

Petroleum Test Instruments Product Range

Fall 2012

Company Information

From Berthold Pensky...

In 1873, Mr. Berthold Pensky, an engineer at the "Kaiser-Wilhelm-Institut" in Berlin-Dahlem, today known as the "Bundesanstalt für Materialprüfung" (German Federal Institution for Materials Testing), founded his own company and produced Pensky-Martens flash point testers, Abel-Pensky flash point testers, as well as viscometers, grain testers and other machinery.



through Sommer & Runge...

1886 Mr. Pensky sold his company to two of his employees, Wilhelm Sommer and Max Runge. By then, the above products were marketed in Germany, the Netherlands, Russia and Romania already. During the bombing of Berlin the factory was partially destroyed and had to move to other quarters. In 1948, a manufacturing line of mineral oil test instruments for the German speaking market was started.



and Petrotest Instruments...

Following the reunification of Germany, Sommer & Runge (SuR) reformed and renamed under Petrotest Instruments GmbH & Co KG. Due to the need for expansion Petrotest relocated in a brand new building on the outskirts of Berlin in the Dahlewitz Industrial Park.

Approximately 60 employees are engaged in the production of mechanical and electronic laboratory instruments such as flash point testers, Fraass breaking point testers, penetrometers etc. Further enhancement and development of more automatic petroleum testing equipment can be expected.



to Petrotest GmbH | A company of Anton Paar

In March 2012, Petrotest Instruments GmbH & Co. KG became part of the Anton Paar Group and renamed under Petrotest GmbH.

Philosophy

Petrotest has a long history in developing and manufacturing manual, semi-automatic and automatic test instruments for the petroleum industry that meet international and national standards.

Right from the start the company's aim has been to incorporate the wishes and suggestions of customers into the development of new products. Petrotest GmbH is actively participating in technical societies and standard committees, e.g. ASTM, DIN, to keep abreast of new technology.

We cover the full range of functions under one roof: assembly, in-house production, also with CNC machinery, research, electrical and mechanical design, software development, quality control according to ISO 9001, sales and order processing, application and customer support, service and repairs, marketing etc.

Innovation combined with tradition as well as highly qualified employees with many years of experience in the industry are the cornerstones of our company.

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Flash-Point with Closed Cup - Pensky-Martens Method

- PMA 5 (automatic)

ASTM D 93-A+B - JIS K2265-3 - AASHTO T73 - AASHTO T172 -
IP 34-A+B - ISO 2719-A+B

ASTM D 93-C

ISO 15 267

Temperature Range: ambient to +405 °C (+761 °F)

- 1-twist handling
- fire extinguisher
- automatic barometric pressure correction

Datasheet:
12-5770.pdf

Ref.-No:
12-5770 (115/230V, EU)
12-5771 (115/230V, US)



Flash- & Fire-Point with Open Cup - Cleveland Method

- CLA 5 (automatic)

ASTM D 92 - FTM 791-1103 - IP 36 - ISO 2592 - JIS K2265-4 -
AASHTO T48

Superpave®

Temperature Range: +79 to +400 °C (+175 to +752 °F)

- automatic barometric pressure correction
- skimmer & draft deflector available
- bitumen test option

Datasheet:
12-5700.pdf

Ref.-No:
12-5700 (115/230V, EU)
12-5701 (115/230V, US)



Flash-Point with Closed Cup - Abel Method

- ABA 4 (automatic)

IP 170 - ISO 13 736

DIN 51 755-1-2

ISO 1516 - ISO 1523 - EN 924 - IP 491 - IP 492

Temperature Range (internal cooling) : +10 to +110 °C (+50 to +230 °F)

Temperature Range (external cooling) : -30 to +110 °C (-22 to +230 °F)

- 1-twist handling
- automatic barometric pressure correction
- milli-cup accessories available

Datasheet:
12-0501.pdf

Ref.-No:
12-0501 (115/230V, EU)
12-0502 (115/230V, US)
- internal cooling
12-0503 (115/230V, EU)
12-0504 (115/230V, US)
- external cooling



Flash-Point with Closed Cup - TAG Method

- TAG 4 (automatic)

ASTM D 56 - FTM 791-1101 - JIS K2265-1

ASTM D 3934 - ASTM D 3941 - EN 924

ASTM D 3934 - ASTM D 3941 - EN 924 - IP 491 - IP 492 -

ISO 1516 - ISO 1523

Temperature Range (internal cooling) : 0 to +110 °C (+32 to +230 °F)

Temperature Range (external cooling) : -30 to +110 °C (-22 to +230 °F)

- 1-twist handling
- automatic barometric pressure correction
- milli-cup accessories available

Datasheet:
12-0540.pdf

Ref.-No:
12-0540 (115/230V, EU)
12-0541 (115/230V, US)
- internal cooling
12-0542 (115/230V, EU)
12-0543 (115/230V, US)
- external cooling



Flash-Point with Closed Cup - Pensky-Martens Method

- PMA 4 Sample Changer (automatic)

ASTM D 93-A+B - JIS K2265-3 - AASHTO T73 - AASHTO T172 -
IP 34-A+B - ISO 2719-A+B

ASTM D 93-C

ISO 15 267

Temperature Range: +40 to +360 °C (+104 to +680 °F)

- fire extinguishing device
- up to 12 test-places
- milli-cup option

Datasheet:
12-2772.pdf

Ref.-No:
12-2772 (115/230V, EU)
12-2773 (115/230V, US)



Auto-Ignition Temperature

- ZPA 3 (automatic)

EN 14 522 - DIN 51 794 - CEI 79-4 - 79/831/EWG

Temperature Range: ambient to +650 °C (+1202 °F)

- autosampler with heated sample-feeder
- automatic test cycle
- special solid heating program

Datasheet:
12-1822.pdf

Ref.-No:
12-1822 (230V)
12-1823 (115V)



Flash-Point with Closed Cup - Pensky-Martens Method

- PM 4 (semi-automatic)

ASTM D 93-A+B - JIS K2265-3 - FTM 791-1102 - FTM 141-4293 -
AASHTO T73 - AASHTO T172 - IP 34-A+B - ISO 2719-A+B

ISO 15 267

Temperature Range: +40 to +350 °C (+104 to +662 °F)

- 1-twist handling
- gas & electric igniter
- manually adjusted heating rate

Datasheet:
12-1650.pdf

Ref.-No:
12-1650 (230V)
12-1651 (115V)



Flash- & Fire-Point with Open Cup - Cleveland Method

- CL 5 (semi-automatic)

ASTM D 92 - JIS K2265 - AASHTO T48 -FTM 791-1103 - IP 36 -
ISO 2592

Superpave®

Temperature Range: +79 to +400 °C (+175 to +752 °F)

- re-cooling device
- electric heating with overheat protection
- gas ignition device

Datasheet:
12-2730.pdf

Ref.-No:
12-2730 (230V)
12-2731 (115V)



