petrotest®

Petroleum Test Equipment

Product Range 2007

Manufacturer since 1873

www.petrotest.com

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Sales: -521
Shipping: -521
Marketing: -348
Purchase: -336
Accounting: -344
Management: -314

ISO 9001 certified

Company Development

From Berthold Pensky .....

In 1873, Mr. Berthold Pensky, an engineer at the "Kaiser-Wilhelm-Institute" 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.

1909-1989

..... through Sommer & Runge .....

1886, upon his appointment to the official position of a "Royal Prussian Planning Officer" Mr. Pensky sold his company to two of his employees, Mr. Wilhelm Sommer and Mr. 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.

..... to 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 improvement and development of more automatic petroleum testing equipment can be expected.

since 1996

Petrotest® Philosophy


TÜV CERT

CERTIFICATE

The TÜV CERT Certification Body
of TÜV Rheinland Industrie Service GmbH

certifies in accordance with
TÜV CERT procedures that

petrotest

has established and applies a quality management system for

DIN EN ISO 9001:2000

are fulfilled.

TÜV

In order to be a highly flexible and reliable partner to our customers, we decided to locate the entire range of branches needed in our company.

- Application
- Customer Care Centre
- Electronical & Mechanical Design
- Software Development
- Production incl. CNC-machinery
- Assembling
- Quality Control according ISO 9001
- Marketing
- Order & Shipping
- Stockage

This gives us the potentiality to provide even customized solutions. Therefore do not hesitate to ask.

Chapters

ADU

PMA

BPA

PNR

Tables of Contents

We reserve the right to make changes to all following information without prior notice.

Sampling Devices

ASTM D 923 - ASTM D 4057 - ASTM D 4177 - DIN 51 750-1-3 - EN 58 - FTM 791-8001 - ISO 3170 - ISO 15 528 - JIS C2101 - JIS K2254 (ASTM D 270, DIN 53 242-1-4 obs.)

Datasheet:
19-.pdf

19-0051

19-0056

19-0058

Sampling Tubes - open (Grease)

ASTM D 4057 (ASTM D 270 obs.) - DIN 51 750-3 - EN 58 (DIN 53 242-3, IP 51 obs.)

Ref.-No:
19-0051 (Auger)
19-0056 (ASTM)
19-0058 (DIN)

19-0005

Sampling Tubes - open

DIN 51 750-2 - EN 58 - ISO 3170

Ref.-No:
19-0005

19-0002

Sampling Tubes - closed

DIN 51 750-1+2 - EN 58 - ISO 3170

Ref.-No:
19-0001
19-0002
19-0003
19-0011
19-0012

19-0032 19-0040 19-0041

Tank Sampling Bottles

ASTM D 923 - ASTM D 4057 (ASTM D 270 obs.) - DIN 51 750-2 - EN 58 - ISO 3170 - (DIN 53 242-1 obs.) - JIS C2101 - JIS K2254

Ref.-No:
19-0032 (BACON)
19-0040 (Can)
19-0041 (Glas)

Tank Sampling by Scoop-Thermometer

scoop Ø 35 mm, length 100 mm

19-0070 with thermometer range 0....+60°C
19-0071 with thermometer range 0...+100°C

Datasheet:
19-.pdf

Ref.-No:
19-0070
19-0071

Lowering Equipment

Wheel with Wire Cord (19-0080)
Brass Chain (19-0035 to 19-0037)
Hemp Rope (19-0034)
Perlon Cord (19-0039)

Tempering Bath for Density, API & Specific Gravity

ASTM D 70 - ASTM D 71 - ASTM D 287 - ASTM D 1298 - ASTM D 1481 - ASTM D 2111 - ASTM E 100 - DIN 51 757 - DIN 52 004 (DIN 1995 obs.) - IP 160 - IP 189 - IP 190 - ISO 3675 - ISO 3838 - JIS K2207 - JIS K2249 - JIS K2265 (BS 4714 - BS 4699 obs.)

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

Datasheet:
26-0010.pdf

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

Tempering Bath for Density, API & Specific Gravity

ASTM D 70 - ASTM D 71 - ASTM D 287 - ASTM D 1298 - ASTM D 1481 - ASTM D 2111 - ASTM E 100 - DIN 51 757 - DIN 52 004 (DIN 1995 obs.) - IP 160 - IP 189 - IP 190 - ISO 3675 - ISO 3838 - JIS K2207 - JIS K2249 - JIS K2265 (BS 4714 - BS 4699 obs.)

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

Datasheet:
26-0017.pdf

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

Hydrometer, DIN 12 791 - Series M 100

DIN 51 757

Ref. temp.: +20 °C, max. length: 250 mm, scale division: 0.0020 g/cm³

Datasheet:
26-0400 etc.pdf

Ref.-No:
26-0400
to
26-0405

Hydrometer, API Specific Gravity - ASTM E 100

ASTM D 287 - ASTM D 1298 - ASTM E 100 - IP 160 - ISO 3675 - JIS K2249

Ref. temp.: +60 °F, max. length: 330 mm, scale division: 0.1 API

Datasheet:
26-0400 etc.pdf

Ref.-No:
26-0500
to
26-0509

Hydrometer, ASTM Specific Gravity - ASTM E 100

ASTM D 1298 - ASTM E 100 - IP 160 - JIS K2249

Ref. temp.: +60 °F, max. length: 330 mm, scale division: 0.0005 g/cm³

Datasheet:
26-0400 etc.pdf

Ref.-No:
26-0600
to
26-0608

Hydrometer, Density - Series M 50 SP

ASTM D 1298 - IP 160 - JIS K2249

Ref. temp.: +15 °C, max. length: 270 mm, scale division: 0.001 g/cm³

Datasheet:
26-0400 etc.pdf

Ref.-No:
99-1141
to
99-1150

Hydrometer, Density - Series L 50 SP

ASTM D 1298 - IP 160 - JIS K2249

Ref. temp.: +15 °C, max. length: 335 mm, scale division: 0.0005 g/cm³

Datasheet:
26-0400 etc.pdf

Ref.-No:
99-1131
to
99-1140

Hydrometer, Density - Series L 50 SP

ASTM D 1298 - IP 160 - JIS K2249

Ref. temp.: +20 °C, max. length: 335 mm, scale division: 0.0005 g/cm³

Datasheet:
26-0400 etc.pdf

Ref.-No:
99-1031
to
99-1040

Hydrometer, Specific Gravity - Series M 50 SP

ASTM D 1298 - IP 160 - JIS K2249

Ref. temp.: +60 °F, max. length: 270 mm, scale division: 0.001 g/cm³

Datasheet:
26-0400 etc.pdf

Ref.-No:
99-1151
to
99-1160

Hydrometer, Specific Gravity - Series L 50 SP

ASTM D 1298 - IP 160 - JIS K2249

Ref. temp.: +60 °F, max. length: 335 mm, scale division: 0.0005 g/cm³

Datasheet:
26-0400 etc.pdf

Ref.-No:
99-1161
to
99-1170

Hydrometer (Thermo-), Specific Gravity - ASTM 101H

ASTM D 1657

Datasheet:
26-0400 etc.pdf

Ref.-No:
14-0116 (°F)
14-0121 (°C)

Pycnometer - LIPKIN

ASTM D 1481 - IP 189 - ISO 3838 (DIS 3658 obs.) -
JIS K2249 (BS 4699 obs.)

Datasheet:
26-0712 etc.pdf

Ref.-No:
26-0712

Pycnometer - GAY-LUSSAC

IP 190 (BS 4699 obs.) - ISO 3838 (DIS 3658 obs.) - JIS K2249

Datasheet:
26-0712 etc.pdf

Ref.-No:
26-0721

Pycnometer - HUBBARD

ASTM D 70 - ISO 3838 (DIS 3658 obs.) - JIS K2249

ASTM D 70 - DIN 52 004 (DIN 1995 obs.) - ISO 3838 (DIS 3658 obs.) -
IP 190 (BS 4699 obs.) - JIS K2249

Datasheet:
26-0712 etc.pdf

Ref.-No:
26-0740 (IP)
26-0741 (ISO)

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Density or Relative Density of Light Hydrocarbons by Pressure Hydrometer

see: LPG

page 14

Density or Relative Density of Gases by SCHILLING Effusiometer

see: LPG

Density Balance (digital)

ASTM D 71 - DIN 51 757-2 (IP 59-A+B obs.)

- conversion of measured balance to density
- build-in RS 232 C interface
- platform with solid stand

Datasheet:
26-0019.pdf

Ref.-No:
26-0019 (115/230V)

Tempering Baths for Viscosity - Kinematic Capillary Methods

ASTM D 445 - ASTM D 446 - ASTM D 2170 - (DIN 51 561, DIN 51 569 obs) - EN 12 595 - FTM 791-305 - IP 71-1+2 - IP 319 - ISO 3104 (NF T60-100 obs.) - ISO 3105 - JIS K2207 - JIS K2283

Tempering Bath for Viscositytubes - Ambient Temperature

- 4-place full-view acryl 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)

Tempering Bath for Viscositytubes - High Temperature

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

Datasheet: 20-0150.pdf

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

Viscosity by UBBELOHDE Capillary - AKV (automatic)

ASTM D 445 - ASTM D 446 - IP 71-1+2 - JIS K2283

Datasheet: 22-1000.pdf

Ref.-No:
22-1000 (230V)
22-1001 (115V)

Viscosity by UBBELOHDE ASTM/DIN Capillary - ViscoClock (semi-automatic)

ASTM D 445 - ASTM D 446 - DIN 51 562 - IP 71-1+2 - IP 319 - ISO 3104 (NF T60-100 obs.) - ISO 3105 - JIS K2283

- fits almost every customer's tempering bath
- for bath temperature ranges of -40 to +150 °C
- interface for PC or printer

Datasheet: 22-0175.pdf

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

Viscometer, UBBELOHDE ASTM-Type - UAV (Suspended Level)

ASTM D 445 - ASTM D 446 - FTM 791-305 - IP 71-1+2 - ISO 3104 (NF T60-100 obs.) - ISO 3105 - JIS K2283

Datasheet: 22-0120.pdf

Ref.-No:
22-0120 (manual)
22-0320 (automatic)

Viscometer, UBBELOHDE DIN-Type - UDV (Suspended Level)

ASTM D 445 - ASTM D 446 - DIN 51 562-1 - DIN 52 007-1 - ISO 3104 (NF T60-100 obs.) - ISO 3105 - JIS K2283

Datasheet: 22-0100.pdf

Ref.-No:
22-0100 (manual)
22-0300 (automatic)

Viscometer, UBBELOHDE Micro Viscometers - UMV (Suspended Level)

ASTM D 445 - ASTM D 446 - DIN 51 562-2 - JIS K2283

Datasheet: 22-0390.pdf

Ref.-No:
22-0390 (manual)
22-0395 (automatic)

Viscometer, CANNON-UBBELOHDE Semi-Micro - CUSMV (Suspended Level)

ASTM D 445 - ASTM D 446 - IP 71-1+2 - ISO 3104 (NF T60-100 obs.) - ISO 3105 - JIS K2283

Datasheet: 22-0360.pdf

Ref.-No:
22-0360 (manual)

Viscometer, CANNON-FENSKE Routine - CFRV (Ostwald)

