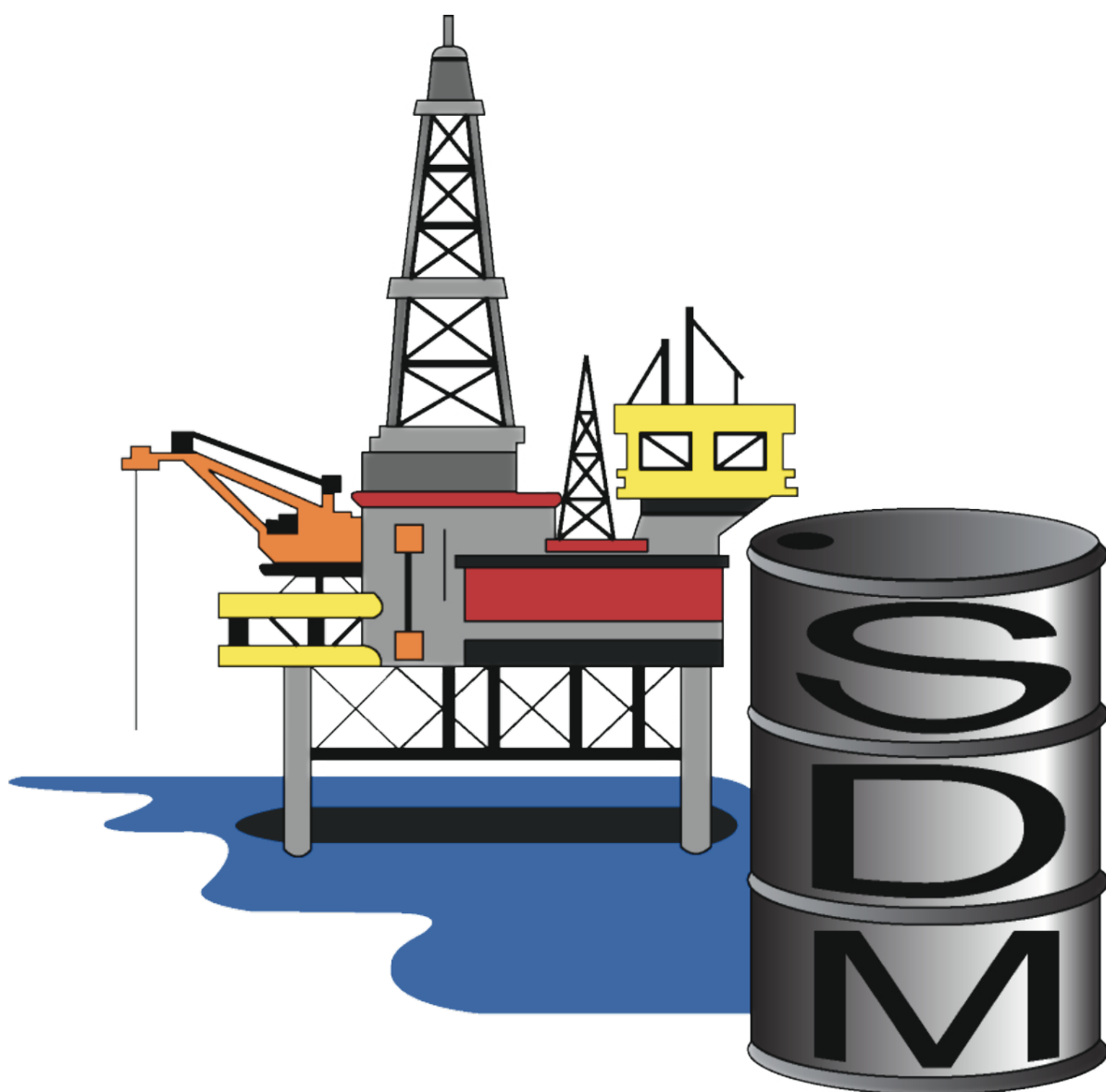


S.D.M.[®] CATALOGUE 2020



With this catalogue we are pleased to present our line of petroleum laboratory instruments conforming to ASTM IP EN ISO DIN and related international methods and furthermore custom solutions on your request.

S.D.M.[®] design and manufacture the control instruments are used petrochemical, food, cosmetics and pharmaceutical industries.

In addition to the classic 230V power supply specifications, we can also produce instrumentation with your local power service.

This catalog is subject to changes and updates therefore the information shown may not be correct.
Refer to the catalogue version.



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IP 70 (obs) REDWOOD VISCOSITY

P/N

120 REDWOOD VISCOMETER NO.1

With orifice no.1, 1 position

120/2 REDWOOD VISCOMETER NO.1

With orifice no.1, 2 positions

120/3 REDWOOD VISCOMETER NO.1

With orifice no.1, 3 positions

122 REDWOOD VISCOMETER NO.2

With orifice no.2, 1 position

122/2 REDWOOD VISCOMETER NO.2

With orifice no.2, 2 positions

122/3 REDWOOD VISCOMETER NO.2

With orifice no.2, 3 positions

Structure made of stainless steel, with front opened jacket, equipped with: bath with capacity of about 7 liters, calibrated brass oil cup with orifice, fitted with closing- ball-ended rod. Temperature regulation by digital thermoregulator PID with PT100 probe class A and over-temperature alarm, stainless steel heater, cooling coil, motor stirrer, insulated double wall, drain cock and safety internal level for low liquid with warning lamp.

Technical specifications:

- Temperature: No.1 from ambient to 95°C (203°F)
No.2 from ambient to 250°C (482°F)
- Stability: $\pm 0.1^\circ\text{C}$
- Bath capacity: 7 about liters
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: No.1 800W
No.2 1200W
- Dimensions: No.1 40x29x64 cm
No.2 40x29x61 cm
- Weight: 12 kg

ACCESSORIES ON REQUEST

10-0103 KOHLRAUSCH RECEIVING FLASK, pack of 3 pcs

10-0332 DIGITAL STOPWATCH

10-0371/50 SILICONE OIL 50 cSt, pack of 20 kg

10-0371/350 SILICONE OIL 350 cSt, pack of 20 kg

T-IP8C/B THERMOMETER IP 8C

T-IP9C/B THERMOMETER IP 9C

122/3



IP 72 VISCOSITY CUTBACK BITUMEN

EN 12846-1 DETERMINATION OF EFFLUX TIME BY THE EFFLUX VISCOMETER - BITUMINOUS EMULSIONS

EN 12846-2 DETERMINATION OF EFFLUX TIME BY THE EFFLUX VISCOMETER - CUT-BACK AND FLUXED BITUMINOUS

EN 13357 DETERMINATION OF THE EFFLUX TIME OF PETROLEUM CUT-BACK AND FLUXED BITUMENS

P/N

140 STV (TAR) VISCOMETER

1 position

140/2 STV (TAR) VISCOMETER

2 positions

140/3 STV (TAR) VISCOMETER

3 positions

140/4 STV (TAR) VISCOMETER

4 positions

Structure made of stainless steel, with front opened jacket, equipped with: bath with capacity of about 7 liters, calibrated brass oil cup with orifice $\varnothing 10$ mm, fitted with closing-ball-ended rod and level indicator. Temperature regulation by digital thermoregulator PID with PT100 probe class A and over-temperature alarm, stainless steel heater, cooling coil, motor stirrer, insulated double wall, drain cock and safety internal level for low liquid with warning lamp.

Technical specifications:

- Temperature: from ambient to 60°C (140°F)
- Stability: $\pm 0.1^\circ\text{C}$
- Bath capacity: 7 about liters
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 800W
- Dimensions: 40x29x64 cm
- Weight: 12 kg

ACCESSORIES ON REQUEST

10-0143 RECEIVER, pack of 3 pcs

10-0140 CALIBRATED CUP WITH ORIFICE, $\varnothing 2$ mm

10-0141 CALIBRATED CUP WITH ORIFICE, $\varnothing 4$ mm

10-0146 GO/NOT GO GAUGE, $\varnothing 2$ mm

10-0144 GO/NOT GO GAUGE, $\varnothing 4$ mm

10-0145 GO/NOT GO GAUGE, $\varnothing 10$ mm

10-0332 DIGITAL STOPWATCH

T-AS17C/B THERMOMETER ASTM 17C

T-AS19C/B THERMOMETER ASTM 19C

T-IP8C/B THERMOMETER IP 8C

140



ASTM D88 SAYBOLT VISCOSITY ASTM E102 SAYBOLT FUROL VISCOSITY OF BITUMINOUS MATERIALS AT HIGH TEMPERATURES

P/N

180 SAYBOLT VISCOMETER

1 position

180/2 SAYBOLT VISCOMETER

2 positions

180/3 SAYBOLT VISCOMETER

3 positions

180/4 SAYBOLT VISCOMETER

4 positions

Structure made of stainless steel, with front opened jacket, equipped with: bath with capacity of about 10 liters, calibrated brass oil cup with stainless steel orifice, polished and calibrated Ø1,76 mm Universal and Ø3,15 mm Furol, orifice wrench and thermometer support. Temperature regulation by digital thermoregulator PID with PT100 probe class A and over-temperature alarm, stainless steel heater, cooling coil, motor stirrer, insulated double wall, drain cock and safety internal level for low liquid with warning lamp.

Technical specifications:

- Temperature: from ambient to 240°C (464°F)
- Stability: $\pm 0.1^{\circ}\text{C}$
- Bath capacity: 10 about liters
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 1200W
- Dimensions: 40x29x61 cm
- Weight: 12 kg

ACCESSORIES ON REQUEST

10-0161 FILTER FUNNEL

10-0162 SAYBOLT FLASK

10-0164 WITHDRAWAL TUBE

10-0167 DISPLACEMENT RING ASTM E102

10-0168 SUCTION PIPETTE

10-0169 CUP COVER

10-0171 CUP CLEANING PLUNGER

10-0332 DIGITAL STOPWATCH

10-0371/50 SILICONE OIL 50 cSt, pack of 20 kg

10-0371/350 SILICONE OIL 350 cSt, pack of 20 kg

Only for ASTM D88

T-AS17C/B THERMOMETER ASTM 17C

T-AS18C/B THERMOMETER ASTM 18C

T-AS19C/B THERMOMETER ASTM 19C

T-AS20C/B THERMOMETER ASTM 20C

T-AS21C/B THERMOMETER ASTM 21C

T-AS22C/B THERMOMETER ASTM 22C

Only for ASTM E102

T-AS77F THERMOMETER ASTM 77F

T-AS78F THERMOMETER ASTM 78F

T-AS79F THERMOMETER ASTM 79F

T-AS80F THERMOMETER ASTM

T-AS81F THERMOMETER ASTM

T-AS108F THERMOMETER ASTM

T-AS109F THERMOMETER ASTM

180



ASTM D1665 IP 212 DIN 51560 ENGLER SPECIFIC GRAVITY VISCOSITY OF TAR PRODUCTS

P/N

270 ENGLER VISCOMETER

Structure made of stainless steel, with front opened jacket, equipped with: bath with capacity of about 7 liters, calibrated brass cup with stainless steel level-control of capillary flow outcropping, lid with PTFE tipped rod for closing the capillary hole. Temperature regulation by digital thermoregulator PID with PT100 probe class A and over-temperature alarm, stainless steel heater, cooling coil, motor stirrer, insulated double wall, drain cock and safety internal level for low liquid with warning lamp.

Technical specifications:

- Temperature: from ambient to 100°C (212°F)
- Stability: $\pm 0.1^{\circ}\text{C}$
- Bath capacity: 7 about liters
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 800W
- Dimensions: 40x29x64 cm
- Weight: 12 kg

P/N

260 CONVENTIONAL ENGLER VISCOMETER

Brass test cup with stainless steel level-control of capillary flow outcropping, lid with PTFE tipped rod for closing the capillary hole, hand stirrer, bath with stainless steel heater regulated by table electronic regulator, tripod stand.

Technical specifications:

- Temperature: from ambient to 100°C (212°F)
- Stability: $\pm 1^{\circ}\text{C}$
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 300W

ACCESSORIES ON REQUEST

10-0261 FILTER FUNNEL

10-0265 TESTING FLASK, pack of 3 pcs

10-0267 KOHLRAUSCH FLASK, pack of 3 pcs

10-0332 DIGITAL STOPWATCH

T-AS23C/B THERMOMETER ASTM 23C

T-AS24C/B THERMOMETER ASTM 24C

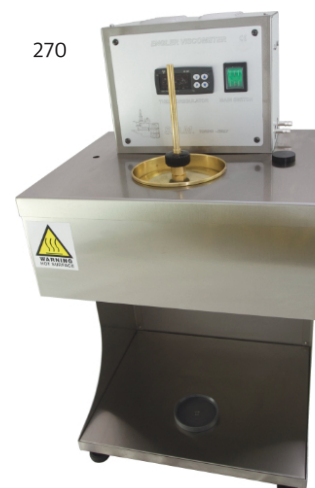
T-AS25C/B THERMOMETER ASTM 25C

T-IP76C/B THERMOMETER IP 76C

260



270



ASTM D1200 VISCOSITY BY FORD VISCOSITY CUP

P/N

200 FORD FLOW CUP

Made of anodized aluminium, without orifice.

200



ACCESSORIES ON REQUEST

- 10-0200/1 ORIFICE ASTM NO.1, Ø1,9 mm
- 10-0200/2 ORIFICE ASTM NO.2, Ø2,53 mm
- 10-0200/3 ORIFICE ASTM NO.3, Ø3,4 mm
- 10-0200/4 ORIFICE ASTM NO.4, Ø4,12 mm
- 10-0200/5 ORIFICE ASTM NO.5, Ø5,2 mm
- 10-0204 FLOW CUP STAND
- 10-0332 DIGITAL STOPWATCH

DIN 53211 (obs) PAINTS, VARNISHES AND SIMILAR COATING MATERIALS DETERMINATION OF FLOW TIME USING THE DIN FLOW CUP

P/N

210 DIN FLOW CUP

Made of anodized aluminium, without orifice.

ACCESSORIES ON REQUEST

- 10-0210/2 ORIFICE NO.2, Ø2 mm
- 10-0210/3 ORIFICE NO.3, Ø3 mm
- 10-0210/4 ORIFICE NO.4, Ø4 mm
- 10-0210/5 ORIFICE NO.5, Ø5 mm
- 10-0210/6 ORIFICE NO.6, Ø6 mm
- 10-0210/7 ORIFICE NO.7, Ø7 mm
- 10-0210/8 ORIFICE NO.8, Ø8 mm
- 10-0204 FLOW CUP STAND
- 10-0332 DIGITAL STOPWATCH

ASTM D5125 VISCOSITY OF PAINTS AND RELATED MATERIALS BY ISO FLOW CUPS

EN 535 (obs) DETERMINATION OF FLOW TIME OF PAINTS BY USE OF FLOW CUPS

ISO 2431 PAINTS AND VARNISHES - DETERMINATION OF FLOW TIME BY USE OF FLOW CUPS

DIN 53224 (obs) TESTING OF PAINTS, VARNISHES AND SIMILAR PRODUCTS; DETERMINATION OF THE FLOW TIME BY THE ISO CUP

P/N

220/2 ISO FLOW CUP

Made of anodized aluminium cup, stainless steel orifice Ø2 mm

220/3 ISO FLOW CUP

Made of anodized aluminium cup, stainless steel orifice Ø3 mm

220/4 ISO FLOW CUP

Made of anodized aluminium cup, stainless steel orifice Ø4 mm

220/5 ISO FLOW CUP

Made of anodized aluminium cup, stainless steel orifice Ø5 mm

220/6 ISO FLOW CUP

Made of anodized aluminium cup, stainless steel orifice Ø6 mm

220/8 ISO FLOW CUP

Made of anodized aluminium cup, stainless steel orifice Ø8 mm

ACCESSORIES ON REQUEST

- 10-0204 FLOW CUP STAND
- 10-0332 DIGITAL STOPWATCH

ASTM D816 RUBBER CEMENTS

ASTM D1084 VISCOSITY OF ADHESIVES

ASTM D4212 VISCOSITY BY DIP-TYPE VISCOSITY CUPS

P/N

190/1 ZAHN FLOW CUP NO.1

Made of brass, Ø2 mm, 5-60 cP

190/2 ZAHN FLOW CUP NO.2

Made of brass, Ø2,7 mm, 20-250 cP

190/3 ZAHN FLOW CUP NO.3

Made of brass, Ø3,8 mm, 100-800 cP

190/4 ZAHN FLOW CUP NO.4

Made of brass, Ø4,3 mm, 200-1200 cP

190/5 ZAHN FLOW CUP NO.5

Made of brass, Ø5,3 mm, 400-1800 cP

190



DIN 53015 HÖPPLER MEASUREMENT OF VISCOSITY USING THE HÖPPLER FALLING-BALL VISCOMETER

P/N

320 HÖPPLER VISCOMETER

Suitable for viscosity 0,5 a 100.000 mPa*s (cP). Mounted on support with leveling screws and bubble level, fitted with stop pin which allows the viscometer to reverse. Calibrated fall tube, tube with two maximum level notches and an intermediate-level one, equipped with 6 gauged balls: 1+2=borosilicate glass, 3+4=Ni-Fe, 5+6=steel. Pyrex glass jacket for thermostatic bath with covers, neoprene gaskets, connections for the circulation of the thermostated liquid from the thermostatic bath. With certificate at 20°C.

Technical specifications:

- Temperature: from -20 to 120°C (-4 to 248°F) (with external unit)

P/N

330 HÖPPLER HEATED VISCOMETER

Suitable for viscosity 0.5 a 100.000 mPa*s (cP). Mounted on support with leveling screws and bubble level, fitted with stop pin which allows the viscometer to reverse. Calibrated fall tube, tube with two maximum level notches and an intermediate-level one, equipped with 6 gauged balls: 1+2=borosilicate glass, 3+4=Ni-Fe, 5+6=steel. Pyrex glass jacket for thermostatic bath with covers, neoprene gaskets, connections for the circulation of the thermostated liquid from the thermostatic bath and heater element regulated by electronic regulator. With certificate at 20°C.

Technical specifications:

- Temperature: from -20 to 120°C (-4 to 248°F) (with external unit for cooling)
- Power supply: 230V ±10% 50/60Hz
- Power: 110W

ACCESSORIES ON REQUEST

722/P CIRCULATING BATH ±0.02°C

10-0332 DIGITAL STOPWATCH

T-0332 THERMOMETER 19° +21°C, DIV. 0.02°

T-0333 THERMOMETER -1° +26°C, DIV. 0.1°

T-0334 THERMOMETER 24° +51°C, DIV. 0.1°

T-0335 THERMOMETER 49° +76°C, DIV. 0.1°

T-0336 THERMOMETER 74 +101°C, DIV.0.1°

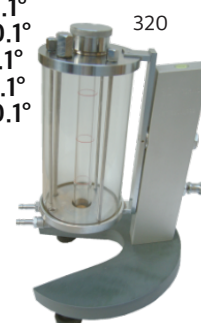
T-0337 THERMOMETER 99 +126°C, DIV.0.1°

T-0338 THERMOMETER 124 +151°C, DIV.0.1°

330



320



VISCOMETER BATH AND CAPILLARY CLEANER AND DRYER

VISCOSITY

ASTM D445 IP 71 ISO 3104 KINEMATIC VISCOSITY OF TRANSPARENT AND OPAQUE LIQUIDS (AND CALCULATION OF DYNAMIC VISCOSITY)

ASTM D446 IP 71 ISO 3105 STANDARD SPECIFICATIONS AND OPERATING INSTRUCTIONS FOR GLASS CAPILLARY KINEMATIC VISCOMETERS

ASTM D2170 IP 319 KINEMATIC VISCOSITY OF ASPHALTS (BITUMENS)

EN 12595 KINEMATIC VISCOSITY OF BITUMEN AND BITUMINOUS BINDERS

P/N

390 VISCOMETER BATH

Borosilicate tank, cover with 5 holes 50.8mm, PT100 probe class A, stainless steel heater, cooling coil for improved control near to ambient temperature, motor stirrer, safety internal level for low liquid, containment chamber.

Plate base painted with antacid epoxy products which houses LCD touch display 4.3" with PID controller, independent timer for each position (total 5), set up constant and automatic viscosity in cSt result, over-temperature alarm, safety internal level for low liquid. With stand-by stainless steel covers and back led light.

Technical specifications:

- Temperature: from ambient to 150°C (302°F)
- Stability: $\pm 0.02^\circ\text{C}$ up to $+100^\circ\text{C}$ (212°F) over $\pm 0.05^\circ\text{C}$
- Bath capacity: about 15 liters
- Power: 1300W
- Dimensions: 60x34x60 cm
- Weight: 27 Kg

P/N

370 VISCOMETER BATH

For the determination of the kinematic viscosity with glass capillary viscometer.

Borosilicate tank, cover with 5 holes 50.8 mm, leakage protection vessel supplied with cork disk supporting and stainless steel base, stainless steel control box on the cover, temperature controlled by digital thermoregulator PID with PT100 probe class A and over-temperature alarm, stainless steel heater, cooling coil for improved control near to ambient temperature, motor stirrer, safety internal level for low liquid with warning lamp. With stand-by stainless steel covers.

Technical specifications:

- Temperature: from ambient to 150°C (302°F)
- Stability: $\pm 0.1^\circ\text{C}$
- Bath capacity: 15 about liters
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 1200W
- Dimensions: 35x35x52 cm
- Weight: 15 kg

ACCESSORIES ON REQUEST

10-0371/10 SILICONE OIL 10 cSt, pack of 20 l

10-0371/50 SILICONE OIL 50 cSt, pack of 20 kg

10-0372 VISCOSITY TEMPERATURE CHARTS

10-0373 FILTER, 75 MICRON

10-0375 METALLIC SYRINGE

10-0332 DIGITAL STOPWATCH (only for 370)

10-0371 BACK LIGHT (only for 370)

P/N

380 VISCOMETER CLEANING AND DRYING APPARATUS

Solvent cleaning-unit for washing and drying capillary-glass-tube viscometers. Washes and dries up to 6 capillary tubes at a time.

Stainless steel case with 6 independent regulation valves fitted with holding-down spring, air filters, pressure regulator and pressure gauge, to be feed from one external air source. 7.5 liters capacity internal solvent tank with level indicator.

Protection cover in stainless steel and window check.

Technical specifications:

- Capacity: about 7.5 liters
- Dimensions: 72x34x82 cm
- Weight: 32 kg.

ACCESSORIES ON REQUEST

2460/SC5 PUMP

380



370



390



GLASS CAPILLARY VISCOMETERS

VISCOSITY

CANNON-FENSKE ROUTINE VISCOMETER ASTM D445 D446 IP 71 ISO 3104 ISO 3105

P/N

350/25 Size 25
350/50 Size 50
350/75 Size 75
350/100 Size 100
350/150 Size 150
350/200 Size 200
350/300 Size 300
350/350 Size 350
350/400 Size 400
350/450 Size 450
350/500 Size 500
350/600 Size 600
350/650 Size 650
350/700 Size 700

On request uncalibrated with item 350/.../U

ACCESSORIES ON REQUEST

10-0350/P VISCOMETER HOLDER
10-0350/R VISCOMETER HOLDER
10-0350/M VISCOMETER HOLDER

CANNON-FENSKE OPAQUE VISCOMETER ASTM D445 D446 D2170 IP 71 ISO 3104 ISO 3105

P/N

360/25 Size 25
360/50 Size 50
360/75 Size 75
360/100 Size 100
360/150 Size 150
360/200 Size 200
360/300 Size 300
360/350 Size 350
360/400 Size 400
360/450 Size 450
360/500 Size 500
360/600 Size 600
360/650 Size 650
360/700 Size 700

On request uncalibrated with item 360/.../U

ACCESSORIES ON REQUEST

10-0350/P VISCOMETER HOLDER
10-0350/R VISCOMETER HOLDER
10-0350/M VISCOMETER HOLDER

UBBELOHDE VISCOMETER ASTM D445 D446 IP 71 ISO 3104 ISO 3105

P/N

340/0 Size 0
340/0C Size 0C
340/0B Size 0B
340/1 Size 1
340/1C Size 1C
340/1B Size 1B
340/2 Size 2
340/2C Size 2C
340/2B Size 2B
340/3 Size 3
340/3C Size 3C
340/3B Size 3B
340/4 Size 4
340/4C Size 4C
340/4B Size 4B
340/5 Size 5

On request uncalibrated with item 340/.../U

ACCESSORIES ON REQUEST

10-0340 VISCOMETER HOLDER

CANNON-UBBELOHDE VISCOMETER ASTM D445 D446 IP 71 ISO 3104 ISO 3105

P/N

341/25 Size 25
341/50 Size 50
341/75 Size 75
341/100 Size 100
341/150 Size 150
341/200 Size 200
341/300 Size 300
341/350 Size 350
341/400 Size 400
341/450 Size 450
341/500 Size 500
341/600 Size 600
341/650 Size 650
341/700 Size 700

On request uncalibrated with item 341/.../U

ACCESSORIES ON REQUEST

10-0341/P VISCOMETER HOLDER
10-0341/R VISCOMETER HOLDER
10-0341/M VISCOMETER HOLDER

CANNON-UBBELOHDE SEMI-MICRO VISCOMETER ASTM D445 D446 IP 71 ISO 3104 ISO 3105

P/N

343/25 Size 25
343/50 Size 50
343/75 Size 75
343/100 Size 100
343/150 Size 150
343/200 Size 200
343/300 Size 300
343/350 Size 350
343/400 Size 400
343/450 Size 450
343/500 Size 500
343/600 Size 600

On request uncalibrated with item 343/.../U

ACCESSORIES ON REQUEST

10-0341/P VISCOMETER HOLDER
10-0341/R VISCOMETER HOLDER
10-0341/M VISCOMETER HOLD

CANNON-UBBELOHDE DILUTION VISCOMETER ASTM D445 D446 IP 71 ISO 3104 ISO 3105

P/N

345/25 Size 25
345/50 Size 50
345/75 Size 75
345/100 Size 100
345/150 Size 150
345/200 Size 200
345/300 Size 300
345/350 Size 350
345/400 Size 400
345/450 Size 450
345/500 Size 500
345/600 Size 600

On request uncalibrated with item 345/.../U

ACCESSORIES ON REQUEST

10-0341/P VISCOMETER HOLDER
10-0341/R VISCOMETER HOLDER
10-0341/M VISCOMETER HOLDER

CANNON-UBBELOHDE FOUR-BULB SHEAR DILUTION VISCOMETER (FIVE-FOLD DILUTION TYPE) ASTM D445 D446 IP 71 ISO 3104 ISO 3105

P/N

347/25 Size 25
347/50 Size 50
347/75 Size 75
347/100 Size 100
347/150 Size 150

On request uncalibrated with item 347/.../U

ACCESSORIES ON REQUEST

10-0341/P VISCOMETER HOLDER
10-0341/R VISCOMETER HOLDER
10-0341/M VISCOMETER HOLDER

CANNON-UBBELOHDE FOUR-BULB SHEAR DILUTION VISCOMETER (TEN-FOLD DILUTION TYPE) ASTM D445 D446 IP 71 ISO 3104 ISO 3105

P/N

349/25 Size 25
349/50 Size 50
349/75 Size 75
349/100 Size 100
349/150 Size 150

On request uncalibrated with item 349/.../U

ACCESSORIES ON REQUEST

10-0341/P VISCOMETER HOLDER
10-0341/R VISCOMETER HOLDER
10-0341/M VISCOMETER HOLDER

CANNON-MANNING SEMI-MICRO VISCOMETER ASTM D445 D446 IP 71 ISO 3104 ISO 3105

P/N

352/25 Size 25
352/50 Size 50
352/75 Size 75
352/100 Size 100
352/150 Size 150
352/200 Size 200
352/300 Size 300
352/350 Size 350
352/400 Size 400
352/450 Size 450
352/500 Size 500
352/600 Size 600
352/650 Size 650
352/700 Size 700