Flash-Point with Closed Cup - Abel Method

- AB 5 (semi-automatic)

IP 170 - ISO 13 736

Temperature Range: -18 to +70 °C (-0.4 to +158 °F)

- 1-twist handling
- connection of external cooling device possible

Datasheet:
12-2270.pdf

Ref.-No:
12-2270 (230V)



Distillation of Petroleum Products & Volatile Organic Liquids - Atmospheric Pressure Method

Automatic Distillation Unit

- ADU 4+ (automatic)

ASTM D 86 - IP 123 - ISO 3405 - JIS K2254

- accessories available for distillation group 0

Datasheet:
11-5580.pdf

Ref.-No:
11-5580 (230V)

- ADU 4+ DryPoint (automatic)

ASTM D 86 - IP 123 - ISO 3405 - JIS K2254
ASTM D 850 - ASTM D 1078 - IP 195 (Solvents)

- optional automatic dry-point detection
- available accessories for distillation group 0 and solvents

11-5582 (230V)
- Dry-Point

Temperature Range: +0 to +450 °C (+32 to +842 °F)

- integrated: - fire extinguisher
- bath tempering (internal heating & cooling)
- computer (with variable mountable monitor, keypad & mouse)
- automatic swith-over from group 1 to 4 during distillation
- ready-to go with glassware for distillation group 1-4
- suitable for distillation group 0-4



Manual Distillation Unit - Professional

ASTM D 86 - IP 123 - ISO 3405 - JIS K2254
ASTM D 850 - ASTM D 1078 - IP 195

Datasheet:
11-0900.pdf

DU 4-Pro (manual)

- bath tempering: external heating & cooling

Ref.-No:
11-0910 (230V)
11-0911 (115V)
- Pro

DU 4-ProThermo (manual)

- bath tempering: internal heating but external cooling

Temperature Range: +0 to +440 °C (+32 to +824 °F)

- 1200 W heater (safety-heater-rods reduce burn-risk)
- built-in fire extinguisher, re-cooling fan, bath-liquid level indicator
- suitable for distillation groups 0-4

11-0912 (230V)
11-0913 (115V)
- ProThermo



Manual Distillation Unit - Economy

ASTM D 86 - IP 123 - ISO 3405 - JIS K2254
ASTM D 850 - ASTM D 1078 - IP 195

Datasheet:
11-0900.pdf

DU 4-Eco (manual)

- bath tempering: external heating & cooling

Ref.-No:
11-0900 (230V)
11-0901 (115V)
- Eco

DU 4-EcoThermo (manual)

- bath tempering: internal heating but external cooling

Temperature Range: +0 to +300 °C (+32 to +572 °F)

- 800W heater
- suitable for distillation groups 0-3

11-0902 (230V)
11-0903 (115V)
- EcoThermo



Eco/EcoPlus

DU 4-EcoPlus (manual)

- bath tempering: external heating & cooling

11-0904 (230V)
11-0905 (115V)
- EcoPlus

DU 4-EcoThermoPlus (manual)

- bath tempering: internal heating but external cooling

Temperature Range: +0 to +440 °C (+32 to +824 °F)

- 1200W heater (safety-heater-rods reduce burn-risk)
- suitable for distillation groups 0-4

11-0906 (230V)
11-0907 (115V)
- EcoThermoPlus



EcoThermo/EcoThermoPlus
(with internal bath-heating)



Oxidation Stability of Gasoline, Diesel & FAME

- RSSOT (Rapid Small Scale Oxidation Test)

ASTM D 7525 (Gasoline)
 ASTM D 7545 (Diesel, Biodiesel & Blends)
 EN 16091 (Diesel, Biodiesel (FAME) & Blends)

Correlates with:
 Gasoline Method: ASTM D 525 - IP 40 - ISO 7536
 Diesel Method: EN 15 751
 FAME Method: EN 14 112

Datasheet:
 13-3002.pdf

Ref.-No:
 13-3002 (115/230V, EU)
 13-3003 (115/230V, US)



- PetroOXY Block-Cooling (automatic)

manual re-cooling between tests by chilled cooling block

Datasheet:
 13-3006.pdf

- PetroOXY Active Cool (automatic)

automatic re-cooling between tests by peltier elements

Ref.-No:
 13-3006 (115/230V, EU)
 13-3007 (115/230V, US)

Gum Content of Fuels

ASTM D 381 - DIN 51 784 - FTM 791-3302 -
 ISO 6246 - IP 131 - IP 540 - JIS K2261

Datasheet:
 13-0035.pdf

- Air & Steam-Jet Evaporation - GUM (semi-automatic)

- for tests with air or steam supply
- achivable heater temperature up to +280°C
- complete calibration set is available

Ref.-No:
 13-0035 (230V)
 13-0036 (115V)



- Air-Jet Evaporation - GUM (semi-automatic)

- for tests with air supply
- achivable heater temperature up to +240°C
- complete calibration set is available

Datasheet:
 13-2030.pdf

Ref.-No:
 13-2030 (230V)
 13-2031 (115V)

Oxidation Stability of Gasoline & Aviation Fuels

- Induction Period

ASTM D 525 - FTM 791-3352 - IP 40 - ISO 7536 - JIS K2287
 Induction Period

ASTM D 873 - FTM 791-3354 - IP 138 - JIS K2276
 Potential Residue

Datasheet:
 13-1660.pdf

- OBA & PA 5 (semi-automatic)

- 4-place Liquid or Dry-Heat baths
- digital Manometer
- Liquid Bath Test Arrangement - OBA 1

Ref.-No:
 13-1660 (230V)
 13-1661 (115V)

- Dry-Heat Bath Test Arrangement - OBA 1/T

Ref.-No:
 13-1662 (230V)
 13-1663 (115V)



- OBA Safety & PA 5 (semi-automatic)

- 4-place Liquid or Dry-Heat baths
- safety approved oxidation vessels
- digital Manometer
- Liquid Bath Safety Test Arrangement - OBA 2

Datasheet:
 13-1664.pdf

Ref.-No:
 13-1664 (230V)
 13-1665 (115V)

- Dry-Heat Bath Safety Test Arrangement - OBA 2/T

Ref.-No:
 13-1666 (230V)
 13-1667 (115V)





Oxidation Stability of Diesel - TOST (manual)

ASTM D 2274

4-place liquid bath (for tests < 175°C) & flowmeter < 6 l/h

8-place liquid bath (for tests < 175°C) & flowmeter < 6 l/h

Datasheet:
16-0586_ASTM2274.pdf

Ref.-No:
16-0583 (230V)
16-0584 (115V)

Ref.-No:
16-0581 (230V)
16-0458 (115V)



Oxidation Stability of Diesel & Biodiesel - TOST (manual)