ASTM D 445 - ASTM D 446 - ASTM D 2170 - FTM 791-305 - IP 71-1+2 - IP 319 - ISO 3104 (NF T60-100 obs.) - ISO 3105 - JIS K2283

Datasheet: 22-0000.pdf

Ref.-No: **22-0000** (manual)

Viscometer, CANNON-FENSKE Opaque - CFOV (Reverse Flow)

ASTM D 445 - ASTM D 446 - ASTM D 2170 - DIN 51 366 - (DIN 51 372 obs., DIN 51 550 obs.) - DIN 52 007-1 - EN 12 595 - FTM 791-305 - IP 71-1+2 - IP 319 - ISO 3104 (NF T60-100 obs.) - ISO 3105 - JIS K2207 - JIS K2283

Datasheet: 22-0050.pdf

Ref.-No: **22-0050** (manual)

Viscometer, BS/IP U-Tube - BS/IP/RF (Reverse Flow)

ASTM D 445 - ASTM D 446 - ASTM D 2170 - DIN 51 366 - (DIN 51 372 obs., DIN 51 550 obs.) - DIN 52 007-1 - EN 12 595 - FTM 791-305 - IP 71-1+2 - IP 319 - ISO 3104 (NF T60-100 obs.) - ISO 3105 - JIS K2207 - JIS K2283

Datasheet: 22-0200.pdf

Ref.-No: **22-0200** (manual)

Viscometer, BS/IP - BS/IP/SL(S)(Suspended Level)

ASTM D 445 - ASTM D 446 - FTM 791-305 - IP 71-1+2 - ISO 3104 (NF T60-100 obs.) - ISO 3105 - JIS K2283

Datasheet: 22-0230.pdf

Ref.-No: **22-0230** (manual)

Viscometer, Micro-OSTWALD - MOV (Ostwald)

ASTM D 445 - ASTM D 446 - FTM 791-305 - IP 71-1+2 - ISO 3104 (NF T60-100 obs.) - ISO 3105 - JIS K2283

Datasheet: 22-0400.pdf

Ref.-No: **22-0400** (manual) **22-0405** (automatic)

Viscometer, ZEITFUCHS Cross-Arm - ZCAV (Reverse Flow)

ASTM D 445 - ASTM D 446 - ASTM D 2170 - EN 12 595 - FTM 791-305 - IP 71-1+2 - IP 319 - ISO 3104 (NF T60-100 obs.) - ISO 3105 - JIS K2207 - JIS K2283

Datasheet: 22-0530.pdf

Ref.-No: **22-0530** (manual)

Viscometer, VOGEL-OSSAG - VOV

DIN 51 561 (obs.) - DIN 51 569 (obs.)

Datasheet: 23-0501.pdf

Ref.-No: **23-0501** (manual)

Viscosity, Oil Standards

ASTM D 2162 - ASTM D 4052 - ISO 9001 (DIN 51 550 obs.)

Datasheet: 24-0551.pdf

Ref.-No: **24-0551** (Primary) **24-0501** (Secondary) **24-0601**

Viscometer, Vacuum - CMVV, AIVV, MKVV

ASTM D 2171 - EN 12 596 - IP 222

22-0500 Cannon-Manning - CMVV
22-0520 Viscometer, Asphalt Institute - AIVV
Viscometer, Modified Koppers - MKVV

Datasheet: 22-0500.pdf

Ref.-No: **22-0500** **22-0520** ---

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Viscosity, Specific by ENGLER

see: Bitumen

Viscosity by REDWOOD (manual)

IP 70 (obs.)

21-0300 with oil cup n° 1
21-0335 with oil cup n° 2

Datasheet:
21-0300.pdf

Ref.-No:
21-0300 (230V)
21-0335 (230V)

Viscosity by SAYBOLT (manual)

ASTM D 88 - ASTM E 102 - AASHTO T72 - FTM 791-304 - JIS K2207

- 2 viscosity tubes, gold plated
- stainless steel housing
- thermostatically controlled test bath with electric stirrer

Datasheet:
21-0501.pdf

Ref.-No:
21-0501 (230V)
21-0502 (115V)

Viscosity by Falling Ball - HÖPPLER (manual)

DIN 53 015

Datasheet:
24-0025.pdf

Ref.-No:
24-0025

Viscosity by Falling Ball - JUNG Check

see: Oil page 30

Viscosity by Comparator - Viscosity Check

see: Oil page 30

Viscosity by Flow Cup - FORD (manual)

DIN 53 211

ASTM D 1200 (NF T30-070 obs.)

Datasheet:
21-0761.pdf

Ref.-No:
21-0750 (DIN)
21-0761 (ASTM)

Viscosity by Flow Cup - ISO (manual)

ASTM D 5125 - DIN 53 224 - ISO 2431 (EN 535 obs.)

Datasheet:
21-0761.pdf

Ref.-No:
21-0766 (ISO)

Distillation at Atmospheric Pressure - ADU 4 (automatic)

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

ADU 4 : basic unit
ADU 4F : basic unit with built-in fire-extinguisher

- low price - high value
- software included
- ultra-high heating power
- safety-heater-rods reduce burn-risk

Datasheet:
11-0540.pdf

Ref.-No:
11-0540 (230V)
11-0541 (115V)
- ADU 4
11-0542 (230V)
11-0543 (115V)
- ADU 4F

Distillation at Atmospheric Pressure - ADU 4-DryPoint (automatic)

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

ADU 4D : basic unit with built-in dry-point
ADU 4FD : basic unit with built-in fire-extinguisher & dry-point

- low price - high value
- software included
- ultra-high heating power
- safety-heater-rods reduce burn-risk

Datasheet:
11-0540.pdf

Ref.-No:
11-1540 (230V)
11-1541 (115V)
- ADU 4D

11-1542 (230V)
11-1543 (115V)
- ADU 4FD

Distillation at Atmospheric Pressure - DU 4-Economy (manual)

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

DU 4-Eco
basic unit with: - 800W heater
- external bath-tempering
- for distillation groups 0 - 3 & 4 (up to +300°C)

DU 4-EcoPlus
basic unit with: - 1200W heater (safety-heater-rods reduce burn-risk)
- external bath-tempering
- for distillation groups 0 - 4

Datasheet:
11-0900.pdf

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

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

DU 4-EcoThermo
basic unit with: - 800W heater
- with built-in bath-heater but external cooling
- for distillation groups 0 - 3 & 4 (up to +300°C)

DU 4-EcoThermoPlus
basic unit with: - 1200W heater (safety-heater-rods reduce burn-risk)
- with built-in bath-heater but external cooling
- for distillation groups 0 - 4

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

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

Distillation at Atmospheric Pressure - DU 4-Professional (manual)

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

DU 4-Pro : basic unit with built-in fire-extinguisher
DU 4-ProThermo: .. with built-in fire-extinguisher & bath heating

- low price - high value
- available for distillation groups 0 - 3 or 0 - 4
- ultra-high 1200 W heater (safety-heater-rods reduce burn-risk)

Datasheet:
11-0900.pdf

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

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

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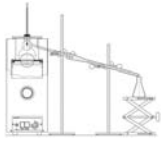
Front Octane Number by Distillation

see: Fuel



Distillation of Pitch

ASTM D 2569

Datasheet:
10-0179.pdf

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

Flash-Point Testing with Closed Cup acc. ABEL - ABA 4 (automatic)

IP 170 - ISO 13 736

NF T66-009

ISO 3679 - ISO 3680

DIN 51 755-1-2 - NF M07-036

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

ABA 4 - Air : air cooled version (12-0501)
ABA 4 - Water : water cooled, low temperature version (12-0503)

- 1-twist handling
- ABAcon PC-software included
- RAPID-flash set and milli-cup available

Datasheet:
12-0501.pdf

Ref.-No:
12-0501 (115/230V)
- air cooled
12-0503 (115/230V)
- water cooled

Flash-Point Testing with Closed Cup acc. TAG - TAG 4 (automatic)

ASTM D 56 - FTM 791-1101 - JIS K2265

ASTM D 3934 - ASTM D 3941 - EN 924

ISO 3679 - ISO 3680

ASTM D 3934 - ASTM D 3941 - EN 924 - IP 491 - IP 492 - ISO 1516 - ISO 1523

TAG 4 - Air : air cooled version (12-0540)
TAG 4 - Water : water cooled, low temperature version (12-0542)

- 1-twist handling
- TAGcon PC-software included
- milli-cup & RAPID accessories available

Datasheet:
12-0540.pdf

Ref.-No:
12-0540 (115/230V)
- air cooled
12-0542 (115/230V)
- water cooled

Flash-Point Testing with Closed Cup acc. PENSKY-MARTENS - PMA 4 (automatic)

ASTM D 93-A+B - JIS K2265 - AASHTO T73 - AASHTO T172 - EN 22 719 - FTM 791-1102 - FTM 141-4293 - IP 34-A+B - ISO 2719-A+B

ASTM D 6751

ISO 15 267 - BS 684-1.17

- 1-twist handling
- PMAcon PC-software included
- fire-extinguisher option

Datasheet:
12-1770.pdf

Ref.-No:
12-1770 (115/230V)

12-1767 (115/230V)
- with fire-extinguisher

Flash-Point Testing - Sample Changer with PMA 4 (automatic)

PMA 4 S: standard version (12-2770 or 12-2771)

PMA 4 FS: fire-extinguishing version (12-2772 or 12-2773)

PMA 4 SC: chilled sampler set version (12-2776 or 12-2777)

PMA 4 FSC: fire-extinguishing & chilled sampler set version (12-2778 or 12-2779)

- up to 12 test-places
- software included
- milli-cup option

Datasheet:
12-2770.pdf

Ref.-No:
12-2770 (with EU-plug)
12-2771 (with US-plug)

12-2772 (with EU-plug)
12-2773 (with US-plug)

12-2776 (with EU-plug)
12-2777 (with US-plug)

12-2777 (with EU-plug)
12-2778 (with US-plug)

Flash- & Fire-Point Testing with Open Cup acc. CLEVELAND Open Cup - CLA 4 (automatic)

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

Superpave®

- barometric pressure correction
- skimmer available
- bitumen test option

Datasheet:
12-0940.pdf

Ref.-No:
12-0940 (115/230V)

Auto-Ignition Temperature - ZPA 3 (automatic)

EN 14 522 - DIN 51 794 - CEI 79-4 - NF T20-037
NF T20-036 - 79/831/EWG

- autosampler available with or without heated sample-feeder
- fully automatic test cycle
- special solid heating program

Datasheet:
12-1822.pdf

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

Flash-Point Testing with Closed Cup acc. ABEL (semi-automatic)

IP 170 - ISO 13 736 - NF T66-009
EN 924 - IP 491 - IP 492 - ISO 1516 - ISO 1523

Note! Abel-Pensky Model available upon request.

