

viscometer holders

- For use with glass capillary viscometers

ordering information

Viscometer Type	Round Holder Catalog No.
Cannon®-Fenske Routine	K23381
Cannon®-Fenske Opaque	
Cannon®-Manning Semi-Micro	K23382
Ubbelohde	
Cannon®-Ubbelohde	K23384
Cannon®-Ubbelohde Semi-Micro	
(Also - Dilution and Semi-Micro Dilution types)	
Cross-Arm	K23383
BS/IP/RF U-Tube	K23387
Cannon®-Manning Vacuum	K23388
Asphalt Institute	K23363
Modified Koppers	



high temperature viscometer holders

- For use with HKV baths for temperature up to 232°C (450°F) which are defined as picosiemens per meter in ASTM D2624.

ordering information

Viscometer Type	Round Holder Catalog No.
Cannon®-Fenske Routine	K23381-HT
Cannon®-Fenske Opaque	
Cannon®-Manning Semi-Micro	K23382-HT
Ubbelohde	

universal tube holders

Can be used interchangeably with Cannon®-Fenske, Cannon®-Manning, Cross-Arm and Ubbelohde type capillary viscometers. Choice of round (2" dia.) plastic holders or rectangular metal holders.

ordering information

catalog no.	description
K23351	Universal Viscometer Holder, Round
K23350	Universal Viscometer Holder, Rectangular

digital stopwatch

- Accurate to 0.0003%
- Calibration certificate traceable to NIST

Solid-state LCD digital stopwatch with a full range of features, including single action timing, cumulative split, interval split and more. Housed in a rugged high impact case with 40" (102cm) lanyard. Supplied with 4-year battery and calibration certificate traceable to NIST.

ordering information

catalog no.	description
K23462	Digital Stopwatch

bath oil

- White mineral oil for routine applications
- Silicone fluid for high temperature applications

White Mineral Oil – Highly refined white technical oil for use in constant temperature baths. Contains an oxidation inhibitor to limit clouding at higher temperatures. Suitable for use at temperatures of up to 230°F (110°C).

Silicone Fluid – Clear heat transfer fluid with high oxidation resistance and low volatility. Recommended for constant temperature bath applications above 240°F (116°C).

Specifications

	White Mineral Oil	Silicone Fluid
Nominal Viscosity	14.2-17.0 cSt @ 40°C	100 cSt @ 25°C
Minimum Flash Point	248°F (120°C)	392°F (200°C)
Specific Gravity @ 25°C	0.839-0.855	0.964

Shipped in 1 gal (3.785L) or 5 gal (18.925L) containers

Kinematic Viscosity

viscometer cleaning and drying apparatus

- Six tube capacity
- For all types of capillary viscometers

Cleans and dries glass capillary viscometers using solvent and pressurized filtered air. Use for all types of kinematic viscometers. Cleans as many as six tubes at a time. Place tubes on solvent/air jets and open the valve for each jet. Turn selector dial to 'solvent' to rinse tubes, and then to 'air' to evaporate any remaining solvent. Use adjustable drainage rack to drain excess sample oil from tubes prior to cleaning. Drainage trough connects to a suitable waste container or chemical drain for removal of waste oil and solvent. Built-in air filter removes particles from the air stream. Available solvent tank has tubing with fittings for connection to apparatus. Requires pressurized air source (150psi maximum).

Dimensions lwxh,in.(cm) without solvent tank

16x7x12.5 (40.6x17.8x31.7)

Net Weight: K34000: 34 lbs (15.4kg)

K34010: 15 lbs (6.8kg)

Shipping Information:

Shipping Weight:

K34000: 44 lbs (20kg)

K34010: 18 lbs (8.2kg)

Dimensions:

K34000: 8.2 Cu. ft.



K34010 Cleaning and Drying Apparatus

ordering information

catalog no. description

K34000 Viscometer Cleaning and Drying Apparatus with Solvent Tank

K34010 Viscometer Cleaning and Drying Apparatus without Solvent Tank

Kinematic Viscosity

Catalog IP No.	Thermometer	Test Temperature °F	Test Temperature °C	Reference
250-000-74F	ASTM 74F	-65°F	—	69F
250-000-74C	ASTM 74C	—	-53.9°C	69C
250-000-43F	ASTM 43F-61	-29°F	—	65F
250-000-43C	ASTM 43C	—	-51 to -34°C	65C
250-000-73F	ASTM 73F	-40°F	—	68F
250-000-73C	ASTM 73C	—	-40°C	68C
250-000-126F	ASTM 126F	-15°F	—	71F
250-000-126C	ASTM 126C	—	-26°C	71C
250-000-127C	ASTM 127C	—	-20°C	99C
250-000-72F	ASTM 72F	0°F	—	67F
250-000-72C	ASTM 72C	—	-17.8°C	67C
250-000-128F	ASTM 128F	32°F	—	33F
250-000-128C	ASTM 128C	—	0°C	33C
250-000-44F	ASTM 44F	68°F	—	29F
250-000-44C	ASTM 44C	—	20°C	29C
250-000-45F	ASTM 45F	77°F	—	30F
250-000-45C	ASTM 45C	—	25°C	30C
250-000-118F	ASTM 118F	86°F	—	—

