1

MODULAR FLASH POINT TESTER

MULTIFLASH AUTOMATIC MULTI METHOD FLASH POINT TESTER (PENSKY-MARTENS, ABEL, TAG, CLEVELAND & SMALL SCALE)

Multiflash is a universal fully automated instrument designed for testing the flash point of fuels, lubricating oils, solvents, chemicals, waste materials and many other substances.

The instrument comprises a universal base unit that houses the display, control and data acquisition functions, and a series of interchangeable modules that allow the implementation of the required standard test methods.

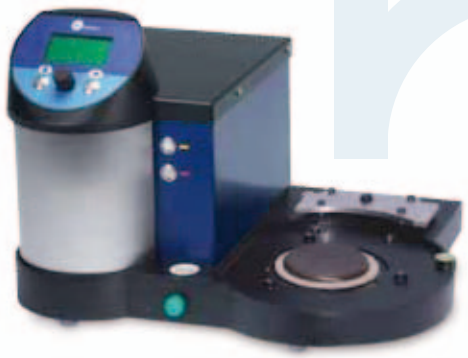
Multiflash is ruggedly designed to provide simple and reliable operation and is specifically engineered to ensure a very low cost of maintenance.

BIO-FUEL TESTING

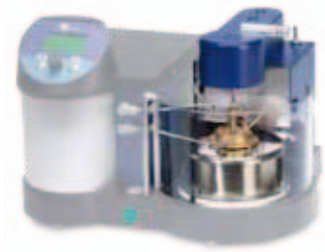
CALIBRATION & VERIFICATION MATERIALS

SETALERT COMPATIBLE

TECHNICAL DATASHEETS AVAILABLE



34000-0 UNIVERSAL BASE UNIT



PENSKY-MARTENS (A, B & C Closed Cup)

ASTM D93; E502; IP 34; IP 404 (obs); BS 2000 Parts 34 & 404 (obs); ISO 15267; EN ISO 2719; JIS K2265; NF M07-019; DIN 51 758; FTM 791 1102; EPA 1010A; GB/T 261

ABEL (Closed Cup and Equilibrium)

IP 170; IP 304 (obs) Part 2; IP 492; BS 2000 Part 170; BS 3900 Parts A8 and A9; BS 6664 Parts 1 and 2; EN ISO 13736; ISO 1523

CLEVELAND (Open Cup)

ASTM D92; IP 36; EN ISO 2592; BS 2000 Parts 36 & 403 (obs); DIN 51 376; NF T60-119; JIS K2265; AASHTO T48

TAG (Closed Cup)

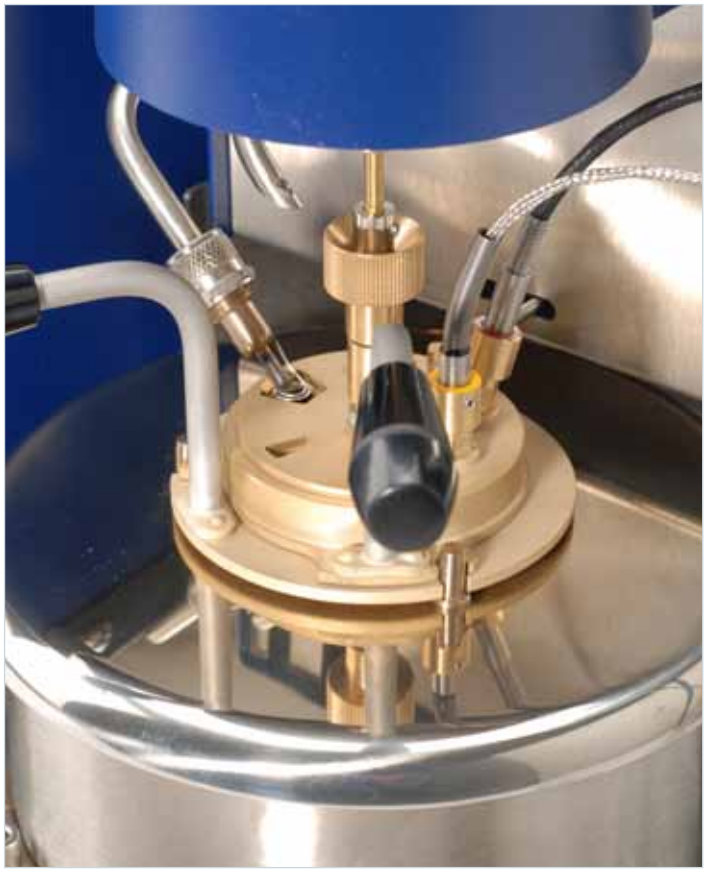
ASTM D56; D3934; D3941; E502; IP 304 (obs) Parts 1 & 2; IP 491: IP 492; ISO 1516; ISO 1523; FTM 791 1101; JIS K2265