Datasheet:
12-1270.pdf

Ref.-No:
12-1270 (230 V)

Flash-Point Testing with Closed Cup acc. TAG (semi-automatic)

ASTM D 56 - FTM 791-1101 - JIS K2265

Datasheet:
12-1520.pdf

Ref.-No:
12-1520 (230V)
12-1521 (110V)

Flash-Point Testing with Open Cup acc. TAG (semi-automatic)

ASTM D 1310 - ASTM D 3143

Datasheet:
12-1540.pdf

Ref.-No:
12-1540 (230V)

Flash-Point Testing with Closed/Open Cup acc. RAPID Tester "Series 3" (automatic)

IP 523 - ASTM D 3828-B - ISO 3679 - JIS K2265
ASTM D 3278-B - UN Class 3 N - ASTM E 502
IP 524 - ASTM D 3828-A - ISO 3680
ASTM D 3278-A
ASTM D 4206 - ISO 9038 - BS 3900-A11 - UN Class 3 L.3 - CFR 49-173.120

Datasheet:
12-1240.pdf

Ref.-No:
12-1240 (115/230V)
- closed cup
12-1241 (115/230V)
- open cup
12-1242 (115/230V)
- special

Flash-Point Testing with Closed/Open Cup acc. RAPID Tester "Series 7 & 7+" (automatic)

IP 523 - ASTM D 3828-B - ISO 3679 - JIS K2265
ASTM D 3278-B - UN Class 3 N - ASTM E 502
IP 524 - ASTM D 3828-A - ISO 3680
ASTM D 3278-A

Datasheet:
12-1208.pdf

Ref.-No:
12-1208 (115/230V)
- high temperature
12-1210 (115/230V)
- low temperature

Flash-Point Testing with Closed Cup acc. PENSKY-MARTENS - PMP 4 (semi-automatic)

ASTM D 93-A+B - JIS K2265 - FTM 791-1102 - FTM 141-4293 - AASHTO T73 - AASHTO T172 - IP 34-A+B - ISO 2719-A+B - EN 22 719
ASTM D 6751
ISO 15 267 - BS 684-1.17

- 1-twist handling
- barometric pressure correction
- automatically controlled heating rate

Datasheet:
12-0595.pdf

Ref.-No:
12-0595 (115/230V)

Flash-Point Testing with Closed Cup acc. PENSKY-MARTENS - PM 4 (semi-automatic)

ASTM D 93-A+B - JIS K2265 - FTM 791-1102 - FTM 141-4293 - AASHTO T73 - AASHTO T172 - IP 34-A+B - ISO 2719-A+B - EN 22 719

ASTM D 6751

ISO 15 267 - BS 684-1.17

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

Datasheet: 12-1650.pdf

Ref.-No: **12-1650** (230V)

Flash-Point Testing with Closed Cup acc. PENSKY-MARTENS - PM (manual)

ASTM D 93-A - JIS K2265 - AASHTO T73-A - AASHTO T172-A - FTM 791-1102 - FTM 141-4293 - IP 34-A - ISO 2719-A - EN 22 719

ASTM D 6751

ISO 15 267 - BS 684-1.17

Optional IP 35

- adjustable gas burner (for all gas-types)
- hand operated stirrer
- open cup-option (IP 35)

Datasheet: 12-0601.pdf

Ref.-No: **12-0601** (Gas)

Flash-Point Testing with Closed Cup acc. PENSKY-MARTENS - Army Check (manual) (Field Test)

similar to international Pensky-Martens methods

Datasheet: 12-1000.pdf

Ref.-No: **12-1000** (230V) **12-1001** (115V)

Flash- & Fire-Point Testing with Open Cup acc. CLEVELAND - CL (semi-automatic)

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

Superpave®

- 3 interchangeable test flame jets
- electric heating
- gas ignition

Datasheet: 12-0730.pdf

Ref.-No: **12-0730** (115/230V)

Flash- & Fire-Point Testing with Open Cup acc. CLEVELAND (manual)

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

Superpave®

- 3 interchangeable test flame jets
- adjustable gas burner (for all gas-types)
- gas ignition

Datasheet: 12-0701.pdf

Ref.-No: **12-0701** (Gas)

Auto-Ignition Temperature (semi-automatic)

ASTM E 659

Datasheet: 12-1802.pdf

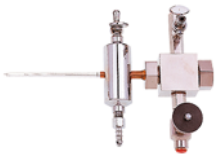
Ref.-No: **12-1802** (230V)

Auto-Ignition Temperature of Solids acc. Grewer (semi-automatic)

VDI 2263 (in analogy to 79/831/EWG)

Datasheet: 12-1840.pdf

Ref.-No: **12-1840** (230V)



Water Vapor Content by Dew-Point (manual)

ASTM D 1142

Datasheet:
14-0004.pdf

Ref.-No:
14-0004
to 14-0006

Dryness by Freeze Valve (manual)

ASTM D 2713 - IP 395 - ISO 13 758

Datasheet:
14-0100.pdf

Ref.-No:
14-0100

Vapor Pressure (manual)

ASTM D 1267 - IP 161 - IP 410 - ISO 4256 - JIS K2240 - JIS K2258

- digital Manometer PA-REID available

Datasheet:
14-0015.pdf

Ref.-No:
14-0015

Corrosion by Copper Strip (manual)

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

Datasheet:
14-0050.pdf

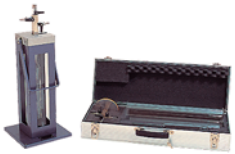
Ref.-No:
14-0050 (230V)

Volatility & Residue by Propane Residue (Mercury Freeze Method) (manual)

ASTM D 1837 - NF M41-012
ASTM D 2158 - IP 317

Datasheet:
14-0060.pdf

Ref.-No:
14-0060



Density or Relative Density by SCHILLING Effusiometer (manual)

IP 59-C (obs.)

Datasheet:
14-0090.pdf

Ref.-No:
14-0090

Density or Relative Density by Pressure Hydrometer (manual)

ASTM D 1657 - IP 235 - ISO 3993 (NF M41-008 obs.) - DIN 12 804 - DIN 51 757-5

Datasheet:
14-0110.pdf

Ref.-No:
14-0110 (230V)

Hydrogen Sulfide by Lead Acetate (manual)

ASTM D 2420 - ISO 8819 (NF M41-011 obs.)

Datasheet:
14-0130.pdf

Ref.-No:
14-0130 (230V)

Density Balance

see: Density page 6

Flash-Point by TAG & Auto-Ignition

see: Flash-Point page 12

GUM by Jet Evaporation (manual)

ASTM D 381 - DIN 51 784 - FTM 791-3302 - ISO 6246 - IP 131 - IP 540 - JIS K2261 (BS 4348, EN 26 246 obs.)

- highest level of user safety
- all necessary auxiliary devices are available
- complete re-calibration set is available

Datasheet: 13-0035.pdf

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

Aniline Point by Method A (Test Tube) (manual)

ASTM D 611-A - IP 2-A - JIS K2256 - NF M07-021
ISO 2977-A - (DIN 51 775, DIN 51 787 obs.)

- available with ASTM or DIN test tube

Datasheet: 13-0100.pdf

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

Aniline Point by Method B (Thin Film) (manual)

ASTM D 611-B - IP 2-B - JIS K2256 - NF M07-021
ISO 2977-B (DIN 51 775, DIN 51 787 obs.)

Datasheet: 13-0106.pdf

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

Aniline Point by Method D (U-Tube) (manual)

ASTM D 611-D - IP 2-D - JIS K2256 - NF M07-021
ISO 2977-D (DIN 51 775, DIN 51 787 obs.)

Datasheet: 13-0102.pdf

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

Aniline Point by Method E (automatic)

ASTM D 611-E - FTM 791-3601 - IP 2-E - JIS K2256 - NF M07-021
ISO 2977-E (DIN 51 775 - DIN 51 787 obs.)

(Method E is the automatic procedure of methods A and B)

Datasheet: 13-0001.pdf

Ref.-No:
13-0001 (230V)

Fluorescent Indicator Adsorption - FIA (manual)

ASTM D 1319 - FTM 791-3703 - IP 156 - ISO 3837 - JIS K2536 - NF M07-024 (EN 10 obs.)

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

Datasheet: 13-0930.pdf

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

Depentanization by PONA (manual)

ASTM D 2001

Datasheet: 13-1030.pdf

Ref.-No:
13-1030 (230V)
13-1031 (115V)

Vapor Pressure by REID (manual)

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

- digital manometer PA-Reid & baths available
- liquid chamber (1 opening) for less than 180 kPa
- liquid chamber (2 openings) for above than 180 kPa

Datasheet: 13-0201.pdf

Ref.-No:
13-0201 (‹180 bar)
13-0202 (›180 bar)

Vapor Pressure Analyzer - PetroVap II (automatic)

ASTM D 5191 - EN 13 016-1 - IP 394 - IP 481

Correlates with:
ASTM D 323 (JIS K2258 obs.) - ASTM D 4953 - ASTM D 5190 - ASTM D 6378 - ISO 3007 - IP 69

Datasheet: 13-2620.pdf

Ref.-No: **13-2620** (115/230V)

Vapor Pressure Analyzer (automatic)

ASTM D 5191 - EN 13 016-1+2 - IP 394 - IP 409

Correlates with:
ASTM D 323 (JIS K2258 obs.) - ASTM D 2533 - ASTM D 4953 - ASTM D 5190 - ASTM D 5482 - ASTM D 6378 - ISO 3007 - IP 69

Datasheet: 13-2600.pdf

Ref.-No: **13-2600** (105-250V)

page 21

Lead & Salt by Hot-Extraction - TEL

see: Constituents

page 21

Lead in Gasoline - Iodine Monochloride Method

see: Constituents

Front Octane Number by Distillation (manual)

IP 325 (DIN 51 756-6 obs.)

- automatic limit temperature switch
- built-in power regulator
- flask heating mantle

Datasheet: 11-0600.pdf

Ref.-No: **11-0600** (230V)

Freezing Point (manual)

ASTM D 2386 - IP 16 - ISO 3013 - JIS K2276 (DIN 51 421 obs.)

Datasheet: 13-0461.pdf

Ref.-No: **13-0461**
13-1470 (230V)

Freezing Point of Antifreeze Solutions (manual)

ASTM D 1177 - NF T78-102

Datasheet: 13-2460.pdf

Ref.-No: **13-2460** (230V)

Cold Filter Plugging Point - CFPP (manual)

ASTM D 6371 - EN 116 - IP 309 - JIS K2288
(DIN 51 428-1, SIS 155 122 obs.)

CFPP - Dry-Ice Test Arrangement

Datasheet: 13-0420.pdf

Ref.-No: **13-0420**

Cold Filter Plugging Point - CFPP I (manual)

ASTM D 6371 - EN 116 - IP 309 - JIS K2288
(DIN 51 428-1, SIS 155 122 obs.)

CFPP I - Cryostat with 1 Test-Chamber

Datasheet: 13-0418.pdf

Ref.-No: **13-2418** (230V)

Cold Filter Plugging Point - CFPP V (manual)

ASTM D 6371 - EN 116 - IP 309 - JIS K2288
(DIN 51 428-1, SIS 155 122 obs.)