ISO 12 205 - IP 388

ASTM D 7462

4-place liquid bath (for tests < 175°C) & flowmeter < 6 l/h

8-place liquid bath (for tests < 175°C) & flowmeter < 6 l/h

4-place dry-heat bath (for tests < 230°C) & flowmeter < 6 l/h

Datasheet:
16-0586_ISO12205.pdf

Ref.-No:
16-0583 (230V)
16-0584 (115V)

Ref.-No:
16-0581 (230V)
16-0458 (115V)

Ref.-No:
16-1416 (230V)
16-1417 (115V)



Storage Stability of Diesel Fuel

- Oxygen Overpressure Method (semi-automatic)

ASTM D 5304

Datasheet:
13-3072.pdf

Ref.-No:
13-3072 (230V)



Corrosiveness

to Copper by Petroleum Products

- Copper Strip Tarnish Test (manual)

ASTM D 130 - ASTM D 4048 - DIN 51 811 - FTM 791-5325 -
IP 112 - IP 154 - ISO 2160 - JIS K2220 - JIS K2513

Option: **Silver Strip Test** ASTM D 4814

Datasheet:
13-0700.pdf

Ref.-No:
13-0700 (230V)
13-0699 (115V)



to Silver by Aviation Fuels

- Silver Strip Method (manual)

IP 227 (obs.)

Datasheet:
13-1000.pdf

Ref.-No:
13-1000 (230V)
13-1001 (115V)



to Copper by Industrial Aromatic Hydrocarbons

- Copper Strip Method (manual)

ASTM D 849

13-1020 with 1 test-place

13-1028 with 4 test-places

Datasheet:
13-1020.pdf

Ref.-No:
13-1020 (230V)
13-1019 (115V)

Ref.-No:
13-1028 (230V)
13-1029 (115V)



to Copper by Liquefied Petroleum Gases

- Copper Strip Test (manual)

ASTM D 1838 - ISO 2160 - ISO 6251 - IP 411 - JIS K2240

Datasheet:
14-0050.pdf

Ref.-No:
14-0050 (230V)
14-0047 (115V)



Salts in Crude Oil - Conductivity Method

- Salinometer - SCO 1 (manual)

ASTM D 3230 - IP 265 - JIS K2601

Datasheet:
13-0497.pdf

Ref.-No:
13-0497 (230V)
13-0496 (115V)



Vapor Pressure of Petroleum Products

- REID Method - RVP (digital / analog)

ASTM D 323-A+B+D - ASTM D 4953-A - IP 69-A+B+D - ISO 3007-A+B+D - JIS K2258

ASTM D 323-C - IP 69-C - ISO 3007-C - JIS K2258

- liquid chamber (1 opening) for less than 180 kPa
- liquid chamber (2 openings) for above than 180 kPa
- digital manometer PA-REID or analog manometer available
- 3 or 6 place baths available

Datasheet:
13-0201_digital.pdf
13-0201_analog.pdf

Ref.-No:
13-0201 (<180 bar)
13-0202 (>180 bar)

Water & Sediment in Fuel & Crude Oil

- Centrifuge Method (semi-automatic)

Amount of Water and Sediment in Fuel / Crude Oil:

ASTM D 96 (obs.) - API 2542 - AASHTO T55 - JIS K2601

ASTM D 1796 - API 2548

ASTM D 2709

ASTM D 4007

ISO 3734

ISO 9030

Insoluble in Lubricating Oil:

ASTM D 91 - JIS K2503

ASTM D 893

ASTM D 2273

ASTM D 2711

- heatable < +70°C
- suitable for conical, trace and pear shaped tubes



Datasheet:
13-4160.pdf

Ref.-No:
13-4160 (220-240V)

Carbon Residue of Petroleum Products

- Ramsbottom Method - RCRT (manual)

ASTM D 524 - FTM 791-5002 - IP 14 - ISO 4262

Datasheet:
13-0870.pdf

Ref.-No:
13-0870 (230V)
13-0871 (115V)



- Conradson Method - CCR (manual)

ASTM D 189 - DIN 51 551-1 - FTM 791-5001 - IP 13 - ISO 6615 - JIS K2270

- 13-0841 for MUNICIPAL gas supply
- 13-0842 for BUTANE/PROPANE gas supply
- 13-0843 for NATURAL gas supply

Datasheet:
13-0841.pdf

Ref.-No:
13-0841 (Gas)
13-0842 (Gas)
13-0843 (Gas)



Cold Filter Plugging Point of Diesel & Heating Fuels

- CFPP (manual)

ASTM D 6371 - EN 116 - IP 309 - JIS K2288

- Dry-Ice Test Arrangement

Datasheet:
13-0420.pdf

Ref.-No:
13-0420



- CFPP I (manual)

ASTM D 6371 - EN 116 - EN 14 214 - IP 309 - JIS K2288

- Cryostat with 1 Test-Chamber

Datasheet:
13-2418.pdf

Ref.-No:
13-2418 (230V)
13-2414 (115V)



Hydrocarbons in Liquid Petroleum Products

- Fluorescent Indicator Adsorption - FIA (manual)

ASTM D 1319 - FTM 791-3703 - IP 156 - ISO 3837 - JIS K2536

- 4-place apparatus
- standard column test kit or precision bore column test kit

Datasheet:
13-0930.pdf

Ref.-No:
13-0930 (230V)
13-0929 (115V)





Aniline Point of Petroleum Products & Hydrocarbon Solvents



- Test Tube Method (manual)

ASTM D 611-A - IP 2-A - JIS K2256
ISO 2977-A

Datasheet:
13-0100.pdf

Ref.-No:
13-0101 (ASTM)
13-0100 (DIN)



- Thin Film Method (manual)

ASTM D 611-B - IP 2-B - JIS K2256
ISO 2977-B

Datasheet:
13-0106.pdf

Ref.-No:
13-0106 (230V)
13-0107 (115V)



- U-Tube Method (manual)

ASTM D 611-D - IP 2-D - JIS K2256
ISO 2977-D

Datasheet:
13-0102.pdf

Ref.-No:
13-0102 (230V)
13-0103 (115V)



Freezing Point of Aviation Fuels (manual)

ASTM D 2386 - IP 16 - ISO 3013 - JIS K2276

Datasheet:
13-0461.pdf

Ref.-No:
13-0461



Asphaltenes Content of Petroleum Products

- Extraction Method (manual)

ASTM D 6560 - DIN 51 595 - IP 143

Datasheet:
13-0170.pdf

Ref.-No:
13-0170 (230V)
13-0169 (115V)



Hydrogen Sulfide in Liquefied Petroleum Gas (manual)

ASTM D 2420 - ISO 8819

Datasheet:
14-0230.pdf

Ref.-No:
14-0230 (230V)
14-0231 (115V)



Contamination in Liquid Petroleum Products

- Membrane Filter Method (manual)

EN 12 662 - IP 440

Datasheet:
16-0970.pdf

Ref.-No:
16-0970



Sediment in Crude & Fuel Oil

- Extraction Method (manual)