SMALL SCALE Rapid Equilibrium (Setaflash) Closed Cup

ASTM D3278; D3828; D7236; E502; IP 303 (obs); IP 523; IP 524; IP 534; ISO 3679; ISO 3680; BS EN 456; BS 6664 Parts 3 & 4; BS 3900 Part A13; UN Class 3 Non-viscous Flammable Liquids; CHIPS Regulations; Classification of Dangerous Goods for Carriage: Viscous and Non-viscous Liquids; EPA 1020 A & B

MODULAR FLASH POINT TESTER

- **ALL MAJOR TEST METHODS**
  - Pensky-Martens (A,B & C Closed Cup and Chinese Method: GB)
  - Abel (Closed Cup & Equilibrium)
  - TAG (Closed Cup & Equilibrium)
  - Cleveland (Open Cup)
  - Small Scale Rapid Equilibrium (Setaflash)
- **UNIVERSAL OPERATION**
  - Unique '5 in 1' modular solution for flash point testing
  - All primary flash point tests from one instrument
  - Universal base, interchangeable test modules
  - Gas or electric ignition
- **FULLY AUTOMATIC**
  - Automatic set up of test parameters
  - Automatic heating control, ignition & flash detection
  - Automatic test results & end of test warning
  - Automatic barometric correction
- **UNRIVALLED EASE OF USE**
  - Minimum operator input
  - Integral self diagnosis
- **LOW COST**
  - Modular design optimises capital outlay
  - Instrument can be configured to match the requirements of the user
  - Simple to extend range of test methods by adding modules
- **STRICT CONFORMITY TO TEST METHODS**
  - Precise results
  - Procedures in conformance with method of test
  - Critical components designed in exact conformance with test methods
  - Easy and quick calibration and verification procedures
- **FAST & RELIABLE PERFORMANCE**
  - Designed for long service life
  - Reliable and proven technology
  - Simple operation
  - Error messaging
  - Calibration & diagnostics mode
- **IN-BUILT SAFETY**
  - 3 independant hardware safety systems
  - Fire sensors, over-temperature protection and automatic gas shut off
  - Automatic sample, bath fluid and probe checks prior to heating
  - Integral software limits
  - Suitable for unattended operation
  - Pensky-Martens D93 10°C safety protocol
- **RANGE OF ACCESSORIES**
  - Clear draught screens
  - Printer
  - Remote alarm system
  - Rapid cooling modules & cryostats
  - Calibration and verification instruments and materials



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MODULAR FLASH POINT TESTER

34100-2 MULTIFLASH – PENSKY-MARTENS CLOSED CUP MODULE

ASTM D93; E502; IP 34; IP 404 (obs); BS 2000 Parts 34 & 404 (obs); ISO 15267; EN ISO 2719; JIS K2265; NF M07-019; DIN 51 758; FTM 791 1102; EPA 1010A; GB/T 261

- Procedures A, B and C
- Flexible automated search mode
- Ambient to 400°C temperature range
- Gas or electric ignition
- Independent fire detector

The Pensky-Martens Closed Cup Module comprises a Test Area, DIPS pod (Dipping, Ignition, Pilot, Stirrer), flash detector, sample temperature probe, and all necessary cables to interconnect with the 34000-0 Universal Base Unit.