CFPP V - Cryostat with 5 Test-Chambers

Datasheet: 13-2419.pdf

Ref.-No: **13-2419** (230V)

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Refractive Index & Dispersion by Universal ABBE Refractometer

see: Various

page 42

Refractive Index & Dispersion by Modified ABBE Refractometer

see: Various

page 42

Refractive Index by High Performance Refractometer - ABBEMAT

see: Various

Refractive Index by Hand Refractometer - Eclipse

see: Various page 42

Refractive Index by Refractometer - RFM 340

see: Various page 42

Conductivity by Field Method - DCM (manual) (Field Test)

ASTM D 2624 - DIN 51 412-2 - ISO 6297 - IP 274 - JIS K2276

Datasheet: 13-3180.pdf

Ref.-No: **13-3180** (Battery)

Conductivity by Field Method - MLA (manual) (Field Test)

ASTM D 2624 - DIN 51 412-2 - ISO 6297 - IP 274 - JIS K2276

Datasheet: 13-0195.pdf

Ref.-No: **13-0195** (Battery)

Conductivity by Lab Method - Precision (automatic)

ASTM D 4308

Datasheet: 13-1410.pdf

Ref.-No: **13-1410** (Battery)

Water Separation Characteristics by Micro-Separometer (semi-automatic) (Field Test)

ASTM D 3948 - ASTM D 4860 - ASTM D 5000 - ASTM D 7224 - DIN 51 403-2 - JIS K2276
(battery rechargeable by 110V or 220V)

Datasheet: 13-0394.pdf

Ref.-No: **13-0394** (Battery) **13-0393** (110/230V)

Water Reaction by Mixing Cylinder (manual)

ASTM D 1094 - ISO 4788 (DIN 12 685-1 obs.)

Datasheet: 13-0401.pdf

Ref.-No: **13-0401**

Color by SAYBOLT-Scale Chromometer

see: Oil page 23

Lubricity by the High-Frequency Reciprocating Rig - HFRR

see: Friction & Wear page 31

Oxidation Stability of FAME - PetroOXY (automatic)

ASTM D 525 - IP 40 - ISO 7536
EN 14 112

Datasheet: 13-3000.pdf

Ref.-No: **13-3000**

Oxidation Stability - OBA (semi-automatic)

ASTM D 525 - DIN 51 480 - FTM 791-3352 - IP 40 - ISO 7536 - JIS K2287 (BS 4347 obs.)

ASTM D 873 - FTM 791-3354 - IP 138 - JIS K2276
(BS 4456, DIN 51 799 obs.)

- 4-place Liquid or Dry-Heat baths with vessel-holding option
- safety approved oxidation vessels available
- digital Manometer

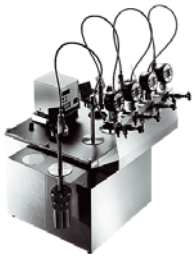
Datasheet: 13-1660.pdf

Oxidation Stability by Liquid Bath Test Arrangement - OBA 1

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

Oxidation Stability by Dry-Heat Bath Test Arrangement - OBA 1/T

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



Oxidation Stability by Liquid Bath Safety Test Arrangement - OBA 2

Oxidation Stability by Dry-Heat Bath Safety Test Arrangement - OBA 2/T

Datasheet: 13-1664.pdf

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

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

Smoke Point by Lamp Method (manual)

ASTM D 1322 - FTM 791-2107 - IP 57 - ISO 3014 - JIS K2537 - NF M07-028 (DIN 51 406 obs.)

Datasheet: 13-0691.pdf

Ref.-No:
13-0691

Burning Quality by Lamp Method (manual)

ASTM D 187 - IP 10 - FTM 791-2106

Datasheet: 13-0345.pdf

Ref.-No:
13-0345

Corrosion by 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
(BS 4351, DIN 51 759-1 obs.)

Datasheet: 13-0700.pdf

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

Corrosion by Silver Strip Test (manual)

IP 227 (obs.)

Datasheet: 13-1000.pdf

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

Corrosion by Copper Strip Test (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)

Coking Tendency by CONRADSON Carbon Residue (manual)

ASTM D 189 - DIN 51 551-1 - FTM 791-5001 - IP 13 - ISO 6615 - JIS K2270 (BS 4380, NF T60-116 obs.)

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)

Coking Tendency by Micro Carbon Residue - MCR-210 (manual)

ASTM D 4530 - IP 398 - ISO 10 370 - JIS K2270

Datasheet: 13-2900.pdf

Ref.-No:
13-2900 (230V)

Coking Tendency by RAMSBOTTOM Carbon Residue - RCRT (manual)

ASTM D 524 - FTM 791-5002 - IP 14 - ISO 4262 - NF T60-117 (BS 4451 obs.)

Datasheet: 13-0870.pdf

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

Particulates & Filter Membrane Color Ratings by Aviation Fuel Contamination Sampler - AFCON	see: Constituents	page 21
Particulates & Free Water	see: Constituents	page 22
Particulate Contamination in Aviation Fuel by Laboratory Filtration ASTM D 5452 - IP 423	Datasheet: 16-1960.pdf Ref.-No: **16-1960**	
Heat of Combustion by Calorimeter - C 2000 (automatic) ASTM D 240 - ASTM D 4809 - ASTM D 5468 - DIN 51 900-1-3 - ISO 1928 - JIS K2279 (ASTM D 1989 obs.)	Datasheet: 13-1880.pdf Ref.-No: **13-1880** (230V)	
Water & Sediment by Centrifuge	see: Constituents	page 22
Sediment by Extraction	see: Constituents	page 22
Total Sediment	see: Constituents	page 22
Salts by Conductivity (electrometric) - Salinometer	see: Constituents	page 21
Asphaltenes by Extraction	see: Constituents	page 21
Mercaptan by Doctor-Test	see: Constituents	page 21
Stability - Storage (manual) ASTM D 6748 - IP 463 Correlates to: ASTM D 4625 - IP 378	Datasheet: 13-2000.pdf Ref.-No: **13-2000** (230V)	
Stability - Thermal by JFTOT (manual) ASTM D 3241 - FTM 791-2506 - IP 323 - ISO 6249 (ASTM D 1661 obs.)	Datasheet: 13-0272.pdf Ref.-No: **13-0272**	
Sulfur & Chlorine by WICKBOLD Combustion	see: Constituents	page 20

Sulfur & Chlorine by WICKBOLD Combustion (manual)

ASTM D 2384 - ASTM D 2784 - DIN 51 408-1 - EN 24 260 -
FD M07-008 - IP 243 - ISO 4260 - JIS K2240 - JIS K2541-1

Datasheet:
13-0670.pdf

Ref.-No:
13-0670 (230V)
13-0671 (115V)

Sulfur & Chlorine by Pressure Vessel (manual)

ASTM D 129 - ASTM D 1662 - FTM 791-5202 - IP 61 - JIS K2541-5
(BS 4454 obs.) - Sulfur
ASTM D 808 (DIN 51 577-1 obs.) - Chlorine

Datasheet:
13-1850.pdf

Ref.-No:
13-1850 (230V)
13-1851 (115V)

Sulfur & Chlorine by GROTE-KREKELER (manual)

DIN 51 400-2 - JIS K2541

Datasheet:
13-0756.pdf

Ref.-No:
13-0756 (230V)

Sulfur & Chlorine by High Temperature (manual)

ASTM D 1552 - DIN 51 724-1 - DIN 51 727

Datasheet:
13-1160.pdf

Ref.-No:
13-1160 (230V)
13-1161 (115V)

Sulfur by Lamp Method (manual)

ASTM D 1072 - ASTM D 1266 - FTM 791-5201 - IP 107 -
JIS K2541 - NF M07-031 (ISO 2192 obs.)

13-0950 for Non-Aromatic Samples
13-0951 for Aromatic Samples
13-0952 for Fuel Gases

Datasheet:
13-0950.pdf

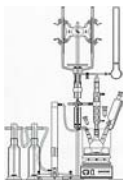
Ref.-No:
13-0950 (230V)
13-0951 (230V)
13-0952 (230V)

Sulfur by SCHÖNIGER (Thorin-Titration) (manual)

DIN 51 400-3 (similar IP 242)

Datasheet:
13-1720.pdf

Ref.-No:
13-1720



Sulfur by Raney-Nickel (manual)

DIN 51 400-8 (obs.)

Datasheet:
13-0475.pdf

Ref.-No:
13-0475 (230V)

Sulfur (Active) (manual)

ASTM D 1662

Datasheet:
16-0084.pdf

Ref.-No:
16-0084 (230V)
16-0085 (115V)

Sulfonation Number by Shaking Machine (manual)

FTM 791-1040

Datasheet:
13-0803.pdf

Ref.-No:
13-0803 (230V)

Unsulfonated Residue of Plant-Spray-Oil by Combined Shaking Machine (manual)

ASTM D 483

Datasheet: 13-0920.pdf

Ref.-No: **13-0920** (230V)

Mercaptan Sulfur by pH-Meter (manual)

ASTM D 3227 - IP 342 - ISO 3012 - JIS K2276 (NF M07-022 obs.)

Datasheet: 13-1560.pdf

Ref.-No: **13-1560** (230V)

Mercaptan by Doctor-Test (manual)

ASTM D 4952 - DIN 12 685-2 - IP 30 - ISO 5275 - JIS K2276

Datasheet: 16-0431.pdf

Ref.-No: **16-0431**

Asphaltenes by Extraction (manual)

ASTM D 6560 - DIN 51 595 - IP 143

Datasheet: 13-0170.pdf

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

Fluorescent Indicator Adsorption - FIA see: Fuel page 15

Depentanization by PONA see: Fuel page 15

Salts by Conductivity (electrometric) - Salinometer SCO 1 (manual)

ASTM D 3230 - IP 265 - JIS K2601

- laboratory bench model

Datasheet: 13-0497.pdf

Ref.-No: **13-0497** (230V)

Salts by Conductivity (electrometric) - Salinometer Portable (manual) (Field Test)

ASTM D 3230 - IP 265 - JIS K2601

Datasheet: 13-1490.pdf

Ref.-No: **13-1490** (230V) **13-1491** (115V)

Lead & Salt by Hot-Extraction - TEL (manual)

IP 77 - DIN 51 576

FTM 791-5501 - IP 182 (ASTM D 526, ASTM D 2547, DIN 51 769-1, IP 96, IP 248, ISO 2083 obs.)

Datasheet: 13-0305.pdf

Ref.-No: **13-0305** (220V)

Lead in Gasoline - Iodine Monochloride Method (manual)

ASTM D 3341

Datasheet: 13-2340.pdf

Ref.-No: **13-2340**

Particulates & Filter Membrane Color Ratings by Aviation Fuel Contamination Sampler - AFCON (manual)

ASTM D 2276 - IP 216 - FTM 791-3008 - JIS K2276

Datasheet: 13-1980.pdf

Ref.-No: **13-1980**

Particulates & Free Water (manual)

ASTM D 4176

Datasheet:
13-2350.pdf

Ref.-No:
13-2350

Contamination by Diaphragm Filtration (manual)

EN 12 662 - IP 440

Datasheet:
16-0970.pdf

Ref.-No:
16-0970

Sediment, Total (manual)

ASTM D 4870 - IP 375 - IP 390-A - ISO 10 307-1+2

Datasheet:
13-2300.pdf

Ref.-No:
13-2300 (230V)
13-2301 (115V)

Sediment by Extraction (manual)

ASTM D 473 - FTM 791-3002 - IP 53 - ISO 3735 (BS 4382 obs.)