On request uncalibrated with item 352/.../U

ACCESSORIES ON REQUEST

10-0350/P VISCOMETER HOLDER
10-0350/R VISCOMETER HOLDER

CANNON-MANNING SEMI-MICRO EXTRA LOW CHARGE VISCOMETER ASTM D445 D446 IP 71 ISO 3104 ISO 3105

P/N

353/25 Size 25
353/50 Size 50
353/75 Size 75
353/100 Size 100
353/150 Size 150
353/200 Size 200
353/300 Size 300
353/350 Size 350
353/400 Size 400
353/450 Size 450
353/500 Size 500
353/600 Size 600
353/650 Size 650
353/700 Size 700

On request uncalibrated with item 353/.../U

ZEITFUCHS® TRANSPARENT VISCOMETER (ROUND METAL HOLDER) ASTM D445 D446 IP 71 ISO 3104 ISO 3105

P/N

366/1 Size 1
366/2 Size 2
366/3 Size 3
366/4 Size 4
366/5 Size 5
366/6 Size 6
366/7 Size 7

On request uncalibrated with item 366/.../U

ZEITFUCHS® TRANSPARENT VISCOMETER (RECTANGULAR METAL HOLDER) ASTM D445 D446 IP 71 ISO 3104 ISO 3105

P/N

367/1 Size 1
367/2 Size 2
367/3 Size 3
367/4 Size 4
367/5 Size 5
367/6 Size 6
367/7 Size 7

On request uncalibrated with item 367/.../U

ZEITFUCHS® VISCOMETER CROSS-ARM ASTM D445 D446 IP 71 ISO 3104 ISO 3105

P/N

364/1 Size 1
364/2 Size 2
364/3 Size 3
364/4 Size 4
364/5 Size 5
364/6 Size 6
364/7 Size 7
364/8 Size 8
364/9 Size 9
364/10 Size 10

ACCESSORIES ON REQUEST

10-0364/R VISCOMETER HOLDER
10-0364/M VISCOMETER HOLDER

ZEITFUCHS® VISCOMETER CROSS-ARM (ROUND METAL HOLDER) ASTM D445 D446 IP 71 ISO 3104 ISO 3105

P/N

362/1 Size 1
362/2 Size 2
362/3 Size 3
362/4 Size 4
362/5 Size 5
362/6 Size 6
362/7 Size 7
362/8 Size 8
362/9 Size 9
362/10 Size 10

ZEITFUCHS® VISCOMETER CROSS-ARM (RECTANGULAR METAL HOLDER) ASTM D445 D446 IP 71 ISO 3104 ISO 3105

P/N

363/1 Size 1
363/2 Size 2
363/3 Size 3
363/4 Size 4
363/5 Size 5
363/6 Size 6
363/7 Size 7
363/8 Size 8
363/9 Size 9
363/10 Size 10

BS/IP/MSL MINIATURE SUSPENDED LEVEL VISCOMETER ASTM D445 D446 IP 71 ISO 3104 ISO 3105

P/N

342/1 Size 1
342/2 Size 2
342/3 Size 3
342/4 Size 4
342/5 Size 5
342/6 Size 6
342/7 Size 7

ACCESSORIES ON REQUEST

10-0342 VISCOMETER HOLDER

BS/IP/SL SUSPENDED LEVEL VISCOMETER ASTM D445 D446 IP 71 ISO 3104 ISO 3105

P/N

344/1 Size 1
344/1A Size 1A
344/2 Size 2
344/2A Size 2A
344/3 Size 3
344/3A Size 3A
344/4 Size 4
344/4A Size 4A
344/5 Size 5

ACCESSORIES ON REQUEST

10-0342 VISCOMETER HOLDER

BS/IP/SL(S) VISCOMETER ASTM D445 D446 IP 71 ISO 3104 ISO 3105

P/N

354/1 Size 1
354/2 Size 2
354/3 Size 3
354/4 Size 4
354/5 Size 5
354/6 Size 6
354/7 Size 7
354/8 Size 8
354/9 Size 9

ACCESSORIES ON REQUEST

10-0342 VISCOMETER HOLDER

BS/U/M MINIATURE U-TUBE VISCOMETER ASTM D445 D446 IP 71 ISO 3104 ISO 3105

P/N

346/M1 Size M1
346/M2 Size M2
346/M3 Size M3
346/M4 Size M4
346/M5 Size M5

BS/U-TUBE VISCOMETER ASTM D445 D446 IP 71 ISO 3104 ISO 3105

P/N

348/A Size A
348/B Size B
348/C Size C
348/D Size D
348/E Size E
348/F Size F
348/G Size G
348/H Size H

BS/IP/RF U-TUBE REVERSE FLOW VISCOMETER ASTM D445 D446 IP 71 ISO 3104 ISO 3105

P/N

361/1 Size 1
361/2 Size 2
361/3 Size 3
361/4 Size 4
361/5 Size 5
361/6 Size 6
361/7 Size 7
361/8 Size 8
361/9 Size 9
361/10 Size 10
361/11 Size 11

ACCESSORIES ON REQUEST 10-0361 VISCOMETER HOLDER

CANNON-MANNING VACUUM VISCOMETER ASTM D2171

P/N

351/4 Size 4
351/5 Size 5
351/6 Size 6
351/7 Size 7
351/8 Size 8
351/9 Size 9
351/10 Size 10
351/11 Size 11
351/12 Size 12
351/13 Size 13
351/14 Size 14

ACCESSORIES ON REQUEST 10-0351 VISCOMETER HOLDER

CANNON-MANNING VACUUM VISCOMETER (ROUND METAL HOLDER) ASTM D2171

P/N

355/4 Size 4
355/5 Size 5
355/6 Size 6
355/7 Size 7
355/8 Size 8
355/9 Size 9
355/10 Size 10
355/11 Size 11
355/12 Size 12
355/13 Size 13
355/14 Size 14

ASPHALT INSTITUTE VACUUM VISCOMETER ASTM D2171

P/N

357/25 Size 25
357/50 Size 50
357/100 Size 100
357/200 Size 200
357/400 Size 400R
357/800 Size 800R

ACCESSORIES ON REQUEST 10-0351 VISCOMETER HOLDER

ASPHALT INSTITUTE VACUUM VISCOMETER (ROUND METAL HOLDER) ASTM D2171

P/N

359/25 Size 25
359/50 Size 50
359/100 Size 100
359/200 Size 200
359/400 Size 400R
359/800 Size 800R

CANNON MODIFIED KOPPERS VACUUM VISCOMETER ASTM D2171

P/N

365/25 Size 25
365/50 Size 50
365/100 Size 100
365/200 Size 200
365/400 Size 400

ACCESSORIES ON REQUEST 10-0365 VISCOMETER HOLDER

ASTM D97 IP 15 ISO 3016 POUR POINT OF PETROLEUM PRODUCTS

ASTM D2500 IP 219 EN 23015 ISO 3015 CLOUD POINT OF PETROLEUM PRODUCTS

ASTM D5853 IP 441 POUR POINT OF CRUDE OILS

Resistant structure painted with antacid epoxy products, fitted with 4 wheels with brake. Glossy-black PVC cover with small stand-by covers, aluminium blocks with holes for accommodate the graduated jars, equipped with a hole where the thermometer is placed.

Temperature is controlled by digital thermoregulator fitted with a probe PT100 A. Automatic defrosting device under the cover, earth leakage circuit breaker, independent compressors CFC free refrigerant gases are used.

P/N

490/HS/140 CLOUD AND POUR POINT REFRIGERATOR

Heating element controlled by an independent switch for a quick return to a ambient temperature.

4 positions.

Technical specifications:

- Temperature: from -15° to -69°C (5° to -92,2°F)
- Power supply: 230V ±10% 50Hz
- Power: 1300W
- Dimensions: 60x70x100 cm
- Weight: 110 kg

500/S CLOUD AND POUR POINT REFRIGERATOR

4 positions for each temperature.

Technical specifications:

- Temperature: 0° -18 -33° -51°C (32° -0,4° -27,4° -59,8°F)
- Power supply: 230V ±10% 50Hz
- Power: 2900W
- Dimensions: 133x72x100 cm
- Weight: 208 kg

510/S CLOUD AND POUR POINT REFRIGERATOR

4 positions for each temperature.

Technical specifications:

- Temperature: 0° -18 -33°C (32° -0,4° -27,4°F)
- Power supply: 230V ±10% 50Hz
- Power: 2600W
- Dimensions: 104x72x100 cm
- Weight: 156 kg

520/S CLOUD AND POUR POINT REFRIGERATOR

4 positions for each temperature.

Technical specifications:

- Temperature: 0° -18 -33° -51° -69°C (32° -0,4° -27,4° -59,8° -92,2°F)
- Power supply: 230V ±10% 50Hz
- Power: 3700W
- Dimensions: 180x72x100 cm
- Weight: 285 kg

530/S CLOUD AND POUR POINT REFRIGERATOR

4 positions for each temperature.

Technical specifications:

- Temperature: 50° 0° -18 -33° -51° -69°C (122° 32° -0,4° -27,4° -59,8° -92,2°F)
- Power supply: 230V ±10% 50Hz
- Power: 3900W
- Dimensions: 210x72x100 cm
- Weight: 335 kg

540 CONVENTIONAL CLOUD AND POUR POINT

1 places conventional model with dry ice (CO₂) (not included) external cooling, consisting of: dewar flask fully silvered with metal protection and PVC cover, metal air jacket for support test jar.

Technical specifications:

- Temperature: up to -69°C (-92°F) with dry ice
- Dimensions: Ø130x310 mm
- Weight: 1,5 kg.

20

ACCESSORIES ON REQUEST

10-0491 TEST JAR SET, pack of 4 pcs

10-0490/S FRAMEWORK FOR 490/HS/140

10-0500/S FRAMEWORK FOR 500/S

10-0510/S FRAMEWORK FOR PER 510/S

10-0520/S FRAMEWORK FOR PER 520/S

10-0530/S FRAMEWORK FOR PER 530/S

10-0332 DIGITAL STOPWATCH

15-1441/A SUPPORT FOR VESSEL ASTM D130 D5853

10-1441/B PRESSURE VESSEL ASTM D130 D5853

1230 WATER/OIL BATH

T-AS5C/B THERMOMETER ASTM 5C

T-AS6C/T THERMOMETER ASTM 6C

T-AS61C/B THERMOMETER ASTM 61C

490/HS/140



540



500/S

510/S



520/S

ASTM D6371 IP 309 EN 116 DIN 51428 (obs) COLD FILTER PLUGGING POINT OF DIESEL AND HEATING FUELS

P/N

2540 COLD FILTER PLUGGING POINT - CFPP

PVC structure fitted with: dewar flask with cover, brass jacket Ø48x115 mm outside, test jar Ø31x125 mm at bottomed and mark at 45 ml level, insulating ring thickness 6 mm, to be placed in the bottom of the jacket, two spacers to be placed as around the test jar to provide insulation for the test jar from the sides of the jacket, a supporting ring for suspend the jacket, a pipet with a calibration mark corresponding to a contained volume of 20 mL at a point 149 mm from the bottom of the pipet, a metallic unit filter, a stopper with three holes one for thermometer one for pipet and one for vent, two 5 liters bottle with stopper, stopcock and U-manometer.

Technical specifications:

- Weight: 9 kg

P/N

2540/SEM SEMI-AUTOMATIC CFPP

Resistant structure painted with anti-acid epoxy products, fitted with 4 wheels with brake. Glossy-black PVC cover with small stand-by covers aluminium block with 1 hole for accommodate the test jar, equipped with a hole where the thermometer is placed, heating element controlled by a independent switch for a quick return to a ambient temperature. Temperature is controlled by digital thermoregulator fitted with a probe PT100 A. Automatic defrosting device under the cover, earth leakage circuit breaker, double stage compressor CFC free refrigerant gases are used. Brass jacket Ø48x115 mm outside, test jar Ø31x125 mm at bottomed and mark at 45 ml level, insulating ring thickness 6mm, to be placed in the bottom of the jacket, two spacers to be placed as around the test jar to provide insulation for the test jar from the sides of the jacket, a supporting ring for suspend the jacket, a pipet with a calibration mark corresponding to a contained volume of 20 mL at a point 149 mm from the bottom of the pipet, a metallic unit filter, a stopper with three holes one for thermometer one for pipet and one for vent, two 5 liters bottle with stopper, stopcock and U-manometer.

Technical specifications:

- Temperature: from ambient to -70°C (-94°F)
- Power supply: 230V ±10% 50Hz
- Power: 1300W
- Weight: 118 kg

ACCESSORIES ON REQUEST

2460/RC4D VACUUM PUMP

10-0332 DIGITAL STOPWATCH

T-AS5C/B THERMOMETER ASTM 5C IP 1C

T-AS6C/T THERMOMETER ASTM 6C



ASTM D1120 BOILING POINT OF ENGINE COOLANTS

P/N

2320 BOILING POINT

Consisting of: a heating mantle, a 100 ml flask having a neck with a 19/38 standard-taper, female ground-glass joint and a 10 mm outside diameter side-entering tube, so located as to permit the end of the thermometer device to be directly centered in the flask 6.5 mm from the bottom, a condenser having a jacket 200 mm in length with the bottom end of the condenser have a 19/38 standard-taper, drip-tip, male ground-glass joint.

Technical specifications:

- Power supply: 230V ±10% 50/60 Hz
- Power: 100W
- Dimensions: 15x15x12 cm
- Weight: 3 kg

ACCESSORIES ON REQUEST

10-2321 SILICON CARBIDE GRAINS, pack of 100 g

10-0332 DIGITAL STOPWATCH

T-AS2C/G THERMOMETER ASTM 2C



ASTM D852 SOLIDIFICATION POINT OF BENZENE

P/N

2340 SOLIDIFICATION POINT

Consisting of: 1 cooling bath cup model 1 liter Dewar, 1 cover for dewar, 1 air jacket tube 25x150 mm, 1 inner test tube 15x125 mm, stoppers, stirrer wire in stainless steel Ø1 mm

ACCESSORIES ON REQUEST

T-AS112C/B THERMOMETER ASTM 112C



ASTM D2386 IP 16 ISO 3013 DIN 51421 (obs) FREEZING POINT OF AVIATION FUELS

P/N

2370 MANUAL FREEZING POINT

Consisting of: tripod stand with clamp the jacketed sample tube into the Dewar flask at the level required from method; Dewar flask Ø75x280 mm. int. for cooling medium with support; jacketed sample tube Dewar Ø20x234 mm. int.; cork stopper with hole for thermometer and supporting the brass moisture-proof collar (with silica gel and glass wool) through which the manual brass stirrer passes.

P/N

2370/SEM SEMI-AUTOMATIC FREEZING POINT

Base painted with antacid epoxy products supporting Dewar flask Ø75x280 mm. int. for cooling medium with support; jacketed sample tube Dewar Ø20x234 mm. int.; cork stopper with two holes one for thermometer and one for supporting the brass moisture-proof collar (with silica gel and glass wool) through which the brass stirrer passes joined to a geared motor for automatic stirrer at 70 rpm.

Technical specifications:

- Power supply: 230V ±10% 50Hz
- Power: 50W
- Dimensions: 26X35X115 cm
- Weight: 11 kg

P/N

2370/SEM/2 SEMI-AUTOMATIC FREEZING POINT 2 POSITIONS

Stand-alone with base painted with antacid epoxy products supporting two Dewar flask Ø75x280 mm. int. for cooling medium with support, each with; jacketed sample tube Dewar Ø20x234 mm. int.; cork stopper with two holes one for thermometer and one for supporting the brass moisture-proof collar (with silica gel and glass wool) through which the manual brass stirrer passes joined to a geared motor for automatic stirrer at 70 rpm.

Technical specifications:

- Power supply: 230V ±10% 50Hz
- Power: 100W
- Dimensions: 60x40x115 cm
- Weight: 38 kg

ACCESSORIES ON REQUEST

T-AS114C/T THERMOMETER ASTM 114C

2370



2370/SEM



2370/SEM/2

ASTM D1177 FREEZING POINT OF AQUEOUS COOLANTS

P/N

2380 FREEZING POINT

Base painted with antacid epoxy products supporting Dewar flask Ø100x290mm. int. for cooling medium, fully silvered with metal protection; 200 ml freezing tube Dewar; cork with three holes one for PT100A probe one for stirrer and one for introducing wire for seeding; five coil stirrer made of stainless steel wire joined to a geared motor for automatic stirrer at 70 rpm.

The base accommodate the main switch, stirrer switch and digital thermometer plug in to PT100A probe.

Technical specifications:

- Power supply: 230V ±10% 50Hz
- Power: 50W
- Dimensions: 26X35X85 cm
- Weight: 8 kg

P/N

2380/2 FREEZING POINT 2 POSITIONS

Base painted with antacid epoxy products supporting two Dewar flask Ø100x290mm. int. for cooling medium, fully silvered with metal protection; 200 ml freezing tube Dewar; cork with three holes one for PT100A probe one for stirrer and one for introducing wire for seeding; five coil stirrer made of stainless steel wire joined to a geared motor for automatic stirrer at 70 rpm.

The base accommodate the main switch, stirrer switch and digital thermometer plug in to PT100A probe.

Technical specifications:

- Power supply: 230V ±10% 50Hz
- Power: 100W

P/N

2380/SEM SEMI-AUTOMATIC FREEZING POINT

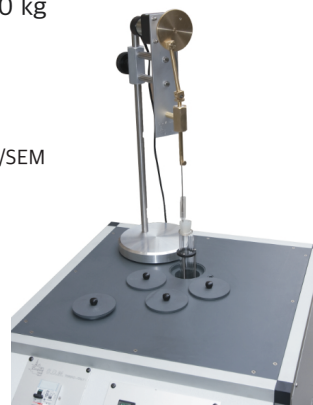
Resistant structure painted with antacid epoxy products, fitted with 4 wheels with brake. Glossy-black PVC cover with small stand-by covers aluminium block with 4 holes for accommodate the 200 ml freezing tube, equipped with a hole where the thermometer is placed, heating element controlled by a independent switch for a quick return to a ambient temperature. Temperature is controlled by digital thermoregulator fitted with a probe PT100 A. Automatic defrosting device under the cover, earth leakage circuit breaker, double stage compressor CFC free refrigerant gases are used. Consisting of: 200 ml freezing tuber; cork with three holes one for PT100A probe one for stirrer and one for introducing wire for seeding; five coil stirrer made of stainless steel wire joined to a geared motor for automatic stirrer at 70 rpm.

The temperature of sample is obtain by a PT100A probe plug in to a digital thermometer.

Technical specifications:

- Temperature: from -15° to -69°C (5° to -92,2°F)
- Power supply: 230V ±10% 50Hz
- Power: 1300W
- Dimensions: 60x70x140 cm
- Weight: 110 kg

2380/SEM



2380



ASTM D287 API GRAVITY OF CRUDE PETROLEUM AND PETROLEUM PRODUCTS

ASTM D1298 IP 160 ISO 3675 DENSITY, RELATIVE DENSITY, OR API GRAVITY OF CRUDE PETROLEUM AND LIQUID PETROLEUM PRODUCTS BY HYDROMETER METHOD

ASTM D1122 DENSITY OR RELATIVE DENSITY OF ENGINE COOLANT CONCENTRATES AND ENGINE COOLANTS BY THE HYDROMETER

**P/N
550/300 DENSITY BATH**

For the determination of the density with glass hydrometer Ø54x300 mm.

Borosilicate tank, cover with 5 holes Ø55 mm, leakage protection vessel supplied with cork disk supporting and stainless steel base, stainless steel control box on the cover, temperature controlled by digital thermoregulator PID with PT100 probe class A and over-temperature alarm, stainless steel heater, cooling coil for improved control near to ambient temperature, motor stirrer, safety internal level for low liquid with warning lamp. With stand-by stainless steel covers.

Technical specifications:

- Temperature: from ambient to 150°C (302°F)
- Stability: $\pm 0.1^\circ\text{C}$
- Bath capacity: 15 about liters
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 1200W
- Dimensions: 35x35x52 cm
- Weight: 15 kg

**P/N
550/450 DENSITY BATH**

For the determination of the density with glass hydrometer Ø65x420 mm.

Borosilicate tank, cover with 4 holes Ø66 mm, leakage protection vessel supplied with cork disk supporting and stainless steel base, stainless steel control box on the cover, temperature controlled by digital thermoregulator PID with PT100 probe class A and over-temperature alarm, stainless steel heater, cooling coil for improved control near to ambient temperature, motor stirrer, safety internal level for low liquid with warning lamp. With stand-by stainless steel covers.

Technical specifications:

- Temperature: from ambient to 150°C (302°F)
- Stability: $\pm 0.1^\circ\text{C}$
- Bath capacity: 23 about liters
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 2200W
- Dimensions: 35x35x70 cm
- Weight: 30 kg

ACCESSORIES ON REQUEST

10-0554 HYDROMETER CYLINDER Ø65x420 mm, pack of 4 pcs (only for 550/450)

10-0556 HYDROMETER CYLINDER Ø54x300 mm, pack of 5 pcs (only for 550/300)

10-0555 HYDROMETER CYLINDER

T-AS12C/B THERMOMETER ASTM 12C IP 64C

T-AS17C/B THERMOMETER ASTM 17C

T-AS22C/B THERMOMETER ASTM 22C

T-AS63C/B THERMOMETER ASTM 63C

ASTM D1475 STANDARD TEST METHOD FOR DENSITY OF LIQUID COATINGS, INKS, AND RELATED PRODUCTS

ISO 2811 SPECIFIES A METHOD FOR DETERMINING THE DENSITY OF PAINTS, VARNISHES AND RELATED PRODUCTS USING A METAL OR GAY-LUSSAC PYCNOMETER

DIN 53217 (obs) DETERMINATION OF DENSITY OF PAINTS, VARNISHES AND SIMILAR COATING MATERIALS BY THE PYCNOMETER METHOD

**P/N
PIC/10 PYCNOMETER 10 ml**
Made of stainless steel

**P/N
PIC/25 PYCNOMETER 25 ml**
Made of stainless steel

**P/N
PIC/50 PYCNOMETER 50 ml**
Made of stainless steel

**P/N
PIC/100 PYCNOMETER 100 ml**
Made of stainless steel



PIC/50



550/300

DENSITY HYDROMETER BS 718 DIN 12791 SERIES L20

P/N

550/L20/068 Type L20-068
550/L20/070 Type L20-070
550/L20/072 Type L20-072
550/L20/074 Type L20-074
550/L20/076 Type L20-076
550/L20/078 Type L20-078
550/L20/080 Type L20-080
550/L20/082 Type L20-082
550/L20/084 Type L20-084
550/L20/086 Type L20-086
550/L20/088 Type L20-088
550/L20/090 Type L20-090
550/L20/092 Type L20-092
550/L20/094 Type L20-094
550/L20/096 Type L20-096
550/L20/098 Type L20-098
550/L20/100 Type L20-100
550/L20/102 Type L20-102
550/L20/104 Type L20-104
550/L20/106 Type L20-106
550/L20/108 Type L20-108

DENSITY HYDROMETER BS 718 DIN 12791 SERIES L50

P/N

550/L50/060 Type L50-060
550/L50/065 Type L50-065
550/L50/070 Type L50-070
550/L50/075 Type L50-075
550/L50/080 Type L50-080
550/L50/085 Type L50-085
550/L50/090 Type L50-090
550/L50/095 Type L50-095
550/L50/100 Type L50-100
550/L50/105 Type L50-105
550/L50/110 Type L50-110
550/L50/115 Type L50-115
550/L50/120 Type L50-120
550/L50/125 Type L50-125
550/L50/130 Type L50-130
550/L50/135 Type L50-135
550/L50/140 Type L50-140
550/L50/145 Type L50-145
550/L50/150 Type L50-150
550/L50/155 Type L50-155
550/L50/160 Type L50-160
550/L50/165 Type L50-165
550/L50/170 Type L50-170
550/L50/175 Type L50-175
550/L50/180 Type L50-180
550/L50/185 Type L50-185
550/L50/190 Type L50-190
550/L50/195 Type L50-195

PRECISION DENSITY HYDROMETER BS 718 DIN 12791 SERIES L50 SP

P/N

550/L50SP/060 Type L50-060
550/L50SP/065 Type L50-065
550/L50SP/070 Type L50-070
550/L50SP/075 Type L50-075
550/L50SP/080 Type L50-080
550/L50SP/085 Type L50-085
550/L50SP/090 Type L50-090
550/L50SP/095 Type L50-095
550/L50SP/100 Type L50-100
550/L50SP/105 Type L50-105

DENSITY HYDROMETER BS 718 DIN 12791 SERIES M50

P/N

550/M50/060 Type M50-060
550/M50/065 Type M50-065
550/M50/070 Type M50-070
550/M50/075 Type M50-075
550/M50/080 Type M50-080
550/M50/085 Type M50-085
550/M50/090 Type M50-090
550/M50/095 Type M50-095
550/M50/100 Type M50-100
550/M50/105 Type M50-105
550/M50/110 Type M50-110
550/M50/115 Type M50-115
550/M50/120 Type M50-120
550/M50/125 Type M50-125
550/M50/130 Type M50-130
550/M50/135 Type M50-135
550/M50/140 Type M50-140
550/M50/145 Type M50-145
550/M50/150 Type M50-150
550/M50/155 Type M50-155
550/M50/160 Type M50-160
550/M50/165 Type M50-165
550/M50/170 Type M50-170
550/M50/175 Type M50-175
550/M50/180 Type M50-180
550/M50/185 Type M50-185
550/M50/190 Type M50-190
550/M50/195 Type M50-195

PRECISION DENSITY HYDROMETER BS 718 DIN 12791 SERIES M50 SP

P/N

550/M50SP/060 Type M50-060
550/M50SP/065 Type M50-065
550/M50SP/070 Type M50-070
550/M50SP/075 Type M50-075
550/M50SP/080 Type M50-080
550/M50SP/085 Type M50-085
550/M50SP/090 Type M50-090
550/M50SP/095 Type M50-095
550/M50SP/100 Type M50-100
550/M50SP/105 Type M50-105

DENSITY HYDROMETER BS 718 DIN 12791 SERIES M100

P/N

550/M100/060 Type M100-060
550/M100/070 Type M100-070
550/M100/080 Type M100-080
550/M100/090 Type M100-090
550/M100/100 Type M100-100
550/M100/110 Type M100-110
550/M100/120 Type M100-120
550/M100/130 Type M100-130
550/M100/140 Type M100-140
550/M100/150 Type M100-150
550/M100/160 Type M100-160
550/M100/170 Type M100-170
550/M100/180 Type M100-180
550/M100/190 Type M100-190

DENSITY THERMO-HYDROMETER BS 718 DIN 12791 SERIES M100

P/N

550/M100TH/060 Type M100-060
550/M100TH/070 Type M100-070
550/M100TH/080 Type M100-080
550/M100TH/090 Type M100-090
550/M100TH/100 Type M100-100
550/M100TH/110 Type M100-110
550/M100TH/120 Type M100-120
550/M100TH/130 Type M100-130
550/M100TH/140 Type M100-140
550/M100TH/150 Type M100-150
550/M100TH/160 Type M100-160
550/M100TH/170 Type M100-170
550/M100TH/180 Type M100-180
550/M100TH/190 Type M100-190