The Test Area consists of an electrically heated solid block/air bath with a removeable sample cup and lid. The lid is equipped with a stirrer, rotating shutter, and ports for the flash detector and sample temperature probe.

The DIPS pod contains a fire detection probe, stirrer drive, shutter actuator and ignitor dipping mechanism with a coaxial gas jet/electric hot wire ignitor.

The sample temperature probe is a class A PRT, and flash detection is by a thermocouple.

Safety features include an initial dip to check that the sample is below its flash point, a PRT check to ensure that the correct probe is connected and is immersed in the sample, and new 10°C dipping protocol. When in search mode, the software limits the maximum temperature to 50°C above "expected flash". A bath temperature probe protects against over-temperature, and an independent fire detection probe is mounted over the teat area.

The optional 34008-0 Cooling Boost Module allows the test area to be rapidly cooled in between tests by a blast of compressed air.

SUPPLIED WITH: DIPS pod, Test Area, Ignitor, Flash Detector, Sample PRT, interconnection leads, and instruction manual.

Note: 34000-0 Universal Base Unit required for operation.

34100-2 mounted on a 34000-0 Base Unit with a 34010-0 Draught Screen fitted

BIO-FUEL TESTING

CALIBRATION & VERIFICATION MATERIALS

SETALERT COMPATIBLE

TECHNICAL DATASHEETS AVAILABLE

SPECIFICATIONS

Method:	Pensky-Martens Closed Cup
Tests:	P-M Procedures A, B & C GB/T 261 Search mode for unknown samples
Temperature Range:	Ambient to 400°C
Barometric Correction:	Automatic
Bath:	Solid Block/Air
Heating:	Bottom and side heaters
Post Test Cooling:	Fan assisted or Forced Air (Requires 34008-0 Cooling Boost Module option)
Post Test Cool-down Time (90°C to 50°C):	36 minutes (Fan) 6 minutes (Forced Air)
Ignitor:	Quick-fit coaxial gas jet/electric hot wire, user selectable (Electric hot wire pilot light for gas jet)
Temperature Probes:	Class A Platinum Resistance Thermometer, °C or °F
Flash Detection:	Thermocouple
Stirrer Speed:	105 & 250 rpm
Gas Supply (gas jet ignitor):	Laboratory gas, 3kPa (0.44psi) maximum pressure
Air Supply (forced air cooling):	Dry compressed air, 670kPa (100psi) maximum pressure
Voltage:	110/120V or 220/240V, 50/60Hz, (switchable)
Power:	1kW
Size (HxWxD):	40 x 45 x 34cm
Weight:	20kg

ACCESSORIES – Pensky-Martens Closed Cup Module

OPTIONAL

00100-0	SETALERT REMOTE PAGING SYSTEM
23680-0	SPIRIT LEVEL
34003-0	RS232 CABLE, for connecting instrument to PC.
34008-0	COOLING BOOST MODULE
34010-0	DRAUGHT SCREEN (recommended for gas tests).
81002-2	PRINTER

CALIBRATION VERIFICATION & TRAINING

60005-002	DRY WELL PROBE CALIBRATOR, *(for details see page 144).*
99851-0	MULTI-TEST VERIFICATION MATERIAL, D93 - IP 34 Gas Oil, *(for details see page 150).*
99853-0	MULTI-TEST VERIFICATION MATERIAL, D93 - IP 34 Lubricating Oil, *(for details see page 151).*
99908-0	BIO MULTI-TEST VERIFICATION MATERIAL, Gas Oil, *(for details see page 151).*
99880-0	FLASHCHECK, secondary verification material, *(for details see page 156).*
99910-0	PORTABLE DIGITAL BAROMETER, 750 to 1500 mbar absolute, *(for details see page 145).*
99960-0	DIGITAL PHOTO TACHOMETER, *(for details see page 147).*

CONSUMABLES – Pensky-Martens Closed Cup Module

2 Years/2000 Tests		Qty
34100-001	FLASH DETECTOR	2
34100-002	SAMPLE PRT PROBE	1
34100-004	CO-AXIAL IGNITOR	2
81002-001	PRINTER PAPER, pack of 20 rolls	1