Datasheet:
13-0321.pdf

Ref.-No:
13-0321

Water & Sediment by Centrifuge (semi-automatic)

Lubricating Oil Tests:
ASTM D 91 - ASTM D 2273 - JIS K2503

Datasheet:
13-2140_ASTM D 91.pdf
13-2140_ASTM D 2273.pdf

Ref.-No:
13-2140 (230V)
13-2141 (115V)

Water & Sediment by Centrifuge (semi-automatic)

Lubricating Oil Tests:
ASTM D 893

Amount of Water and Sediment:
API 2542 - AASHTO T55 - JIS K2601 (ASTM D 96, BS 4385 obs.)
ASTM D 4007 (IP 359 obs.)
ASTM D 1796 - API 2548 (DIN 51 793 - IP 75 obs.)
ASTM D 2709
ISO 3734
ISO 9030

Datasheet:
13-2160_ASTM D 96.pdf
13-2160_ASTM D 893.pdf
13-2160_ASTM D 1796.pdf
13-2160_ASTM D 2709.pdf
13-2160_ASTM D 2711.pdf
13-2160_ASTM D 4077.pdf
13-2160_ISO 3734.pdf
13-2160_ISO 9030.pdf

Ref.-No:
13-2160 (230V)
- heatable < +70°C

Demulsification Number (manual)

IP 19 (ASTM D 1935 obs.)

Datasheet:
16-0140.pdf

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

Demulsibility Characteristics (manual)

ASTM D 2711

Datasheet:
16-1230.pdf

Ref.-No:
16-1230 (230V)

Demulsibility Characteristics by HERSCHEL Stirring Method (semi-automatic)

ASTM D 1401 - IP 412 - ISO 6614 - JIS K2207 - JIS K2520
(DIN 51 599, FTM 791-380 obs.)

- 7 place full-view bath
- variable stirrer speed with digital display
- automatic timer stop and audible alarm

Datasheet:
16-2100.pdf

Ref.-No:
16-2100 (230V)
16-2101 (115V)

Color by SAYBOLT-Scale Chromometer (manual)

ASTM D 156 - DIN 51 411 - FTM 791-101 - JIS K2580 - NF M07-003

with scales for: Saybolt Color

Datasheet:
16-0180.pdf

Ref.-No:
16-0180 (230V)
16-0179 (115V)

Color by ASTM-Scale Comparator (manual)

ASTM D 1500 - IP 196 - ISO 2049 - JIS K2580
(DIN 51 578, FTM 791-102, NF T60-104 obs.)

with scales for: ASTM Color

Datasheet:
16-0210.pdf

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

Color by Colorimeter - PFX 195/2 (automatic)

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

ASTM D 6045
ASTM D 156 - DIN 51 411 - JIS K2580 - NF M07-003
ASTM D 1500 - IP 196 - ISO 2049 - JIS K2580
(DIN 51 578, FTM 791-102, NF T60-104 obs.)
ASTM D 1209 - ASTM D 6166
(ASTM E 308 obs.)

optional scales for: Gardner

ASTM D 1544

Datasheet:
16-2194.pdf

Ref.-No:
16-2194 (115/230V)

Color by Colorimeter - PFX 880/P (automatic)

with scales for: Tristimulus Method (Automatic Saybolt Color & ASTM Color Scale), CIE Values, Spectral Data

ASTM D 6045
ASTM D 156 - DIN 51 411 - JIS K2580 - NF M07-003
ASTM D 1500 - IP 196 - ISO 2049 - JIS K2580
(DIN 51 578, FTM 791-102, NF T60-104 obs.)
(ASTM E 308 obs.)

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

ASTM D 1209 - ASTM D 6166
ASTM D 1544

16-2175 Colorimeter PFX 880/P
16-2176 Colorimeter PFX 880/P-H with heated sample chamber

Datasheet:
16-2175.pdf

Ref.-No:
16-2175 (115/230V)
16-2176 (115/230V)

Color by Colorimeter - PFX 995/P (automatic)

with scales for: Tristimulus Method (Automatic Saybolt Color & ASTM Color Scale), CIE Values, Spectral Data, Pt-Co / Hazen / APHA, Gardner, Lovibond RYBN, IP Units

ASTM D 6045
ASTM D 156 - DIN 51 411 - JIS K2580 - NF M 07-003
ASTM D 1500 - IP 196 - ISO 2049
(DIN 51 578, FTM 791-102, NF T 60-104 obs.)
ASTM D 1209 - ASTM D 6166
ASTM D 1544
IP 17-A+B
(ASTM E 308 obs.)

16-2190 Colorimeter PFX 995/P
16-2191 Colorimeter PFX 995/P-H with heated sample chamber

Datasheet:
16-2190.pdf

Ref.-No:
16-2190 (115/230V)
16-2191 (115/230V)

Tensiometer - Processor (automatic)

ASTM D 971 - ASTM D 1331 - ASTM D 1417 - EN 14 370 - ISO 1409 - ISO 6295 - ISO 6889 - JIS K2241 (ASTM D 1590, DIN 53 914 obs.)

Lecomte du Noüy Ring & Wilhelmy Plate Method

Datasheet:
16-1750.pdf

Ref.-No:
16-1750 (115/230V)

Tensiometer - Digital (semi-automatic)

ASTM D 971 - ASTM D 1331 - ASTM D 1417 - EN 14 370 - ISO 1409 - ISO 6295 - ISO 6889 - JIS K2241 (ASTM D 1590, DIN 53 914 obs.)

Lecomte du Noüy Ring & Wilhelmy Plate Method

Datasheet:
16-1740.pdf

Ref.-No:
16-1740 (115/230V)

Tensiometer - Scale (manual)

ASTM D 971 - EN 14 370 - JIS K2241 (DIN 53 914 obs.)

Lecomte du Noüy Ring Method

Datasheet:
16-1755.pdf

Ref.-No:
16-1755

Total Dirt by Refrigerated Centrifuge (semi-automatic)

DIN 51 365

Datasheet:
16-1870.pdf

Ref.-No:
16-1870 (230V)

Fluidity by U-Tube Method (manual)

DIN 51 568

Datasheet:
16-0252.pdf

Ref.-No:
16-0252 (230V)
16-0253 (115V)

Flock Point (manual)

DIN 51 351

Datasheet:
16-0390.pdf

Ref.-No:
16-0390 (230V)
16-0389 (115V)

Resistance by Philipp Test (manual)

DIN 51 593 (obs.)

Datasheet:
16-0401.pdf

Ref.-No:
16-0401 (230V)
16-0402 (115V)

Solidity & Turbidity Point (manual)

DIN 51 583 (obs.)

Datasheet:
16-0301.pdf

Ref.-No:
16-0301

Cloud and Pour Point - CAPP (manual)

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 -
NF T60-105 - JIS K2269 - JIS K2601 - (BS 4458, DIN 51 597 obs.)

- 1-place type (16-0352)
- 4-place type (16-2348 & 16-2349)
- both types with circulation coil for external cooling

Datasheet:
16-0352.pdf

Ref.-No:
16-0352
16-2348 (230V)
16-2349 (115V)

Cloud and Pour Point - CAPP I (semi-automatic)

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 -
NF T60-105 - JIS K2269 - JIS K2601 - (BS 4458, DIN 51 597 obs.)

1 chamber with 4 test-positions & metal-block cryostat

Datasheet:
16-2359.pdf

Ref.-No:
16-2359 (230V)
16-2358 (115V)

Cloud and Pour Point - CAPP V (semi-automatic)

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 -
NF T60-105 - JIS K2269 - JIS K2601 - (BS 4458, DIN 51 597 obs.)

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

Datasheet:
16-2360.pdf

Ref.-No:
16-2360 (230V)
16-2363 (115V)

Shear Stability by Diesel Injector Rig (manual)

ASTM D 2603 - ASTM D 6278 - ASTM D 7109 - CEC L-14-A-95 -
DIN 51 382 - IP 294

Datasheet:
16-0320.pdf

Ref.-No:
16-0320 (380V)
16-1383 (3x 220V)

Shear Stability of Polymer-Containing Oils and Hydraulic Fluids - Sonic (semi-automatic)

ASTM D 2603 - ASTM D 5621

Datasheet:
16-2410.pdf

Ref.-No:
16-2410 (230V)

Viscosity, High Temperature & High Shear Rate by Tapered-Plug Viscometer - HTHS (semi-automatic)

ASTM D 4741 - CEC L-36-A-90

Datasheet:
16-1660.pdf

Ref.-No:
16-1660 (230V)

Viscosity by Brookfield (semi-automatic)

ASTM D 2983
DIN 51 398 - IP 267-B

Datasheet:
16-1152.pdf

Ref.-No:
16-1152 (230V)

Oil Content of Water Mixed Cooling Lubricants by Acidification & Saponification (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 by Oil / Layer Separation (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)

Corrosion Preventing Characteristics by HERBERT Corrosion Test (manual)

DIN 51 360-1 - IP 125

Datasheet:
16-0281.pdf

Ref.-No:
16-0281 (230V)
16-0282 (115V)

Corrosion Preventing Characteristics by Chip & Filterpaper Test (manual)

DIN 51 360-2

Datasheet:
16-0286.pdf

Ref.-No:
16-0286 (230V)
16-0287 (115V)

page 22

Insoluble Matters & Total Contamination by Diaphragm Filtration

see: Constituents

page 20

Sulfur (Active)

see: Constituents

pH-Value by pH-Meter (manual)

DIN 51 369 (partially for ASTM D 1121, ASTM D 1287)

Datasheet:
16-0295.pdf

Ref.-No:
16-0295

Ash by Muffle Furnace (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)

Ageing Stability by Baader (manual)

DIN 51 554-1+2

Datasheet:
16-0750.pdf

Ref.-No:
16-0750 (230V)
16-0749 (115V)

Gasoline Diluent of Engine Oil by Distillation (manual)

ASTM D 322 - IP 23

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

Datasheet:
16-0683.pdf

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

Dielectric Breakdown Voltage - Electric Strength (semi-automatic & automatic)

ASTM D 877 - ASTM D 1816 - ASTM D 3300 - BS 148 - EN 60 156 -
FTM 791-5702 - IP 295 - IEC 156 - IEC 60247 - JIS C2101 - VDE 0370

High-Voltage Insulating Oil Test Apparatus (semi-automatic)
Voltage between the electrodes: **0 ... 60 kV_{rms}**

Datasheet:
16-1710.pdf

Ref.-No:
16-1710 (115/230V)

High-Voltage Insulating Oil Test Apparatus (semi-automatic)
Voltage between the electrodes: **0 ... 75 kV_{rms}**

Ref.-No:
16-1712 (115/230V)

High-Voltage Insulating Oil Test Apparatus (automatic)
Voltage between the electrodes: **0 ... 100 kV_{rms}**

Option: all instruments are available in an aluminum carry case

Ref.-No:
16-1715 (115/230V)

Dielectric Dissipation Factor by Tangens Delta (semi-automatic)

VDE 0370 - IEC 147 - IEC 60 156

High-Voltage-Dissipation Factor Measuring Bridge

Datasheet:
16-1610.pdf

Ref.-No:
16-1610 (115/230V)

Oxidation Characteristics by TOST/TOO Dry-Heat - ASTM (manual)

4-place dry-heat bath: for tests up to 230°C
ASTM D 943 - ISO 4263 - ISO 12 205 - JIS K2514 (BS 4388 obs.)

Datasheet:
16-1416_ASTM D 943.pdf
16-1416_ASTM D 4310.pdf
16-1416_DIN 51587.pdf
16-1416_ISO 12205.pdf

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

Oxidation Characteristics by TOST/TOO Dry-Heat - DIN (manual)

4-place dry-heat bath: for DIN-tests up to 230°C
DIN 51 394 - FTM 791-5308

Datasheet:
16-1418.pdf

Ref.-No:
16-1418 (230V)
16-1419 (115V)

Oxidation Characteristics by TOST/TOO Liquid - ASTM D 943 (manual)

4-place liquid bath: for tests up to 175°C
ASTM D 943 - ASTM D 2274 - ASTM D 4310 - IP 157 - IP 388 - ISO 12 205 - DIN 51 587 - DIN 51 394 - FTM 791-5308 - JIS C2101 - JIS K2514 (BS 4388 obs.)