DENSITY HYDROMETER BS 718 DIN 12791 SERIES S50

P/N

550/S50/060 Type S50-060
550/S50/065 Type S50-065
550/S50/070 Type S50-070
550/S50/075 Type S50-075
550/S50/080 Type S50-080
550/S50/085 Type S50-085
550/S50/090 Type S50-090
550/S50/095 Type S50-095
550/S50/100 Type S50-100
550/S50/105 Type S50-105
550/S50/110 Type S50-110
550/S50/115 Type S50-115
550/S50/120 Type S50-120
550/S50/125 Type S50-125
550/S50/130 Type S50-130
550/S50/135 Type S50-135
550/S50/140 Type S50-140
550/S50/145 Type S50-145
550/S50/150 Type S50-150
550/S50/155 Type S50-155
550/S50/160 Type S50-160
550/S50/165 Type S50-165
550/S50/170 Type S50-170
550/S50/175 Type S50-175
550/S50/180 Type S50-180
550/S50/185 Type S50-185
550/S50/190 Type S50-190
550/S50/195 Type S50-195

PRECISION DENSITY HYDROMETER BS 718 DIN 12791 SERIES S50 SP

P/N

550/S50SP/060 Type S50-060
550/S50SP/065 Type S50-065
550/S50SP/070 Type S50-070
550/S50SP/075 Type S50-075
550/S50SP/080 Type S50-080
550/S50SP/085 Type S50-085
550/S50SP/090 Type S50-090
550/S50SP/095 Type S50-095
550/S50SP/100 Type S50-100
550/S50SP/105 Type S50-105

DENSITY HYDROMETER API ASTM

P/N

550/1H/62 Type 1H-62
550/2H/62 Type 2H-62
550/3H/62 Type 3H-62
550/4H/62 Type 4H-62
550/5H/62 Type 5H-62
550/6H/62 Type 6H-62
550/7H/62 Type 7H-62
550/8H/62 Type 8H-62
550/9H/62 Type 9H-62
550/10H/62 Type 10H-62
550/21H/62 Type 21H-62
550/22H/62 Type 22H-62
550/23H/62 Type 23H-62
550/24H/62 Type 24H-62
550/25H/62 Type 25H-62
550/26H/62 Type 26H-62
550/27H/62 Type 27H-62
550/28H/62 Type 28H-62
550/29H/62 Type 29H-62
550/30H/62 Type 30H-62
550/31H/62 Type 31H-62
550/32H/62 Type 32H-62
550/33H/62 Type 33H-62
550/34H/62 Type 34H-62
550/35H/62 Type 35H-62
550/36H/62 Type 36H-62
550/37H/62 Type 37H-62
550/38H/62 Type 38H-62
550/39H/62 Type 39H-62
550/40H/62 Type 40H-62
550/82H/62 Type 51H-82
550/83H/62 Type 51H-83
550/84H/62 Type 51H-84
550/85H/62 Type 51H-85
550/86H/62 Type 51H-86
550/87H/62 Type 51H-87
550/88H/62 Type 51H-88
550/89H/62 Type 51H-89
550/90H/62 Type 51H-90
550/98H/62 Type 51H-98
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550/103H/62 Type 51H-103
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550/118H/62 Type 51H-118
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550/120H/62 Type 51H-120
550/125H/62 Type 51H-125
550/126H/62 Type 51H-126
550/127H/62 Type 51H-127
550/128H/62 Type 51H-128
550/129H/62 Type 51H-129
550/130H/62 Type 51H-130
550/131H/62 Type 51H-131
550/132H/62 Type 51H-132
550/133H/62 Type 51H-133
550/134H/62 Type 51H-134
550/135H/62 Type 51H-135
550/136H/62 Type 51H-136
550/137H/62 Type 51H-137
550/138H/62 Type 51H-138

550/139H/62 Type 51H-139
550/140H/62 Type 51H-140
550/141H/62 Type 51H-141

DENSITY THERMO-HYDROMETER API ASTM

P/N

550/51H/62 Type 51H-62
550/52H/62 Type 52H-62
550/53H/62 Type 53H-62
550/54H/62 Type 54H-62
550/55H/62 Type 55H-62
550/56H/62 Type 56H-62
550/57H/62 Type 57H-62
550/58H/62 Type 58H-62
550/59H/62 Type 59H-62
550/60H/62 Type 60H-62

DENSITY THERMO-HYDROMETER

P/N

550/300H/82 Type 300H-82
550/301H/82 Type 301H-82
550/302H/82 Type 302H-82
550/303H/82 Type 303H-82
550/304H/82 Type 304H-82
550/305H/82 Type 305H-82
550/306H/82 Type 306H-82
550/307H/82 Type 307H-82
550/308H/82 Type 308H-82
550/309H/82 Type 309H-82

DENSITY HYDROMETER

P/N

550/311H/82 Type 311H-82
550/312H/82 Type 312H-82
550/313H/82 Type 313H-82
550/314H/82 Type 314H-82
550/315H/82 Type 315H-82
550/316H/82 Type 316H-82
550/317H/82 Type 317H-82
550/318H/82 Type 318H-82
550/319H/82 Type 319H-82
550/320H/82 Type 320H-82

ASTM D5 IP 49 PENETRATION OF BITUMINOUS MATERIAL

EN 1426 BITUMEN AND BITUMINOUS BINDERS - DETERMINATION OF NEEDLE PENETRATION

ASTM D217 IP 50 CONE PENETRATION LUBRICATING GREASE

ASTM D937 IP 179 ISO 2137 DIN 51580 CONE PENETRATION OF PETROLATUM

ASTM D1321 IP 376 DIN 51579 NEEDLE PENETRATION OF PETROLEUM WAXES

ASTM D1403 IP 310 ISO 2137 CONE PENETRATION OF LUBRICATING GREASE USING ¼ AND ½ SCALE CONE EQUIPMENT

ASTM D2884 YIELD STRESS OF HETEROGENEOUS PROPELLANTS BY CONE PENETRATION METHOD

P/N

650/SEM SEMIAUTOMATIC PENETROMETER

Aluminum anodized base with inset spirit level and adjustable feet, solid stainless steel column supporting a calibrated dial with 360 divisions corresponding to 1/10 of millimeter for penetration up to 720, release button by a low voltage solenoid, controlled on its turn by a digital timer.

Micro-metric regulation, magnifying glass and check light.

Technical specifications:

- Power supply: 230V ±10% 50Hz
- Power: 20W
- Dimensions: 26x26x62 cm
- Weight: 9 kg

P/N

650 MANUAL PENETROMETER

Aluminum anodized base with inset spirit level and adjustable feet, solid stainless steel column supporting a calibrated dial with 360 divisions corresponding to 1/10 of millimeter for penetration up to 720, release button with manual halting function. Micro-metric regulation, magnifying glass and check light.

Technical specifications:

- Dimensions: 26x26x51 cm
- Weight: 7 kg

ACCESSORIES ON REQUEST

10-0652 PENETRATION NEEDLE ASTM D5 IP 49 EN 1426

10-0652/C CERTIFICATE PENETRATION NEEDLE ASTM D5 IP 49 EN 1426

10-0652/60 PENETRATION NEEDLE

10-0653 NEEDLE PENETRATION ASTM D1321 IP 376 DIN 51579

10-0654 CONE PENETRATION "OPTIONAL" ASTM D217 D937 IP 50 IP 179 DIN 51804 ISO 2137

10-0655 CONE PENETRATION "STANDARD" ASTM D217 D937 IP 50 IP 179 ISO 2137

10-0656 CONE PENETRATION ½ ASTM D1403 IP 310

10-0657 CONE PENETRATION ¼ ASTM D1403 IP 310

10-0658/MG CONE PROPELLANTS ASTM D2884

10-0658/PX CONE

10-0658/5 MICRO-CONE ASTM

10-0658/10 MICRO-CONE ASTM

10-0659/70 PERFORATED DISK

10-0659/35 PERFORATED DISK

10-0659/39 PERFORATED DISK

10-0662/BALL BALL PENETRATION ASTM D5329

10-0661/47 PLUNGER

10-0661/97 PLUNGER

10-0661/15 PLUNGER ½

10-0661/8 PLUNGER ¼

10-0661/10 PLUNGER

10-0651/50 LOAD WEIGHT, 50 g

10-0651/100 LOAD WEIGHT, 100 g

10-0660/M TRANSFER DISH

10-0660/V TRANSFER DISH

10-0660/338 SAMPLE JAR Ø33x8 mm, pack of 5 pcs

10-0660/5016 SAMPLE JAR Ø50x16 mm, pack of 5 pcs

10-0660/5535 SAMPLE JAR Ø55x35 mm, pack of 5 pcs

10-0660/5545 SAMPLE JAR Ø55x45 mm, pack of 5 pcs

10-0660/7570 SAMPLE JAR Ø75x70 mm, pack of 5 pcs

10-0660/7045 SAMPLE JAR Ø70x45 mm, pack of 5 pcs

10-0660/5570 SAMPLE JAR Ø55x70 mm, pack of 5 pcs

10-0660/7060 SAMPLE JAR Ø70x60 mm, pack of 5 pcs

10-0660/10065 SAMPLE JAR Ø100x65 mm, pack of 3 pcs

10-0660/765635 SAMPLE JAR Ø76.5x63.5 mm, pack of 3 pcs

10-0660/7664 SAMPLE JAR Ø76x64 mm, pack of 3 pcs

10-0660/2532 WAX TEST CYLINDER Ø25x32 mm, pack of 2 pcs

10-0660/BC BASE PLATE 63.5x38 mm, pack of 2 pcs

10-0660/AL SAMPLE JAR Ø55x35 mm, pack of 100 pcs

10-0660/AN20 REDUCTION RING "20" EN 1426

10-0660/AN30 REDUCTION RING "30" EN 1426

722/PEN CIRCULATING BATH

10-0332 DIGITAL STOPWATCH

T-AS17C/B THERMOMETER ASTM 17C

T-AS63C/B THERMOMETER ASTM 63C

T-AS64C/B THERMOMETER ASTM 64C



650



650/SEM

GREASE WORKER, ROLL STABILITY

PENETRATION

P/N

670/AUT AUTOMATIC GREASE WORKER

Automatic grease worker machine. Heavy base plate with gear motor preset to make 60 strokes per minute, 6-digit counting mechanism and automatic stroke count and shut-off device. With one grease worker.

Technical specifications:

- Power supply: 230V $\pm$ 10% 50Hz
- Power: 800W
- Dimensions: 41x30x50 cm
- Weight: 37 kg

P/N

670/2 AUTOMATIC GREASE WORKER 2 POSITIONS

Automatic grease worker machine. Heavy base plate with gear motor preset to make 60 strokes per minute, 6-digit counting mechanism and automatic stroke count and shut-off device. With two greases workers.

Technical specifications:

- Power supply: 230V $\pm$ 10% 50Hz
- Power: 800W
- Dimensions: 41x30x50 cm
- Weight: 52 kg

P/N

670/MAN MANUAL GREASE WORKER

Metal body, screw cover with air valve and thermometer pass, piston with ground-slide-way brass handle, with base and lever.

ACCESSORIES ON REQUEST

10-0671/ASTM ASTM WORKER PLATE

10-0671/FTM FTM WORKER PLATE

10-0672 GREASE CUTTER

10-0673 OVERFLOW RING

T-0672 BI-METAL THERMOMETER

P/N

680/¼ SCALE GREASE WORKER

8 holes Ø3.17 mm plate, stainless steel

P/N

680/½ SCALE GREASE WORKER

8 holes Ø6.35 mm plate, stainless steel

ASTM D1831 ROLL STABILITY OF LUBRICATING GREASE

ASTM D7342 SHEAR STABILITY OF LUBRICATING GREASE IN PRESENCE OF WATER (WATER STABILITY TEST)

P/N

700 ROLL STABILITY TESTER

Thermostatic cabin for up to 4 test cylinders, temperature is controlled by a PID digital thermoregulator with over-temperature alarm and PT100A, digital timer, 160 rpm speed geared motor, base with roller supports allowing the rotation.

Technical specifications:

- Temperature: from ambient to +200°C (392°F)
- Power: 2000W
- Dimensions: 62x62x48 cm
- Weight: 39 kg

ACCESSORIES ON REQUEST

10-0701 TEST CYLINDER WITH ROLLER



700



670/MAN



670/AUT



680/½

680/¼

ASTM D93 E502 IP 34 EN 22719 ISO 15267 ISO 2719 DIN 51758 FLASH POINT BY PENSKY-MARTENS CLOSED CUP TESTER

**P/N
750 PENSKY-MARTENS**

Electrically heated by electronic regulator, mounted on a case painted with antacid epoxy products. Calibrated brass test cup, cover with gas and electric ignition device allowing to ignite the testing sample by a manual trip-opening. Motor stirrer for procedure "A" and "B", air bath and cooling fan.

Technical specifications:

- Temperature: from 40 to 360°C (104 +680°F)
- Power supply: 230V ±10% 50/60Hz
- Power: 700W
- Dimensions: 40x33x52 cm
- Weight: 11 kg

**P/N
750/DIG DIGITAL PENSKY-MARTENS**

Electrically heated by electronic regulator, mounted on a case painted with antacid epoxy products. Calibrated brass test cup, cover with gas and electric ignition device allowing to ignite the testing sample by a manual trip-opening. Motor stirrer for procedure "A" and "B", digital thermometer with PT100A probe, air bath and cooling fan.

Technical specifications:

- Temperature: from 40 to 360°C (104 +680°F)
- Power supply: 230V ±10% 50/60Hz
- Power: 700W
- Dimensions: 40x33x52 cm
- Weight: 13 kg

ACCESSORIES ON REQUEST

- 10-0747 GAS TUBE
- 10-0748 GAS CYLINDER 2 kg
- 10-0749 GAS REDUCER 30 mbar
- 10-0751 STAINLESS STEEL TEST CUP
- T-AS9C/B THERMOMETER ASTM 9C IP 15C
- T-AS10C/G THERMOMETER ASTM 10C IP 16C
- T-AS88C/G THERMOMETER ASTM 88C IP 101C

IP 170 ISO 13736 DETERMINATION OF FLASH POINT - ABEL CLOSED CUP METHOD

**P/N
820 ABEL**

Electrically heated by electronic regulator, mounted on a case painted with antacid epoxy products. Calibrated brass crucible, cover with gas and electric ignition device allowing to ignite the testing sample by a manual glide-opening. Motor stirrer, air bath and water bath are made in chromium-plated copper, internal cooling coil with external connection for possible cooling bath.

Technical specifications:

- Temperature: from ambient to 70°C (158°F) (up to -30°C (-22°F) (with external unit)
- Power supply: 230V ±10% 50/60Hz
- Power: 300W
- Dimensions: 26x32x37 cm
- Weight: 7 kg

ACCESSORIES ON REQUEST

- 10-0747 GAS TUBE
- 10-0748 GAS CYLINDER 2 kg
- 10-0749 GAS REDUCER 30 mbar
- 10-0821 STAINLESS STEEL TEST CUP
- T-IP74C/B THERMOMETER IP 74C
- T-IP75C/B THERMOMETER IP 75C
- T-IP2C/T THERMOMETER IP 2C

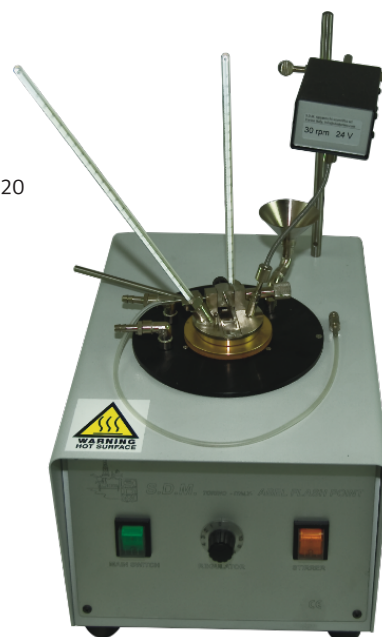
750/DIG



750



820



ASTM D56 IP 491 IP 492 ISO 1516 ISO 1523 FLASH POINT BY TAG CLOSED CUP TESTER

ASTM D3934 FLASH/NO FLASH TEST-EQUILIBRIUM METHOD BY A CLOSED-CUP APPARATUS

ASTM D3941 FLASH POINT BY THE EQUILIBRIUM METHOD WITH A CLOSED-CUP APPARATUS

ASTM E502

P/N

930 TAG CLOSED

Electrically heated by electronic regulator, mounted on a case painted with antacid epoxy products. Test cup equipped with glide device and gas or electrical ignition. Water bath and support-jacket made in brass. With internal cooling coil. Technical specifications:

- Temperature: from ambient to 110°C (230°F) (up to -30°C (-22°F) with external unit)
- Power supply: 230V ±10% 50/60Hz
- Power: 700W
- Dimensions: 18x20x20 cm
- Weight: 6 kg

ACCESSORIES ON REQUEST

10-0747 GAS TUBE

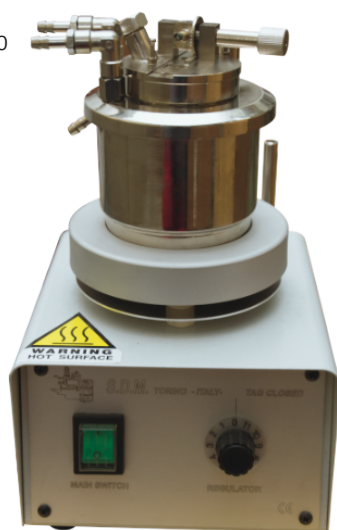
10-0748 GAS CYLINDER 2 kg

10-0749 GAS REDUCER 30 mbar

T-AS57C/B THERMOMETER ASTM 57C

T-AS9C/B THERMOMETER ASTM 9C

930



ASTM D3278 IP 534 FLASH POINT OF LIQUIDS BY SMALL SCALE CLOSED-CUP APPARATUS

ASTM D3828 FLASH POINT BY SMALL SCALE CLOSED CUP TESTER

ASTM D7236 FLASH POINT BY SMALL SCALE CLOSED CUP TESTER (RAMP METHOD)

ASTM E502 SELECTION AND USE OF ASTM STANDARDS FOR THE DETERMINATION OF FLASH POINT OF CHEMICALS BY CLOSED CUP METHODS

IP 303 (obs)

IP 523 ISO 3679 DETERMINATION OF FLASH POINT - RAPID EQUILIBRIUM CLOSED CUP METHOD

IP 524 ISO 3680 DETERMINATION OF FLASH/NO FLASH - RAPID EQUILIBRIUM CLOSED CUP METHOD

P/N

780 SMALL SCALE FLASH POINT

Electrically heated by electronic regulator, mounted on a case painted with antacid epoxy products. Aluminum block for 2 and 4 ml samples, cover with manual opening system, gas ignition with pilot flame, digital thermometer with PT100A probe.

Thermal insulating with cooling coil for circulation of cooling fluid with optional cryostat.

Technical specifications:

- Temperature: from ambient to 300°C (572°F) (up to -10°C (14°F) with external unit)
- Power supply: 230V ±10% 50/60Hz
- Power: 700W
- Dimensions: 29x33x30 cm
- Weight: 10 Kg

ACCESSORIES ON REQUEST

10-0747 GAS TUBE

10-0748 GAS CYLINDER 2 kg

10-0749 GAS REDUCER 30 mbar

780



ASTM D92 IP 36 EN 22592 (obs.) ISO 2592 DIN 51376 (obs.)
FLASH AND FIRE POINTS BY CLEVELAND OPEN CUP
TESTER

P/N

880 CLEVELAND

Electrically heated by electronic regulator, mounted on a case painted with antacid epoxy products. Calibrated brass cup, gas ignition device fitted with a pivot manually passing on the cup. Fitted with pincers for thermometer.

Technical specifications:

- Temperature: from 79 to 400°C (from 175 to 752°F)
- Power supply: 230V ±10% 50/60Hz
- Power: 700W
- Dimensions: 29x33x30 cm
- Weight: 8 kg

P/N

890 SEMIAUTOMATED CLEVELAND

Electrically heated by electronic regulator, mounted on a case painted with antacid epoxy products. Calibrated brass cup, gas ignition device fitted with a pivot automatic passing on the cup every 20 seconds or manually by acting on a switch. Fitted with pincers for thermometer.

Technical specifications:

- Temperature: from 79 to 400°C (from 175 to 752°F)
- Power supply: 230V ±10% 50/60Hz
- Power: 700W
- Dimensions: 29x33x30 cm
- Weight: 8 kg

ACCESSORIES ON REQUEST

10-0747 GAS TUBE

10-0748 GAS CYLINDER 2 kg

10-0749 GAS REDUCER 30 mbar

T-AS11C/G THERMOMETER ASTM 11C IP 28C

ASTM D1310 FLASH POINT AND FIRE POINT OF LIQUIDS
BY TAG OPEN-CUP APPARATUS

ASTM D3143 FLASH POINT OF CUTBACK ASPHALT

P/N

950 TAG OPEN

Electrically heated by electronic regulator, mounted on a case painted with antacid epoxy products. Test cup made in moulded glass, gas ignition device with pivot passing manually over the cup.

This item has a water bath fitted with pincers for thermometer

Technical specifications:

- Temperature: from ambient 180°C (356°F)
- Power supply: 230V ±10% 50/60Hz
- Power: 700W
- Dimensions: 26x20x33 cm
- Weight: 8 kg

ACCESSORIES ON REQUEST

10-0747 GAS TUBE

10-0748 GAS CYLINDER 2 kg

10-0749 GAS REDUCER 30 mbar

T-AS9C/B THERMOMETER ASTM 9C IP 15C

T-AS33C/B THERMOMETER ASTM 33C IP 20C

T-AS35C/B THERMOMETER ASTM 34C IP 21C

T-AS35C/B THERMOMETER ASTM 35C IP 59C

880



890



950



ASTM D86 DISTILLATION OF PETROLEUM PRODUCTS AT ATMOSPHERIC PRESSURE

ASTM D216 (obs) METHOD OF TEST FOR DISTILLATION OF NATURAL GASOLINE

ASTM D447 (obs) TEST METHOD FOR DISTILLATION OF PLANT SPRAY OILS

ASTM D850 DISTILLATION OF INDUSTRIAL AROMATIC HYDROCARBONS AND RELATED MATERIALS

ASTM D1078 IP 195 ISO 4626 DISTILLATION RANGE OF VOLATILE ORGANIC LIQUIDS

ASTM E133, IP 123, ISO 3405, DIN 51751 DISTILLATION STANDARD SPECIFICATION

P/N

990 DISTILLATION UNIT

Consisting of an electric heating for temperature up to 400°C (752°F), receiver on right side (on request on left side), made of stainless steel with inspection tempered window can be opened, electronic regulator, adjustable flask support with external control knob and extinguishing system by drawer for sand. Stainless steel condenser bath with internal cooling coil and connection for possible external cooling bath.

Condenser tube made of nickel-plated brass, glossy-black PVC cover and drain valve.

Technical specifications:

- Temperature: from ambient to 400°C (752°F)
- Power supply: 230V ±10% 50/60Hz
- Power: 1000W
- Dimensions: 39x65x60 cm
- Weight: 30 kg

P/N

990/R DISTILLATION UNIT

Consisting of an electric heating for temperature up to 400°C (752°F), receiver on right side (on request on left side), made of stainless steel with inspection tempered window can be opened, electronic regulator, adjustable flask support with external control knob and extinguishing system by drawer for sand. Refrigerated and heated stainless steel condenser bath with temperature range 0-60°C (32-140°F) controlled by a digital thermoregulator PID with probe PT100A. Condenser tube made of nickel-plated brass, glossy-black PVC cover and drain valve.

Technical specifications:

- Temperature: from ambient to 400°C (752°F)
- Power supply: 230V ±10% 50Hz
- Power: 1000W
- Dimensions: 39x65x60 cm
- Weight: 60 kg

990



990/R



1000



P/N

1000 DISTILLATION UNIT (2 POSITIONS)

Consisting of two electric heating for temperature up to 400°C (752°F), made of stainless steel with inspection tempered window can be opened, electronic regulator, adjustable flask support with external control knob and extinguishing system by drawer for sand. Stainless steel condenser bath with internal cooling coil and connection for possible external cooling bath.

Condenser tube made of nickel-plated brass, glossy-black PVC cover and drain valve.

Technical specifications:

- Temperature: from ambient to 400°C (752°F)
- Power supply: 230V ±10% 50/60Hz
- Power: 2000W
- Dimensions: 39x65x60 cm
- Weight: 30 kg

P/N

1000/R DISTILLATION UNIT (2 POSITIONS)

Consisting of two electric heating for temperature up to 400°C (752°F), made of stainless steel with inspection tempered window can be opened, electronic regulator, adjustable flask support with external control knob and extinguishing system by drawer for sand. Refrigerated and heated stainless steel condenser bath with temperature range 0-60°C (32-140°F) controlled by a digital thermoregulator PID with probe PT100A. Condenser tube made of nickel-plated brass, glossy-black PVC cover and drain valve.

Technical specifications:

- Temperature: from ambient to 400°C (752°F)
- Power supply: 230V ±10% 50Hz
- Power: 2000W
- Dimensions: 39x65x60 cm
- Weight: 60 kg

ACCESSORIES ON REQUEST

10-1175/100 CENTERING DEVICE THERMOMETER AND STOPPER CONDENSER

10-1175/200 CENTERING DEVICE THERMOMETER AND STOPPER CONDENSER

10-1176 FLASK TYPE A 100 ml, pack of 3 pcs

10-1177 FLASK TYPE B 125 ml, pack of 3 pcs

10-1179 FLASK TYPE C 200 ml, pack of 3 pcs

10-1187/P PRECISION CYLINDER TYPE B 100 ml

10-1174 BLOTTERING PAPER DISC, pack of 50 pcs

10-1191 GLASS CERAMIC FLASK SUPPORT BOARD Ø25

10-1192 GLASS CERAMIC FLASK SUPPORT BOARD Ø32

10-1193 GLASS CERAMIC FLASK SUPPORT BOARD Ø38

10-1194 GLASS CERAMIC FLASK SUPPORT BOARD Ø50

T-AS2C/G THERMOMETER ASTM 2C IP 62C

T-AS3C/G THERMOMETER ASTM 3C IP 73C

T-AS7C/G THERMOMETER ASTM 7C IP 5C

T-AS8C/G THERMOMETER ASTM 8C IP 6C

T-AS14C/B THERMOMETER ASTM 14C

T-AS37C/B THERMOMETER ASTM 37C IP 77C

T-AS38C/B THERMOMETER ASTM 38C IP 78C

T-AS39C/B THERMOMETER ASTM 39C IP 79C

T-AS40C/B THERMOMETER ASTM 8C IP 80C

T-AS41C/B THERMOMETER ASTM 41C IP 81C

T-AS42C/G THERMOMETER ASTM 42C IP 82C

T-AS102C/B THERMOMETER ASTM 102C IP 83C

T-AS103C/G THERMOMETER ASTM 103C IP 84C

T-AS104C/G THERMOMETER ASTM 104C IP 85C

T-AS105C/G THERMOMETER ASTM 105C IP 86C

T-AS106C/G THERMOMETER ASTM 106C IP 87C

T-AS107C/G THERMOMETER ASTM 107C IP 88C

PARAFFIN WAX CONTENT, CUTBACK ASPHALTIC

DISTILLATION

IP 459-1 EN 12606-1 DETERMINATION OF PARAFFIN WAX
CONTENT BY DISTILLATION

P/N
**1040 DISTILLATION UNIT FOR DETERMINATION OF
PARAFFIN WAX CONTENT**

Consisting of a distillation unit with a 100 ml distillation flask with cork stopper, 100 ml Erlenmeyer flask with a bored cork stopper, glass vessel, gas burner, support stand and adjustable table; liquid cooling bath with sockets for external cooling unit or adding directly in the bath with solid carbon dioxide, cover for accommodate: 3 test tubes Ø38x160 mm 29/32 with wash bottle, 3 test tubes Ø38x160 mm with a spout and bored cork stopper, two openings one for insertion for solid carbon dioxide and one for insertion of thermometer; filtration unit with a 500 ml suction flask, 500 ml glass wash bottle, funnel Ø70x200 mm and vacuum manometer with valve.