34200-0 MULTIFLASH – ABEL CLOSED CUP MODULE

IP 170; IP 304 (obs) Part 2; IP 492; BS 2000 Part 170; BS 3900 Parts A8 and A9; BS 6664 Parts 1 & 2; EN ISO 13736; ISO 1523

- Equilibrium tests
- Non-Equilibrium tests
- Flash/No-Flash tests
- Flexible automated search mode
- Ambient to 93°C (5°C to 93°C with optional cryostat)
- Gas or electric ignition

The Abel Closed Cup Module comprises a Test Area, DIPS pod (Dipping, Ignition, Pilot, Stirrer), flash detector, sample temperature probe, outer and inner bath temperature probes and all necessary cables to interconnect with the 34000-0 Universal Base Unit.

The Test Area consists of an outer liquid filled bath surrounding an inner liquid filled bath and a removeable sample cup and lid. The outer bath is heated by the hotplate within the 34000-0 Universal Base Unit, has a port for a temperature probe and connections for a 34008-0 Cooling Boost Module, allowing circulation of cooling fluid via a cryostat for sub-ambient tests. The inner bath also has provision for a temperature probe. The lid of the sample cup is equipped with a stirrer, sliding shutter, and ports for the flash detector and sample temperature probe.

The DIPS pod contains a stirrer drive, shutter actuator and ignitor dipping mechanism with a coaxial gas jet/electric hot wire ignitor.

The outer bath, inner bath and sample temperature probes are class A PRTs, and flash detection is by a thermocouple.

Safety features include an initial dip to check that the sample is below its flash point at the start of the test and PRT checks to ensure that the correct probes are connected and are immersed in bath liquids or sample. When in search mode, the software limits the maximum temperature to 50°C above "expected flash". An over-temperature cut-out is mounted on the base flange of the outer bath.

SUPPLIED WITH: DIPS pod, Test Area, Ignitor, Flash Detector, Inner and Outer Bath PRTs, Sample PRT, interconnection leads, instruction manual.

Note: 34000-0 Universal Base Unit and 34008-0 Cooling Boost Module are required for operation. Sub-ambient tests down to 5°C require a 34006-0 Cryostat.

34200-0 mounted on a 34000-0 Base Unit with a 34012-0 Draught Screen fitted

CALIBRATION & VERIFICATION MATERIALS

SETALERT COMPATIBLE

TECHNICAL DATASHEETS AVAILABLE

SPECIFICATIONS

Method:	Abel Closed Cup
Tests:	Equilibrium Non-Equilibrium Flash/No Flash
Temperature Range:	Ambient to 93°C (5°C to 93°C with optional cryostat)
Barometric Correction:	Automatic
Bath:	Liquid/Liquid
Heating:	Hot Plate
Post Test Cooling:	Fan assisted or Circulating liquid/external cryostat (optional)
Post Test Cool-down Time (90°C to 50°C):	45 minutes (Fan) 3 minutes (external cryostat)
Ignitor:	Quick-fit coaxial gas jet/electric hot wire, user selectable (Electric hot wire pilot light for gas jet)
Temperature Probes:	Class A Platinum Resistance Thermometers
Flash Detection:	Thermocouple
Stirrer Speed:	30 rpm
Gas Supply (gas jet ignitor):	Laboratory gas, 3kPa (0.44psi) maximum pressure
Cooling Supply:	Water (5°C and above) Water/Ethylene Glycol 50/50 (below 5°C) 125kPa (18psi) maximum pressure
Voltage:	110/120V or 220/240V, 50/60Hz, (switchable)
Power:	600W
Size (HxWxD):	47 x 45 x 34cm
Weight:	13kg