8-place liquid bath: for tests up to 175°C
ASTM D 943 - ASTM D 2274 - ASTM D 4310 - IP 157 - IP 388 - ISO 12 205 - DIN 51 587 - DIN 51 394 - FTM 791-5308 - JIS C2101 - JIS K2514 (BS 4388 obs.)

Datasheet:
16-1416_ASTM D 943.pdf
16-1416_ASTM D 4310.pdf
16-1416_DIN 51587.pdf
16-1416_ISO 12205.pdf
16-1418.pdf
16-1424.pdf

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

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

Oxidation Characteristics by TOST/TOO Liquid - ASTM D 2893 (manual)

4-place liquid bath: for tests up to 175°C
ASTM D 2893

Datasheet:
16-1420.pdf

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

Oxidation Stability & Corrosiveness (manual)

ASTM D 4636

- aluminum block heater

Datasheet:
25-0716.pdf

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

Oxidation Stability by BAM Liquid (manual)

BAM 200 Liquid: flowmeter range 0.08...2 l/h
ASTM D 2440 - DIN 51 373 - DIN 51 538 - EN 61 125-A,B,C - IP 280 - IP 306 - IP 307 - IP 335 - ISO 7624 - JIS C2101

- 8-place liquid bath with low level and temperature excess protection

Datasheet:
16-1500_ASTM D 2440.pdf
16-1500_DIN 51373.pdf
16-1500_DIN 51538.pdf
16-1500_EN 611125.pdf
16-1500_IP 280.pdf
16-1500_IP 306.pdf

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

Oxidation Stability by BAM Liquid (manual)

BAM 250 Liquid: flowmeter range 1.6...16 l/h
DIN 51 352-1+2 - IP 48 - ISO 6617-1+2

- 8-place liquid bath with low level and temperature excess protection

Datasheet:
16-1502_DIN 51352-1.pdf
16-1502_DIN 51352-2.pdf
16-1502_IP 48.pdf

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

Oxidation Stability by BAM Dry-Heat - BAM 200 (manual)

BAM-200 Dry: flowmeter range 0.08...2 l/h (Tube Ø 28)
DIN 51 373

BAM-200 Dry: flowmeter range 0.08...2 l/h (Tube Ø 26)
DIN 51 373

- 8-place dry-heat bath with aluminum block heater
- Option: available with 12-test places

Datasheet:
16-1500_DIN 51373.pdf

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

Datasheet:
16-1500_ASTM D 2440.pdf
16-1500_DIN 51538.pdf
16-1500_EN 611125.pdf
16-1500_IP 280.pdf
16-1500_IP 306.pdf

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

Oxidation Stability by BAM Dry-Heat - BAM 250 (manual)

BAM-250 Dry: flowmeter range 1.6...16 l/h (Tube Ø 28)
DIN 51 352-1+2 - IP 48 - ISO 6617-1+2

BAM-250 Dry: flowmeter range 1.6...16 l/h (Tube Ø 26)
DIN 51 352-1+2 - IP 48 - ISO 6617-1+2

- 8-place dry-heat bath with aluminum block heater
- Option: available with 12-test places

Datasheet:
16-1502_DIN 51352-1.pdf
16-1502_DIN 51352-2.pdf

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

Datasheet:
16-1502_IP 48.pdf

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

Oxidation Stability by Rotating Bomb - RBOT (automatic)

ASTM D 2112 - ASTM D 2272 - IP 229 - JIS K2514 - ASTM D 4742

Datasheet:
16-1980.pdf

Ref.-No:
16-1980 (230V)

Oxidation Stability by Rotating Bomb - RBOT (semi-automatic)

ASTM D 2112 - ASTM D 2272 - IP 229 - JIS K2514 - ASTM D 4742

- 2-place bath
- digital manometers PA4-RBOT
- pressure indication in psi, kPa, bar, mWc

Datasheet:
16-1990.pdf

Ref.-No:
16-1990 (230V)
16-1991 (115V)

Rust Preventing Characteristics - TOR (semi-automatic)

ASTM D 665 - BS 7120 - 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)

Rust Preventing by Chip & Filter (manual)

DIN 51 360-2
DIN 51 360-1 - IP 125 - IP 287

Datasheet:
16-0249.pdf

Ref.-No:
16-0249
16-0242

Rust Protection by Humidity Cabinet (manual)

ASTM D 1748 - JIS K2246

Datasheet:
16-3250.pdf

Ref.-No:
16-3250 (230V)

Compatibility of Elastomer or Rubber with Lubricating Fluids & Greases

ASTM D 4289

Datasheet:
17-0780.pdf

Ref.-No:
17-0780 (230V)

Air Release Value by Impinger (semi-automatic)

ASTM D 3427 - IP 313 - ISO 9120

Datasheet:
16-1200.pdf

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

Foaming Characteristics - Quadruple (manual)

ASTM D 892 (sequence I-III)- IP 146 - ISO 6247 - JIS K2518 - NF M07-075

Optional:
ASTM D 6082 (sequence IV)

Twin Foam-Tester
- 4-places in each bath
- 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
- 4-place
- full-view bath with digital-thermostat
- to be maintained at 24, 49, 93.5 or 150 °C

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

Foaming Tendencies of Engine Coolants (manual)

ASTM D 1881

Datasheet:
16-0690.pdf

Ref.-No:
16-0690 (230V)
16-0689 (115V)

Corrosion of Engine Coolants (manual)

ASTM D 1384 - JIS K2234

Datasheet:
16-0955.pdf

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

Evaporation Loss by NOACK (automatic)

ASTM D 5800-A - CEC L-40-A-93 - DIN 51 581 - IP 421 - NF T60-161

Datasheet:
16-3000.pdf

Ref.-No:
16-3000 (230V)

Evaporation Loss by NOACK - VP 4000 (automatic)

Not yet approved by Standards Organisations but in analogy to:
ASTM D 5800-A - CEC L-40-A-93 - DIN 51 581 - IP 421

wood metal free!

Datasheet:
16-2010.pdf

Ref.-No:
16-2010 (230V)
16-2011 (115V)

Evaporation Loss of Lubricants (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)

Hydrolytic Stability by Beverage Bottle (manual)

ASTM D 2619 - DIN 51 348

Datasheet:
99-0117.pdf

Ref.-No:
99-0117 (230V)

Neutralization Number by Color-Indicator Titration (Acid & Base No.) - TAN & TBN (manual)

ASTM D 974 - DIN 51 558-1+2 - FTM 791-5105 - IP 139 - JIS C2101 - JIS K2501 (BS 2634 obs.)

Datasheet: 17-0600.pdf

Ref.-No: **17-0600**

Neutralization Number by Potentiometric Titration (Acid & Total Base No.) - TAN & TBN (manual)

ASTM D 664 - ASTM D 4739 (alternative) - FTM 791-5106 - IP 177 - JIS K2501 (BS 4457, DIN 51 809-2 obs.)

ASTM D 2896 - IP 276 - ISO 3771 - JIS K2501

Datasheet: 17-0695.pdf

Ref.-No: **17-0695** (230V) **17-0696** (115V)

page 16

Refractive Index by Refractometer

see: Fuel

Coking Tendency by Panel Coking (manual)

FTM 791-3462

Datasheet: 99-0300.pdf

Ref.-No: **99-0300** (220/240V)

page 18

Coking Tendency by Carbon Residue

see: Fuel

page 41

Water Content

see: Various

page 42

Water Separation Ability of Oil by Steam Treatment

see: Various

Lube Oil - VARIO Check (Field Test)

testing engine fluids on:
Viscosity, Water in Oil, Base No, Salt Water Contamination, Insolubles

Datasheet: 40-0160.pdf

Ref.-No: **40-0160**

Viscosity by Comparator - Viscosity Check (Field Test)

Datasheet: 40-0150.pdf

Ref.-No: **40-0150**

Viscosity by Falling Ball - JUNG Check (Field Test)

Datasheet: 40-0140.pdf

Ref.-No: **40-0140**

Total Acid Number - TAN Check (Field Test)

Datasheet: 40-0130.pdf

Ref.-No: **40-0130**

Water in Oil - WIO Check (Field Test)

Datasheet: 40-0120.pdf

Ref.-No: **40-0120**

PCB-Content - PCB Check (Field Test)

USEPA SW-846-9079

(CLOR-N-OIL)

Datasheet: 13-1650.pdf

Ref.-No: **13-1650**

Friction & Wear by REICHERT M2 (manual)

Datasheet:
15-0035.pdf

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

Lubrication & Load Capability by BRUGGER (manual)

DIN 51 347-1+2

Datasheet:
15-0070.pdf

Ref.-No:
15-0070 (380V)
15-0071 (440/480V)

Wear Characteristics (Extreme Pressure & Wear Properties, Shear Stability) by SHELL - Four-Ball Machine (manual)

ASTM D 2266 - FTM 791-6514
ASTM D 2596
ASTM D 2783 - JIS K2519
ASTM D 4172
ASTM D 5183
IP 239
DIN 51 350-1-6
FTM 791-6503
CEC L-45-T-99
ISO 20 623

With additional equipment:
ASTM D 2266 - ASTM D 2783 - ASTM D 4172 - CEC L-45-T-99 - DIN 51 350-6 - PV 1417 - PV 1437 - PV 1444

Datasheet:
15-1000.pdf

Ref.-No:
15-1000 (380V)

Wear Characteristics (Extreme Pressure & Wear Properties, Load Carrying Capacity) by FALEX Pin & Vee Block (manual)

ASTM D 2625
ASTM D 2670
ASTM D 3233

Datasheet:
15-0450.pdf

Ref.-No:
15-0450 (230V)

Wear Characteristics (Extreme Pressure Properties, Load-Carrying Capacity) by TIMKEN-Test (manual)

ASTM D 2509 - IP 326 - JIS K2220
ASTM D 2782 - IP 240 - JIS K2519

Datasheet:
15-0602.pdf

Ref.-No:
15-0602 (230V)
15-0603 (115V)

Wear Characteristics (Scuffing Load Capacity & Shear Stability) by FZG Gear Oil Rig (manual)

ASTM D 4998 - ASTM D 5182 - DIN 51 354 - CEC L-07-A-71

Datasheet:
15-0249.pdf

Ref.-No:
15-0249 (380/415V)

Congealing Point by Rotating Thermometer (manual)

ASTM D 938 - IP 76 - ISO 2207 (BS 5088 obs.)

Datasheet:
17-0000.pdf

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

Melting Point - Cooling Curve (manual)

ASTM D 87 - BS 4695 - FTM 791-1402 - IP 55 - ISO 3841 - JIS K2235

Datasheet:
17-0031.pdf

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

Melting Point - Drop (manual)

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

Datasheet:
17-0040.pdf

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

Saponification Number (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)

Neutralization Number by Color-Indicator Titration (manual)

ASTM D 128-18+20 - IP 37 - JIS K2220 (DIN 51 809-1 obs.)

