Guideline

Minimum equipment:	1x each 16-2010, 16-1138, 16-1137
Spares (approx. 1 year):	Thermometer, 16-0793, 16-1072, 16-1109
Additional requirements:	