ACCESSORIES – Abel Closed Cup Module

REQUIRED	
34008-0	COOLING BOOST MODULE
OPTIONAL	
00100-0	SETALERT REMOTE PAGING SYSTEM
23680-0	SPIRIT LEVEL
34003-0	RS232 CABLE, for connecting instrument to PC.
34006-0	CRYOSTAT (-20°C).
34007-0	SHUTTER LUBE
34012-0	DRAUGHT SCREEN (recommended for gas tests).
81002-2	PRINTER
CALIBRATION VERIFICATION & TRAINING	
60005-002	DRY WELL PROBE CALIBRATOR, *(for details see page 144).*
99850-0	MULTI-TEST VERIFICATION MATERIAL, IP 170 Kerosine, *(for details see page 150).*
99910-0	PORTABLE DIGITAL BAROMETER, 750 to 1500 mbar absolute, *(for details see page 145).*
99960-0	DIGITAL PHOTO TACHOMETER, *(for details see page 147.*

CONSUMABLES – Abel Closed Cup Module

2 Years/2000 Tests		Qty
34100-002	SAMPLE PRT PROBE	1
34200-003	OUTER BATH PRT PROBE	1
34200-005	CO-AXIAL IGNITOR	2
34700-001	FLASH DETECTOR	2
81002-001	PRINTER PAPER, pack of 20 rolls	1

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MODULAR FLASH POINT TESTER

34300-0 MULTIFLASH – CLEVELAND OPEN CUP MODULE

ASTM D92; IP 36; EN ISO 2592; BS 2000 Parts 36 & 403 (obs); DIN 51 376; NF T60-119; JIS K2265; AASHTO T48

- Flash Point & Fire Point
- Flexible automated search mode
- Ambient to 400°C temperature range
- Gas or electric ignition
- Automatic snuffer
- Independent fire detector

The Cleveland Open Cup Module comprises a Test Area, DIPS pod (Dipping, Ignition, Pilot, Stirrer), flash/fire detector, sample temperature probe, and all necessary cables to interconnect with the 34000-0 Universal Base Unit.

The Test Area consists of a removeable sample cup in a thermal insulation ring, and a probe block for mounting the flash/fire detector and sample temperature probe. The sample cup is heated by the hotplate within the 34000-0 Universal Base Unit.

The DIPS pod contains the ignitor sweeping mechanism with a coaxial gas jet/electric hot wire ignitor, and a snuffer that extinguishes any flames in the sample cup at the end of the test.

The sample temperature probe is a class A PRT, and flash/fire detection is by an ionisation ring.

Safety features include an initial sweep to check that the sample is below its flash point at the start of the test and a PRT check to ensure that the correct probe is connected and is immersed in sample. When in search mode, the software limits the maximum temperature to 50°C above "expected flash". The snuffer automatically deploys at the end of the test or if the independant fire detection probe (mounted over the test area) detects a flame. The hotplate in the 34000-0 is equipped with a cut-out to protect against over-temperature.

The optional 34008-0 Cooling Boost Module allows the test area to be rapidly cooled in between tests by a blast of compressed air.

SUPPLIED WITH: DIPS pod, Test Area, Ignitor, Flash/Fire Detector, Sample PRT, interconnection leads, and instruction manual.

Note: 34000-0 Universal Base Unit required for operation.

34300-0 mounted on a 34000-0 Base Unit with a 34012-0 Draught Screen fitted

CALIBRATION & VERIFICATION MATERIALS

SETALERT COMPATIBLE

TECHNICAL DATASHEETS AVAILABLE

SPECIFICATIONS

Method:	Cleveland Open Cup
Tests:	Flash Point and Fire Point Non-Equilibrium Search mode for unknown samples
Temperature Range:	Ambient to 400°C
Barometric Correction:	Automatic
Bath:	N/A
Heating:	Hotplate
Post Test Cooling:	Fan assisted or Forced Air (Requires 34008-0 Cooling Boost Module option)
Post Test Cool-down Time (90°C to 50°C):	9 minutes (Fan) 6 minutes (Forced Air)
Ignitor:	Quick-fit coaxial gas jet/electric hot wire, user selectable (Electric hot wire pilot light for gas jet)
Temperature Probe:	Class A Platinum Resistance Thermometer, °C or °F
Flash/Fire Detection:	Ionisation Ring
Gas Supply (gas jet ignitor):	Laboratory gas, 3kPa (0.44psi) maximum pressure
Air Supply (forced air cooling):	Dry compressed air, 670kPa (100psi) maximum pressure
Voltage:	110/120V or 220/240V, 50/60Hz, (switchable)
Power:	1kW
Size (HxWxD):	34 x 45 x 42cm
Weight:	20kg