ASTM D 473 - FTM 791-3002 - IP 53 - ISO 3735

Datasheet:
13-0321.pdf

Ref.-No:
13-0321



Water in Crude Oil

- Distillation Method (manual)

ASTM D 4006 - IP 358 - ISO 9029 - JIS K2275
- available with flask heating mantle (16-1847)

Datasheet:
16-0847.pdf

Ref.-No:
16-0847 (230V)
16-1447 (115V)
16-1847 (230V)



Demulsibility (Water Separation) of Petroleum Oils & Synthetic Fluids

- Herschel Stirring Method - DH 5 (semi-automatic)

ASTM D 1401 - ISO 6614

- full-view bath with 8 test and 2 pre-tempering places
- variable stirrer speed with digital display
- automatic timer stop and audible alarm

Datasheet:
16-2600.pdf

Ref.-No:
16-2600 (230V)
16-2601 (115V)



Demulsibility of Lubricating Oils

- Demulsification Number (manual)

IP 19

Datasheet:
16-0140.pdf

Ref.-No:
16-0140 (230V)
16-0141 (115V)



Foaming of Lubricating Oils

ASTM D 892 (sequence I-III)- IP 146 - ISO 6247 - JIS K2518

Optional:

ASTM D 6082 (sequence IV)

- Twin Foam-Tester - Quadruple (manual)

- two 4 place baths
- full-view baths with digital-thermostats
- each bath to be maintained individually at 24, 49, 93.5 or 150 °C

Datasheet:
16-1470.pdf

Ref.-No:
16-1470 (230V)
16-1471 (115V)

- Single Foam-Tester (manual)

- 4 place bath
- full-view bath with digital-thermostat
- to be maintained at 24, 49, 93.5 or 150 °C

Datasheet:
16-1470.pdf

Ref.-No:
16-1472 (230V)
16-1473 (115V)



Corrosion Prevention of Mineral Oil

- TOR (semi-automatic)

ASTM D 665 - FTM 791-4011 - IP 135 - ISO 7120 - JIS K2510 - NAC TM0172-2001

ASTM D 3603 - ASTM D 5534 - FTM 791-5315

Datasheet:
16-0724.pdf

Ref.-No:
16-0724 (230V)
16-0725 (115V)



Friction & Wear of Lubricating Oil & Cutting Fluid

- Reichert Method - M 2 (manual)

Datasheet:
15-0035.pdf

Ref.-No:
15-0035 (230V)



Corrosion of Metal by Engine Coolants

- Glassware Method (manual)

ASTM D 1384 - JIS K2234

Datasheet:
16-0955.pdf

Ref.-No:
16-0955 (230V)



Oxidation Stability & Corrosiveness of Hydraulic Oils, Aircraft Turbine Engine Lubricants (manual)

ASTM D 4636

- aluminum block heater & flowmeter < 16 l/h

Datasheet:
25-0716.pdf

Ref.-No:
25-0716 (230V)



Oxidation Stability

of Light Oils - TOO (manual)

FTM 791-5308

4-place liquid bath (for tests < 175°C) & flowmeter < 6 l/h

8-place liquid bath (for tests < 175°C) & flowmeter < 6 l/h

4-place dry-heat bath(for tests < 220°C) & flowmeter < 6 l/h

Datasheet:
16-0545.pdf

Ref.-No:
16-0583 (230V)
16-0584 (115V)

Ref.-No:
16-0581 (230V)
16-0458 (115V)

Ref.-No:
16-1418 (230V)

of Lubricating Oils - TOST (manual)

ASTM D 2893

4-place liquid bath (for tests < 175°C) & flowmeter < 16 l/h

Datasheet:
16-0539.pdf

Ref.-No:
16-1420 (230V)
16-1421 (115V)

of Steam Turbine Oils - TOST (manual)

ASTM D 943 - JIS K2514

4-place liquid bath (for tests < 175°C) & flowmeter < 6 l/h

8-place liquid bath (for tests < 175°C) & flowmeter < 6 l/h

4-place dry-heat bath(for tests < 220°C) & flowmeter < 6 l/h

Datasheet:
16-0586_ASTM943.pdf

Ref.-No:
16-0583 (230V)
16-0584 (115V)

Ref.-No:
16-0581 (230V)
16-0458 (115V)

Ref.-No:
16-1416 (230V)



Liquid Bath



Dry-Heat Bath

of Steam Turbine & Hydraulic Oil - TOST (manual)

DIN 51 587

4-place liquid bath (for tests < 175°C) & flowmeter < 6 l/h

8-place liquid bath (for tests < 175°C) & flowmeter < 6 l/h

4-place dry-heat bath(for tests < 220°C) & flowmeter < 6 l/h

Datasheet:
16-0586_DIN51587.pdf

Ref.-No:
16-0583 (230V)
16-0584 (115V)

Ref.-No:
16-0581 (230V)
16-0458 (115V)

Ref.-No:
16-1416 (230V)

of Steam Turbine, Hydraulic & Circulating Oils - TOST (manual)

ASTM D 4310 - IP 157 - JIS C2101

4-place liquid bath (for tests < 175°C) & flowmeter < 6 l/h

8-place liquid bath (for tests < 175°C) & flowmeter < 6 l/h

4-place dry-heat bath(for tests < 220°C) & flowmeter < 6 l/h

Datasheet:
16-0586_ASTM4310.pdf

Ref.-No:
16-0583 (230V)
16-0584 (115V)

Ref.-No:
16-0581 (230V)
16-0458 (115V)

Ref.-No:
16-1416 (230V)

of Mineral Oils & Hydraulic Fluids - TOST (manual)

ISO 4263-1 - ISO 4263-2 - ISO 4263-3

4-place liquid bath (for tests < 175°C) & flowmeter < 6 l/h

8-place liquid bath (for tests < 175°C) & flowmeter < 6 l/h

4-place dry-heat bath(for tests < 220°C) & flowmeter < 6 l/h

Datasheet:
16-0586_ISO4263.pdf

Ref.-No:
16-0583 (230V)
16-0584 (115V)

Ref.-No:
16-0581 (230V)
16-0458 (115V)

Ref.-No:
16-1416 (230V)



Oxidation Stability

of Insulating Oils - ASTM Method - BAM 200 (manual)

ASTM D 2440

Datasheet:
16-1500_ASTM2440.pdf

of Insulating Oils - EN Method - BAM 200 (manual)

EN 61 125

Datasheet:
16-1500_EN61125.pdf

of Turbine Oils - BAM 200 (manual)

IP 280

Datasheet:
16-1500_IP280.pdf

of Lubricating Oils - BAM 200 (manual)

IP 306 - IP 307 - IP 335

Datasheet:
16-1500_IP306.pdf

of Refrigerator Oils - BAM 200 (manual)