ACCESSORIES ON REQUEST

10-1041 ROUND FILTER, pack of 100 pcs

10-0332 DIGITAL STOPWATCH

2460/1040 VACUUM PUMP

2470/BC160 ELECTRONIC BALANCE

T-1040/B/R BATH THERMOMETER

T-1040/S/R SAMPLE THERMOMETER

T-1040/C/R CONGEALING POINT THERMOMETER

ASTM D402 IP 27 DISTILLATION OF CUTBACK ASPHALTIC
(BITUMINOUS) PRODUCTS

P/N
**1050/E GAS DISTILLATION OF CUT-BACK ASPHALTIC
APPARATUS**

Consisting of: 500 ml side arm distillation flask, Ø117 mm chimney with insulated metal shield, insulated cover split in two halves, Ø100 mm lamp screen, two sheets of 16 mesh gauze, 100 ml cylinder lamp, empty tube glass cooler, nozzle extensor made in glass. Supported on a height adjustable platform. Electrical heated model.

Technical specifications:

- Temperature: up to 360°C (680°F)
- Power supply: 230V ±10% 50/60Hz
- Power: 700W
- Weight: 8 kg

P/N
**1050/G GAS DISTILLATION OF CUT-BACK ASPHALTIC
APPARATUS**

Consisting of: 500 ml side arm distillation flask, Ø117 mm chimney with insulated metal shield, insulated cover split in two halves, Ø100 mm lamp screen, two sheets of 16 mesh gauze, 100 ml cylinder lamp, empty tube glass cooler, nozzle extensor made in glass. Supported on a height adjustable platform. Gas heated model.

Technical specifications:

- Temperature: up to 360°C (680°F)
- Weight: 6 kg

ACCESSORIES ON REQUEST

T-A58C/G THERMOMETER ASTM 8C IP 6C

1040



1050/E



1050/G



DEAN AND STARK, CRUDE OIL, DISTILLATION GASOLINE DILUENT, ASPHALT

ASTM D95 IP 74 EN 1428 WATER IN PETROLEUM PRODUCTS AND BITUMINOUS MATERIALS BY DISTILLATION

ASTM D244 STANDARD TEST METHODS AND PRACTICES FOR EMULSIFIED ASPHALTS

P/N

1090 DEAN AND STARK APPARATUS

Consisting of a mantle heater with steel rod and clamp, 500 ml flask, 400 mm condenser Liebig and graduated 10 ml receiver type "A" conical bottom graduated tube 0-1.0:0.1 1.0-10:0.2, tapered joints 29/32.

Technical specifications:

- Power supply: 230V $\pm$ 10% 50/60Hz
- Power: 300W

P/N

1090/2 DEAN AND STARK APPARATUS (2 POSITIONS)

Consisting of two mantles heater with steel rod and clamp, 500 ml flask, 400 mm condenser Liebig and graduated 10 ml receiver type "A" conical bottom graduated tube 0-1.0:0.1 1.0-10:0.2, tapered joints 29/32.

Technical specifications:

- Power supply: 230V $\pm$ 10% 50/60Hz
- Power: 600W

P/N

1090/3 DEAN AND STARK APPARATUS (3 POSITIONS)

Consisting of three mantles heater with steel rod and clamp, 500 ml flask, 400 mm condenser Liebig and graduated 10 ml receiver type "A" conical bottom graduated tube 0-1.0:0.1 1.0-10:0.2, tapered joints 29/32.

Technical specifications:

- Power supply: 230V $\pm$ 10% 50/60Hz
- Power: 900W

ACCESSORIES ON REQUEST

10-1093/25A RECEIVER TYPE "A", 25 ml

10-1093/5E RECEIVER TYPE "E", 5 ml

10-1093/5EP RECEIVER TYPE "E", 5 ml

10-1093/10A RECEIVER TYPE "A" 10 ml

10-1093/10E RECEIVER TYPE "E", 10 ml

10-1093/2F RECEIVER TYPE "F", 2 ml

10-1093/244 RECEIVER 25 ml ASTM D244

ASTM D4006 IP 358 ISO 9029 WATER IN CRUDE OIL BY DISTILLATION

P/N

1100 WATER IN CRUDE OIL DISTILLATION

Consisting of a mantle heater with steel rod and clamp, 1000 ml flask, 400 mm condenser Liebig and graduated 5 ml receiver type "E" round bottom graduated tube 0-5.0:0.05, tapered joints 29/32 and drying tube.

Technical specifications:

- Power supply: 230V $\pm$ 10% 50/60Hz
- Power: 300W
- Dimensions: $\varnothing$ 35x135 cm
- Weight: 4 kg

ASTM D322 IP 23 GASOLINE DILUENT IN USED GASOLINE ENGINE OILS BY DISTILLATION

P/N

1120 GASOLINE DILUENT DISTILLATION

Consisting of a mantle heater with steel rod and clamp, 1000 ml flask, 400 mm condenser Liebig and graduated 5 ml trap graduated tube 0-5.0:0.1, tapered joints 29/32

Technical specifications:

- Power supply: 230V $\pm$ 10% 50/60Hz
- Power: 300W

ASTM D244 STANDARD TEST METHODS AND PRACTICES FOR EMULSIFIED ASPHALTS

ASTM D6997 DISTILLATION OF EMULSIFIED ASPHALT

P/N

2710 RESIDUE BY DISTILLATION FOR EMULSIFIED ASPHALT

Aluminium alloy boiler with ring burner for heating, connection glass tube with protection shield, glass condenser for water circulation, 100 ml graduated cylinder, supporting ring, bases with rods, pliers.

ACCESSORIES ON REQUEST

10-0748 GAS CYLINDER 2 KG. Empty

10-0749 GAS REDUCER 30 MBAR

10-0747 GAS TUBE, L=5 M.

10-2711 SIEVE

T-AS7C/G THERMOMETER ASTM 7C



CRUDE AND FUEL OILS, ASPHALTENES, CONRADSON

EXTRACTION RESIDUES SEDIMENT

ASTM D473 IP 53 ISO 3735 SEDIMENT IN CRUDE OILS AND FUEL OILS BY THE EXTRACTION METHOD

P/N

1130 SEDIMENT IN CRUDE AND FUEL OILS BY EXTRACTION APPARATUS

Consisting of: 1000 ml Erlenmeyer flask, stainless steel basket supporting an extraction thimble of alundum, cooling metal coil, glass water cup.

ACCESSORIES ON REQUEST

1280/S6 HEATING DEVICE

2470/BCA120 ANALYTICAL BALANCE

ASTM D6560 IP 143 DIN 51595 DETERMINATION OF ASPHALTENES (HEPTANE INSOLUBLES) IN CRUDE PETROLEUM AND PETROLEUM PRODUCTS

P/N

1140 DETERMINATION ASPHALTENES APPARATUS

Consisting of: an electric heater with support rod and clamps, a reflux extractor with 24/29 and 34/45 ground-glass joint, an 500 ml Erlenmeyer flask 24/29 and a condenser 34/45 and one glass stopper.

Technical specifications:

- Power supply: 230V $\pm$ 10% 50/60Hz

- Power: 700W

ACCESSORIES ON REQUEST

10-1141 FILTER PAPER, pack of 100 pcs

15-1142/1000 ERLENMEYER FLASK, 1000 ml

15-1142/250 ERLENMEYER FLASK, 250 ml

15-1142/150 ERLENMEYER FLASK, 150 ml

15-1142/100 ERLENMEYER FLASK, 100 ml

2470/BCA250 ANALYTICAL BALANCE

ASTM D2547 (obs) IP 248 ISO 2083 LEAD IN GASOLINE, VOLUMETRIC CHROMATE METHOD

IP 77 DETERMINATION OF SALT CONTENT - EXTRACTION AND VOLUMETRIC TITRATION METHOD

IP 182 DETERMINATION OF INORGANIC ACIDITY OF PETROLEUM PRODUCTS - COLOUR INDICATOR TITRATION METHOD

P/N

2440 LEAD AND SALT EXTRACTION APPARATUS

Dual extractor apparatus with structure supports two independent sets of glassware: two boiling flask, two reflux condenser, two graduated funnel, two 600 ml beaker; controlled by two independent electronic regulator and cooling water supply.

Technical specifications:

- Power supply: 230V $\pm$ 10% 50/60Hz

- Power: 500W

- Dimensions: 36x43x72 cm

- Weight: 15 kg

ASTM D189 IP 13 ISO 6615 DIN 51551 CONRADSON CARBON RESIDUES OF PETROLEUM PRODUCTS

P/N

960 GAS CONRADSON

LPG-heated by Meker lamp fitted with safety valve. Insulating ring block, metal tripod holder with Nichrome triangle, stainless steel chimney. Inner porcelain crucible, middle iron crucible fitted with Skidmore lid and external iron crucible fitted with lid.

ACCESSORIES ON REQUEST

2470/BC160 ELECTRONIC BALANCE

ASTM D2416 COKING VALUE OF TAR AND PITCH

P/N

970 ELECTRIC CONRADSON

Muffle furnace, insulating ring block, stainless steel chimney. Inner porcelain crucible, middle iron crucible fitted with Skidmore lid and external iron crucible fitted with lid.

Technical specifications:

- Temperature: up to 1100°C (2012°F)

- Power supply: 230V $\pm$ 10% 50/60Hz

- Power: 4500W

- Dimensions: 56x66x65+34 cm

- Weight: 75 kg

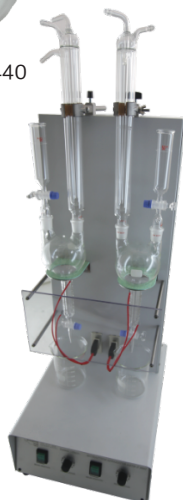
1130



1140



2440



960



970



RAMSBOTTOM, TOULENE TAR AND PITCH, ASH, SMOKE POINT

EXTRACTION RESIDUES SEDIMENT

ASTM D524 IP 14 ISO 4262 RAMSBOTTOM CARBON RESIDUES OF PETROLEUM PRODUCTS

P/N
980 RAMSBOTTOM

Heating block made of casting iron to 5 cells, external structure made of stainless steel, heating unit controlled by a digital thermoregulator PID with thermocouple J and over-temperature alarm., front digital thermometer. Cavity insulation with high efficiency.

Technical specifications:

- Temperature: from ambient to 600°C (1112°F)
- Stability: $\pm 1^\circ\text{C}$
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 1700W
- Dimensions: 50x50x70 cm
- Weight: 38 kg

ACCESSORIES ON REQUEST

2470/BCA200 ANALYTICAL BALANCE
10-0981 COKING BULB, pack of 10 pcs
10-0982 LUER-LOCK SYRINGE 10 ml
10-PIN/PTFE_220 TONG
10-0984 FILLING DEVICE
10-0986 SAMPLING DEVICE
10-0985 CONTROL BULB

ASTM D4072 TOULENE-INSOLUBLE CONTENT OF TAR AND PITCH

P/N
1110 DETERMINATION OF TOULENE IN TAR AND PITCH APPARATUS

Flask with metal cap condenser, wire support, extraction thimble of alundum. Without filter paper.

ACCESSORIES ON REQUEST

10-1112/30 ASTM SIEVE NO.30
10-1112/60 ASTM SIEVE NO.60
1280/S6 HEATING DEVICE

980



1110



2720



ASTM D482 IP 4 ISO 6245 ASH FROM PETROLEUM PRODUCTS

ASTM D874 IP 163 ISO 3987 SULFATED ASH FROM LUBRICATING OILS AND ADDITIVES

ASTM D4422 ASH IN ANALYSIS OF PETROLEUM COKE

P/N
2720 ASH DETERMINATION APPARATUS

The heat insulation is made in ceramics fibre in order to get a speed heating with a limited energetic consumption. Heating muffle, unthreaded from the back, in an only cast of refractory cordieletic material to provide for thermic joints. Resistors in Kanthal screened. Lateral opening door with pressure wedge and with a stop device for electric feeding when it opens, allowing the worker, during the loading and unloading of the muffle, to act with the utmost safety avoiding the contact with the burning part. Natural draught posterior exhaust of the smokes. Control panel is positioned on the furnace bottom containing a digital visualized thermoregulator and magnetic thermic for protection system.

Technical specifications:

- Temperature: from ambient to 1100°C (2012°F)
- Power: 2300W
- Dimensions: 40x58x54 cm external, 14.5x25x10 cm internal
- Weight: 40 kg

ACCESSORIES ON REQUEST

2470/BCA200 ANALYTICAL BALANCE
10-2722 CRUCIBLE 80 ml, pack of 5 pcs
15-0745 MEKER LAMP
10-2723 CRUCIBLE 150 ml, pack of 5 pcs
10-2724 CRUCIBLE 30 ml., pack of 5 pc

ASTM D1322 IP 57 SMOKE POINT OF KEROSENE AND AVIATION TURBINE FUEL

P/N
2530 SMOKE POINT

Brass lamp painted in black, millimeter white scale on a black background, window with mobile glass, brass candle with oil tank and cotton wick 180mm long, micro-metric setting.

Technical specifications:

- Dimensions: 35x25x20 cm
- Weight: 5 kg

ACCESSORIES ON REQUEST

10-2531 WICK, pack of 100 pcs
T-AS13C/B THERMOMETER ASTM 13C IP 47C

2530



**ASTM D4870 IP 375 IP 390 (PROC.A) ISO 10307-1-2
DETERMINATION OF TOTAL SEDIMENT IN RESIDUAL
FUELS**

**P/N
1150 TOTAL SEDIMENT**

Stainless steel structure with two filtration groups comprises two sintered brass disk, circuit of heating with steam and cooling with water; vacuum circuit complete with regulation valve, 500 ml flask fitted with protection mesh and vacuum manometer.

Technical specifications:

- Temperature: from ambient to 100°C (212°F)
- Dimensions: 64x22x46 cm
- Weight: 15 Kg

ACCESSORIES ON REQUEST

2470/BCA200 ANALYTICAL BALANCE

10-1152 PETRI DISH, pack of 2 pcs

10-1153 GFA FILTER, pack of 100 pcs

10-1154 STEAM GENERATOR

2460/SC5 COMPRESSOR/VACUUM PUMP

10-1155 AGEING BATH

10-1156 CONICAL FLASK 50 ml, pack of 10 pcs

10-1157 AIR CONDENSER TUBE, pack of 10 pcs

T-AS1C/B THERMOMETER ASTM 1C

T-AS22C/B THERMOMETER ASTM 22C IP 24C

T-AS25C/B THERMOMETER ASTM 25C

1150



2150/A



2150/B



**ASTM D611 (MET.A) IP 2 (MET.A) ANILINE POINT AND
MIXED ANILINE POINT OF PETROLEUM PRODUCTS AND
HYDROCARBON SOLVENTS**

**ASTM D611 (MET.B) IP 2 (MET.B) ANILINE POINT AND
MIXED ANILINE POINT OF PETROLEUM PRODUCTS AND
HYDROCARBON SOLVENTS**

**ASTM D611 (MET.C) IP 2 (ME.C) ANILINE POINT AND
MIXED ANILINE POINT OF PETROLEUM PRODUCTS AND
HYDROCARBON SOLVENTS**

**ASTM D611 (MET.D) IP 2 (MET.D) ANILINE POINT AND
MIXED ANILINE POINT OF PETROLEUM PRODUCTS AND
HYDROCARBON SOLVENTS**

P/N

2150/A ANILINE POINT METHOD "A"

Consisting of: electric heater device with rod and clamp, Pyrex jacket Ø40x175 mm, Pyrex test tube Ø25x150 mm, manual stirrer, two corks.

Technical specifications:

- Temperature: from ambient to 200°C (392°F)
- Power supply: 230V ±10% 50/60Hz
- Power: 700W
- Dimensions: 13x21x55 cm
- Weight: 3 kg

P/N

2150/B ANILINE POINT METHOD "B"

Consisting of: electric heater device with electronic regulator, speed regulator for pumping and stirrer of sample and light low voltage regulator; 800 ml Pyrex jar, adjustable support for pumping motor, Pyrex tube, Pyrex pump body, stainless steel pump rotor. Blocking cover with manual bath stirrer and cooling coil for external connection.

Technical specifications:

- Temperature: from ambient to 200°C (392°F)
- Power supply: 230V ±10% 50Hz
- Power: 700W
- Dimensions: 26x26x62 cm
- Weight: 6 kg

P/N

2150/C ANILINE POINT METHOD "C"

Consisting of: electric heater device, test tube Ø22x150 mm, corks, support and clamp.

Technical specifications:

- Temperature: from ambient to 200°C (392°F)
- Power supply: 230V ±10% 50/60Hz
- Power: 700W

P/N

2150/D ANILINE POINT METHOD "D"

Consisting of: electric heater device, 2 ml bulb, corks, support and clamp.

Technical specifications:

- Temperature: from ambient to 200°C (392°F)
- Power supply: 230V ±10% 50/60Hz
- Power: 700W

ACCESSORIES ON REQUEST

2470/BC160 ANALYTICAL BALANCE

T-AS33C THERMOMETER ASTM 33C IP 20C

T-AS34C THERMOMETER ASTM 34C IP 21C

T-AS35C THERMOMETER ASTM 35C IP 59C

ASTM D1319 IP 156 ISO 3837 HYDROCARBON TYPES IN LIQUID PETROLEUM PRODUCTS BY FLUORESCENT INDICATOR ADSORPTION

P/N

2240/S/2 FIA STANDARD (2 POSITIONS)

Flat support made in black material equipped with spring connections that block the standard column with spherical joint 28/12 with analyzer replaceable, 1000 mm stainless steel ruler with sliding pointers, socket places fitted with a reducer and manometer for controlling the nitrogen pumped into the columns, stainless steel lamps holder with 365nm UV light source.

Technical specifications:

- Power supply: 230V $\pm$ 10% 50/60Hz
- Power: 36W
- Dimensions: 45x20x210 cm
- Weight: 32 Kg

P/N

2240/S/4 FIA STANDARD (4 POSITIONS)

Technical specifications:

- Power supply: 230V $\pm$ 10% 50/60Hz
- Power: 72W
- Dimensions: 78x40x216 cm
- Weight: 37 kg

P/N

2240/P/2 FIA PRECISION (2 POSITIONS)

Flat support made in black material equipped with spring connections that block the precision bore column with spherical joint 28/12 with analyzer and tip of precision bore "12", 1000 mm stainless steel ruler with sliding pointers, socket places fitted with a reducer and manometer for controlling the nitrogen pumped into the columns, stainless steel lamps holder with 365nm UV light source.

Technical specifications:

- Power supply: 230V $\pm$ 10% 50/60Hz
- Power: 36W
- Dimensions: 45x20x210 cm
- Weight: 32 Kg

P/N

2240/P/4 FIA PRECISION (2 POSITIONS)

Technical specifications:

- Power supply: 230V $\pm$ 10% 50/60Hz
- Power: 72W
- Dimensions: 78x40x216 cm
- Weight: 37 kg

ACCESSORIES ON REQUEST

10-2241 PORTABLE VIBRATOR

10-2242 SYRINGE 1 ml

10-2242/A NEEDLE , pack of 6 pcs

10-2243 SILICA GELL 923, pack of 2 kg

10-2244 FLUORESCENT INDICATOR DYED GEL, pack of 40 g

10-2245 ATTAPULGITE, pack of 2 kg

10-2246 CLEANING CAPILLARY

ASTM D1551 (obs) IP 63 DIN 51768 SULFUR IN PETROLEUM OILS (QUARTZ-TUBE METHOD)

P/N

1460 QUARTZ TUBE APPARATUS

This two-place instrument is mounted on a plate painted with epoxide products and consists of an electric stainless steel furnace with two independent places, two digital thermoregulator with thermocouple, two scrubbers, a trap equipped with two inlet cocks for air or oxygen and two outlet cocks for combustion tubes made in transparent quartz. The tubes are provided with tapered connections at the inlet side and spherical connections at the delivery side. Set of primary and secondary absorbers on support, vacuum collector with two regulating valves, two flow-off valves, two LPG Meker lamps, flame filter mesh for combustion tubes.

Technical specifications:

- Temperature: up to 1100°C (2012°F)
- Power supply: 230V $\pm$ 10% 50/60Hz
- Power: 1200W
- Dimensions: 95x100x52 cm
- Weight: 32 kg

ACCESSORIES ON REQUEST

10-1464 COMBUSTION BOAT, pack of 3 pcs

2460/8203 VACUUM PUMP



1460

2240/S/4



2240/S/2



PARTICULATE CONTAMINATION

EXTRACTION RESIDUES SEDIMENT

ASTM D5452 IP 423 PARTICULATE CONTAMINATION IN AVIATION FUELS BY LABORATORY FILTRATIONS

P/N

1550 PARTICULATE CONTAMINATION IN AVIATION FUELS

Metallic structure conforming to method, metallic filter funnel supported by a base with support for closing of the tightness membrane, 5 liters filling container made in stainless steel with stopper for spillage, one receiving and one security 5 liters filtering flask. Connection flasks to flask by vacuum tube and the flask are provided with grounding system. Rubber stoppers and tubes for connection.

Technical specifications:

- Dimensions: 40x40x90 cm
- Weight: 13 kg

ACCESSORIES ON REQUEST

2460/8103 VACUUM PUMP

10-1553 MEMBRANE FILTERS, pack of 100 pcs

2470/BCA200 ANALYTICAL BALANCE



1550

IP 440 EN 12662 LIQUID PETROLEUM PRODUCTS - DETERMINATION OF CONTAMINATION IN MIDDLE DISTILLATES

P/N

1560 DETERMINATION OF CONTAMINATION IN MIDDLE DISTILLATES

Consisting of: filtering apparatus with glass funnel 250 ml and flask 1000 ml., one pack of 100 pcs of membrane filter of cellulose nitrate Ø47 mm 0.8 µm.

ACCESSORIES ON REQUEST

2460/8163 VACUUM PUMP

2470/BCA200 ANALYTICAL BALANCE



1560

ASTM D4176 FREE WATER AND PARTICULATE CONTAMINATION IN DISTILLATE FUELS

P/N

1170 FREE WATER & PARTICULATE CONTAMINATION IN DISTILLATE FUELS

Beaker 1000 ml., high shape without spout, bar chart, haze rating chart.

ASTM D6468 IP 467 HIGH TEMPERATURE STABILITY OF MIDDLE DISTILLATE FUELS

P/N

1180 HIGH TEMPERATURE STABILITY OF MIDDLE DISTILLATE FUELS

Structure made of stainless steel, support for six aging tubes, temperature regulation by digital thermoregulator PID with PT100 probe class A and over-temperature alarm, stainless steel heater, cooling coil, motor stirrer, insulated double wall, safety internal level for low liquid with warning lamp.

Technical specifications:

- Temperature: from ambient to 200°C (392°F)
- Stability: ±0.1°C
- Bath capacity: 5 about liters
- Power supply: 230V ±10% 50/60Hz
- Power: 1200W
- Dimensions: 27x39x45 cm
- Weight: 8 kg

ACCESSORIES ON REQUEST

10-1181 AGING TUBE, pack of 6 pcs



1180

ASTM D91 PRECIPITATION NUMBER OF LUBRICATING OILS
 ASTM D96 (obs) WATER AND SEDIMENT IN CRUDE OIL BY CENTRIFUGE METHOD (FIELD PROCEDURE)
 ASTM D483 UNSULFONATED RESIDUE OF PETROLEUM PLANT SPRAY OILS
 ASTM D893 INSOLUBLES IN USED LUBRICATING OILS
 ASTM D1019 (obs) IP 145 (obs) ISO 3840 OLEFINIC PLUS AROMATIC HYDROCARBONS IN PETROLEUM DISTILLATES
 ASTM D1290 SEDIMENT IN WATER-EMULSION POLISHES BY CENTRIFUGE
 ASTM D1796 WATER AND SEDIMENT IN FUEL OILS
 ASTM D1966 (obs) FOOTS IN RAW LINSEED OIL (GRAVIMETRIC METHOD)
 ASTM D2273 TRACE SEDIMENT IN LUBRICATING OILS
 ASTM D2709 WATER AND SEDIMENT IN MIDDLE DISTILLATE FUELS
 ASTM D2711 DEMULSIBILITY CHARACTERISTICS OF LUBRICATING OILS
 ASTM D4007 WATER AND SEDIMENT IN CRUDE OIL
 IP 75 (obs); IP 359; DIN 51793 WATER AND SEDIMENT IN CRUDE OIL BY CENTRIFUGE

P/N

1220 CENTRIFUGE

Four places model for anti-vibration table, is equipped with a star wheel that has 4 rings swinging up to 90°, max. 2000 rpm speed, 482.6 mm maximum rotation diameter. LCD touch display 4,3" for setup: the rcf or rpm speed, the testing time, the temperature and the tube type. Max. temperature 80°C. Lid fitted with safety device which stops the motor when the lid opens.

Technical specifications:

- Temperature: from ambient to 80°C (176°F)
- Stability: $\pm 1^\circ\text{C}$
- Power supply: 230V $\pm 10\%$ 50Hz
- Power: 2200W
- Dimensions: 60x76x62 (120 with cover open) cm
- Weight: 75 kg

ACCESSORIES ON REQUEST

2470/BC160 ELECTRONIC BALANCE

1230 WATER BATH

10-1221 BUCKET FOR PEAR-SHAPED TUBE, pack of 4 pcs

10-1224 PEAR-SHAPED TUBE, pack of 4 pcs

10-1222 BUCKET FOR CONE-SHAPED TUBE, pack of 4 pcs

10-1225 CENTRIFUGE TUBE CONE-SHAPED, pack of 4 pcs

10-1226 CENTRIFUGE TUBE CONE-SHAPED, pack of 4 pcs

10-1223 BUCKET FOR CONE-SHAPED TUBE, pack of 4 pcs

10-1227 CENTRIFUGE TUBE CONE-SHAPED, pack of 4 pcs

10-1224/W WATER BATH RACK

10-1225/W WATER BATH RACK

10-1227/W WATER BATH RACK

10-1200 SHAKING MACHINE

10-1201 STANDARD FLASK FOR SULFONATION 100%, pack of 4 pcs

10-1202 PRECISION FLASK FOR SULFONATION 10 ml., pack of 4 pcs

10-1203 PRECISION FLASK FOR SULFONATION 5 ml., pack of 4 pcs

10-1204 IP FLASK FOR SULFONATION 100%, pack of 4 pcs

10-1205 BUCKET FOR PRECISION FLASK

10-1206 ICE WATER JAR

10-1210 WATER AND SHAKER BATH

10-1211 SULFONATION FLASK 50%

10-1229 CORK, pack of 50 pcs

1220



HEAT OF COMBUSTION, GUM, RUBBER

EXTRACTION RESIDUES SEDIMENT

ASTM D240 IP 12 HEAT OF COMBUSTION OF LIQUID HYDROCARBON FUELS BY BOMB CALORIMETER

ASTM D4809 ASTM D2382 (obs) HEAT OF COMBUSTION OF LIQUID HYDROCARBON FUELS BY BOMB CALORIMETER (PRECISION METHOD)

ASTM D5865 ASTM D3286 (obs) GROSS CALORIFIC VALUE OF COAL AND COKE

ISO 1716 REACTION TO FIRE TESTS FOR PRODUCTS - DETERMINATION OF THE GROSS HEAT OF COMBUSTION (CALORIFIC VALUE)

ASTM D129 IP 61 DIN 51577 SULFUR IN PETROLEUM PRODUCTS (GENERAL BOMB METHOD)

ASTM D808 CHLORINE IN NEW AND USED PETROLEUM PRODUCTS (BOMB METHOD)

P/N

2060 CYLINDER MAHLER

Capacity 300ml, completely made of stainless steel included the two electrodes, cover with threaded displacing ring, gasket around the cover edge, an automatic inlet valve, a pin exhaust valve. Tested at 200 bar/20 MPa.