ACCESSORIES – Cleveland Open Cup Module

OPTIONAL

00100-0	SETALERT REMOTE PAGING SYSTEM
23680-0	SPIRIT LEVEL
34003-0	RS232 CABLE, for connecting instrument to PC.
34008-0	COOLING BOOST MODULE
34012-0	DRAUGHT SCREEN (recommended for gas tests).
34301-0	HUSSAMI KIT
81002-2	PRINTER

CALIBRATION VERIFICATION & TRAINING

60005-002	DRY WELL PROBE CALIBRATOR, *(for details see page 144).*
99880-0	FLASHCHECK, secondary verification material, *(for details see page 156).*
99910-0	PORTABLE DIGITAL BAROMETER, 750 to 1500 mbar absolute, *(for details see page 145).*

CONSUMABLES – Cleveland Open Cup Module

2 Years/2000 Tests		Qty
34100-004	CO-AXIAL IGNITOR	2
34300-001	IONISATION RING	2
34300-002	SAMPLE PRT PROBE	1
81002-001	PRINTER PAPER, pack of 20 rolls	1

34400-0 TAG CLOSED CUP MODULE

ASTM D56; D3934; D3941; E502; IP 304 (obs) Part 2; IP 491: IP 492; ISO 1516; ISO 1523; FTM 791 1101; JIS K2265

- Equilibrium tests
- Non-Equilibrium tests
- Flash/No-Flash tests
- Flexible automated search mode
- Ambient to 93°C (5°C to 93°C with optional cryostat)
- Gas or electric ignition

The TAG Closed Cup Module comprises a Test Area, DIPS pod (Dipping, Ignition, Pilot, Stirrer), flash detector, sample temperature probe, bath temperature probe and all necessary cables and pipes to interconnect with the 34000-0 Universal Base Unit and 34008 Cooling Boost Module.

The Test Area consists of a liquid filled bath with an internal cooling coil, a removeable sample cup and lid, and an overflow vessel. The bath is heated by the hotplate within the 34000-0 Universal Base Unit. The cooling coil is connected to the 34008-0 Cooling Boost Module by flexible pipes allowing circulation of water or cooling fluid via a cryostat for sub-ambient tests. The top of the bath has a port for a temperature probe. The lid of the sample cup is equipped with a sliding shutter, and ports for the flash detector and sample temperature probe.

The DIPS pod contains the shutter actuator and ignitor dipping mechanism with a coaxial gas jet/electric hot wire ignitor.

The sample and bath temperature probes are class A PRTs, and flash detection is by a thermocouple.

Safety features include an initial dip to check that the sample is below its flash point at the start of the test and PRT checks to ensure that the correct probes are connected and are immersed in bath liquid or sample. When in search mode, the software limits the maximum temperature to 50°C above "expected flash". An over-temperature cut-out is mounted on the base flange of the bath.

SUPPLIED WITH: DIPS pod, Test Area, Ignitor, Flash Detector, Bath PRT, Sample PRT, interconnection leads and instruction manual.

Note: Requires 34000-0 Universal Base Unit and 34008-0 Cooling Boost Module. For sub-ambient tests down to 5°C a Cryostat (34006-0) is also required.