Catalog IP No.	Thermometer	Test Temperature °F	Test Temperature °C	Reference
250-000-118C	ASTM 118C	—	30°C	—
250-000-28F	ASTM 28F	100°F	—	31F
250-000-28C	ASTM 28C	—	37.8°C	31C
250-000-120C	ASTM 120C	—	40°C	92C
250-000-46F	ASTM 46F	122°F	—	66F
250-000-46C	ASTM 46C	—	50°C	66C
250-000-29F	ASTM 29F	130°F	—	—
250-000-29C	ASTM 29C	—	54.4°C	34C
250-000-47F	ASTM 47F	140°F	—	35F
250-000-47C	ASTM 47C	—	60°C	35C
250-000-48F	ASTM 48F	180°F	—	90F
250-000-48C	ASTM 48C	—	82.2°C	90C
250-000-129F	ASTM 129F	200°F	—	36F
250-000-129C	ASTM 129C	—	93.3°C	36C
250-000-30F	ASTM 30F	210°F	—	32F
250-000-121C	ASTM 121C	—	100°C	32C
250-000-110F	ASTM 110F	275°F	—	—
250-000-110C	ASTM 110C	—	135°C	93C

Please note: ASTM D445 recommends calibrated kinematic viscosity thermometers.



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Kinematic Viscosity

Calibrated Glass Capillary Kinematic Viscometers - Koehler offers a full selection of glass capillary viscometers for measuring kinematic viscosity of liquid petroleum products in accordance with ASTM D445 and related standard test methods. All types of viscometers conform to ASTM D446 and related standard specifications for glass capillary kinematic viscometers. Each viscometer is supplied with a calibration certificate, and holders should be ordered separately. Please refer to the following brief descriptions for determining which viscometer is best suited for your particular application.

Cannon®-Fenske Routine Viscometers - The Cannon®-Fenske Routine viscometer is a rugged and inexpensive viscometer that works well if the sample is transparent or translucent. Other viscometers for transparent samples in this catalog include the Cross Arm and BS/U-Tube viscometers.

Ubbelohde Viscometers - The Ubbelohde viscometer and other suspended level viscometers are used to measure transparent liquids. Unlike the Cannon®-Fenske Routine viscometer, suspended level viscometers maintain the same viscometer constant at all temperatures, advantageous when samples are to be measured at different temperatures. Other suspended level viscometers in this catalog include the BS/IP/SL, BP/IP/SL(S), and BP/IP/MSL viscometers.

Reverse Flow Viscometers - The Cannon®-Fenske Opaque, Cross Arm, and BS/IP/RF U-Tube viscometers have been designed for testing opaque liquids. These viscometers wet the timing section of the viscometer capillary only during the actual measurement and must be cleaned, dried and refilled before a repeat measurement can be made. By contrast, other viscometer types commonly used to measure transparent liquids allow the sample to be repeatedly drawn up into the capillary, permitting duplicate measurements.

Small Volume Viscometers - Several semi-micro viscometers have been designed which require one milliliter or less of liquid, which include the Cannon®-Manning Semi-Micro, Cannon®-Manning Semi-Micro Extra Low Charge, and Cannon®-Ubbelohde Semi-Micro viscometers.

Dilution Viscometers - Estimates of the molecular size and shape of large polymers molecules can be obtained from kinematic viscosity measurements of dilute solutions. The Cannon®-Ubbelohde Dilution viscometer has an extra large reservoir which allows polymer solutions to be diluted several times and measures viscosities at four different shear rates. Dilute polymer solutions frequently appear to exhibit changes in kinematic viscosity when the shear rate is changed.

Vacuum Viscometers - In most glass capillary viscometers, the samples flow under gravity. When liquids are too viscous to flow readily under gravity, vacuum viscometers may be used to measure viscosity. A vacuum is applied to one end of the viscometer to pull the liquid through the capillary into the timing bulb. Koehler offers the Cannon®-Manning Vacuum, the Asphalt Institute Vacuum, and the Modified Koppers Vacuum reverse flow viscometer tubes. These vacuum viscometers require an accurately controlled vacuum regulator for proper measurement. Please refer to page 13 for information about the Koehler Vacuum Regulator.