Technical specifications:

- Dimensions: Ø10x22 cm
- Weight: 4.5 kg

P/N

2070 CALORIMETER VESSEL

Handle for extraction, 2 sectors polycarbonate cover with holes for the passing of stirrer, blade stirrer, motor stirrer 100 rpm 24V with support, plier for thermometer, connection for Mahler bomb electrodes.

The vessel is fitted with ignition device including: low voltage outlet, start pushbutton, 24V socket for motor stirrer, ammeter.

Technical specifications:

- Power supply: 230V ±10% 50/60Hz
- Dimensions: 40x40x82 cm
- Weight: 29 kg

ACCESSORIES ON REQUEST

2470/BCA200 ANALYTICAL BALANCE

10-2061/A QUARTZ CRUCIBLE

10-2061/B STAINLESS STEEL CRUCIBLE

10-2061/C CRUCIBLE IP 12

10-2061/D PLATINUM CRUCIBLE

10-2063 REDUCER GEAR

10-2064 SUPPORT FOR COVER

10-2065 PRESS FOR PASTILS

10-2067 BENZOIC ACID FOR PASTILS, pack of 100 g

10-2068 BENZOIC ACID PASTILS, pack of 10 pcs

10-2074 SIEVE ASTM

10-2071/A IGNITION WIRE CHROMEL C, 5 m., pack of 10 pc:

10-2071/B PLATINUM IGNITION WIRE, 10 cm

10-2071/D COTTON WIRE, pack of 3 m

10-2062 IGNITION DEVICE

T-AS116C/B THERMOMETER ASTM 116C

T-AS117C/B THERMOMETER ASTM 117C

T-AS56C/B THERMOMETER 56C

ASTM D381 IP 131 IP 540 EN 26246 (obs) ISO 6246 DIN 51784 GUM CONTENT IN FUELS BY JET EVAPORATION

P/N

2410 EVAPORATION BATH "AIR AND STEAM JET"

5 concentric pre-heating coils with 5 wells connected to the central collector with socket for steam measurer, 5 mobile jets, insulated air gap. Built-in steam superheater with regulator and condensate discharge valves. Heating and superheater are controlled by a digital thermoregulator PID with over-temperature alarm. The bath is fitted with a flowmeter 700-6500 ml/s wrapped in a protection covering, steam flow-metric manometer. The superheater for steam can be disconnect.

Technical specifications:

- Temperature: from ambient to 250°C (482°F)
- Stability: ±3°C
- Power supply: 230V ±10% 50/60Hz
- Power: 3500W
- Dimensions: 75x52x90 cm
- Weight: 65 kg

ACCESSORIES ON REQUEST

2470/BCA200 ANALYTICAL BALANCE

10-2411 BEAKER, pack 5 pcs

10-PIN/PTFE_220 TONG

10-2413 STEAM GENERATOR

2460/SB40 AIR PUMP

T-AS3CG THERMOMETER ASTM 3C IP 73C

ASTM D454 RUBBER DETERIORATION BY HEAT AND AIR PRESSURE

ASTM D572 RUBBER-DETERIORATION BY HEAT AND OXYGEN

P/N

2390 SCOTT CYLINDER

Completely made in stainless steel, 300 ml capacity, PTFE gaskets, 3 internal hooks for testing, cover fitted with central column, stainless steel pin valve for recharge, hole for thermometer, pressure gauge 0-360 psi/25 bar, with burst disc 220 psi / 15 bar.



SAMPLING CYLINDER, CAN AND BOTTLE, WINDER

SAMPLING AND GAUGING

ASTM D1265 IP 51 (obs) IP 181 (obs); ISO 4257 SAMPLING LIQUEFIED PETROLEUM (LP) GASES

P/N

1630/50 SAMPLING CYLINDER 50 ML

1630/75 SAMPLING CYLINDER 75 ML

1630/150 SAMPLING CYLINDER 150 ML

1630/300 SAMPLING CYLINDER 300 ML

1630/500

1630/400 SAMPLING CYLINDER 400 ML

1630/500 SAMPLING CYLINDER 500 ML

1630/1000 SAMPLING CYLINDER 1000 ML

1630/2250 SAMPLING CYLINDER 2250 ML



Produced from cold drawn AISI 316L stainless steel tube and seamless construction, 1/4" NPT tapered connection and 1/4" NPT charge, fitted with 2 stainless steel AISI 316 valves and a 20% outage tube. 124 bar/1800 PSI pressure certificate.

ACCESSORIES ON REQUEST

10-1631 HANDLE

10-1635 PROTECTION COLLAR

10-1670 CONNECTOR FILTER

10-1680 CONNECTOR PIPE

ASTM D270 (obs) D4057 D4306 IP 51 (obs) ISO 3170 DIN 51750 STANDARD PRACTICE FOR MANUAL SAMPLING OF PETROLEUM AND PETROLEUM PRODUCTS

P/N

1330/40 BRASS SAMPLING CANS 38

1330/40

For heavy crude and heavy fuel oil, lubricating oils, heavy gas oils and non-transparent. Opening Ø38 mm. Capacity 946 ml., Ø80 mm., total height 350 mm., cork stopper with ring.

P/N

1330/20 BRASS SAMPLING CANS 19

For light crude oils, light lubricating oils, kerosene, gasoline, transparent gas oils. Opening Ø19 mm. Capacity 946 ml., Ø80 mm., total height 350 mm., cork stopper with ring.



P/N

1335/40 STAINLESS STEEL SAMPLING CANS 38

For heavy crude and heavy fuel oil, lubricating oils, heavy gas oils and non-transparent. Opening Ø38 mm. Capacity 946 ml., Ø80 mm., total height 350 mm., cork stopper with ring.

P/N

1335/20 STAINLESS STEEL SAMPLING CANS 19

For light crude oils, light lubricating oils, kerosene, gasoline, transparent gas oils. Opening Ø19 mm. Capacity 946 ml., Ø80 mm., total height 350 mm., cork stopper with ring.

P/N

1340 BACON SAMPLING VESSEL

1340

Made of brass, capacity 1 l, Ø80 mm, total height 250 mm, weight 1750 g, bottom opening valve.



P/N

10-1794/40 SAMPLE CONTAINER

Made of brass with double walled and internal weight, ground joint, Ø40 mm head, screwing metal cap, capacity 1 l

P/N

10-1794/20 SAMPLE CONTAINER

Made of brass with double walled and internal weight, ground joint, Ø20 mm head, screwing metal cap, capacity 1 l

P/N

1360 SAMPLING CAGE FOR SAMPLING BOTTLE

Made of brass, this item protects sampling glass bottles.

P/N

10-1365/C CLEAR GLASS SAMPLING BOTTLE, 1 l

P/N

10-1365/S DARK GLASS SAMPLING BOTTLE, 1 l

P/N

10-1421 BRASS CHAIN, 5 m

P/N

1350/O/9 BRASS SAMPLING TUBE

900 mm height, Ø34 mm

P/N

1350/O/15 BRASS SAMPLING TUBE

1500 mm height, Ø34 mm

P/N

1350/S/9 STAINLESS STEEL SAMPLING TUBE

900 mm height, Ø34 mm

P/N

1350/S/15 STAINLESS STEEL SAMPLING TUBE

1500 mm height, Ø34 mm

P/N

1410 WATER FINDING PASTE, 70 g, pack of 10 pcs

P/N

1430 LEVEL PASTE, 50 g, pack of 10 pcs

P/N

1420 GASOLINE PAPER, pack of 200 pcs

P/N

1390/10 WINDER

10 m length metric tape made of stainless steel, carrying handle, fitted with stopping system, graduated in cm and mm.

P/N

1390/20 WINDER

20 m length metric tape made of stainless steel, carrying handle, fitted with stopping system, graduated in cm and mm.

P/N

1390/30 WINDER

30 m length metric tape made of stainless steel, carrying handle, fitted with stopping system, graduated in cm and mm.

P/N

1390/50 WINDER

50 m length metric tape made of stainless steel, carrying handle, fitted with stopping system, graduated in cm and mm.

1390



ACCESSORIES ON REQUEST

10-1390/700/O BRASS COUNTERWEIGHT, 700 g

10-1390/1400/O BRASS COUNTERWEIGHT, 1400 g

10-1390/700/S STAINLESS STEEL COUNTERWEIGHT, 700 g

10-1390/1400/S STAINLESS STEEL COUNTERWEIGHT, 1400 g

ASTM D130 IP 154 ISO 2160 ISO 22160 DIN 51759
CORROSIVENESS TO COPPER FROM PETROLEUM
PRODUCTS BY COPPER STRIP TEST

ASTM D4048 IP 112 DETECTION OF COPPER CORROSION
FROM LUBRICATING GREASE

ASTM D4814 AUTOMOTIVE SPARK-IGNITION ENGINE
FUEL

ASTM D7667 DETERMINATION OF CORROSIVENESS TO
SILVER BY AUTOMOTIVE SPARK-IGNITION ENGINE
FUEL— THIN SILVER STRIP METHOD

ASTM D7671 CORROSIVENESS TO SILVER BY
AUTOMOTIVE SPARK-IGNITION ENGINE FUEL-SILVER
STRIP METHOD

IP 227 (obs) SILVER CORROSION AVIATION TURBINE
FUELS

P/N **1440 “COPPER/SILVER” CORROSION BATH**

Fully made in stainless steel, this bath has a capacity of about 13 liters for 4 copper corrosion test vessel. The temperature control is a thermoregulator PID with PT100 probe class A and over-temperature alarm, stainless steel heater, cooling coil, motor stirrer, insulated double wall, safety internal level for low liquid with warning lamp. The bath includes a cover with 4 lids and hooks for suspending the corrosion test vessel.

Technical specifications:

- Temperature: from ambient to 150°C (302°F)
- Stability: $\pm 0.1^\circ$
- Capacity: about 13 liters
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 1200W
- Dimensions: 30x49x50 cm
- Weight: 10 kg

ACCESSORIES ON REQUEST

10-1441/B CORROSION VESSEL
10-1441/D TEST TUBE, pack of 10 pcs
10-1441/T TEST TUBE HOLDER
10-1441/E RACK FOR 8 TEST TUBES
10-1441/F VIEWING TEST TUBE
10-1441/G COPPER STRIPS, pack of 10 pcs
10-1441/R SILVER STRIPS, pack of 5 pcs
10-1441/I 3 POSITIONS POLISHING VISE
10-1441/M COPPER STRIP CORROSION STANDARD
10-1441/O SILICON CARBIDE GRAIN 150 MESH, pack of 1 kg
10-1441/S SILICONE CARBIDE PAPER 220 GRIT, pack of 50 pcs
10-1442/A SILVER STRIPS, pack of 5 pcs
10-1442/B GLASSWARE IP227
10-1442/C SUSPENSION COVER
10-1442/E SILVER STRIP SUSPENSION ASSEMBLY
PROCEDURE "A"
10-1442/D SILVER STRIP CORROSION STANDARD
10-0332 DIGITAL STOPWATCH
T-AS12C/B THERMOMETER ASTM 12C IP 64C

1690



ASTM D849 COPPER STRIP CORROSION BY INDUSTRIAL
AROMATIC HYDROCARBON

P/N **1450 COPPER CORROSION BATH OF INDUSTRIAL AROMATIC HYDROCARBONS**

Structure made of stainless steel, cover with four openings for four sets of glassware. Temperature regulation by digital thermoregulator PID with PT100 probe class A and over-temperature alarm, stainless steel heater, cooling coil, motor stirrer, insulated double wall, safety internal level for low liquid with warning lamp.

Technical specifications:

- Temperature: from ambient to 150°C (302°F)
- Stability: $\pm 0.1^\circ$
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 1200W
- Dimensions: 45x40x56 cm
- Weight: 21 kg

ACCESSORIES ON REQUEST

10-1452 250 ml FLASK
10-1453 250 mm CONDENSER
10-1454 COPPER WIRE $\varnothing 1.6$ mm x 1 m.
10-1441/F VIEWING TEST TUBE
10-1441/G COPPER STRIPS, pack of 10 pcs
10-1441/I 3 POSITIONS POLISHING VISE
10-1441/L SILICON CARBIDE PAPER 240 GRIT, pack of 50 pcs
10-1441/M COPPER STRIP CORROSION STANDARD
10-1441/O SILICON CARBIDE GRAIN 150 MESH, pack of 1 kg
T-AS12C/B THERMOMETER ASTM 12C IP 64C

ASTM D1838 IP 411 ISO 6251 COPPER STRIP CORROSION
BY LIQUEFIED PETROLEUM (LP) GASES

P/N **1690 LPG CORROSION VESSEL**

Stainless steel vessel with two needle valves in stainless steel. Screw top closure and O-ring sealing gasket. Tested at 1015 psi (70 bar)

ACCESSORIES ON REQUEST

1770 THERMOSTATIC BATH
10-1692 COPPER STRIPS, pack of 10 pcs
10-1441/F VIEWING TEST TUBE
10-1441/L SILICON CARBIDE PAPER 240 GRIT, pack of 50 pcs
10-1441/O SILICON CARBIDE GRAIN 150 MESH, pack of 1 kg
10-1441/I 3 POSITIONS POLISHING VISE
10-1441/M COPPER STRIP CORROSION STANDARD
T-AS12C/B THERMOMETER ASTM 12C IP 64C

1440



1450



CAST IRON, CAST ALUMINIUM, ENGINE COOLANTS CORROSION

IP 125 DIN 51360-1 DETERMINATION OF CAST IRON CORROSION CHARACTERISTICS OF PETROLEUM PRODUCTS

P/N

2210/125 CAST IRON CORROSION

100x100x6 mm thick cast-iron plate, 250 g 6x1.5-3 mm steel millings, desiccator test chamber, pipette, sieve 600 µm

IP 287 DIN 51360-2 TESTING OF COOLING LUBRICANTS; DETERMINATION OF CORROSION PREVENTING CHARACTERISTICS OF COOLING LUBRICANTS MIXED WITH WATER; CHIP/FILTER PAPER METHOD

P/N

2210/287 CAST IRON CORROSION

2 liters beaker, 120x19x1.5 mm stainless steel stirrer palette, 250 g. cast iron drillings, 50 ml syringe with needle, 70 mm filter with 40 mm centering ring, sieves: one 2 mm and one 4 mm

ASTM D4340 CORROSION OF CAST ALUMINIUM ALLOYS IN ENGINE COOLANTS UNDER HEAT-REJECTING CONDITIONS

P/N

2220 CORROSION CAST ALUMINIUM

Apparatus composed of base painted with antacid epoxy products with electrical part thermoregulator a with thermocouple J and digital timer. Safety screen surrounding cell, truss with plates and stainless steel tie rods at the center, which is placed in a Pyrex glass tube, with related fittings, safety valve, pressure manometer 0-400 kPa, tap and plug load.

Technical specifications:

- Temperature: from ambient to 160°C (320°F)
- Stability: $\pm 0.5^\circ\text{C}$
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 950W
- Dimensions: 26x34x110 cm
- Weight: 18 kg

P/N

2220/2 CORROSION CAST ALUMINIUM (2 POSITIONS)

2 Independent positions apparatus composed of base painted with antacid epoxy products with electrical part thermoregulator a with thermocouple J and digital timer. Safety screen surrounding cell, truss with plates and stainless steel tie rods at the center, which is placed in a Pyrex glass tube, with related fittings, safety valve, pressure manometer 0-400 kPa, tap and plug load.

Technical specifications:

- Temperature: from ambient to 160°C (320°F)
- Stability: $\pm 0.5^\circ\text{C}$
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 1900W
- Dimensions: 35x43x110 cm
- Weight: 35 kg

ACCESSORIES ON REQUEST

10-2221 ALUMINUM TEST SPECIMEN

2460/2220 PUMP

ASTM D1384 CORROSION TEST FOR ENGINE COOLANTS IN GLASSWARE

P/N

2330 CORROSION TESTER FOR ENGINE ANTIFREEZE

Thermoregulated electric-plate heater, 1 liter Becker fitted with a rubber stopper, condenser, tube for air diffusion, flowmeter system complete with flowmeter 6 l/h air flow with pin valves, clamp to support the glassware.

Technical specifications:

- Temperature: from ambient to 160°C (320°F)
- Stability: $\pm 1^\circ\text{C}$
- Power: 700W
- Dimensions: 26X25x150 cm
- Weight: 6 kg

P/N

2330/4 CORROSION TESTER FOR ENGINE ANTIFREEZE

System at 4 independent positions, thermoregulated electric-plate heater, four 1 liter beakers fitted with a rubber stopper, four condensers, four tubes for air diffusion, flowmeters system complete with four flowmeters 6 l/h air flow with pin valves, clamp to support the glassware.

Technical specifications:

- Temperature: from ambient to 160°C (320°F)
- Stability: $\pm 1^\circ\text{C}$
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 700W
- Dimensions: 26X25x150 cm
- Weight: 15 kg

ACCESSORIES ON REQUEST

10-2330 METAL TEST SPECIMENS SET

10-2331 DEWAR WITH TRAP

10-2331/4 DEWAR WITH 4 TRAP

2460/SC5 COMPRESSOR/VACUUM PUMP

T-AS1C/B THERMOMETER ASTM 1C

2330



2220/2



ASTM D943 ISO 4263 DIN 51587 OXIDATION CHARACTERISTICS OF INHIBITED MINERAL OILS
 ASTM D2274 IP 388 OXIDATION STABILITY OF DISTILLATE FUEL OIL (ACCELERATED METHOD)
 ASTM D2893 OXIDATION CHARACTERISTICS OF EXTREME-PRESSURE LUBRICATION OILS
 ASTM D4310 IP 157 DETERMINATION OF SLUDGING AND CORROSION TENDENCIES OF INHIBITED MINERAL OILS
 ASTM D7462 IP 388 ISO 12205 OXIDATION STABILITY OF BIODIESEL (B100) AND BLENDS OF BIODIESEL WITH MIDDLE DISTILLATE PETROLEUM FUEL (ACCELERATED METHOD)

P/N

1920 OXIDATION STABILITY BATH - TOST

6 positions stainless steel, insulated double wall, double bottom for supporting the cells, refrigerating system with pipelines for water inlet and outlet. Temperature control by digital thermoregulator PID with PT100 probe class A and over-temperature alarm, stainless steel heater, cooling coil, motor stirrer, safety internal level for low liquid with warning lamp.

Technical specifications:

- Temperature: from ambient to 130°C (266°F)
- Stability: $\pm 0.1^\circ\text{C}$
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 2200W
- Capacity: 55 liters
- Dimensions: 57x47x73 cm
- Weight: 32 Kg

P/N

1920/S OXIDATION STABILITY DRY BATH - TOST

8 positions dry bath in aluminum block, insulated double wall, refrigerating system with pipelines for water inlet and outlet. The temperature control is a thermoregulator PID with PT100 probe class A and over-temperature alarm.

Technical specifications:

- Temperature: from ambient to 130°C (266°F)
- Stability: $\pm 0.1^\circ\text{C}$
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power 2100W
- Dimensions: 51x55x66 cm
- Weight: 68 kg

ACCESSORIES ON REQUEST

- 10-1983 FLOWMETER 0.6-4 l/h
- 10-1920/2893 FLOWMETER AIR 10 l/h
- 10-1921 OXIDATION CELL
- 10-1921/BA AIR DELIVERY TUBE
- 10-1174/200 BEAKER, 200 ml
- 15-1560/1000 FILTER ASSEMBLY
- 1561/1000 FILTERING FLASK, 1000 ml
- 10-1560/4310 MEMBRANE FILTERS, pack of 100 pcs
- 10-1560/2274 MEMBRANE FILTERS, pack of 100 pcs
- 10-1560/2274/2 MATCHED WEIGHT PAIR FILTERS, pack of 50 pcs
- 10-1560/7462 MEMBRANE FILTERS, pack of 100 pcs
- 10-1560/12205 MEMBRANE FILTERS, pack of 100 pcs
- 10-1922 COPPER/STEEL CATALYST WIRES, l=3 m pack of 5 pcs
- 10-1922/CU COPPER CATALYST WIRES, l=3 m pack of 5 pcs
- 10-1922/SS STEEL CATALYST WIRES, l=3 m pack of 5 pcs
- 10-1923 OXIDATION CELL THERMOMETER BRACKET
- 10-1921/SUP DARKENED OXIDATION TEST TUBE RACK 8
- 10-1924/10 SYRINGE LUER-LOCK 10 ml.
- 10-1924/50 SYRINGE LUER-LOCK 50 ml.
- 10-1925 SAMPLING TUBE SPACER
- 10-1926 SAMPLING TUBE HOLDER
- 10-1927 MANDREL
- 10-1928 REDUCER MANOMETER FOR O₂
- 10-1929 REDUCER MANOMETER FOR AIR
- 10-1441/P SILICONE CARBIDE CLOTH 100 GRIT, pack of 25 m
- 10-0371/50 SILICONE OIL 50 cSt, pack of 20 kg
- 2460/8163 VACUUM PUMP
- 1280/S6 ELECTRICAL HEATER DEVICE
- 2470/BCA200 ANALYTICAL BALANCE
- T-AS40C/B THERMOMETER ASTM 40 IP 70C
- T-AS137C/B THERMOMETER ASTM 137C

1920



1920/S



OXIDATION STABILITY- RPVOT(RBOT)/TFOUT, OILS

OXIDATION

ASTM D2112 OXIDATION STABILITY OF INHIBITED MINERAL INSULATING OIL BY PRESSURE VESSEL

ASTM D2272 OXIDATION STABILITY OF STEAM TURBINE OILS BY ROTATING PRESSURE VESSEL

ASTM D4742 OXIDATION STABILITY OF GASOLINE AUTOMOTIVE ENGINE OILS BY THIN-FILM OXYGEN UPTAKE(TFOUT)

ASTM D7098 OXIDATION STABILITY OF LUBRICANTS BY THIN-FILM OXYGEN UPTAKE (TFOUT) CATALYST B

IP 229 DETERMINATION OF THE RELATIVE OXIDATION STABILITY BY ROTATING BOMB OF MINERAL TURBINE OIL

P/N

1970/AUT AUTOMATIC RPVOT BATH (RBOT)/TFOUT

Two positions stainless steel structure and tank where the two oxidation vessels are turned at variable rpm with a 30° angle according to ASTM specifications. 7" touch screen LCD-pc for complete control of instrument: temperature, rotational speed of oxidation vessel, real time pressure graph in bar/psi/kPa, over 500000 test results memory, USB. Two pressure sensor, stainless steel heater, motor stirrer, insulated double wall, safety internal level for low liquid with warning lamp.

Technical specifications:

- Temperature: from ambient to 180°C (356°F)
- Stability: $\pm 0.1^\circ\text{C}$
- Capacity: 70 liters about
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 3200W
- Dimensions: 90x60x70 cm
- Weight: 85 kg

P/N

1970 RPVOT BATH (RBOT)/TFOUT

Two positions stainless steel structure and tank where the two oxidation vessels are turned at 100 rpm with a 30° angle according to ASTM specifications. The temperature control is a thermoregulator PID with PT100 probe class A and over-temperature alarm, stainless steel heater, motor stirrer, insulated double wall, safety internal level for low liquid with warning lamp.

Technical specifications:

- Temperature: from ambient to 180°C (356°F)
- Stability: $\pm 0.1^\circ\text{C}$
- Capacity: 70 liters about
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 3200W
- Dimensions: 90x60x70 cm
- Weight: 85 kg

ACCESSORIES ON REQUEST

10-1971 OXIDATION VESSEL RPVOT (RBOT)/TFOUT

10-MANDIG/30 DIGITAL MANOMETER

10-MANDIG/30/C CERTIFICATE DIGITAL MANOMETER

10-1974/A SAMPLE CONTAINER

10-1974/B PTFE DISK Ø57.2x1.6 mm

10-1974/C GLASS COVER Ø50.8 mm.

10-1974/D HOLD-DOWN SPRING

10-1974/E ALUMINUM INSERT Ø6.03x7.46 cm

10-1974/F SAMPLE CONTAINER

10-1974/G PTFE COVER

10-1977/A CATALYST "A", pack of 3 kit (ASTM D4742)

10-1977/B CATALYST "B", pack of 3 kit (ASTM D7098)

10-1922/CU COPPER CATALYST, l=3 m pack of 5 pcs

10-1441/P SILICON CARBIDE ABRASIVE CLOTH 100 GRIT, pack of 25 m

10-0371/350 SILICONE OIL 350 cSt, pack of 25 kg

2470/EL200 ELECTRONIC BALANCE

2470/BC160 ELECTRONIC BALANCE

T-AS96C/B THERMOMETER ASTM 96C

T-AS102C/B THERMOMETER ASTM 102C IP 83C

T-IP37C/G THERMOMETER IP 37C

ASTM D4636 CORROSIVENESS AND OXIDATION STABILITY OF HYDRAULIC OILS, AIRCRAFT TURBINE ENGINE LUBRICANTS, AND OTHER HIGHLY REFINED OILS

ASTM D5968 EVALUATION OF CORROSIVENESS OF DIESEL ENGINE OIL AT 121°C

ASTM D6594 EVALUATION OF CORROSIVENESS OF DIESEL ENGINE OIL AT 135°C

P/N

1990 STABILITY OXIDATION AND CORROSION BATH

6 positions dry bath. Stainless steel structure with aluminum block with 6 holes for sample tubes, one digital thermoregulator PID with over-temperature alarm, 6 digital thermometers with 6 thermocouples for the sample tube, 6 flowmeters for air 10 l/h with relative valves of regulation, support for glasswares.