DIN 51 538

Datasheet:
16-1500_DIN51538.pdf



Liquid Bath

Temperature Range: ambient to +200 °C (ambient to +392 °F)

BAM 200 liquid bath & flowmeter range 0.08...2 l/h (tube Ø 26 & 28)
- 8-place liquid bath with low level and temperature excess protection

Ref.-No:
16-1500 (230V)
16-1501 (115V)

BAM-200 dry bath & flowmeter range 0.08...2 l/h (tube Ø 26)
- 8-place dry-heat bath with aluminum block heater

Ref.-No:
16-1566 (230V)
16-1568 (115V)

of Governor Fluids - BAM 200 (manual)

DIN 51 373

Datasheet:
16-1500_DIN51373.pdf

Temperature Range: ambient to +200 °C (ambient to +392 °F)

BAM 200 liquid bath & flowmeter range 0.08...2 l/h (tube Ø 26 & 28)
- 8-place liquid bath with low level and temperature excess protection

Ref.-No:
16-1500 (230V)
16-1501 (115V)

BAM-200 dry bath & flowmeter range 0.08...2 l/h (tube Ø 28)
- 8-place dry-heat bath with aluminum block heater

Ref.-No:
16-1519 (230V)
16-1520 (115V)



Dry-Heat Bath

of Lubricating Oil - ISO Method - BAM 250 (manual)

ISO 6617-1 - ISO 6617-2 - DIN 51 352-2

Datasheet:
16-1502_ISO6617.pdf

Temperature Range: ambient to +250 °C (ambient to +482 °F)

BAM 250 liquid bath & flowmeter range 1.6...16 l/h (tube Ø 26 & 28)
- 8-place liquid bath with low level and temperature excess protection

Ref.-No:
16-1502 (230V)
16-1503 (115V)

BAM-250 dry bath & flowmeter range 1.6...16 l/h (tube Ø 28)
- 8-place dry-heat bath with aluminum block heater

Ref.-No:
16-1522 (230V)
16-1523 (115V)

of Lubricating Oil - IP Method - BAM 250 (manual)

IP 48

Datasheet:
16-1502_IP48.pdf

Temperature Range: ambient to +250 °C (ambient to +482 °F)

BAM 250 liquid bath & flowmeter range 1.6...16 l/h (tube Ø 26 & 28)
- 8-place liquid bath with low level and temperature excess protection

Ref.-No:
16-1502 (230V)
16-1503 (115V)

BAM-250 dry bath & flowmeter range 1.6...16 l/h (tube Ø 26)
- 8-place dry-heat bath with aluminum block heater

Ref.-No:
16-1569 (230V)
16-1570 (115V)

Air Release Value of Lubricating, Turbine & Hydraulic Oils

- Impinger Method (semi-automatic)

ASTM D 3427 - IP 313 - ISO 9120

Datasheet:
16-1200.pdf

Ref.-No:
16-1200 (230V)
16-1201 (115V)





Cloud & Pour Point of Petroleum Oils

ASTM D 97 - ASTM D 2500 - ASTM D 5853 - EN 23 015 -
FTM 791-201 - IP 15 - IP 219 - IP 441 - ISO 3015 - ISO 3016 -
JIS K2269 - JIS K2601

Datasheet:
16-2372.pdf

Ref.-No:
16-2372 (230V)
16-2373 (115V)

- CAPP I (semi-automatic)

1 chamber with 4 test positions & metal-block cryostat

Datasheet:
16-2378.pdf

- CAPP IV (semi-automatic)

4 chambers with 4 test positions each & metal-block cryostat

Ref.-No:
16-2378 (230V)



- CAPP V (semi-automatic)

5 chambers with 4 test positions each & metal-block cryostat

Datasheet:
16-2360.pdf

Ref.-No:
16-2360 (230V)
16-2361 (115V)



- CAPP 1 (manual)

- with circulation coil for external cooling
- 1-place type (16-0352)

Datasheet:
16-0352.pdf

Ref.-No:
16-0352

- CAPP 4 (manual)

- with circulation coil for external cooling
- 4-place type (16-2348 & 16-2349)

Datasheet:
16-2348.pdf

Ref.-No:
16-2348 (230V)
16-2349 (115V)

Color of Lubricating Oils, Fuels & Waxes

- Photoelectric Colorimeter 880/P (automatic)

with scales for: ASTM Color, Saybolt Color, Tristimulus Method,
CIE Values, Spectral Data

ASTM D 1500 - IP 196 - ISO 2049 - JIS K2580

ASTM D 156 - DIN 51 411 - JIS K2580

ASTM D 6045

optional scales for: Pt-Co / Hazen / APHA, Gardner

ASTM D 1209

ASTM D 1544 - ASTM D 6166

16-3175 Colorimeter PFX 880/P

16-3176 Colorimeter PFX 880/P-H with heated sample chamber for wax

Datasheet:
16-3175.pdf

Ref.-No:
16-3175 (115/230V)
16-3176 (115/230V)
- heated



Color of Lubricating Oils, Fuels & Solvents

- Photoelectric Colorimeter 195/2 (automatic)

with scales for: ASTM Color, Saybolt Color, Tristimulus Method,
Pt-Co / Hazen / APHA, CIE Values, Spectral Data

ASTM D 1500 - IP 196 - ISO 2049 - JIS K2580

ASTM D 156 - DIN 51 411 - JIS K2580

ASTM D 6045

ASTM D 1209

optional scales for: Gardner

ASTM D 1544 - ASTM D 6166

Datasheet:
16-3194.pdf

Ref.-No:
16-3194 (115/230V)



Color of Lubricating Oils & Fuels

- Color Comparator POC (manual)

with scale for: ASTM Color

ASTM D 1500 - IP 196 - ISO 2049 - JIS K2580

Datasheet:
16-0210.pdf

Ref.-No:
16-0210 (115/230V)





Evaporation Loss of Lubricating Grease & Oil (manual)

ASTM D 972 - ASTM D 2878 - FTM 791-351 - IP 183 - JIS K2220

Datasheet:
16-0771.pdf

Ref.-No:
16-0771 (230V)
16-0772 (115V)



Ash from Petroleum Products

- Muffle Furnace Method (manual)

ASTM D 482 - ASTM D 874 - ASTM D 1026 - ASTM D 4422 -
DIN 51 352-2 - DIN 51 575 - FTM 791-5421 - FTM 791-5422 -
IP 4 - IP 163 - ISO 3987 - ISO 6245 - JIS K2272

Datasheet:
16-0001.pdf

Ref.-No:
16-0001 (230V)



Stability of Emulsified Cooling Lubricants

- Acidification Method (manual)

DIN 51 367 - DIN 51 385
DIN 51 368 - IP 137

Datasheet:
16-0070.pdf

Ref.-No:
16-0070 (230V)
16-0072 (230V)



Stability of Emulsified Fluids

- Oil Separation Method (manual)

DIN 51 346
IP 263 (similar)