Datasheet:
17-0620.pdf

Ref.-No:
17-0620 (230V)
17-0621 (115V)

Dropping Point (manual)

ASTM D 566 - BS 2877 - 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)

Dropping Point by Wide Temperature Range (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)

Oil Separation During Storage - ASTM (manual)

ASTM D 1742 - FTM 791-322 - JIS K2220

Datasheet:
17-0111.pdf

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

Oil Separation During Storage - DIN/IP (manual)

DIN 51 817 - IP 121

Datasheet:
17-0140.pdf

Ref.-No:
17-0140

Oil Separation by Conical Sieve (manual)

ASTM D 6184 - FTM 791-321

Datasheet:
17-0131.pdf

Ref.-No:
17-0131

Oxidation Stability - OFA (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 PA4-OFA
- 4-place bath (liquid "OFA" or dry-heat "OBA/OFA")

Datasheet:
17-0212.pdf

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

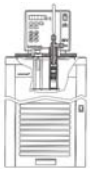
Flow Pressure by KESTERNICH (manual)

DIN 51 805

17-0752 for test temperature of -20 °C
17-0754 for test temperature of -35 °C

Datasheet:
17-0752.pdf

Ref.-No:
17-0752 (230V)
17-0754 (230V)



Low-Temperature Torque (automatic)

ASTM D 1478 (obs.)

Datasheet:
99-0505.pdf

Ref.-No:
99-0505 (230V)

Evaporation Loss by Wide-Temperature Range (manual)

ASTM D 2595 - JIS K2220

Datasheet:
17-0390.pdf

Ref.-No:
17-0390 (230V)

Deleterious Particle Content by Estimation (manual)

ASTM D 1404

Datasheet:
17-1530.pdf

Ref.-No:
17-1530

Leakage Tendencies by High Temperature (manual)

ASTM D 3527 - ASTM D 4290 - ASTM D 4950

Datasheet:
99-0106.pdf

Ref.-No:
99-0106 (115/230V)

Leakage Tendencies - LNF-2 (automatic)

ASTM D 1263 - FTM 791-3454 - JIS K2220

- temperature controlled test cabinet
- control unit with four test programs

Datasheet:
17-0450.pdf

Ref.-No:
17-0450 (230V)
17-0451 (115V)

Corrosion Preventive Properties by Run-In Stand (manual)

ASTM D 1743 - ASTM D 4950

Datasheet:
17-1240.pdf

Ref.-No:
17-1240 (230V)

Corrosion Preventive Properties by EMCOR (manual)

ASTM D 6138 - DIN 51 802 - IP 220 - ISO 11 007

Datasheet:
17-0430.pdf

Ref.-No:
17-0430 (230V)

Water Washout Characteristics - Dynamic Test (manual)

ASTM D 1264 - DIN 51 807-2 - FTM 791-3252 - IP 215 - JIS K2220

Datasheet:
17-0810.pdf

Ref.-No:
17-0810 (230V)

Water Washout Characteristics - Static Test (manual)

DIN 51 807-1

- 6-place constant temperature bath

Datasheet:
17-0470.pdf

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

Resistance to Water Spray

ASTM D 4049

Datasheet:
17-0465.pdf

Ref.-No:
17-0465 (230V)

Mineral Oil & Soap Content by Dialysis (manual)

DIN 51 814

Datasheet:
17-0540.pdf

Ref.-No:
17-0540 (230V)
17-0541

Oil Content (manual)

ASTM D 721 - ASTM D 3235 - IP 158 - FTM 791-5431 - JIS K2235
(DIN 51 571-2, ISO 2908 obs.)

- 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 (17-0551)

Datasheet:
17-0550.pdf

Ref.-No:
17-0550 (230V)
17-0551 (230V)

Grease Penetration by Cone - PNR 10 (digital)

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 - NF T60-132 - SMS 658 (DIN 51 804-2 obs.)

- cones (Standard, Quarter-Scale, Half-Scale, Micro-cones)
- disk penetrator
- needle penetrator

Datasheet:
18-1000_Grease.pdf
18-1000.pdf

Ref.-No:
18-1000 (230V)
18-1014 (115V)

Grease Penetration by Cone - PNR 12 (digital)

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 - NF T60-132 - SHELL SMS 658 (DIN 51 804-2 obs.)

- cones (Standard, Quarter-Scale, Half-Scale, Micro-cones)
- disk penetrator
- needle penetrator

Datasheet:
18-1120.pdf

Ref.-No:
18-1120 (100-240V)

Grease Working by Machine (automatic)

ASTM D 217 - FTM 791-313 - IP 50 - ISO 2137 - JIS K2220 - NF T60-132

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

Datasheet:
17-0506.pdf

Ref.-No:
17-0506 (230V)

Grease Working by Grease Worker Slave (manual)

ASTM D 217 - IP 50 - ISO 2137 - JIS K2220 - NF T60-132

Datasheet:
17-0500.pdf

Ref.-No:
17-0500

Grease Working by Micro-Grease Worker Quarter-Cone (manual)

ASTM D 1403 - IP 310 - ISO 2137 - JIS K2220 - NF T60-132

Datasheet:
17-0500.pdf

Ref.-No:
18-0134

Grease Working by Micro-Grease Worker SHELL-Cone (manual)

ASTM D 1403 - IP 310 - ISO 2137 - JIS K2220 - NF T60-132

Datasheet:
17-0500.pdf

Ref.-No:
18-0145

Roll-Stability of Lubricating Grease (semi-automatic)

ASTM D 1831 - MIL-G-10924

Datasheet:
17-1600.pdf

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

Breaking Point by FRAASS - BPA 5 (automatic)

IP 80 - EN 12 593 (DIN 52 012, NF T66-026 obs.) - JIS K2207

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

Datasheet:
10-0460.pdf

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

Breaking Point by FRAASS (manual)

IP 80 - EN 12 593 (DIN 52 012, NF T66-026 obs.) - JIS K2207

Datasheet:
10-0000.pdf

Ref.-No:
10-0000

Tensile Properties - Force-Ductilometer Method - DDA 3 (automatic)

Elongation: ASTM D 113 - AASHTO T 51 - JIS K2207
Recovery: ASTM D 5892 - ASTM D 6084 - AASHTO T 301 - EN 13 398 - IP 516
Force: EN 13 589 - EN 13 703 - AASHTO T300 - IP 515 - IP 520

- bath length of 100 cm or 150 cm available
- 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)

Tensile Properties - Ductilometer Method - DD 3 (semi-automatic)

Elongation: ASTM D 113 - AASHTO T 51 - JIS K2207
Recovery: ASTM D 5892 - ASTM D 6084 - AASHTO T 301 - EN 13 398 - IP 516

- bath length of 100 cm or 150 cm available
- 3 simultanious 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)

Softening Point by Ring & Ball - RKA 2 (automatic)

ASTM D 36 - ASTM E 28 - AASHTO T53 - BS 6782-6 - DIN 1996-15 - EN 1427 - EN 13 179 - IP 58 - ISO 4625 - JIS K2207 (NF T66-008 obs.)

- optional: IP 58 and “Wilhelmi-Method“ DIN 1996 pt.15 accessories
- available with magnetic ball holder (10-0264)

Datasheet:
10-0181.pdf

Ref.-No:
10-0181 (230V)
10-0182 (115V)

10-0264 (230V)
10-0265 (115V)

Softening Point by Ring & Ball - RKA 5 (automatic)

ASTM D 36 - AASHTO T53 - EN 1427 (DIN 52011, NF T66-008 obs.) - IP 58 - JIS K2207
EN 1871-F
EN 13 179-1
ISO 4625-1 - BS 6782-6
ASTM E 28
EN 1238

- optional: IP 58 and “Wilhelmi-Method“ DIN 1996 pt.15 accessories
- available with electromagnetic ball dispenser and automatic ball application

Datasheet:
10-0800.pdf

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

Softening Point by Ring & Ball (manual)

ASTM D 36 - EN 1427 - IP 58 - JIS K2207
(DIN 52 011, NF T66-008 obs.)
EN 13 179-1

Datasheet:
10-0281.pdf

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

Softening Point by WILHELMI (manual)

DIN 1996-15 - EN 1871-F

Datasheet:
10-0071.pdf

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

Softening Point by KRAEMER-SARNOW (manual)

DIN 52 025 (DIN 1995 obs.)

Datasheet:
10-0081.pdf

Ref.-No:
10-0081 (230V)
10-0088 (115V)

Effect of Heat & Air by Rolling Thin-Film Oven - RTFOT (manual)

ASTM D 2872 - Superpave® (AASHTO T240 obs.)

EN 12 607-1 - IP 460-1

Datasheet:
10-0618.pdf

Ref.-No:
10-0618 (230V) - ASTM
10-0608 (230V) - EN

Effect of Heat & Air by Rotating Flask - RFT (manual)

EN 12 607-3 - IP 460-3

Datasheet:
10-0110.pdf

Ref.-No:
10-0110 (230V)

Effect of Heat & Air by Thin-Film Oven - TFOT & Loss on Heating (manual)

ASTM D 1754 - EN 12 607-2 (NF T66-047 obs.) - IP 460-2 - JIS K2207

ASTM D 6 (AASHTO T47 obs.) - EN 13 303 (IP 45, NF T66-011 obs.) - IP 506 - JIS K2207

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

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

Paraffin Content by Distillation (manual)

EN 12 606-1 (DIN 52 015 obs.) - IP 459-1

Datasheet:
10-0160.pdf

Ref.-No:
10-0160 (230V)
10-0161 (115V)

Distillation of Pitch

see: Distillation page 10

Distillation of Cut-Back Bitumen - ASTM Type (manual)

ASTM D 402 (AASHTO T79 obs.) - EN 13 358 (NF T66-003 obs.) - IP 27

Datasheet:
10-0213.pdf

Ref.-No:
10-0213 (Gas)

Distillation of Cut-Back Bitumen - DIN Type (manual)

DIN 52 024

Datasheet:
10-0173.pdf

Ref.-No:
10-0173 (Gas)

Distillation of Road Tar / Bitumen - ASTM Type (manual)

ASTM D 20 - (ASTM D 246 obs.)

Datasheet:
10-0203.pdf

Ref.-No:
10-0203 (Gas)

Distillation of Road Tar / Bitumen - DIN Type (manual)

DIN 52 027

Datasheet:
10-0152.pdf

Ref.-No:
10-0152 (Gas)

Water Content by Asphalt Distillation - ASTM (manual)

ASTM D 244 - AASHTO T 59 - IP 291 (BS 434 obs.)

- available with flask heating mantle (16-1844+16-1454)

Datasheet:
16-0844.pdf

Ref.-No:
16-0844 (230V)
16-1444 (115V)
16-1844 (230V)
16-1454 (115V)

Water Content by Bitumen Distillation - DIN (manual)

DIN 1996-5

- available with flask heating mantle (16-1845+16-1455)

Datasheet:
16-0845.pdf

Ref.-No:
16-0845 (230V)
16-1445 (115V)
16-1845 (230V)
16-1455 (115V)

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Viscosity by Flow Cups

see: Viscosity

Viscosity, Specific by ENGLER (semi-automatic)

ASTM D 1665 - JIS K2208
IP 212 (DIN 51 560 obs.)