Technical specifications:

- Temperature: from ambient to 400°C (752°F)
- Stability: $\pm 0.5^\circ\text{C}$
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 3000W
- Dimensions: 86x32x120 cm
- Weight: 110 kg

ACCESSORIES ON REQUEST

10-1991 SAMPLE TUBE

10-1991/OST OIL SAMPLING TUBE

10-1992 SQUARE SHAPED METAL SPECIMENS

10-1993 WASHER SHAPED METAL SPECIMENS

10-1994 SQUARE METAL SPECIMENS

10-1995 HANGER

10-1997 SQUARE METAL SPECIMENS

10-2574 SYRINGE 100 ml

1220 CENTRIFUGE

10-1222 BUCKET FOR CONE-SHAPED TUBE, pack of 4 pcs

10-1225 CENTRIFUGE TUBE CONE-SHAPED, pack of 4 pcs

10-1996 ALUMINUM OXIDE PAPER 240 GRIT,

pack of 50 pcs

10-1441/L SILICON CARBIDE PAPER 240 GRIT,

pack of 50 pcs

10-1441/O SILICON CARBIDE GRAINS 150 MESH,

pack of 1 kg

10-1441/Q SILICON CARBIDE PAPER 400 GRIT,

pack of 50 pcs

2470/BCA250 ANALYTICAL BALANCE

2470/EL3000 ELECTRONIC BALANCE

1970



1990



OXIDATION STABILITY- MINERAL INSULATING OIL

OXIDATION

ASTM D2440 IP 307 (obs) ISO 7624 OXIDATION STABILITY OF MINERAL INSULATING OIL

IP 48 DETERMINATION OF OXIDATION CHARACTERISTICS OF LUBRICATING OIL

IP 280 PETROLEUM PRODUCTS AND LUBRICANTS - INHIBITED MINERAL TURBINE OILS - DETERMINATION OF OXIDATION STABILITY

IP 306 DETERMINATION OF OXIDATION STABILITY OF STRAIGHT MINERAL OIL

IP 335 (obs) OXIDATION STABILITY OF INHIBITED MINERAL INSULATING OILS

EN 61125-A TEST FOR EVALUATING THE OXIDATION STABILITY OF UNUSED UNINHIBITED MINERAL INSULATING OIL

EN 61125-B TEST FOR EVALUATING THE OXIDATION STABILITY OF UNUSED INHIBITED MINERAL INSULATING OILS BY MEASUREMENT OF THE INDUCTION PERIOD

EN 61125-C TEST FOR EVALUATING THE OXIDATION STABILITY OF UNUSED HYDROCARBON BASED INSULATING LIQUIDS UNDER ACCELERATED CONDITIONS REGARDLESS OF WHETHER OR NOT ANTIOXIDANT ADDITIVES ARE PRESENT

ACCESSORIES ON REQUEST

10-1980 OXIDATION/ABSORPTION TUBE

10-1981 CONNECTION SET

10-1983 FLOWMETER 0.6-4 l/h

10-1984 FLOWMETER 0.1-1.55 l/h

10-1985 FLOWMETER 2.5-25 l/h

10-1987 SOAP BUBBLE FLOWMETER

10-1928 REDUCER MANOMETER FOR O₂

10-1929 REDUCER MANOMETER FOR AIR

10-1988 COPPER CATALYST, l=3 m pack of 5 pcs

10-1441/P SILICON CARBIDE ABRASIVE CLOTH 100 GRIT, pack of 25 m

10-1988/P SILICON CARBIDE ABRASIVE CLOTH 220 GRIT, pack of 25 m

10-0371/350 SILICONE OIL 350 cSt, pack of 25 kg

10-1986 PORCELAIN CRUCIBLE, pack of 5 pcs

10-1989 FILTER FUNNEL 125 ml.

2470/BCA200 ANALYTICAL BALANCE

10-0332 DIGITAL STOPWATCH

T-AS9C/B THERMOMETER ASTM 9C IP 15C

T-AS40C/B THERMOMETER ASTM 40C IP 80C

T-AS41C/B THERMOMETER ASTM 41C IP 81C

T-IP22C/G THERMOMETER IP22C

P/N

1980 OXIDATION STABILITY BATH

Six positions oil bath with double bottom. Stainless steel structure with insulation double wall, support for the flowmeters and adsorption tubes. Temperature control by digital thermoregulator PID with PT100 probe class A and over-temperature alarm, stainless steel heater, cooling coil, motor stirrer, safety internal level for low liquid with warning lamp.

Technical specifications:

- Temperature: from ambient to 210°C (410°F)
- Stability: $\pm 0.1^\circ\text{C}$
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 2400W
- Dimensions: 60x57x52 cm
- Weight: 35 Kg

P/N

1980/S OXIDATION STABILITY DRY BATH

Eight positions dry bath in aluminum block. Stainless steel structure with insulation double wall, support for the flowmeters and adsorption tubes. The temperature control is a thermoregulator PID with PT100 probe class A and over-temperature alarm.

Technical specifications:

- Temperature: from ambient to 130°C (266°F)
- Stability: $\pm 0.1^\circ\text{C}$
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power 1900W
- Dimensions: 45x45x52 cm
- Weight: 45 kg

1980/S



1980



OXIDATION STABILITY- GREASE, GASOLINE

OXIDATION

ASTM D942 IP 142 DIN 51808 OXIDATION STABILITY OF LUBRICATING GREASES BY THE OXYGEN PRESSURE VESSEL METHOD

P/N

2020 OXIDATION STABILITY GREASES BATH

Oil bath with structure of stainless steel, insulated double wall, cover with two holes for oxidation pressure vessel. Temperature regulation by digital thermoregulator PID with PT100 probe class A and over-temperature alarm, stainless steel heater, motor stirrer, safety internal level for low liquid with warning lamp.

Technical specifications:

- Temperature: from ambient to 120°C (248°F)
- Stability: $\pm 0.1^\circ\text{C}$
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 2400W
- Dimensions: 56x36x45 cm
- Weight: 26 kg

P/N

2020/S OXIDATION STABILITY GREASES DRY BATH

Dry bath with aluminum block, structure of stainless steel, insulated double wall, cover with two holes for oxidation pressure vessel.

Temperature regulation by digital thermoregulator PID with PT100 probe class A and over-temperature alarm.

Technical specifications:

- Temperature: from ambient to 120°C (248°F)
- Stability: $\pm 0.1^\circ\text{C}$
- Power supply: 230V $\pm 10\%$ 50/60Hz

ACCESSORIES ON REQUEST

10-2020 OXIDATION PRESSURE VESSEL

10-2021 DISH, pack of 5 pcs

10-2022 PRESSURE GAUGE

10-MANDIG/30 DIGITAL MANOMETER

10-2023 DISH HOLDER

15-2063/R HY-FLEX JUNCTION FOR O₂

2470/EL200 ELECTRONIC BALANCE

T-AS22C/B THERMOMETER ASTM 22C IP24C

ASTM D525 IP 40 ISO 7536 DIN 51780 OXIDATION STABILITY OF GASOLINE (INDUCTION PERIOD METHOD)

ASTM D873 IP 138 DIN 51799 OXIDATION STABILITY OF AVIATION FUELS (POTENTIAL RESIDUE METHOD)

P/N

2010/2 OXIDATION STABILITY GASOLINE BATH (2 POSITIONS)

P/N

2010/4 OXIDATION STABILITY GASOLINE BATH (4 POSITIONS)

Completely made in stainless steel. Temperature regulation by thermoregulator PID with PT100 probe class A and over-temperature alarm, stainless steel heater, motor stirrer, insulated double wall, safety internal level for low liquid with warning lamp.

Technical specifications:

- Temperature: from ambient to 120°C (248°F)
- Stability: $\pm 0.1^\circ\text{C}$
- Capacity: 30 liters
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 2400W
- Dimensions: 62x38x100 cm
- Weight: 35 kg

P/N

2010/S/2 OXIDATION STABILITY GASOLINE DRY BATH (2 POSITIONS)

P/N

2010/S/4 OXIDATION STABILITY GASOLINE DRY BATH (4 POSITIONS)

Dry bath with aluminum block, structure of stainless steel. Temperature regulation by thermoregulator PID with PT100 probe class A and over-temperature alarm, stainless steel heater, motor stirrer, insulated double wall, safety internal level for low liquid with warning lamp.

Technical specifications:

- Temperature: from ambient to 120°C (248°F)
- Stability: $\pm 0.1^\circ\text{C}$
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 2000W
- Dimensions: 75x72x90 cm
- Weight: 45 kg

ACCESSORIES ON REQUEST

10-2010 OXIDATION PRESSURE VESSEL

10-2011/2 RECORDING MANOMETER,

10-2011/3 RECORDING MANOMETER,

10-MANDIG/30 DIGITAL MANOMETER

10-2002 GLASS SAMPLE CONTAINER

10-2012 COPPER JUNCTION

10-2013 HY-FLEX JUNCTION FOR O₂

10-2014 PRESSURE REDUCER

2470/BCA200 ANALYTICAL BALANCE

10-2016 COOLING TANK

T-AS22C/B THERMOMETER ASTM 22C IP 24C

2020



2010/2

2010/S/4



RUST-PREVENTING, HUMIDITY CABINET

RUST

ASTM D665 IP 135 RUST-PREVENTING CHARACTERISTICS OF INHIBITED MINERAL OIL IN THE PRESENCE OF WATER

ASTM D3603 RUST-PREVENTING CHARACTERISTICS OF STEAM TURBINE OIL IN THE PRESENCE OF WATER (HORIZONTAL DISK METHOD)

ASTM D5534 VAPOR-PHASE RUST-PREVENTING CHARACTERISTICS OF HYDRAULIC FLUIDS

ISO 7120 PETROLEUM PRODUCTS AND LUBRICANTS - PETROLEUM OILS AND OTHER FLUIDS - DETERMINATION OF RUST-PREVENTING CHARACTERISTICS IN THE PRESENCE OF WATER

P/N

1940/4 RUST PREVENTION BATH (4 POSITIONS)

P/N

1940/6 RUST PREVENTION BATH (6 POSITIONS)

Oil bath completely made of stainless steel, with double insulated wall. Temperature regulation by digital thermoregulator PID with PT100 probe class A and over-temperature alarm, stainless steel heater, motor stirrer, safety internal level for low liquid with warning lamp.

T-shaped stainless steel stirrers rotate in their glasses at a variable speed by electronic regulator. Transmission frame and upper weir with bearings block and pulley.

Technical specifications:

- Temperature: from ambient to 120°C (248°F)
- Stability: $\pm 0.1^\circ\text{C}$
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 1800W
- Dimensions: 65x22x60 cm
- Weight: 35 kg
- Dimensions: 115x22x60 cm
- Weight: 40 kg

ACCESSORIES ON REQUEST

10-1172 BEAKER, 400 ml
 10-1942/665 TEST ROD
 10-1947 ALUMINUM OXIDE CLOTH 150, pack of 50 pcs
 10-1948 ALUMINUM OXIDE CLOTH 280, pack of 50 pcs
 10-1940 GRINDING AND POLISHING DEVICE
 10-1941/665AB BEAKER COVER
 10-1943/AB HOLDER
 10-1945/AB "T" STIRRER
 10-1941/665C BEAKER COVER
 10-1943/C HOLDER
 10-1945/C AUXILIARY STIRRER
 10-1958 BEAKER, 25 ml
 10-1941/3603 BEAKER COVER
 10-1942/3603 TEST SPECIMENS
 T-AS9C/B THERMOMETER ASTM 9C IP 15C
 T-IP21C/B THERMOMETER IP 21C

1940/4



ASTM D1748 RUST PROTECTION BY METAL PRESERVATIVES IN THE HUMIDITY CABINET

P/N

2500 HUMIDITY CABINET

Thermostatic 18/8 stainless steel tank with double wall. Hinged cover consists of layer of desized cotton cloth secured to an aluminium frame, basket rotating at 1/3 rpm housing 33 sample plates. Air is distributed through 20 diffuser ball-shape placed on the tank bottom. 4,3" touch LCD display with PID controller, over-temperature alarm, airflow control by digital flowmeter and pH indicator. The water level is kept constant by a level switch and a external solenoid valve. Electric heating with 2 armored stainless steel heaters. Two analog thermometers and 33 hooks left and 33 right.

Technical specifications:

- Temperature: from ambient to 50°C (122°F)
- Stability: $\pm 1^\circ\text{C}$
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 1000W
- Dimensions: 100x80x98 cm
- Weight: 95 kg

ACCESSORIES ON REQUEST

10-2501 AIR SYSTEM

10-2502 PANEL, pack of 5 pcs

10-2504 DUMMY PANEL

10-2507 ALUMINUM OXIDE CLOTH 240, pack of 50 pcs

10-2509 pH PAPER

2500



1940/6



ASTM D1837 VOLATILITY OF LIQUEFIED PETROLEUM (LP) GASES

ASTM D2158 IP 317 RESIDUES IN LIQUEFIED PETROLEUM (LP) GASES

P/N

1700 VOLATILITY OF LPG APPARATUS

18/8 stainless steel bath with double wall, copper cooling coil with one ¼" and one ⅛" valve, internal support for tube.

Technical specifications:

- Dimensions: 36x15x40 cm

- Weight: 3 kg

ACCESSORIES ON REQUEST

10-1701 WEATHERING TUBE

10-1702 SUPPORT WITH BATH

10-1187/P PRECISION CYLINDER TYPE B

10-1703 SYRINGE

10-1704 FILTER PAPER, pack of 100 pcs

10-1705 COPPER WIRE

T-AS5C/B THERMOMETER ASTM 5C IP 1C

T-AS6C/T THERMOMETER ASTM 6C IP 2C

T-AS57C/B THERMOMETER ASTM 57C

T-AS99C/B/ARM THERMOMETER ASTM 99C ARMORED

ASTM D1657 DENSITY OR RELATIVE DENSITY OF LIGHT HYDROCARBONS BY PRESSURE HYDROMETER

IP 235 ISO 3993 DETERMINATION OF DENSITY OF LIGHT HYDROCARBONS - PRESSURE HYDROMETER METHOD

P/N

1750 HYDROMETER

Chamber made of PMMA Ø50X36 mm L=440 mm with mesh for safety, metallic headers coupled with six stainless steel tie rods, neoprene gaskets, three ¼" needle valves: inlet and outlet valves are mounted in the base and third vapor vent valve on the top of instrument, stainless steel manometer Ø100 mm scale 0-400 psi/ 2758 kPa.

Working pressure max. 14 bar / 200 psi / 1379 kPa.

With hydraulic testing certificate at 28 bar / 400 psi / 2758 kPa

Technical specifications:

- Dimensions: Ø17x66 cm

- Weight: 3.2 kg

ACCESSORIES ON REQUEST

1770 THERMOSTATIC BATH

10-1751 THERMO-HYDROMETER ASTM 310H

10-1752 THERMO-HYDROMETER ASTM 101H

10-1765 HYDROMETER

10-1766 HYDROMETER

T-AS12C/B THERMOMETER ASTM 12C IP 64C

T-1750/BS THERMOMETER BS593 B60C/TOTAL

T-1750/ISO THERMOMETER ISO R653 Scale -15° +45°C

EN 15469 FREE WATER IN LIQUEFIED PETROLEUM GAS BY VISUAL INSPECTION

P/N

1760 FREE WATER IN LPG APPARATUS

Tubular chamber made of acrylic resins 250 ml. capacity, metallic headers coupled stainless steel tie-rods, neoprene gaskets, fitted with a inlet bottom valve and a top vent valve, hole for thermometer. Tested at 15 bar hydraulic pressure

GPA 2140 PROPANE DRYNESS TEST

P/N

1780 COBALT BROMIDE APPARATUS

Consists of an indicator with nickel-plated brass protective sheath with flow-off orifice on the header, fitted with a screw cap, tightness-proof Pyrex capillary tube placed on neoprene gaskets containing the bromide indicator; a copper cooling coil with threaded T-shaped connection ¼" and ⅛" needle valve, a manometer ¼" connection, 0-15 bar/232 psi scale, a Ø130x230 mm, borosilicate jar.

ACCESSORIES ON REQUEST

10-1784 COBALT BROMIDE, pack of 50 g



HYDROGEN SULFIDE, DEW POINT, SCHILLING

LPG

ASTM D2420 HYDROGEN SULFIDE IN LIQUEFIED PETROLEUM (LP) GASES (LEAD ACETATE METHOD)

P/N

2300 HYDROGEN SULFIDE APPARATUS

Consisting of: stainless steel cylinder of 500 ml. with needle valve connected to a glass cylinder with caps means a stainless steel tube interrupted half from a needle valve, water bath controlled by a thermostat for temperature and stainless steel electric heater, flowmeter 0.2-3 l/min, watch glass with its holder, glass hook full for the suspended particles of lead acetate.

Technical specifications:

- Temperature: from ambient to 80°C (176°F)
- Stability: $\pm 1^\circ\text{C}$
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 1200W
- Capacity: 12 liters
- Dimensions: 42x27x65 cm
- Weight: 14 kg

ACCESSORIES ON REQUEST

10-2301 LEAD ACETATE TEST PAPER, pack of 5 m

ASTM D1142 WATER VAPOR CONTENT OF GASEOUS FUELS BY MEASUREMENT OF DEW-POINT TEMPERATURE

P/N

1730 DEW POINT APPARATUS

Ø60 mm pressure gauge with 0-160 bar/2320 psi scale, cooling chamber with ¼" gas valve, stainless steel block with ¼" gas valves, plexiglass window, external mirror.

ACCESSORIES ON REQUEST

10-1732 CASE

10-1733 HY-FLEX JUNCTION

10-1734 FIELD TRIPOD SUPPORT

10-1735 LABORATORY TRIPOD SUPPORT

T-AS33C/B THERMOMETER ASTM 33C

IP 59 METHOD "C" (Obs) DENSITY AND RELATIVE DENSITY OF GASES - THE EFFUSION METHOD

P/N

2310 SCHILLING EFFUSIOMETER

Consisting of: glass cylinder, cylinder cover fitted with three sphere valves for gas charge and flow-off, stainless steel orifice plate Ø0.45 mm, internal tube fitted with two calibration lines, support for internal tube, metal stand with carrying handle.

Technical specifications:

- Dimensions: Ø13x70 cm
- Weight: 5 kg

ACCESSORIES ON REQUEST

10-2311 CASE

T-IP39C/B THERMOMETER IP 39C

2310



2300



1730



ASTM D1267 IP 161 IP 410 EN 4256 ISO 4256 GAGE VAPOR PRESSURE OF LIQUEFIED PETROLEUM (LP) GASES (LP-GAS METHOD)

P/N

1740/U VAPOR PRESSURE CYLINDER UPPER CHAMBER

Stainless steel upper chamber with threaded lower neck which allows the connection to the valve, and ¼" threaded upper head for pressure gauge fitting a ¼" discharge pin valve.

With hydraulic testing certificate at 70 bar/1015 psi/7000 kPa

P/N

1740/L20 VAPOR PRESSURE CYLINDER 20% LOWER CHAMBER

Stainless steel 20% lower chamber two opening.

With ¾" straight-through valve and ¼" inlet valve.

With hydraulic testing certificate at 70 bar/1015 psi/7000 kPa

P/N

1740/L33 VAPOR PRESSURE CYLINDER 33⅓% LOWER CHAMBER

Stainless steel 33⅓% lower chamber one opening.

With hydraulic testing certificate at 70 bar/1015 psi/7000 kPa

ACCESSORIES ON REQUEST

1770 THERMOSTATIC BATH

10-1741/10 PRESSURE GAUGE 10 bar/145 psi

10-1741/25 PRESSURE GAUGE 25 bar/360 psi

10-1741/40 PRESSURE GAUGE 40 bar/580 psi

10-1741/100 PRESSURE GAUGE 100 psi/700 kPa

10-1741/250 PRESSURE GAUGE 250 psi/1750 kPa

10-1741/500 PRESSURE GAUGE 500 psi/3500 kPa

10-1733 HY-FLEX JUNCTION

T-AS18C/B THERMOMETER ASTM 18C IP 23C

T-AS65C/B THERMOMETER ASTM 65C

ASTM D323 IP 69 ISO 3007 VAPOR PRESSURE OF PETROLEUM PRODUCTS (REID METHOD)

ASTM D4953 VAPOR PRESSURE OF GASOLINE AND GASOLINE-OXYGENATE BLENDS (DRY METHOD)

P/N

1790/ABD REID VAPOR PRESSURE CYLINDER <26

For a pressure less than 1,8/26/180 bar/psi/kPa. Made of chromium-plated brass consisting of a liquid chamber valveless ½" BSP male for coupling with the vapor chamber with two ½" BSP female for coupling with the liquid chamber and pressure gauge

Tested at 220 psi (1520 kPa)

P/N

1790/C REID VAPOR PRESSURE CYLINDER >26

For a pressure above 26 psi (180 kPa). Made of chromium-plated brass consisting of a liquid chamber with two valves: one valve ½" BSP male coupling with vapor chamber and one valve ¼" BSP male for inlet line and vapor chamber with two ½" BSP female for coupling with the liquid chamber and pressure gauge.

Tested at 220 psi (1520 kPa)

ACCESSORIES ON REQUEST

1770 THERMOSTATIC BATH

1770/B AUTOMATIC THERMOSTATIC BATH FOR PROCEDURE "B"

10-1791 U-TUBE MANOMETER

10-1793/06 PRESSURE GAUGE ISO 0.6 bar/8.7 psi

10-1793/1 PRESSURE GAUGE ISO 1 bar/14.5 psi

10-1793/2.5 PRESSURE GAUGE ISO 2.5 bar/36.2 psi

10-1793/5 PRESSURE GAUGE ASTM 5 psi/35 kPa

10-1793/15 PRESSURE GAUGE ASTM 15 psi/100 kPa

10-1793/30 PRESSURE GAUGE ASTM 30 psi/200 kPa

10-1793/4 PRESSURE GAUGE ISO 4 bar/58 psi

10-1793/6 PRESSURE GAUGE ISO 6 bar/87 psi

10-1793/10 PRESSURE GAUGE ISO 10 bar/145 psi

10-1793/45 PRESSURE GAUGE ASTM 45 psi/300 kPa

10-1793/60 PRESSURE GAUGE ASTM 60 psi/400 kPa

10-1793/100 PRESSURE GAUGE ASTM 100 psi/700 kPa

10-1794 SAMPLE CONTAINER

10-1795 SAMPLE TRANSFER CONNECTION

10-1796 COOLING BATH 0°C

T-AS18C/B THERMOMETER ASTM 18C IP 23C

1740/U



1740/L33



1790/ABD



1740/L20



ASTM D1401 ISO 6614 DIN 51599 (obs) WATER SEPARABILITY OF PETROLEUM OILS AND SYNTHETIC FLUIDS

P/N

1850/SEM SEMI-AUTOMATIC HERSCHEL

Structure with 3 independent test stirrers with speed control and motorized raising and lowering. 4,3" LCD touch display for temperature setup, speed, test time, interval time and abort time. Stainless steel heater, over-temperature alarm. Three stainless steel blade agitator 19x1,5 mm l=120 mm. With stand-by covers and back led light.

Technical specification:

- Temperature: from ambient to 90°C (194°F)
- Stability: $\pm 1^\circ\text{C}$
- Bath capacity: 14 l
- Power supply: 230V $\pm 10\%$ 50/60 Hz
- Power: 2000W
- Dimensions: 48x56x110 cm
- Weight: 70 kg

P/N

1850/MAN MANUAL HERSCHEL

Borosilicate tank, cover with 4 holes for test cylinder, leakage protection vessel made of tempered glass, supplied with cork disk supporting and stainless steel base, stainless steel heater controlled by a digital thermoregulator PID and probe PT100A, over-temperature alarm, programmable digital timer for duration of the test, motor stirrer for bath, centering for 4 emulsion cylinders, bar supporting the stirrer motor with stop system allowing the exact immersion of the blade agitator, variable speed controller 150 to 1999 rpm, stainless steel blade agitator 19x1,5mm L=120 mm connected to a stainless steel 6 mm shaft.

Technical specifications:

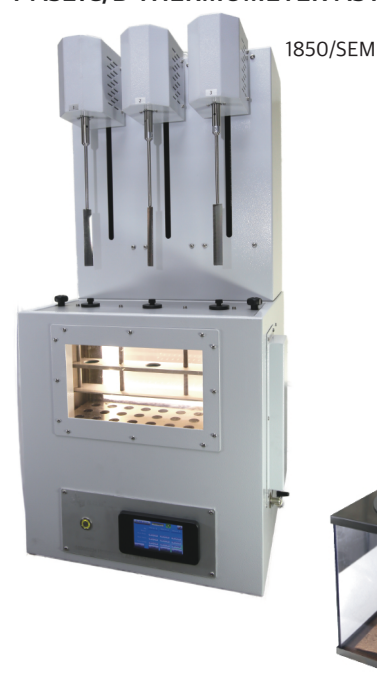
- Temperature: from ambient to 150°C (302°F)
- Stability: $\pm 0,1^\circ\text{C}$
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 1200W
- Dimensions: 35x35x92 cm
- Weight: 28 kg

ACCESSORIES ON REQUEST

10-1851 CYLINDER 100 ml

T-AS19C/B THERMOMETER ASTM 19C

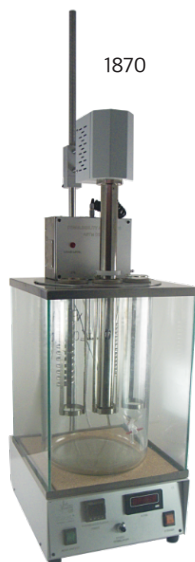
T-AS21C/B THERMOMETER ASTM 21C



1850/SEM



1850/MAN



1870

ASTM D2711 DEMULSIBILITY CHARACTERISTICS OF LUBRICATING OILS

P/N

1870 DEMULSIBILITY APPARATUS

3 positions bath, Ø270x450 mm tank, leakage protection vessel made of tempered glass, cover with three 55 mm holes for separatory funnels. Temperature is controlled by a digital thermoregulator PID with over-temperature alarm and probe PT100A, cooling coil for external joint, stirrer motor, safety internal level for low liquid with warning lamp, stainless steel bar supporting the agitator turbine, programmable digital timer for duration of the test, plate base painted with antacid epoxy products, 300 to 5,000 rpm turbine agitator electronically regulated and digitally read.

Technical specifications:

- Temperature: from ambient to 150°C (302°F)
- Stability: $\pm 0,1^\circ$
- Capacity: 23 liters about
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 2200W

ACCESSORIES ON REQUEST

10-1871 SEPARATORY FUNNEL

1220 CENTRIFUGE

10-1222 BUCKET FOR CONE-SHAPED TUBE

10-1225 CENTRIFUGE TUBE CONE-SHAPED

T-AS21C/B THERMOMETER ASTM 21C

IP 19 DETERMINATION OF DEMULSIBILITY CHARACTERISTICS OF LUBRICATING OIL

P/N

1840 DEMULSIBILITY APPARATUS

Consisting of: a steam generator including: 1 electric-heater units with electronic-power regulators, 1 support boards with ceramic plate with an hole Ø 51 mm, 1 steam generator flask capacity: 1 liter, 1 stopper for flask, 1 ventilation tube, 2 steam pipings, 1 hose connection of 2 m, 3 clamps for hose, 1 support rod, 1 boss head, 1 clamp. An Emulsifying Bath including: 1 tripod stand: Ø100 mm, 1 support boards made of ceramic glass, 1 glass jar as bath of 3000 ml, 1 cover for bath with stopper, 1 oil test tube made of glass, 1 stopper for oil test tube, 1 steam inlet tube. A Separating Bath including: 1 electric-heater units with electronic-power regulators, 1 support boards made of cast iron, 1 glass jar of 3000 ml as bath, 1 cover for bath with stopper, 1 steam inlet tube.



1840

ASTM D3427 IP 313 ISO 9120 DIN 51381 AIR RELEASE PROPERTIES OF PETROLEUM OILS

P/N

1880 AIR RELEASE APPARATUS

Consisting of: structure made in plate painted with antacid epoxy products with upper base for density balance (optional), with heating system controlled by PID digital thermoregulator and PT100 probe, reducer pressure, manometer, hole for thermometer, test vessel with jacketed sample tube for connection to circulating bath (optional). Not included: oven, air pump, density balance with platinum wire and sinker, circulating bath and thermometer. Technical specifications:

- Temperature: from ambient to 80°C (176°F)
- Stability: $\pm 0.1^\circ$
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 500W
- Dimensions: 40x35x57 cm
- Weight: 25 kg

ACCESSORIES ON REQUEST

722 CIRCULATING BATH

2470/PS DENSITY BALANCE

10-1881 PLATINUM WIRE

10-1882/10 SINKER 10 ml

10-1882/5 SINKER 5 ml

10-0332 DIGITAL STOPWATCH

2460/SC5 COMPRESSOR/VACUUM PUMP

T-AS12C/B THERMOMETER ASTM 12C

ASTM D1881 FOAMING TENDENCIES OF ENGINE COOLANTS IN GLASSWARE

P/N

1915 COOLANTS FOAMING APPARATUS

Consisting of a small electric heater, borosilicate glass, 500 ml graduated cylinder with metal ballast on the bottom, a porous stone with a diffuser ball-shape, a 3-way stopcock and flowmeter 60 l/h.