16-0074 with emulsion stirring unit
16-0082 with magnetic stirrer unit

Datasheet:
16-0074.pdf

Ref.-No:
16-0074 (230V)
16-0082 (230V)



Diluent in Gasoline Engine Oils

- Distillation Method (manual)

ASTM D 322 - IP 23

16-0683 flask heating on electric heater
16-0683 flask heating with heating mantle

Datasheet:
16-0683.pdf

Ref.-No:
16-0683 (230V)
16-1317 (230V)



Oxidation Stability & Corrosiveness of Hydraulic Oils, Aircraft Turbine Engine Lubricants (manual)

ASTM D 4636

- aluminum block heater & flowmeter < 16 l/h

Datasheet:
25-0716.pdf

Ref.-No:
25-0716 (230V)



Saponification Number of Lubricating Fluids

- Color Indicator Titration (manual)

ASTM D 94-A - DIN 51 559-2 - FTM 791-5401 - IP 136-1 -
ISO 6293 - JIS K2503

Datasheet:
17-0610.pdf

Ref.-No:
17-0610 (230V)
17-0611 (115V)



Greases



Consistency of Lubricating Grease & Wax

- Cone Penetration Method - PNR 12 (automatic)

ASTM D 217 - ASTM D 937 - ASTM D 1321 - ASTM D 1403 - DAB 10-V.5.8.1 - DIN 51 579 - DIN 51 580 - IP 50 - IP 179 - IP 310 - IP 376 - ISO 2137 - JIS K2220 - JIS K2235 - SHELL SMS 658

- cones (standard, quarter-scale, half-scale, micro-cones)
- disk penetrator
- needle penetrator

(For further accessories see chapter Penetration & Texture.)

Datasheet:
18-1120_Grease.pdf

Ref.-No:
18-1120 (100-240V, EU)
18-1121 (100-240V, US)



Shear Stability of Lubricating Grease

- Grease Working Machine (automatic)

ASTM D 217 - FTM 791-313 - IP 50 - ISO 2137 - JIS K2220

- two-place model
- worker with 51-hole or 270-hole worker plate
- worker with screw or bayonet-coupling

Datasheet:
17-1506.pdf

Ref.-No:
17-1506 (230V)
17-1505 (115V)



- Grease Worker (manual)

ASTM D 217 - IP 50 - ISO 2137 - JIS K2220

Datasheet:
17-0500.pdf

Ref.-No:
17-0500
17-0502



Consistency of Lubricating Grease

- Roll-Stability Method (semi-automatic)

ASTM D 1831

Datasheet:
17-1600.pdf

Ref.-No:
17-1600 (230V)



Oxidation Stability of Lubricating Grease

- Oxygen Bomb Method - OFA & PA 5 (manual)

ASTM D 942 - DIN 51 808 - FTM 791-3453 - VV-L-791e-5314 - IP 142 - JIS K2220

- screw-cap oxidation vessel OFA-2 with test glasses
- digital manometer PA5-OFA
- 4-place bath (liquid "OFA" or dry-heat "OBA/OFA")

Datasheet:
17-0212.pdf

Ref.-No:
17-0212 (230V)



Dropping Point of Lubricating Grease

- Wide-Temperature Range Method (manual)

ASTM D 2265 - DIN 51 825 - ISO 6299 - JIS K2220

- 6-place aluminum block oven

Datasheet:
17-0151.pdf

Ref.-No:
17-0151 (230V)
17-0152 (115V)



- ASTM Method (manual)

ASTM D 566 - DIN 51 801-1 - FTM 791-1421 - IP 132 - ISO 2176 - JIS K2220

Datasheet:
17-0081.pdf

Ref.-No:
17-0081 (230V)
17-0082 (115V)



Oil Separation of Lubricating Grease

- Pressure Bleeding Method (manual)

ASTM D 1742 - FTM 791-322 - JIS K2220

Datasheet:
17-0111.pdf

Ref.-No:
17-0111 (230V)
17-0112 (115V)



- Conical Sieve Method (manual)

ASTM D 6184 - FTM 791-321

Datasheet:
17-0131.pdf

Ref.-No:
17-0131



- Pressure Filtration Method (manual)

DIN 51 817 - IP 121

Datasheet:
17-0140.pdf

Ref.-No:
17-0140



Water Resistance of Lubricating Grease

- Static Method (manual)

DIN 51 807-1

- 6-place constant temperature bath

Datasheet:
17-0470.pdf

Ref.-No:
17-0470 (230V)



Water, Solvent & Distillation Residue in Used Oil

- Distillation Method (manual)

DIN 51 432

- available with flask heating mantle (16-1846)

Datasheet:
16-0846.pdf

Ref.-No:
16-0846 (230V)
16-1846 (230V)



Consistency of Bitumen

- Needle Penetration Method - PNR 12 (automatic)

ASTM D 5 - EN 1426 - IP 49 - JIS K2207

- standard needles (precision made, factory or officially certified)
- cones
- force-sensor plunger for automatic surface-detection

(For further accessories see chapter Penetration & Texture.)

Datasheet:
18-1120_Bitumen.pdf

Ref.-No:
18-1120 (100-240V, EU)
18-1121 (100-240V, US)



Softening Point

of Bitumen, Binders, Resins & Thermoplastic Adhesives

- Ring & Ball Method - RKA 5 (automatic)

ASTM D 36 - AASHTO T53 - EN 1427 - IP 58 - JIS K2207
EN 13 179-1
ISO 4625-1
ASTM E 28
EN 1238

- available with electromagnetic ball dispenser and automatic ball application
- optional accessories for IP 58 and
Wilhelmi-Method DIN 1996 pt.15/EN 1871-F

Datasheet:
10-0800.pdf

Ref.-No:
10-0800 (230V)
10-0801 (115V)

10-0830 (230V)
10-0831 (115V)
- electromagnetic



of Bitumen & Binders

- Ring & Ball Method (manual)

ASTM D 36 - AASHTO T53 - EN 1427 - IP 58 - JIS K2207
EN 13 179-1
ISO 4625-1
ASTM E 28
EN 1238

Datasheet:
10-0281.pdf

Ref.-No:
10-0281 (230V)
10-0284 (115V)



of Mastics & Thermoplastic Adhesives

- Wilhelmi Method (manual)

DIN 1996-15 - EN 1871-F

Datasheet:
10-0071.pdf

Ref.-No:
10-0071 (230V)



Tensile Properties of Bitumen

- Ductility Method

- Force-Ductilometer - DDA 3 (automatic)

Elongation: ASTM D 113 - AASHTO T51 - JIS K2207 - DIN 52013
Recovery: ASTM D 6084 - EN 13 398 - IP 516
Force: EN 13 703 - AASHTO T300 - IP 515
EN 13 589 - IP 520