34400-0 mounted on 34000-0 with 34011-0 Draught Screen

CALIBRATION & VERIFICATION MATERIALS

SETALERT COMPATIBLE

TECHNICAL DATASHEETS AVAILABLE

SPECIFICATIONS

Method:	TAG Closed Cup
Tests:	Non-Equilibrium Equilibrium Flash/No Flash
Temperature Range:	Ambient to 93°C (5°C to 93°C with optional cryostat)
Barometric Correction:	Automatic
Bath:	Liquid
Heating:	Hot Plate
Post Test Cooling:	Fan assisted or Circulating liquid/external cryostat (Requires 34008-0 Cooling Boost Module option)
Post Test Cool-down Time (90°C to 50°C):	40 minutes (Fan) 3 minutes (external cryostat)
Ignitor:	Quick-fit coaxial gas jet/electric hot wire, user selectable (Electric hot wire pilot light for gas jet)
Temperature Probes:	Class A Platinum Resistance Thermometers
Flash Detection:	Thermocouple
Gas Supply (gas jet ignitor):	Laboratory gas, 3kPa (0.44psi) maximum pressure
Cooling Supply:	Water (5°C and above) Water/Ethylene Glycol 50/50 (below 5°C) 125kPa (18psi) maximum pressure
Voltage:	110/120V or 220/240V, 50/60Hz, (switchable)
Power:	1kW
Size (HxWxD):	42 x 45 x 34cm
Weight:	20kg

ACCESSORIES - TAG Closed Cup Module

REQUIRED

34008-0	COOLING BOOST MODULE

OPTIONAL

00100-0	SETALERT REMOTE PAGING SYSTEM
23680-0	SPIRIT LEVEL
34003-0	RS232 CABLE, for connecting instrument to PC.
34006-0	CRYOSTAT (-20°C).
34007-0	SHUTTER LUBE
34011-0	DRAUGHT SCREEN (recommended for gas tests).
81002-2	PRINTER

CALIBRATION VERIFICATION & TRAINING

60005-002	DRY WELL PROBE CALIBRATOR, *(for details see page 147).*
99880-0	FLASHCHECK, secondary verification material, *(for details see page 156).*
99910-0	PORTABLE DIGITAL BAROMETER, 750 to 1500 mbar absolute, *(for details see page 145).*

CONSUMABLES - TAG Closed Cup Module

2 Years/2000 Tests		Qty
34100-001	FLASH DETECTOR	2
34400-002	SAMPLE PRT PROBE	1
34400-003	BATH PRT PROBE	1
34400-005	CO-AXIAL IGNITOR	2
81002-001	PRINTER PAPER, pack of 20 rolls	1

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MODULAR FLASH POINT TESTER

34700-0 SMALL SCALE (SETAFLASH) CLOSED CUP MODULE

ASTM D3278; D3828; D7236; E502; IP 303 (obs) Parts 1 & 2; IP 523; IP 524; IP 534; ISO 3679; ISO 3680; BS 6664 Parts 3 & 4; BS 3900 Part A13; BS EN 456; EPA 1020 A & B; UN Class 3 Non-viscous Flammable Liquids; CHIPS Regulations; Classification of Dangerous Goods for Carriage: Viscous and Non-viscous Liquids

- Rapid Equilibrium Tests
- Non-Equilibrium tests
- Flash/No-Flash tests
- Flexible automated search (ramp) mode
- Ambient to 300°C (-10°C to 300°C with optional cryostat)
- Gas or electric ignition

The Small Scale (Setaflash) Closed Cup Module comprises a Test Area, DIPS pod (Dipping, Ignition, Pilot, Stirrer), flash detector, and all necessary cables to interconnect with the 34000-0 Universal Base Unit.

The Test Area consists of an electrically heated solid block bath/sample cup with an integral temperature probe. The bath has a network of internal passages and can be connected to a 34008-0 Cooling Boost Module, allowing circulation of cooling fluid via a cryostat for sub-ambient tests. The hinged lid is equipped with a shutter and ports for the flash detector and injecting sample.

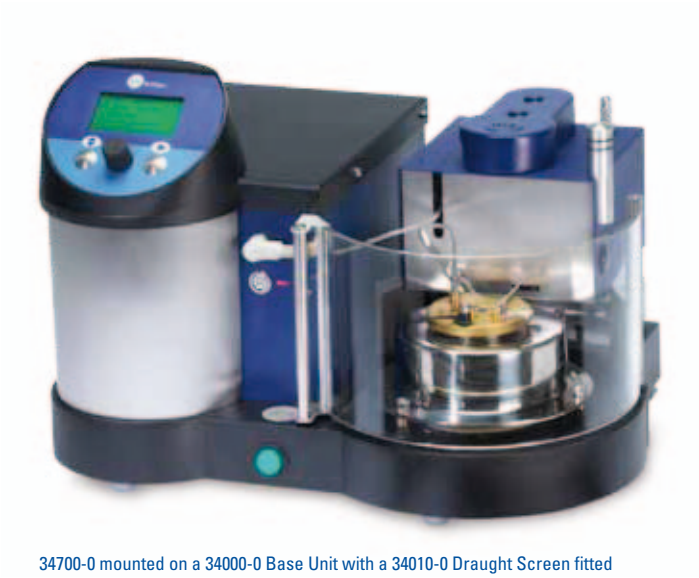
The DIPS pod contains the shutter actuator and ignitor dipping mechanism with a coaxial gas jet/electric hot wire ignitor.