Technical specifications:

- Temperature: from ambient to 100°C (212°F)
- Stability: $\pm 1^\circ$ C
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 700W

ACCESSORIES ON REQUEST

10-1901 CERTIFIED DIFFUSER BALL-SHAPE

10-1905 DRYING TOWER, 300 mm

10-1905/V EMPTY DRYING TOWER, 300 mm

10-1908 DIFFUSER TEST APPARATUS

10-0332 DIGITAL STOPWATCH

2460/2180 AIR PUMP

T-AS1C/B THERMOMETER ASTM 1C

ASTM D892 (I, II, III) IP 146 ISO 6247 DIN 51566 FOAMING CHARACTERISTICS OF LUBRICATING OILS

ASTM D6082 (IV) HIGH TEMPERATURE FOAMING CHARACTERISTICS OF LUBRICATING OILS

1900/2 FOAMING BATH (2 POSITIONS)

Consists of a tank fitted with cover with two hole, which allows two cylinders to get through, and a cooling coil, leakage protection vessel made of tempered glass supplied with cork disk supporting and stainless steel base. Stainless steel control box on the cover, temperature controlled by digital thermoregulator PID with PT100 probe class A and over-temperature alarm, stainless steel heater, cooling coil for improved control near to ambient temperature, motor stirrer, safety internal level for low liquid with warning lamp. Plate base painted with antacid epoxy products with quick connection for external source air. Complete with: two digital flowmeter with display 0-0,5 l/min, two graduated cylinders, two diffuser ball-shape, two rubber plug and diffuser tubes.

Technical specifications:

- Temperature: from ambient to +150°C (302°F)
- Stability: $\pm 0.1^\circ$ C
- Capacity: about 23 l
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 2200W
- Dimensions: 37x48x75 cm
- Weight: 65 kg.

P/N

1900/4 FOAMING BATH (4 POSITIONS)

Consists of two tanks, one for working 24°C (75.2°F) and one for working up to 150°C (302°F), fitted with cover with two hole each, which allows two cylinders to get through, leakage protection vessel made of tempered glass supplied with cork disk supporting and stainless steel base. Stainless steel control box on the cover, temperature controlled by digital thermoregulator PID with PT100 probe class A and over-temperature alarm, stainless steel heater, cooling coil for improved control near to ambient temperature, motor stirrer, safety internal level for low liquid with warning lamp. Plate base painted with antacid epoxy products with quick connection for external source air. Complete with: four digital flowmeter with display 0-0,5 l/min, four graduated cylinders, four diffuser ball-shape, four rubber plug and diffuser tubes.

Technical specifications:

- Temperature: from ambient to +150°C (302°F)
- Stability: $\pm 0.1^\circ$ C
- Capacity: about 23+23 l
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 1200+2200 W
- Dimensions: 76x50x77 cm
- Weight: 65 kg.

ACCESSORIES ON REQUEST

10-1901 CERTIFIED DIFFUSER BALL-SHAPE

10-1904 DIFFUSER CYLINDRICAL-SHAPE

10-1904/C CERTIFIED DIFFUSER CYLINDRICAL-SHAPE

10-1905 DRYING TOWER, 300 mm

10-1905/V EMPTY DRYING TOWER, 300 mm

10-1906 AIR VOLUME METER 1-60 l/h

10-1907 GAS VOLUME METER 5-360 l/h

10-1908 DIFFUSER TEST APPARATUS

2460/SC5 COMPRESSOR/VACUUM PUMP

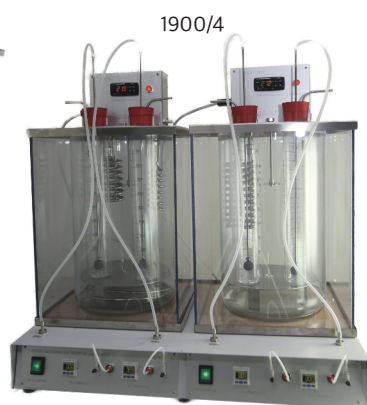
10-0332 DIGITAL STOPWATCH

T-AS12C/B THERMOMETER ASTM 12C IP 64C

T-AS41C/B THERMOMETER ASTM 41C IP 81C



1880



1900/4



1915

ASTM D1742 OIL SEPARATION FROM LUBRICATING GREASE DURING STORAGE

P/N

2030 GREASES SEPARATION APPARATUS

Structure made in plate painted with antacid epoxy products with stainless steel level at 4 standalone places, inlet stabilizing reducer for low pressures, control manometer for cells, 4 pin valve, quick connection for external source air.

Technical specifications:

- Operating pressure: 2.4 bar
- Dimensions: 44x35x18 cm
- Weight: 6 kg

ACCESSORIES ON REQUEST

10-2031/A TEST CELL TYPE "A"

10-2031/B TEST CELL TYPE "B"

10-2032 BEAKER 20 ml, pack of 4 pcs

2460/SC5 COMPRESSOR/VACUUM PUMP

2470/EL600 ELECTRONIC BALANCE

IP 121 DIN 51817 DETERMINATION OF OIL SEPARATION FROM LUBRICATING GREASE - PRESSURE FILTRATION METHOD

P/N

2035/IP GREASES SEPARATION APPARATUS IP

Consisting of: a brass separation cup having a cone of stainless steel woven wire; cloth 240 mesh aperture 63 µm, wire diameter 40 µm on the bottom, 100 g metal weight and oil cup.

ASTM D6184 FTM 791-321 OIL SEPARATION FROM LUBRICATING GREASE (CONICAL SIEVE METHOD)

P/N

2035/ASTM GREASES SEPARATION APPARATUS ASTM

Consisting of: a stainless steel cone-shaped sieve 60 mesh, a 200 ml tall form beaker, cover with hook for the cone.

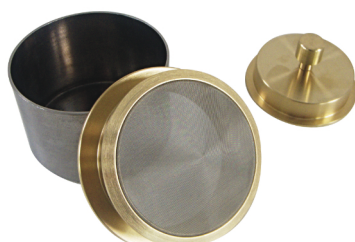
2030



2035/ASTM



2035/IP



2050



ASTM D972 IP 183 EVAPORATION LOSS OF LUBRICATING GREASES AND OILS

ASTM D2878 ESTIMATING APPARENT VAPOR PRESSURES AND MOLECULAR WEIGHTS OF LUBRICATING OILS

P/N

2050 EVAPORATION GREASES BATH

Stainless steel oil bath with insulated double wall, cover with two holes for evaporation cells, two flowmeters. stainless steel control box on the cover, temperature controlled by digital thermoregulator PID with PT100 probe class A and over-temperature alarm, stainless steel heater, motor stirrer, safety internal level for low liquid with warning lamp.

Technical specifications:

- Temperature: from ambient to 180°C (356°F)
- Stability: ±0.3°C
- Power supply: 230V ±10% 50/60Hz
- Power: 1200W
- Dimensions: 58x46x54 cm
- Weight: 27 kg

ACCESSORIES ON REQUEST

10-2050 EVAPORATION CELL

10-2051/G GREASE SAMPLE CUP

10-2051/O OIL SAMPLE CUP

10-2052 FILTERING PIPE

2460/SC5 COMPRESSOR/VACUUM PUMP

2470/EL600 ELECTRONIC BALANCE

T-AS22C/B THERMOMETER ASTM 22C IP 24C

T-AS67C/B THERMOMETER ASTM 67C

ASTM D2595 EVAPORATION LOSS OF LUBRICATING GREASES OVER WIDE-TEMPERATURE RANGE

P/N

2050/S EVAPORATION GREASES DRY BATH

Dry bath with aluminum block and stainless steel structure, cover with two holes for evaporation cells, two flowmeters. stainless steel control box on the cover, temperature controlled by digital thermoregulator PID with probe and over-temperature alarm, stainless steel heater. Included two digital thermoregulator with two thermocouple for connection to evaporation cell.

Technical specifications:

- Temperature: from ambient to 320°C (608°F)
- Stability: ±1°C
- Power supply: 230V ±10% 50/60Hz
- Power: 3400W
- Dimensions: 52x42x70 cm
- Weight: 42 kg

ACCESSORIES ON REQUEST

10-2055 EVAPORATION CELL

10-2052 FILTERING PIPE

2460/SC5 COMPRESSOR/VACUUM PUMP

2470/EL600 ELECTRONIC BALANCE

T-AS3C/G THERMOMETER

2050/S



WHEEL BEARING, WATER WASHOUT, CORROSION

GREASES

ASTM D1263 (obs) LEAKAGE TENDENCIES OF AUTOMOTIVE WHEEL BEARING GREASES

P/N

2580 WHEEL BEARING APPARATUS

Thermostatic cabin equipped with thermic insulator, rotating pivot with spindle, electric heating with digital thermoregulator and probe PT100A, digital timer, motor with pulley and V-type belt controlling the hub rotation. The hub carries bearings with a pulley suitable for 660 rpm speed. Two bearings (tapered roller) Timken 09074 and 15118, grease collection tank.

Technical specifications:

- Temperature: from ambient to 150°C (302°F)
- Stability: $\pm 1^\circ\text{C}$
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 1400W
- Dimensions: 52x50x44 cm
- Weight: 38 kg

ACCESSORIES ON REQUEST

2470/BC8000 ELECTRONIC BALANCE

10-2054/A TORQUE WRENCH For 6.8 Nm

T-AS7C/G THERMOMETER ASTM 7C

ASTM D1264 IP 215 ISO 11009 DIN 51807-2 DETERMINING THE WATER WASHOUT CHARACTERISTICS OF LUBRICATING GREASES

P/N

2590 WATER WASHOUT APPARATUS

Made of stainless steel with of a thermostatic cabin with electric stainless steel heater controlled by a digital thermoregulator, digital timer, two bearings type 6204, a thermometer determining water temperature in the cabin, an electric motor with direct coupling to the pump and drive belt for the shaft pulley 600 rpm, a bearings block, a flowmeter measuring water delivery, delivery and back- flow gates with by-pass and regulator valves.

Technical specifications:

- Temperature: from ambient to 90°C (194°F)
- Stability: $\pm 1^\circ\text{C}$
- Power: 900W
- Dimensions: 58x39x65 cm
- Weight: 39 kg

ACCESSORIES ON REQUEST

2470/EL200 ELECTRONIC BALANCE

T-AS34C/B THERMOMETER ASTM 34C IP 21C

ASTM D1743 DETERMINING CORROSION PREVENTIVE PROPERTIES OF LUBRICATING GREASES

ASTM D4950 STANDARD CLASSIFICATION AND SPECIFICATION FOR AUTOMOTIVE SERVICE GREASES

P/N

2570/P CORROSION PREVENTIVE PROPERTIES APPARATUS (MAIN PROCEDURE)

This instrument is used to determine the anti-corrosive properties of the grease-lubricated bearings using fat stored in wet conditions.

The instrument consists of: structure made in plate painted with antacid epoxy products, one digital timer, one variable digital overhead stirrer 200-3000 rpm and loading spindle with spindle.

Bearing holder assembly consists of 1 kg stainless steel weight, PTFE bearing holder with two o-rings, PTFE upper flange, PTFE lower flange and screw in stainless steel. Timken bearing cone and roller LM11949 and cup LM11910.

Technical specifications:

- Power supply: 230V $\pm 10\%$ 50Hz
- Power: 120W
- Dimensions: 26x26x62 cm
- Weight: 15 kg

ACCESSORIES ON REQUEST

10-2571 BEARING PACKER BRASS

10-2573 PLASTIC JAR, pack of 10 pcs

10-2574 SYRINGE

10-2575 PLIER

10-2576 GLASS JAR

P/N

2570/A CORROSION PREVENTIVE PROPERTIES APPARATUS (ALTERNATE PROCEDURE)

Consists of a group rotating at 1.750 rpm mounted on a bedplate, Timken bearing cone and roller LM11949 and cup LM11910.

ACCESSORIES ON REQUEST

10-2577 THRUST LOADING DEVICE

10-2572 MECHANICAL GREASE PACKER

10-2575 PLIER

10-2576 GLASS JAR

2580



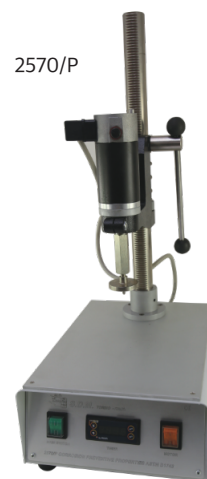
2590



2570/A



2570/P



ASTM D566 IP 132 ISO 2176 DIN 51801-1 DROPPING POINT OF LUBRICATING GREASE

ASTM D4950 STANDARD CLASSIFICATION AND SPECIFICATION FOR AUTOMOTIVE SERVICE GREASES

P/N 2110 DROPPING POINT

Consists of a chromium-plated brass cup, test tube with projection cap and cork ring, thermometer depth gage, cup plug gage, cover of aluminum, a polished metal rod Ø1.5x150 mm, 400 ml beaker, heating device unit with motor stirrer.

Technical specifications:

- Temperature: from ambient to 290°C (554°F)
- Power supply: 230V ±10% 50/60Hz
- Power: 700W
- Dimensions: 18x21x52 cm
- Weight: 3 kg

ACCESSORIES ON REQUEST

T-AS2C/G THERMOMETER ASTM 2C

ASTM D2265 DIN 51825 ISO 6299 DROPPING POINT OF LUBRICATING GREASE OVER WIDE TEMPERATURE RANGE

P/N 2140 DROPPING POINT

Composed by a six positions aluminum block furnace, structure in stainless steel, insulating thermal; in the block six vertical holes are systematized for the support of the pipes of test while in the back part six horizontal holes for the observation with a light cold lamp for the illumination of the zone in correspondence of the cap of test. The lamp is assembled with a reflector in the superior part. The control of the temperature is effected by a digital thermoregulator PID with over-temperature alarm and probe PT100A.

Supplied with: six grease cups, six test tube, six thermometer clamp, six upper bushing, six lower bushing, six bushing support ring, six thermometer depth gage, six cup support, six metal rod Ø1.5x150 mm and one cup plug gage.

Technical specifications:

- Temperature: from ambient to 400°C (752°F)
- Stability: ±0.5°C
- Power supply: 230V ±10% 50/60Hz
- Power: 800W
- Dimensions: 36x16x30 cm
- Weight: 8 kg

ACCESSORIES ON REQUEST

T-AS3C/G THERMOMETER ASTM 3C IP73C

T-AS11C/G THERMOMETER ASTM 11C IP 28C

2110



IP 31 (obs) IP 371 DROP POIN OF PETROLATUM

P/N 2120 DROP POINT PETROLATUM

Consisting of: a chromium-plated brass cup, a Ø40x240 mm test tube, a cap, a 400 ml beaker, cover of aluminum, heating device unit and motor stirrer.

Technical specifications:

- Temperature: from ambient to 150°C (302°F)
- Stability: ±2°C
- Power supply: 230V ±10% 50/60Hz
- Power: 700W

ACCESSORIES ON REQUEST

T-IP40/B THERMOMETER IP 40C

T-IP41C/G THERMOMETER IP 41C

DIN 51801-2 (obs) DETERMINATION OF DROPPING POINT UBBELOHDE METHOD FOR BITUMINOUS BINDERS

P/N 2130 DROPPING POINT UBBELOHDE

Consisting of: a chromium-plated brass cup, a Ø40x240 mm test tube, a cap, a 1000 ml beaker, cover of aluminum, heating device unit and motor stirrer.

Technical specifications:

- Temperature: from ambient to 150°C (302°F)
- Stability: ±2°C
- Power supply: 230V ±10% 50/60Hz
- Power: 700W

ACCESSORIES ON REQUEST

T-2132/A THERMOMETER UBBELOHDE

T-2132/B THERMOMETER UBBELOHDE

2140



SAYBOLT, MELTING, DROP MELTING POINT, OIL CONTENT

COLOR, WAX

ASTM D156 DIN 51411 SAYBOLT COLOR OF PETROLEUM PRODUCTS (SAYBOLT CHROMOMETER METHOD)

P/N

2080 SAYBOLT CHROMOMETER

Black structure supporting two glass tubes one of which graduated, optical glass disc, no.3 Whole color standard and no. 1 Half color standard, petcock and mirror located on a base, prismatic eyepiece, Saybolt Color chart.

P/N

2080/P SAYBOLT CHROMOMETER

Model for wax with heater back on the tubes and electronic regulator device.

Black structure supporting two glass tubes one of which graduated, optical glass disc, no.3 Whole color standard and no. 1 Half color standard, petcock and mirror located on a base, prismatic eyepiece, Saybolt Color chart.

Technical specifications:

- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 300W

ACCESSORIES ON REQUEST

10-2080 "DAYLIGHT" LAMP

ASTM D87 IP 55 ISO 3841 MELTING POINT OF PETROLEUM WAX (COOLING CURVE)

P/N

2090 WAX MELTING POINT APPARATUS

Consisting of: air bath with brass cylinder $\varnothing 51 \times 114$ mm for hold the test tube firmly in a vertical position in the center of the air bath, test tube $\varnothing 25 \times 100$ mm with reference line for sample filling at 51 mm above the bottom and a reference line for positioning of the bottom of the thermometer at 10 mm above the bottom, a chromium-plated metal water bath $\varnothing 130 \times 152$ mm. Complete of cork.

ACCESSORIES ON REQUEST

10-0332 DIGITAL STOPWATCH

T-AS14C/B THERMOMETER ASTM 14C IP 17C

T-AS34C/B THERMOMETER ASTM 34C IP 21C

ASTM D127 IP 133 DROP MELTING POINT OF PETROLEUM WAX, INCLUDING PETROLATUM

P/N

2100 DROP MELTING POINT APPARATUS

Consisting of: electric heater, 1500 ml glass jar, test tube $\varnothing 25 \times 150$ mm, two stoppers in corks for test tubes and one in PVC for the glass jar.

Technical specifications:

- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 700W
- Dimensions: 26x26x35 cm
- Weight: 4 kg.

ACCESSORIES ON REQUEST

T-AS34C/B THERMOMETER ASTM 34C IP 21C

T-AS61C/B THERMOMETER ASTM 61C IP 63C

ASTM D721 IP 158 ISO 2908 DIN 51571 OIL CONTENT OF PETROLEUM WAXES

ASTM D3235 DIN 51572 SOLVENT EXTRACTABLES IN PETROLEUM WAXES

P/N

2180 OIL CONTENT OF PETROLEUM WAXES APPARATUS

Consisting of a 3 positions cooling bath made of stainless steel with internal tank with cooling coil and external sockets for cooling unit, insulated double wall, springs clamp for the filter stick assembly. Thermostatically heater evaporation cabinet made of stainless steel by PID digital regulator with PT100A probe, 4 positions for weighing bottles, double bottom perforated, air inlet tube, heater, glass door, manifold assembly is adjustable for positioning of 4 jets at the correct height.

Technical specifications:

- Temperature: from ambient to 50°C (122°F)
- Stability: $\pm 0.5^\circ\text{C}$
- Power supply: 230V $\pm 10\%$ 50/60Hz
- Power: 50W

ACCESSORIES ON REQUEST

10-2181 FILTER STICK ASSEMBLY

10-2182 AIR PRESSURE REGULATOR

10-2183 FLOWMETER 100-1100 l/h

10-2185 WEIGHING BOTTLES 15 ml, pack of 4 pcs

10-2186 DRYING TOWER, 200 mm

2460/2180 AIR PUMP

2470/BCA200 ANALYTICAL BALANCE

T-AS71C/B THERMOMETER ASTM 71C IP 72C

2080



2090



2100



2180



SOFTENING POINT, BREAKING POINT, FLOAT TEST, DUCTILOMETER

BITUMEN

ASTM D36 IP 58 EN 1427 SOFTENING POINT OF BITUMEN (RING-AND-BALL APPARATUS)

ASTM E28 SOFTENING POINT OF RESINS DERIVED FROM NAVAL STORES BY RING-AND-BALL APPARATUS

P/N

2170 RING AND BALL

Consisting of: a beaker Ø85x130 mm, two-place brass cage adjustable for height, 2 hardened steel balls Ø9.5 mm, 2 rings with collar for centering the balls, heating device unit and motor stirrer.

Technical specifications:

- Temperature: from ambient to 250°C (482°F)
- Power supply: 230V ±10% 50/60Hz
- Power: 700W
- Dimensions: 13x21x55 cm
- Weight: 3 kg

ACCESSORIES ON REQUEST

10-2170/IP1 RING AND COLLAR IP fig.1, pack of 2 pcs

10-2170/IP2 RING AND COLLAR IP fig.2, pack of 2 pcs

10-2170/IP3 RING IP fig.3, pack of 2 pcs

10-2172/5 GLYCERIN 99.5%, pack of 5 kg

10-2172/10 GLYCERIN 99.5%, pack of 10 kg

10-2172/25 GLYCERIN 99.5%, pack of 25 kg

T-AS15C/B THERMOMETER ASTM 15C IP 60C

T-AS16C/R THERMOMETER ASTM 16C IP 61C

T-AS5C/B THERMOMETER ASTM 5C IP 1C

T-AS7C/G THERMOMETER ASTM 7C IP 5C

IP 80 EN 12593 DIN 52012 BITUMEN AND BITUMINOUS BINDERS - DETERMINATION OF THE FRAASS BREAKING POINT

P/N

2520 FRAASS

Comprises 2 concentric resin tubes topped by two clamps for the plate and the flexing brass system, a cooling system by dry ice with 3 concentric glass tubes and funnel, a cork stopper.

P/N

2520/BIS FRAASS

Comprises 2 concentric resin tubes topped by two clamps for the plate and the flexing brass system, a cooling system by dry ice with Dewar and one test tube glass tubes and funnel, a cork stopper.

ACCESSORIES ON REQUEST

10-2521 PLATE, pack of 25 pcs

10-2522 HEATING/COOLING DEVICE

T-IP42C/B THERMOMETER IP 42C

ASTM D139 FLOAT TEST FOR BITUMINOUS MATERIALS

P/N

2700 FLOAT TEST

Aluminum cup with 3 standard brass collars.

ACCESSORIES ON REQUEST

T-AS15C/B THERMOMETER ASTM 15C IP 60C

ASTM D113 IP 32 (obs) DUCTILITY OF BITUMINOUS MATERIALS

ASTM D6084 ELASTIC RECOVERY OF BITUMINOUS MATERIALS BY DUCTILOMETER

EN 13398 DETERMINATION OF THE ELASTIC RECOVERY OF MODIFIED BITUMEN

EN 13589 DETERMINATION OF THE TENSILE PROPERTIES OF MODIFIED BITUMEN BY THE FORCE DUCTILITY METHOD

EN 13703 DETERMINATION OF DEFORMATION ENERGY

P/N

730 DUCTILOMETER

Three-places stainless steel structure with a 1.500 mm stroke, transmission of 10 revolutions on square-thread traction rod, 5 cm/min speed, ¼ Hp one-phase geared motor, stainless steel tank, insulated walls, armored stainless steel heater controlled by a digital thermoregulator with over-temperature alarm and probe PT100A, cooling coil, traction brass carriage holding moulds, circulation pump for stirring the liquids.

Technical specifications:

- Temperature: from ambient to 50°C (122°F)
- Stability: ±0.1°C
- Power supply: 230V ±10% 50Hz
- Power: 1300W
- Dimensions: 185x40x67 cm
- Weight: 55 kg

P/N

730/R REFRIGERATED DUCTILOMETER

With compressor CFC free refrigerant gases are used.

Technical specifications:

- Temperature: from 5 to 50°C (41 +122°F)
- Stability: ±0.1°C
- Power supply: 230V ±10% 50Hz
- Power: 1800W
- Dimensions: 185x40x67 cm
- Weight: 75 kg

ACCESSORIES ON REQUEST

10-0731/113 MOLD ASTM D113 Made of brass

10-0731/6084 MOLD ASTM D6084, EN 13589

10-0731/13398 MOLD EN 13398 Made of brass

10-0732 MOLD HOLDER

T-AS63C/B THERMOMETER ASTM 63C



RTFOT, TFOT, LOSS ON HEATING BITUMEN

ASTM D2872 EFFECT OF HEAT AND AIR ON A MOVING FILM OF ASPHALT (ROLLING THIN-FILM OVEN TEST)

EN 12607-1 DETERMINATION OF THE RESISTANCE TO HARDENING UNDER INFLUENCE OF HEAT AND AIR. RTFOT METHOD

P/N

2550 ROLLING THIN FILM OVEN TEST

Completely made in stainless steel, aluminum carriage rotating at 15 rpm - circular and vertical - with 8 places for glass containers, internal fan controlled by a 1725 rpm motor, copper coil with nozzle pre-heating the air, flowmeter with regulator valve, digital thermoregulator PID with over-temperature alarm and probe PT100, double wall locking door with toughened glass window, internal light.

Technical specifications:

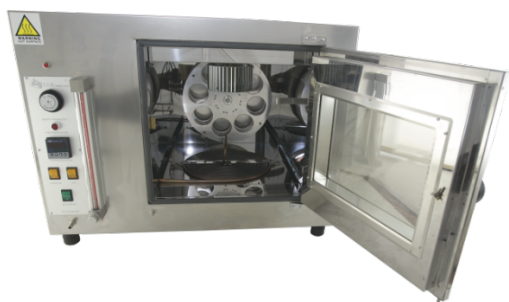
- Temperature: from ambient to 170°C (338°F)
- Stability: $\pm 0.5^{\circ}\text{C}$
- Power supply: 230V $\pm 10\%$ 50Hz
- Power: 1500W
- Dimensions: 78x60x60
- Weight: 90 kg

ACCESSORIES ON REQUEST

10-2551 CONTAINER

T-AS13C/B THERMOMETER ASTM 13C IP 47C

2550



ASTM D6 IP 45 EN 13303 LOSS ON HEATING OF OIL AND ASPHALTIC COMPOUNDS

ASTM D1754 EN 12607-2 EFFECT OF HEAT AND AIR ON ASPHALTIC MATERIALS (THIN-FILM OVEN TEST)

P/N

2560 LOSS AND TFOT OVEN

Completely made in stainless steel, natural ventilation, internal support (on request) rotating at 5-6 rpm controlled by a geared motor located on the oven top, digital thermoregulator PID with over-temperature alarm and probe PT100A, double wall locking door with toughened glass window, internal light.