- available bath length 100 cm or 150 cm
- 3 programs (semi-automatic for forces < 20 mN;
automatic for forces > 20 mN up to 300 N; elastic recovery)
- PC software DDAcon available

Datasheet:
10-0360.pdf

Ref.-No:
- 100 cm
10-0360 (230V)
10-0361 (115V)
- 150 cm
10-0364 (230V)
10-0365 (115V)



- Ductilometer - DD 3 (semi-automatic)

Elongation: ASTM D 113 - AASHTO T51 - JIS K2207 - DIN 52 013
Recovery: ASTM D 6084 - EN 13 398 - IP 516

- bath length of 100 cm or 150 cm available
- 3 simultaneous test runs possible
- printer & 3 molds included

Datasheet:
10-0350.pdf

Ref.-No:
- 100 cm
10-0350 (230V)
10-0351 (115V)
- 150 cm
10-0354 (230V)
10-0355 (115V)



Effect of Heat & Air on Bitumen

- Loss on Heating Method - LOH 4 (manual)

ASTM D 6 - EN 13 303 - IP 506 - JIS K2207

- Thin-Film Oven Method - TFOT (manual)

ASTM D 1754 - EN 12 607-2 - IP 460-2 - JIS K2207

Datasheet:
10-0117_LOH.pdf
10-0117_TFOT.pdf

Ref.-No:
10-0117 (230V)
10-0118 (115V)



Breaking Point of Bituminous Binders

- Fraass Method - BPA 5 (automatic)

EN 12 593 - IP 80 - JIS K2207

- programs for permanent bending, rapid test, etc.
- built-in Peltier cooler
- PC software BPAcon available

BPA 5 - Set
with external circulation cooler

BPA 5 - Single unit

Datasheet:
10-0460.pdf

Ref.-No:
10-0460 (230V)
10-0461 (115V)

Datasheet:
10-0457.pdf

Ref.-No:
10-0457 (230V)
10-0458 (115V)



Water in Bitumen, Tar, Oil & Grease

- Dean & Stark Distillation Method (manual)

ASTM D 95 - AASHTO T55 - EN 1428 - IP 74 - JIS K2275

- available with flask heating mantle (16-1839+16-1452)

- Extended Dean & Stark Distillation Method (manual)

ISO 3733
(also ASTM D 95 - AASHTO T55 - EN 1428 - IP 74 - JIS K2275)

- available with flask heating mantle (16-1850)

Datasheet:
16-0830.pdf

Ref.-No:
16-0830 (230V)
16-1430 (115V)
16-1839 (230V)
16-1452 (115V)

Datasheet:
16-0850.pdf

Ref.-No:
16-0850 (230V)
16-1850 (230V)

Water in Bitumen Emulsions

- Distillation Method (manual)

ASTM D 244 - AASHTO T59 - IP 291

- available with flask heating mantle (16-1844)

Datasheet:
16-0844.pdf

Ref.-No:
16-0844 (230V)
16-1844 (230V)



Water in Bitumen

- Distillation Method (manual)

DIN 1996-5

- available with flask heating mantle (16-1845)

Datasheet:
16-0845.pdf

Ref.-No:
16-0845 (230V)
16-1845 (230V)



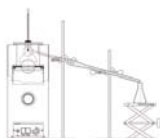
Dropping Point of Bituminous Binders

- Ubbelohde Method (manual)

DIN 51 801-2 (obs.)

Datasheet:
17-0053.pdf

Ref.-No:
17-0053 (230V)



Distillation of Pitch (manual)

ASTM D 2569

Datasheet:
10-0179.pdf

Ref.-No:
10-0179 (230V)



Distillation of Cut-Back Bitumen (manual)

ASTM D 402 - EN 13 358 - IP 27

Datasheet:
10-0213.pdf

Ref.-No:
10-0213 (Gas)



Distillation of Road Tar (manual)

ASTM D 20

Datasheet:
10-0203.pdf

Ref.-No:
10-0203 (Gas)



Efflux Time of Bitumen Emulsions

- Viscometer Method (manual)

EN 12 846

- single unit
- electrically heated
- test cups with different orifices

Datasheet:
10-0312.pdf

Ref.-No:
10-0312 (230V)
10-0313 (115V)

Wax



Congealing Point of Petroleum Wax (manual)

ASTM D 938 - IP 76 - ISO 2207

Datasheet:
17-0000.pdf

Ref.-No:
17-0000 (230V)
17-0008 (115V)



Melting Point of Petroleum Wax

- Cooling Curve Method (manual)

ASTM D 87 - FTM 791-1402 - IP 55 - ISO 3841 - JIS K2235

Datasheet:
17-0031.pdf

Ref.-No:
17-0031 (230V)
17-0032 (115V)



Drop Melting Point of Petroleum Wax (manual)

ASTM D 127 - FTM 791-1401 - IP 133 - JIS K2235

Datasheet:
17-0040.pdf

Ref.-No:
17-0040 (230V)
17-0041 (115V)



Oil & Solvent in Petroleum Wax (manual)

ASTM D 721 - IP 158 - FTM 791-5431 - JIS K2235

ASTM D 3235

- glass accessories, electric stirrer & vacuum pump
- 3-place bath for dry-ice with cooling coil (17-0550)
- 3-place bath for dry-ice with cooling coil and cryostat (17-0555)

Datasheet:
17-0550.pdf

Ref.-No:
17-0550 (230V)
17-0555 (230V)
17-0556 (115V)



Petroleum Wax in Bitumen

- Distillation Method (manual)

EN 12 606-1 - IP 459-1

Datasheet:
10-0160.pdf

Ref.-No:
10-0160 (230V)



Consistency of Various Materials

- Penetrometer Method - PNR 12 (automatic)

ASTM, IP, ISO, EN, DIN etc. depending on accessories

- multi-purpose use
- test accessories on user's choice
- microprocessor controlled with LCD
- automatic surface-detection possible

Datasheet:
18-1120.pdf

Ref.-No:
18-1120 (100-240V, EU)
18-1121 (100-240V, US)

Penetrometer Accessories

suitable for Petrotest Penetrometer

Datasheet:

- Test Kits

Sets acc. to standard requirements
(incl. needle/cone, plunger, weight, sample container etc.)

18-2220.pdf



- Needles

(standard-, tapered-, pin-, VICAT- and certified needles)

18-1160.pdf



- Cones & Discs

(full-scale-, half-scale-, quarter-scale-, micro-cones and discs)

18-0101.pdf



- Rods & Rams

(rods, rams, cylinders, cutter, balls etc.)

18-0260.pdf



- Plunger & Weight

(plunger with or without sensor, additional load weights)

18-0132.pdf



- Sample Jars & Auxiliary Equipment

(standard- & grease-jars, wax-cylinders, centering devices etc.)