Datasheet:
21-0030.pdf

Ref.-No:
21-0030 (230V)

Viscosity, Apparent by Road & Tar Viscometer (manual)

EN 13 357 (similar DIN 52 023 obs.) - IP 502 (IP 72 obs.) - EN 12 846

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

Datasheet:
10-0312.pdf

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

Viscosity by Rotational Viscometer - RV

ASTM D 4402 - AASHTO TP 48 - SHRP 1006 - Superpave®
EN 13 302

Datasheet:
10-0600.pdf

Ref.-No:
10-0600 (230V)

Viscosity by Dynamic Shear Rheometer - DSR

SHRP B-003 - AASHTO TP 5 - ASTM P 246 - SHRP 1007 - Superpave®
EN 12 591 (NF T65-001 obs.)

Datasheet:
10-0770.pdf

Ref.-No:
10-0770 (230V)

Ageing by Pressure Ageing Vessel - PAV (automatic)

ASTM D 6521 - AASHTO MP1 - AASHTO PP 1 - SHRP 1001 - Superpave® (ASTM PS 36 obs.)
AASHTO R28 - AASHTO MP 1 - AASHTO PP 1

Datasheet:
10-0720.pdf

Ref.-No:
10-0720 (115/230V)

Stiffness by Bending Beam Rheometer - BBR (automatic)

SHRP B-002 - AASHTO TP 1 - ASTM P 245 - SHRP 1002 - Superpave®
ASTM D 6648 - EN 14 771 - NF T66-062

Datasheet:
10-0700.pdf

Ref.-No:
10-0700 (230V)
10-0701 (115V)

page 12

Flash-Point by TAG Open Cup

see: Flash-Point

Penetration - PNR 10 (digital)

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

- standard needles (precision made, factory or officially certified)
- ball shaped penetrator
- optional cone

Datasheet:
18-1000_Bitumen.pdf
18-1000.pdf

Ref.-No:
18-1000 (230V)
18-1014 (115V)

Penetration - PNR 12 (digital)

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

- standard needles (precision made, factory or officially certified)
- ball shaped penetrator
- optional cone

Datasheet:
18-1120.pdf

Ref.-No:
18-1120 (100-240V)

page 40

Texture by Rheotex Analyzer - PNR 21

see: Penetration

Thermometers

Thermometers

ASTM / IP

- precision made
- officially certified
- with or without collar

Datasheet:
Thermo_ASTM.pdf
Thermo_IP.pdf

Calibration Fluids

Calibration Fluids & Reference Liquids

are available for the following methods:

- **Boiling Characteristics**
- **Coking Tendency by MCRT**
- **Cloud & Pour Point - CFPP - Freezing Point**
- **Cold Cranking Simulator**
- **Density**
- **Distillation Determination**
- **Effect of Liquids on Rubber**
- **Flash-Point Determination**
- **Fuel Testing**
- **FZG - Gear Test**
- **Multi-Test Verification Material (MTVM)**
  for Bitumen, Gas Oil, Kerosine, Motor Gasoline
- **Noack Evaporation Test**
- **Physical Properties**
- **Predicting the Borderline Pumping Temperature of Engine Oil**
- **Salts in Crude Oil**
- **Shear Stability**
- **Viscosity**
- **Viscosity at Low Temperature by BROOKFIELD Viscometer**

Datasheet:
Cal_Density.pdf
Cal_Distillation.pdf
Cal_Flash-Point.pdf
Cal_Friction Wear.pdf
Cal_Fuel.pdf
Cal_Miscellaneous.pdf
Cal_MTVM, STVM.pdf
Cal_Oil.pdf
Cal_Viscosity.pdf

Metal Test Specimens

Metal Test Specimens

Group 40-1000 - Rust Preventives
Group 40-1500 - Fuels and Fuel Additives
Group 40-2000 - Solid Film Lubricants
Group 40-3000 - Antifreeze and Soluble Oils
Group 40-4000 - Lubricating Oils and Hydraulic Fluids
Group 40-5000 - Specimens for Special Testing

Datasheet:
Spec_Antifreeze.pdf
Spec_Fuel.pdf
Spec_Lubricating.pdf
Spec_Rust.pdf
Spec_Solid.pdf
Spec_Special.pdf

Texture by Rheotex Analyzer - PNR 21 (digital)

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

- control and programming software PNRcon
- Force & Tensile measurement
- additional test-accessories on user's choice

Datasheet:
18-1700.pdf

Ref.-No:
18-1700 (230V)
18-1701 (115V)

Penetration by Penetrometer - PNR 10 (digital)

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

- multi-purpose use
- test-accessories on user's choice
- microprocessor controlled with LCD

Datasheet:
18-1000.pdf
18-1000_Bitumen.pdf
18-1000_Grease.pdf

Ref.-No:
18-1000 (230V)
18-1014 (115V)

Penetration by Penetrometer - PNR 12 (digital)

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

- multi-purpose use
- test-accessories on user's choice
- microprocessor controlled with LCD

Datasheet:
18-1120.pdf

Ref.-No:
18-1120 (100-240V)

Penetration by Penetrometer (analog)

ASTM D 5 - ASTM D 217 - ASTM D 1321 - ASTM D 1403 - ASTM D 5329 - AASHTO T49 - DIN 51 579 - EN 13 880-2 - IP 49 - IP 50 - IP 179 - IP 310 - IP 376 - ISO 2137 - JIS K2207 - DAB 10-V.5.8.1 - SHELL SMS 658

Datasheet:
18-0001.pdf

Ref.-No:
18-0001

Penetration Accessories - Test Combinations

sets according standard requirements
incl. needle/cone, plunger, weight, sample container etc.

Datasheet:
18-0132.pdf

Penetration Accessories - Plunger & Weight

18-1160.pdf

Penetration Accessories - Needles

18-0101.pdf

Penetration Accessories - Cones & Discs

18-0260.pdf

Penetration Accessories - Rods & Rams

18-0066.pdf

Penetration Accessories - Sample Jars

18-0065.pdf

Penetration Accessories - Sample Tempering Units

18-2220.pdf

Penetration Accessories - Test Kits

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Penetration Accessories - Grease Worker

Datasheet:
17-0509.pdf
17-0506.pdf

Penetration by Pocket Penetrometer (Field Test)

Datasheet:
99-0015.pdf

Ref.-No:
99-0015

Bending & Breaking Stress - BBS 5 (automatic)

BBS 5 - Standard Temperature Model
Temperature Range: max. approx. -46 to +60°C

Datasheet:
10-0466.pdf
Ref.-No:
10-0466 (230V)
10-0467 (115V)

BBS 5H - High Temperature Model
Temperature Range: max. approx. -46 to +100°C

Datasheet:
10-0466.pdf
Ref.-No:
10-0462 (230V)
10-0463 (115V)

BBS 5C - Climatic Cabinet Model
Temperature Range: depending on climatic cabinet

Datasheet:
10-0466.pdf
Ref.-No:
10-0464 (230V)
10-0465 (115V)

Water Content by KARL-FISCHER Titration (automatic)

ASTM D 1533 - ASTM D 4377 - ASTM D 4928 - ASTM D 6304 - EN 61 000-3-2 - EN 61 000-3-3 - IP 356 - IP 386 - ISO 10 337 - ISO 12 937

Datasheet:
16-1880.pdf
Ref.-No:
16-1880 (90-264V)

Water Content by Distillation - DEAN & STARK (manual)

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

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

Datasheet:
16-0830.pdf
Ref.-No:
16-0830 (230V)
16-1430 (115V)
16-1839 (230V)
16-1852 (115V)

Water Content by Distillation - DEAN & STARK (extended)

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

- available with flask heating mantle (16-1850+16-1458)

Datasheet:
16-0850.pdf
Ref.-No:
16-0850 (230V)
16-1450 (115V)
16-1850 (230V)
16-1458 (115V)

Water Content by Distillation - ASTM (manual)

ASTM D 4006 - IP 358 - ISO 9029 - JIS K2275

- available with flask heating mantle (16-1847+16-1457)

Datasheet:
16-0847.pdf
Ref.-No:
16-0847 (230V)
16-1447 (115V)
16-1847 (230V)
16-1457 (115V)

Water Content by Distillation - ASTM (manual)

ASTM D 244 - AASHTO T59 - IP 291

- available with flask heating mantle (16-1844+16-1454)

Datasheet:
16-0844.pdf
Ref.-No:
16-0844 (230V)
16-1444 (115V)
16-1844 (230V)
16-1454 (115V)

Water Content by Distillation - DIN (manual)

DIN 1996-5

- available with flask heating mantle (16-1845+16-1455)

Datasheet:
16-0845.pdf
Ref.-No:
16-0845 (230V)
16-1445 (115V)
16-1845 (230V)
16-1455 (115V)

Water Content by Distillation - DIN (manual)

DIN 51 432

- available with flask heating mantle (16-1846+16-1456)

Datasheet:
16-0846.pdf

Ref.-No:
16-0846 (230V)
16-1446 (115V)
16-1846 (230V)
16-1456 (115V)

Water Separation Ability of Oil by Steam Treatment (manual)

DIN 51 589-1

Datasheet:
16-1300.pdf

Ref.-No:
16-1300 (230V)
16-1301 (115V)

Solidification-Point-Apparatus (manual)

ASTM D 852

Datasheet:
13-1170.pdf

Ref.-No:
13-1170

Refractive Index & Dispersion by Universal ABBE Refractometer (manual)

DIN 51 423-2

Datasheet:
13-1520.pdf

Ref.-No:
13-1520 (230V)
13-1521 (115V)

Refractive Index & Dispersion by Modified ABBE Refractometer (manual)

ASTM D 1218 - ASTM D 1747 - DIN 51 423-2 - ISO 5661 - JIS C2101
(ASTM D 2159 obs.)

Datasheet:
13-0285.pdf

Ref.-No:
13-0285 (230V)
13-0300 (115V)

Refractive Index by High Performance Refractometer - ABBEMAT (automatic)

13-1585 **HP** for substances with a **low refractive index**
13-1586 **WR** for substances with a **high refractive index**

Datasheet:
13-1585.pdf

Ref.-No:
13-1585 (100/240V)
13-1586 (100/240V)

Refractive Index by Hand Refractometer - Eclipse (manual) (Field Test)

ASTM D 5006 - JIS C2101

for BATTERY (13-1532), FUEL (13-1533) & AVIATION (13-1534) samples

Datasheet:
13-1532.pdf

Ref.-No:
13-1532
13-1533
13-1534

Refractive Index by Refractometer - RFM 340 (automatic)

ASTM D 5006 - JIS C2101

Datasheet:
13-1540.pdf

Ref.-No:
13-1540

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American Standards

British Standards

German Standards

French Standards

European Standards

International Standards

Japanese Standards

International Standards

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
SAE	Society of Automotive Engineers (US)
SHRP	Strategic Highway Research Program (US)

Notes:

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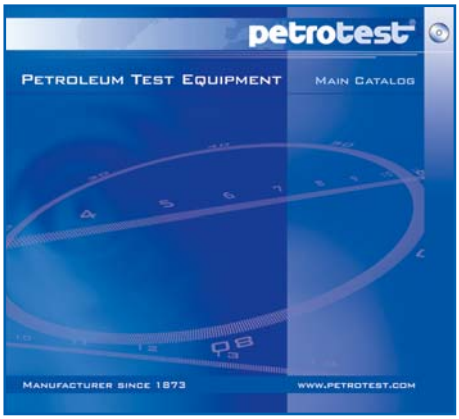

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