The temperature probe is a class A PRT and flash detection is by a precision thermocouple.

Safety features include a check to ensure that the sample probe and flash detector are connected. When in search mode, the software limits the maximum temperature to 50°C above "expected flash".

SUPPLIED WITH: DIPS pod, Test Area, Ignitor, Flash Detector, Sample PRT, interconnection leads, and instruction manual.

Note: 34000-0 Universal Base Unit required for operation. For sub-ambient tests a Cooling Boost Module (34008-0) and Cryostat (34006-0) are also required.



34700-0 mounted on a 34000-0 Base Unit with a 34010-0 Draught Screen fitted

BIO-FUEL TESTING

CALIBRATION & VERIFICATION MATERIALS

SETALERT COMPATIBLE

TECHNICAL DATASHEETS AVAILABLE

SPECIFICATIONS

Method:	Small Scale Closed Cup
Tests:	Rapid Equilibrium Non-Equilibrium Flash/No Flash Search mode for unknown samples
Temperature Range:	Ambient to 300°C (-10°C to 300°C with optional cryostat)
Barometric Correction:	Automatic
Bath:	Solid Block
Heating:	Side heaters
Post Test Cooling:	Fan assisted Forced air or circulating liquid option (Requires 34008-0 Cooling Boost Module and 34006-0 Cryostat)
Post Test Cool-down Time (90°C to 50°C):	36 minutes (Fan) 2 minutes (Cryostat)
Ignitor:	Quick-fit coaxial gas jet/electric hot wire, user selectable (Electric hot wire pilot light for gas jet)
Temperature Probe:	Class A Platinum Resistance Thermometer, °C or °F
Flash Detection:	Thermocouple
Gas Supply (gas jet ignitor):	Laboratory gas, 3kPa (0.44psi) maximum pressure
Cooling Supply (Air): **(Liquid):**	Dry compressed air, 670kPa (100psi) maximum pressure Water (5°C and above) Water/Ethylene Glycol 50/50 (below 5°C) 125kPa (18psi) maximum pressure
Voltage:	110/120V or 220/240V, 50/60Hz, (switchable)
Power:	1kW
Size (HxWxD):	34 x 47 x 42cm
Weight:	20kg

ACCESSORIES - Small Scale Closed Cup Module

OPTIONAL

00100-0	SETALERT REMOTE PAGING SYSTEM
13770-311	SYRINGE, 4ml, for tests above 100°C.
23680-0	SPIRIT LEVEL
34003-0	RS232 CABLE, for connecting instrument to PC.
34006-0	CRYOSTAT (-20°C). For tests to -10°C.
34008-0	COOLING BOOST MODULE
34010-0	DRAUGHT SCREEN (recommended for gas tests).
81002-2	PRINTER

CALIBRATION VERIFICATION & TRAINING

99878-3	SMALL SCALE CERTIFIED FLASH POINT MATERIAL, *(for details see page 156).*
99910-0	PORTABLE DIGITAL BAROMETER, 750 to 1500 mbar absolute, *(for details see page 145).*
99928-0	SETATHERM, *(for details see page 129).*

CONSUMABLES - Small Scale Closed Cup Module

2 Years/2000 Tests		Qty
13740-004	SAMPLE WELL O RING, viton, pack of 5.	1
13770-004	SAMPLE WELL O RING, silicone, pack of 5.	1
34200-005	CO-AXIAL IGNITOR	2
34700-001	FLASH DETECTOR	2
81002-001	PRINTER PAPER, pack of 20 rolls	1