18-0066.pdf



- Sample Tempering Units

(transfer dish for tempering during measurements,
circulator-baths for sample pre-tempering and tempering dish supply)

18-0065.pdf



- Grease Worker (Micro-Cones)

18-0134.pdf

- Grease Worker (Full-Cone)

17-0500.pdf





Oxidation Stability of Food & Cosmetics

- RSSOT (Rapid Small Scale Oxidation Test)

- PetroOXY Stainless Steel (automatic)

with stainless steel test chamber

- PetroOXY Stainless Steel Active (automatic)

automatic re-cooling between tests by peltier elements

Both suitable for solid samples (with further accessories).
Also available with gold-plated chamber (see chapter Fuel).

Datasheet:
13-3008.pdf

Ref.-No:
13-3008 (115/230V, EU)
13-3009 (115/230V, US)

Datasheet:
13-3016.pdf

Ref.-No:
13-3016 (115/230V, EU)
13-3017 (115/230V, US)

Density, API & Specific Gravity of Petroleum Products

ASTM D 70 - ASTM D 287 - ASTM D 1298 - ASTM D 1481 -
ASTM D 2111 - ASTM D 3142 -
DIN 51 757 - DIN 52 004 -
IP 160 - IP 189 - IP 190 -
ISO 3675 - ISO 3838 - JIS K2249



- Tempering Bath - Ambient Temperature

- 4-place full-view acryl bath
- up to +60 °C max.
- for the determination of Density, Specific & API Gravity
with hydrometer or pycnometer

Datasheet:
26-0010.pdf

Ref.-No:
26-0010 (230V)
26-0011 (115V)



- Tempering Bath - High Temperature

- 4-place full-view borosilicate bath
- up to +150 °C max.
- for the determination of Density, Specific & API Gravity
with hydrometer or pycnometer

Datasheet:
26-0017.pdf

Ref.-No:
26-0017 (230V)
26-0018 (115V)

Density Accessories

suitable for Petrotest Density Baths:

- Hydrometer

Bitumen: ASTM D 3142

Oil: ASTM D 287 - ISO 3675

ASTM D 1298 - IP 160 - DIN 51 757-1 - JIS K2249

Solvent: ASTM D 2111-A

- Hydrometer, DIN 12 791 - Series M 100
- Hydrometer, API Specific Gravity - ASTM E 100
- Hydrometer, ASTM Specific Gravity - ASTM E 100
- Hydrometer, Density - Series M 50 SP
- Hydrometer, Density - Series L 50 SP
- Hydrometer, Specific Gravity - Series M 50 SP
- Hydrometer, Specific Gravity - Series L 50 SP

Datasheet:
26-0400.pdf

- Pycnometer

Bitumen: ASTM D 70 - DIN 52 004 - IP 190

Oil: ISO 3838 - JIS K2249 - DIN 51 757-3 - ASTM D 1481 - IP 189

- LIPKIN
for Oil
- GAY-LUSSAC
for Bitumen & Oil
- HUBBARD
for Bitumen & Oil

Datasheet:
26-0712.pdf





Viscosity of Petroleum Products

- Kinematic Capillary Method

ASTM D 445 - ASTM D 446 - ASTM D 2170 - EN 12 595 - FTM 791-305 - IP 71-1+2 - IP 319 - ISO 3104 - ISO 3105 - JIS K2207 - JIS K2283



- Tempering Bath - Ambient Temperature

- 4-place full-view acrylic bath
- max. temperature up to +60 °C
- for Ubbelohde-, Cannon-Fenske- or BS/IP-U-Tube-viscometers

Datasheet:
20-0000.pdf

Ref.-No:
20-0000 (230V)
20-0001 (115V)

Datasheet:
20-0150.pdf

Ref.-No:
20-0150 (230V)
20-0151 (115V)

- Tempering Bath - High Temperature

- 7-place bath
- temperature up to +150 °C max.
- for Ubbelohde-, Cannon-Fenske- or BS/IP-U-Tube-viscometers



Viscosity Accessories

suitable for Petrotest Viscosity Baths:

- Measuring Device - ViscoClock (semi-automatic)

ASTM D 445 - ASTM D 446 - DIN 51 562 - IP 71-1+2 - IP 319 - ISO 3104 - ISO 3105 - JIS K2283

Datasheet:
22-0175.pdf

- suitable capillaries are
UBBELOHDE ASTM-Type - UAV (Suspended Level)
UBBELOHDE DIN-Type - UDV (Suspended Level)

Ref.-No:
22-0175 (230V)
22-0176 (115V)



- Capillary Tubes

Glasware suitable for Petrotest Tempering Baths:

- UBBELOHDE ASTM-Type - UAV (Suspended Level)
- UBBELOHDE DIN-Type - UDV (Suspended Level)
- UBBELOHDE Micro - UMV (Suspended Level)
- CANNON-UBBELOHDE Semi-Micro - CUSMV (Susp. Level)
- CANNON-FENSKE Routine - CFRV (Ostwald)
- CANNON-FENSKE Opaque - CFOV (Reverse Flow)
- BS/IP U-Tube - BS/IP/RF (Reverse Flow)
- BS/IP - BS/IP/SL(S)(Suspended Level)
- Micro-OSTWALD - MOV (Ostwald)
- ZEITFUCHS Cross-Arm - ZCAV (Reverse Flow)
- Vacuum - CMVV, AIVV, MKVV

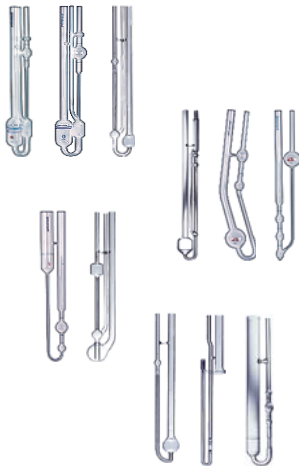
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Certified Reference Material - CRM

- Distillation
- Fuel
- Oil
- Viscosity
- Density
- Flash Point
- Miscellaneous

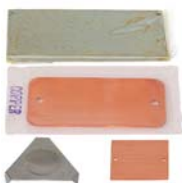
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Metal Test Specimens

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- Fuels and Fuel Additives
- Solid Film Lubricants
- Antifreeze and Soluble Oils
- Lubricating Oils and Hydraulic Fluids
- Special Tests

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Thermometers - ASTM / IP

- precision made
- officially certified
- with or without collar

Datasheet:
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Abbreviations

AASHTO American Association of State Highway & Transportation Officials
API	..... American Petroleum Institute
ASTM	..... American Society for Testing & Materials
BS	..... British Standards Institution
CEC	..... Coordinating European Council (for Transportation Fluids Performance)
DIN	..... Deutsches Institut für Normung
EN	..... Comité Européen de Normalisation
FTM	..... Federal Test Method (US)
IEC	..... International Electrotechnical Commission
IP	..... Institute of Petroleum Standards
ISO	..... International Standardization Organisation
JIS Japanese Industrial Standards Committee
MIL Military Standards (US)
NF Institut Française de Normalisation

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