Technical specifications:

- Temperature: from ambient to 180°C (356°F)
- Stability: $\pm 1^{\circ}\text{C}$
- Power supply: 230V $\pm 10\%$ 50Hz
- Power: 1200W
- Dimensions: 59x51x77 cm
- Weight: 24 kg

ACCESSORIES ON REQUEST

10-2561/6 SUPPORT ASTM D6

10-2562/6/M CONTAINER ASTM D6

10-2562/6/V CONTAINER ASTM D6

10-2561/1754 SUPPORT ASTM D1754 4 positions

10-2562/1754 CONTAINER ASTM D1754

10-2563 PALETTE FOR CONTAINER ASTM D1754

T-AS13C/B THERMOMETER ASTM 13C IP 47C

2560



ASTM THERMOMETER							
P/N	ASTM	IP	NAME	RANGE	DIV. (T°)	IMM. (mm)	LENGHT (mm)
T-AS1C/B	1C		Partial Immersion	-20 +150°C	1	76	327
T-AS1F/B	1F		Partial Immersion	0 +302°F	2	76	327
T-AS2C/G	2C		Partial Immersion	-5 +300°C	1	76	390
T-AS2F/G	2F		Partial Immersion	20 +580°F	2	76	390
T-AS3C/G	3C		Partial Immersion	-5 +400°C	1	76	415
T-AS3F/G	3F		Partial Immersion	20+760°F	2	76	415
T-AS5C/B	5C	1C	Cloud and Pour	-38 +50°C	1	108	264
T-AS5F/B	5F	1F	Cloud and Pour	-36 +120°F	2	108	264
T-AS6C/T	6C	2C	Low Cloud and Pour	-80 +20°C	1	76	230
T-AS6F/T	6F	2F	Low Cloud and Pour	-112 +70°F	2	76	230
T-AS7C/G	7C	5C	Low Distillation	-2 +300°C	1	Total	385
T-AS7F/G	7F	5F	Low Distillation	380 +580°F	2	Total	385
T-AS8C/G	8C	6C	High Distillation	-2 +400°C	1	Total	385
T-AS8F/G	8F		High Distillation	30 +760°F	2	Total	385
T-AS9C/B	9C	15C	Low Pensky-Martens	-5 +110°C	0,5	57	295
T-AS9F/B	9F	15F	Low Pensky-Martens	20 +230°F	1	57	295
T-AS10C/G	10C	16C	High Pensky-Martens	90 +370°C	2	57	290
T-AS10F/G	10F	16F	High Pensky-Martens	200 +700°F	5	57	290
T-AS11C/G	11C	28C	Cleveland Open Flash	-6 +400°C	2	25	310
T-AS11F/G	11F	28F	Cleveland Open Flash	20 +760°F	5	25	310
T-AS12C/B	12C	64C	Density-Wide Range	-20 +102°C	0,2	Total	445
T-AS12F/B	12F	64F	Density-Wide Range	-5 +215°F	0,5	Total	445
T-AS13C/B	13C	47C	Loss on Heat	155 +170°C	0,5	Total	160
T-AS14C/B	14C	17C	Wax Melting Point	38 +82°C	0,1	79	380
T-AS14F/B	14F	17F	Wax Melting Point	100 +180°F	0,2	79	380
T-AS15C/B	15C	60C	Low Softening Point	-2 +80°C	0,2	Total	400
T-AS15F/B	15F		Low Softening Point	30 +180°F	0,5	Total	400
T-AS16C/R	16C	61C	High Softening Point	30 +200°C	0,5	Total	395
T-AS16F/R	16F		High Softening Point	85 +392°F	1	Total	395
T-AS17C/B	17C		Saybolt Viscosity	19 +27°C	0,1	Total	280
T-AS17F/B	17F		Saybolt Viscosity	66 +80°F	0,2	Total	280
T-AS18C/B	18C	23C	Reid Vapor Pressure	34 +42°C	0,1	Total	305
T-AS18F/B	18F	23F	Reid Vapor Pressure	94 +108°F	0,2	Total	305
T-AS19C/B	19C		Saybolt Viscosity	49 +57°C	0,1	Total	280
T-AS19F/B	19F		Saybolt Viscosity	120 +134°F	0,2	Total	280
T-AS20C/B	20C		Saybolt Viscosity	57 +65°C	0,1	Total	280
T-AS20F/B	20F		Saybolt Viscosity	134 +148°F	0,2	Total	280
T-AS21C/B	21C		Saybolt Viscosity	79 +87°C	0,1	Total	280
T-AS21F/B	21F		Saybolt Viscosity	174 +188°F	0,2	Total	280
T-AS22C/B	22C	24C	Oxidation Stability	95 +103°C	0,1	Total	305
T-AS22F/B	22F	24F	Oxidation Stability	204 +218°F	0,2	Total	305
T-AS23C/B	23C		Engler Viscosity	18 +28°C	0,2	90	217
T-AS24C/B	24C		Engler Viscosity	39 +54°C	0,2	90	242
T-AS25C/B	25C		Engler Viscosity	95 +105°C	0,2	90	217
T-AS26C/B	26C		Stability Test	130 +140°C	0,1	Total	468
T-AS27C/G	27C		Turpentine Distillation	147 +182°C	0,5	76	301
T-AS28C/B	28C	31C	Kinematic Viscosity	36,6 +39,4°C	0,05	Total	310
T-AS28F/B	28F	31F	Kinematic Viscosity	97,5 +102,5°F	0,1	Total	310
T-AS29C/B	29C	34C	Kinematic Viscosity	52,6 +55,4°C	0,05	Total	310
T-AS29F/B	29F	34F	Kinematic Viscosity	127,5 +132,5°F	0,1	Total	310
T-AS30F/B	30F	32F	Kinematic Viscosity	207,5 +212,5°F	0,1	Total	310

P/N	ASTM	IP	NAME	RANGE	DIV. (T°)	IMM. (mm)	LENGHT (mm)
T-AS33C/B	33C	20C	Low Aniline Point	-38+42°C	0,2	50	425
T-AS33F/B	33F		Low Aniline Point	36,5 +107,5°F	0,5	50	425
T-AS34C/B	34C	21C	Medium Aniline Point	25 +105°C	0,2	50	425
T-AS34F/B	34F		Medium Aniline Point	77 +221°F	0,5	50	425
T-AS35C/B	35C	59C	High Aniline Point	90 +170°C	0,2	50	425
T-AS35F/B	35F		High Aniline Point	194 +338°F	0,5	50	425
T-AS36C/B	36C		Titer Test	-2 +68°C	0,2	45	410
T-AS37C/B	37C	77C	Solvents Distillation	-2 +52°C	0,2	100	400
T-AS38C/B	38C	78C	Solvents Distillation	24 +78°C	0,2	100	400
T-AS39C/B	39C	79C	Solvents Distillation	48 +102°C	0,2	100	400
T-AS40C/B	40C	80C	Solvents Distillation	72 +126°C	0,2	100	400
T-AS41C/B	41C	81C	Solvents Distillation	98 +152°C	0,2	100	400
T-AS42C/G	42C	82C	Solvents Distillation	95 +255°C	0,5	100	395
T-AS43C/T	43C	65C	Kinematic Viscosity	-51,6 -34°C	0,1	Total	420
T-AS43F/T	43F	65F	Kinematic Viscosity	-61 -29°F	0,2	Total	420
T-AS44C/B	44C	29C	Kinematic Viscosity	18,6 +21,4°C	0,05	Total	310
T-AS44F/B	44F	29F	Kinematic Viscosity	66,5 +71,5°F	0,1	Total	310
T-AS45C/B	45C	30C	Kinematic Viscosity	23,6 +26,4°C	0,05	Total	310
T-AS45F/B	45F	30F	Kinematic Viscosity	74,5 +79,5°F	0,1	Total	310
T-AS46C/B	46C	66C	Kinematic Viscosity	48,6 +51,4°C	0,05	Total	310
T-AS46F/B	46F	66F	Kinematic Viscosity	119,5 +124,5°F	0,1	Total	310
T-AS47C/B	47C	35C	Kinematic Viscosity	58,6 +61,4°C	0,055	Total	310
T-AS47F/B	47F	35F	Kinematic Viscosity	137,5 +142,5°F	0,1	Total	310
T-AS48C/B	48C	90C	Kinematic Viscosity	80,6 +83,4°C	0,05	Total	310
T-AS48F/B	48F	90F	Kinematic Viscosity	177,5 +182,5°F	0,1	Total	310
T-AS49C/B	49C		Stormer Viscosity	20 +70°C	0,2	65	310
T-AS50F/B	50F		Gas Calorimeter Inlet	54 +101°F	0,1	Total	473
T-AS51F/B	51F		Gas Calorimeter Inlet	69 +116°F	0,1	Total	473
T-AS52C/B	52C		Butadiene Boiling Point	-10 +5°C	0,1	Total	167
T-AS54C/B	54C	18C	Congealing Point	20 +100,6°C	0,2	Total	315
T-AS54F/B	54F	18F	Congealing Point	68 +213°F	0,5	Total	315
T-AS56C/B	56C		Bomb Calorimeter	19 +35°C	0,02	Total	622
T-AS56F/B	56F		Bomb Calorimeter	66 +95°F	0,05	Total	622
T-AS57C/B	57C		Tag Closed	-20 +50°C	0,5	57	292
T-AS57F/B	57F		Tag Closed	-4 +122°F	1	57	292
T-AS58C/B	58C		Tank	-34 +49°C	0,5	Total	305
T-AS58F/B	58F		Tank	-30 +120°F	1	Total	305
T-AS59C/B	59C		Tank	-18 +82°C	0,5	Total	305
T-AS59F/B	59F		Tank	0 +180°F	1	Total	305
T-AS60C/G	60C		Tank	77 +260°C	1	Total	303
T-AS60F/G	60F		Tank	170 +500°F	2	Total	303
T-AS61C/B	61C	63C	Petrolatum Melting Point	32 +127°C	0,2	79	385
T-AS61F/B	61F		Petrolatum Melting Point	90 +260°F	0,5	79	385
T-AS62C/B	62C		Precision	-38 +2°C	0,1	Total	411
T-AS62F/B	62F		Precision	-36 +35°F	0,2	Total	411
T-AS63C/B	63C		Precision	-8 +32°C	0,1	Total	411
T-AS63F/B	63F		Precision	18 +89°F	0,2	Total	411
T-AS64C/B	64C		Precision	25 +55°C	0,1	Total	411
T-AS64F/B	64F		Precision	77 +131°F	0,2	Total	411
T-AS65C/B	65C		Precision	50 +80°C	0,1	Total	411
T-AS65F/B	65F		Precision	122 +176°F	0,2	Total	411
T-AS66C/B	66C		Precision	75 +105°C	0,1	Total	411

P/N	ASTM	IP	NAME	RANGE	DIV. (T°)	IMM. (mm)	LENGHT (mm)
T-AS66F/B	66F		Precision	167 +221°F	0,2	Total	411
T-AS67C/B	67C		Precision	95 +155°C	0,2	Total	411
T-AS67F/B	67F		Precision	203 +311°F	0,5	Total	411
T-AS68C/G	68C		Precision	145 +205°C	0,2	Total	379
T-AS68F/G	68F		Precision	293 +401°F	0,5	Total	379
T-AS69C/G	69C		Precision	195 +305°C	0,5	Total	379
T-AS69F/G	69F		Precision	383 +581°F	1	Total	379
T-AS70C/G	70C		Precision	295 405°C	0,5	Total	379
T-AS70F/G	70F		Precision	563 761°F	1	Total	379
T-AS71C/B	71C	72C	Oil in Wax	-37 +21°C	0,5	76	360
T-AS71F/B	71F	72F	Oil in Wax	-35 +70°F	1	76	360
T-AS72C/B	72C	67C	Kinematic Viscosity	-19,4 -16,6°C	0,05	Total	310
T-AS72F/B	72F	67F	Kinematic Viscosity	-2,5 +2,5°F	0,1	Total	310
T-AS73C/B	73C	68C	Kinematic Viscosity	-41,4 -38,6°C	0,05	Total	310
T-AS73F/B	73F	68F	Kinematic Viscosity	-42,5 -37,5°F	0,1	Total	310
T-AS74C/T	74C	69C	Kinematic Viscosity	-55,4 -52,6°C	0,05	Total	305
T-AS74F/T	74F	69F	Kinematic Viscosity	-67,5 -62,5°F	0,1	Total	305
T-AS75F/B	75F		Anti-freeze Freezing Point	-35 +35°F	0,5	100	408
T-AS76F/T	76F		Anti-freeze Freezing Point	-6,5 +5°F	0,5	100	408
T-AS77F/B	77F		Saybolt Viscosity	245 +265°F	0,5	Total	280
T-AS78F/B	78F		Saybolt Viscosity	295 +315°F	0,5	Total	280
T-AS79F/G	79F		Saybolt Viscosity	345 +365°F	0,5	Total	275
T-AS80F/G	80F		Saybolt Viscosity	395 +415°F	0,5	Total	275
T-AS81F/G	81F		Saybolt Viscosity	445 +465°F	0,5	Total	275
T-AS82C/B	82C		Fuel Rating Engine	-15 +105°C	1	30	165
T-AS82F/B	82F		Fuel Rating Engine	0 +220°F	2	30	165
T-AS83C/B	83C		Fuel Rating Air	15 +70°F	1	40	174
T-AS83F/B	83F		Fuel Rating Air	60 +160°F	1	40	174
T-AS84C/B	84C		Fuel Rating Orifice Tank	25 +80°C	1	249	387
T-AS84F/B	84F		Fuel Rating Orifice Tank	75 +175°F	1	249	387
T-AS85C/B	85C		Fuel Rating Surge	40 +150°C	1	181	314
T-AS85F/B	85F		Fuel Rating Surge	100 +300°F	2	181	314
T-AS86C/B	86C		Fuel Rating Mix	95 +175°C	1	35	170
T-AS86F/B	86F		Fuel Rating Mix	200 +350°F	2	35	170
T-AS87C/G	87C		Fuel Rating Coolant	150 +205°C	1	40	172
T-AS87F/G	87F		Fuel Rating Coolant	300 +400°F	1	40	172
T-AS88C/G	88C	101C	Vegetable Oil Flash	10 +200°C	1	57	287
T-AS88F/G	88F		Vegetable Oil Flash	50 +392°F	2	57	287
T-AS89C/B	89C		Solidification Point	-20 +10°C	0,1	76	375
T-AS90C/B	90C		Solidification Point	0 +30°C	0,1	76	375
T-AS91C/B	91C		Solidification Point	20 +50°C	0,1	76	400
T-AS92C/B	92C		Solidification Point	40 +70°C	0,1	76	375
T-AS93C/B	93C		Solidification Point	60 +90°C	0,1	76	375
T-AS94C/B	94C		Solidification Point	80 +110°C	0,1	76	375
T-AS95C/B	95C		Solidification Point	100 +130°C	0,1	76	375
T-AS96C/B	96C		Solidification Point	120 +150°C	0,1	76	375
T-AS97C/B	97C		Tank	-18 +49°C	0,5	Total	305
T-AS97F/B	97F		Tank	0 +120°F	1	Total	305
T-AS98C/B	98C		Tank	16 +82°C	0,5	Total	305
T-AS98F/B	98F		Tank	60 +180°F	1	Total	305
T-AS99C/B	99C		Weathering Test	-50 +5°C	0,2	35	305
T-AS99F/B	99F		Weathering Test	-58 +41°F	0,5	35	305

P/N	ASTM	IP	NAME	RANGE	DIV. (T°)	IMM. (mm)	LENGHT (mm)
T-AS100C/G	100C		Solidification Point	145 +205°C	0,2	76	370
T-AS101C/G	101C		Solidification Point	195 +305°C	0,5	76	370
T-AS102C/B	102C	83C	Solvents Distillation	123 +177°C	0,2	100	400
T-AS103C/G	103C	84C	Solvents Distillation	148 +202°C	0,2	100	395
T-AS104C/G	104C	85C	Solvents Distillation	173 +227°C	0,2	100	395
T-AS105C/G	105C	86C	Solvents Distillation	198 +252°C	0,2	100	395
T-AS106C/G	106C	87C	Solvents Distillation	223 +277°C	0,2	100	395
T-AS107C/G	107C	88C	Solvents Distillation	248 +302°C	0,2	100	395
T-AS108F/B	108F		Saybolt Viscosity	270 +290°F	0,5	Total	280
T-AS109F/G	109F		Saybolt Viscosity	320 +340°F	0,5	Total	275
T-AS110C/G	110C	93C	Kinematic Viscosity	133,6 +136,4°C	0,05	Total	305
T-AS110F/G	110F		Kinematic Viscosity	272,5 +277,5°F	0,1	Total	305
T-AS111C/G	111C		Tar Acids Distillation	170 +250°C	0,2	100	395
T-AS112C/B	112C		Solidification Point of Benzene	4 +6°C	0,02	Total	220
T-AS113C/B	113C	89C	Softening Point Wide Range	-1 +175°C	0,5	Total	410
T-AS113F/B	113F	89F	Softening Point Wide Range	30 +350°F	1	Total	410
T-AS114C/T	114C	14C	Aviation Fuel Freezing Point	-80 +20°C	0,5	Total	300
T-AS116C/B	116C		Bomb Calorimeter	18,9 +25,1°C	0,01	Total	625
T-AS117C/B	117C		Bomb Calorimeter	23,9 +30,1°C	0,01	Total	625
T-AS118C/B	118C		Kinematic Viscosity	28,6 +31,4°C	0,05	Total	310
T-AS118F/B	118F		Kinematic Viscosity	83,5 +88,5°F	0,1	Total	310
T-AS119C/B	119C		Anti-Freeze Freezing Point	-38,3 -30°C	0,1	100	425
T-AS119F/B	119F		Anti-Freeze Freezing Point	-37 -22°F	0,2	100	425
T-AS120C/B	120C	92C	Kinematic Viscosity	38,6 +41,4°C	0,05	Total	310
T-AS121C/B	121C	32C	Kinematic Viscosity	98,6 +101,4°C	0,05	Total	310
T-AS122C/B	122C	94C	Brookfield Viscosity	-45 -35°C	0,1	Total	305
T-AS123C/B	123C	95C	Brookfield Viscosity	-35 -25°C	0,1	Total	305
T-AS124C/B	124C	96C	Brookfield Viscosity	-25 -15°C	0,1	Total	305
T-AS125C/B	125C	97C	Brookfield Viscosity	-15 -5°C	0,1	Total	305
T-AS126C/B	126C	71C	Kinematic Viscosity	-27,4 -24,6°C	0,05	Total	310
T-AS126F/B	126F	71F	Kinematic Viscosity	-17,5 -12,5F	0,1	Total	310
T-AS127C/B	127C	99C	Kinematic Viscosity	-21,4 -18,6°C	0,05	Total	310
T-AS128C/B	128C	33C	Kinematic Viscosity	-1,4 +1,4°C	0,05	Total	310
T-AS128F/B	128F	33F	Kinematic Viscosity	29,5 +34,5°F	0,1	Total	310
T-AS129C/B	129C	36C	Kinematic Viscosity	91,6 +94,4°C	0,05	Total	310
T-AS129F/B	129F	36F	Kinematic Viscosity	197,5 +202,5°F	0,1	Total	310
T-AS130C/B	130C		Tank	-7 +105°C	0,5	Total	305
T-AS130F/B	130F		Tank	20 +220°F	1	Total	305
T-AS132C/G	132C	102C	Kinematic Viscosity	148,6 +151,4°C	0,05	Total	305
T-AS133C/B	133C		Precision	-38 +2°C	0,1	76	384
T-AS134C/G	134C	37C	Sludge	144 +156°C	0,2	100	270
T-AS135C/B	135C		Fuel Rating Air-High	38 +93°C	1	40	174
T-AS135F/B	135F		Fuel Rating Air-High	100 +200°F	1	40	174
T-AS136C/B	136C		Aviation Fuel Density	-20 +60°F	0,2	Total	295
T-AS136F/B	136F		Aviation Fuel Density	-5 +140°F	0,5	Total	295
T-AS137C/B	137C		Oxidation Cell Test	80 +100°C	0,1	76	255

IP THERMOMETER							
P/N	IP	ASTM	NAME	RANGE	DIV. (T°)	IMM. (mm)	LENGHT (mm)
T-IP1C/B	1C	5C	Cloud and Pour	-38 +50°C	1	108	264
T-IP2C/T	2C	6C	Low Cloud and Pour	-80 +20°C	1	76	230
T-IP3C/B	3C		Demulsification	-1 +105°C	0,5	Total	280
T-IP4C/G	4C		Crude Oil Distillation	-4 +360°C	2	Total	310
T-IP5C/G	5C	7C	Low Distillation	-2 +300°C	1	Total	385
T-IP6C/G	6C	8C	High Distillation	-2 +400°C	1	Total	385
T-IP8C/B	8C		Flushing Case Low	0 +45°C	0,2	65	340
T-IP9C/B	9C		Flushing Case Low	40 +85°C	0,2	65	340
T-IP14C/T	14C	114C	Aviation Fuel Freezing Point	-80 +20°C	0,5	Total	300
T-IP15C/B	15C	9C	Low Pensky-Martens	-5 +110°C	0,5	57	295
T-IP16C/G	16C	10C	High Pensky-Martens	90 +370°C	2	57	290
T-IP17C/B	17C	14C	Wax Melting Point	38 +82°C	0,1	79	380
T-IP18C/B	18C	54C	Congeaing Point	20 +100,6°C	0,2	Total	315
T-IP20C/B	20C	33C	Low Aniline Point	-38+42°C	0,2	50	425
T-IP21C/B	21C	34C	Medium Aniline Point	25 +105°C	0,2	50	425
T-IP22C/G	22C		Oxidation	195 +205°C	0,1	100	300
T-IP23C/B	23C	18C	Reid Vapor Pressure	34 +42°C	0,1	Total	305
T-IP24C/B	24C	22C	Oxidation Stability	95 +103°C	0,1	Total	305
T-IP28C/G	28C	11C	Cleveland Open Flash	-6 +400°C	2	25	310
T-IP29C/B	29C	44C	Kinematic Viscosity	18,6 +21,4°C	0,05	Total	310
T-IP30C/B	30C	45C	Kinematic Viscosity	23,6 +26,4°C	0,05	Total	310
T-IP31C/B	31C	28C	Kinematic Viscosity	36,6 +39,4°C	0,05	Total	310
T-IP32C/B	32C	121C	Kinematic Viscosity	98,6 +101,4°C	0,05	Total	310
T-IP33C/B	33C	128C	Kinematic Viscosity	-1,4 +1,4°C	0,05	Total	310
T-IP34C/B	34C	29C	Kinematic Viscosity	52,6 +55,4°C	0,05	Total	310
T-IP35C/B	35C	47C	Kinematic Viscosity	58,6 +61,4°C	0,055	Total	310
T-IP36C/B	36C	129C	Kinematic Viscosity	91,6 +94,4°C	0,05	Total	310
T-IP37C/G	37C	134C	Sludge	144 +156°C	0,2	100	270
T-IP38C/B	38C		Penetration	23 +27°C	0,1	Total	260
T-IP39C/B	39C		Density	-1 -38°C	0,1	Total	440
T-IP40C/B	40C		Drop Point Low	20 +120°C	1	100	250
T-IP41C/G	41C		Drop Point Low	100 +230°C	1	100	250
T-IP42C/B	42C		Breaking Point	-30 +30°C	0,5	250	370
T-IP43C/B	43C		FP Cut-Back (Int)	10 +110°C	0,5		305
T-IP44C/B	44C		FP Cut-Back (Ext)	15 +121°C	0,5		305
T-IP45C/B	45C		Refractometer	15 +30°C	0,2	22	160
T-IP46C/B	46C		Gravity Balance	14,5 +21°C	0,1	Total	160
T-IP47C/B	47C	13C	Loss on Heat	155 +170°C	0,5	Total	155
T-IP48C/B	48C		Tank Low	-38 +30°C	0,5	Total	310
T-IP49C/B	49C		Tank Medium	-15 +40°C	0,5	Total	310
T-IP50C/B	50C		Tank High	10 +65°C	0,5	Total	310
T-IP51C/B	51C		Tank Heated Fuel	35 +120°C	0,5	Total	310
T-IP52C/G	52C		Tank Bitumen	90 +260°C	1	Total	310
T-IP53C/B	53C		Tank Cargo	0 +80°C	0,5	Total	310
T-IP59C/B	59C	35C	High Aniline Point	90 +170°C	0,2	50	425
T-IP60C/B	60C	15C	Low Softening Point	-2 +80°C	0,2	Total	400
T-IP61C/C	61C	16C	High Softening Point	30 +200°C	0,5	Total	395
T-IP62C/G	62C		Partial Immersion	-5 +300°C	1	76	390
T-IP63C/B	63C	61C	Petrolatum Melting Point	32 +127°C	0,2	79	385
T-IP64C/B	64C	12C	Density-Wide Range	-20 +102°C	0,2	Total	445
T-IP65C/T	65C	43C	Kinematic Viscosity	-51,6 -34°C	0,1	Total	420

P/N	IP	ASTM	NAME	RANGE	DIV. (T°)	IMM. (mm)	LENGHT (mm)
T-IP66C/B	66C	46C	Kinematic Viscosity	48,6 +51,4°C	0,05	Total	310
T-IP67C/B	67C	72C	Kinematic Viscosity	-19,4 -16,6°C	0,05	Total	310
T-IP68C/B	68C	73C	Kinematic Viscosity	-41,4 -38,6°C	0,05	Total	310
T-IP69C/T	69C	74C	Kinematic Viscosity	-55,4 -52,6°C	0,05	Total	305
T-IP71C/B	71C	126C	Kinematic Viscosity	-27,4 -24,6°C	0,05	Total	310
T-IP72C/B	72C	71C	Oil in Wax	-37 +21°C	0,5	76	360
T-IP73C/G	73C		Partial Immersion	-5 +400°C	1	76	415
T-IP74C/B	74C		Abel Oil Cup Wide Range	-35 +70°C	0,5	61	310
T-IP75C/B	75C		Abel Water Cup Wide Range	-30 +80°C	0,5	89	310
T-IP76C/B	76C		Engler Viscosity	10 +55°C	0,5	93	240
T-IP77C/B	77C	37C	Solvents Distillation	-2 +52°C	0,2	100	400
T-IP78C/B	78C	38C	Solvents Distillation	24 +78°C	0,2	100	400
T-IP79C/B	79C	39C	Solvents Distillation	48 +102°C	0,2	100	400
T-IP80C/B	80C	40C	Solvents Distillation	72 +126°C	0,2	100	400
T-IP81C/B	81C	41C	Solvents Distillation	98 +152°C	0,2	100	400
T-IP82C/G	82C	42C	Solvents Distillation	95 +255°C	0,5	100	395
T-IP83C/B	83C	102C	Solvents Distillation	123 +177°C	0,2	100	400
T-IP84C/G	84C	103C	Solvents Distillation	148 +202°C	0,2	100	395
T-IP85C/G	85C	104C	Solvents Distillation	173 +227°C	0,2	100	395
T-IP86C/G	86C	105C	Solvents Distillation	198 +252°C	0,2	100	395
T-IP87C/G	87C	106C	Solvents Distillation	223 +277°C	0,2	100	395
T-IP88C/G	88C	107C	Solvents Distillation	248 +302°C	0,2	100	395
T-IP89C/B	89C	113C	Softening Point Wide Range	-1 +175°C	0,5	Total	410
T-IP90C/B	90C	48C	Kinematic Viscosity	80,6 +83,4°C	0,05	Total	310
T-IP91C/B	91C		Rapid Flash	0 +110°C	1	44	198
T-IP92C/B	92C	120C	Kinematic Viscosity	38,6 +41,4°C	0,05	Total	310
T-IP93C/G	93C	110C	Kinematic Viscosity	133,6 +136,4°C	0,05	Total	305
T-IP94C/B	94C	122C	Brookfield Viscosity	-45 -35°C	0,1	Total	305
T-IP95C/B	95C	123C	Brookfield Viscosity	-35 -25°C	0,1	Total	305
T-IP96C/B	96C	124C	Brookfield Viscosity	-25 -15°C	0,1	Total	305
T-IP97C/B	97C	125C	Brookfield Viscosity	-15 -5°C	0,1	Total	305
T-IP98C/G	98C		Rapid Flash (High)	100 +300°C	2	44	197
T-IP99C/B	99C	127C	Kinematic Viscosity	-21,4 -18,6°C	0,05	Total	310
T-IP100C/B	100C		Kinematic Viscosity	78,6 +81,4°C	0,05	Total	305
T-IP101C/G	101C	88C	Vegetable Oil Flash	10 +200°C	1	57	287
T-IP102C/G	102C	132C	Kinematic Viscosity	148,6 +151,4°C	0,05	Total	305