Cannon®-Fenske Routine



Cannon®-Fenske Opaque



Ubbelohde

Cannon®-Fenske Routine

For kinematic viscosity of transparent liquids up to 100,000cSt. Requires a sample of approximately 7mL. Use with K23310 and K23350 rectangular metal holders or K23381 and K23351 round plastic holders. Length: 250mm

ordering information

Catalog No.	Size	Approximate Constant, cSt/s	Kinematic Viscosity Range, cSt
378-025-C01	25	0.002	0.5 to 2
378-050-C01	50	0.004	0.8 to 4
378-075-C01	75	0.008	1.6 to 8
378-100-C01	100	0.015	3 to 15
378-150-C01	150	0.035	7 to 35
378-200-C01	200	0.1	20 to 100
378-300-C01	300	0.25	50 to 250
378-350-C01	350	0.5	100 to 500
378-400-C01	400	1.2	240 to 1,200
378-450-C01	450	2.5	500 to 2,500
378-500-C01	500	8.0	1,600 to 8,000
378-600-C01	600	20.0	4,000 to 20,000
378-650-C01	650	45.0	9,000 to 45,000
378-700-C01	700	100.0	20,000 to 100,000

Kinematic Viscosity

Cannon®-Fenske Opaque - Reverse-flow viscometer for measurement of transparent and dark liquids having kinematic viscosities of up to 100,000cSt. Requires a sample of approximately 12mL. Allows timing of samples whose thin films are opaque and are thus not suitable for modified Ostwald and suspended-level type viscometers. Can be used for kinematic viscosities of asphalts by ASTM D2170 method. Use with K23310 and K23350 rectangular metal holders or K23381 and K23351 round plastic holders. Length: 295mm

Catalog No.	Size	Approximate Constant, cSt/s	Kinematic Viscosity Range, cSt
378-025-C02	25	0.002	0.4 to 2
378-050-C02	50	0.004	0.8 to 4
378-075-C02	75	0.008	1.6 to 8
378-100-C02	100	0.015	3 to 15
378-150-C02	150	0.035	7 to 35
378-200-C02	200	0.1	20 to 100
378-300-C02	300	0.25	50 to 250
378-350-C02	350	0.5	100 to 500
378-400-C02	400	1.2	240 to 1,200
378-450-C02	450	2.5	500 to 2,500
378-500-C02	500	8.0	1,600 to 8,000
378-600-C02	600	20.0	4,000 to 20,000
378-650-C02	650	45.0	9,000 to 45,000
378-700-C02	700	100.0	20,000 to 100,000

Ubbelohde - Suspended-level type viscometer for kinematic viscosities of transparent liquids of up to 100,000cSt. Requires a sample volume of approximately 11mL. Use with K23320 and K23350 rectangular metal holders or K23382 and K23351 round plastic holders. Length: 283mm

Catalog No.	Size	Approximate Constant, cSt/s	Kinematic Viscosity Range, cSt
378-000-C03	0	0.001	0.3 to 1
378-00C-C03	0C	0.003	0.6 to 3
378-00B-C03	0B	0.005	1 to 5
378-001-C03	1	0.01	2 to 10
378-01C-C03	1C	0.03	6 to 30
378-01B-C03	1B	0.05	10 to 50
378-002-C03	2	0.1	20 to 100
378-02C-C03	2C	0.3	60 to 300
378-02B-C03	2B	0.5	100 to 500
378-003-C03	3	1.0	200 to 1,000
378-03C-C03	3C	3.0	600 to 3,000
378-03B-C03	3B	5.0	1,000 to 5,000
378-004-C03	4	10.0	2,000 to 10,000
378-04C-C03	4C	30.0	6,000 to 30,000
378-04B-C03	4B	50.0	10,000 to 50,000
378-005-C03	5	100.0	20,000 to 100,000

Cannon®-Ubbelohde Four-Bulb Shear Dilution - Suspended level viscometer for the measurement of intrinsic viscosity extrapolated to zero shear rate. Provides five-fold range of shear rates. Requires approximately 20mL of sample. Use with K23361 rectangular holder or K23384 round holder. Length: 280 mm

Catalog No.	Size	Approximate Constant, cSt/s	Kinematic Viscosity Range, cSt
378-025-C16	25	0.002	0.5 to 2
378-050-C16	50	0.004	0.8 to 4
378-075-C16	75	0.008	1.6 to 8
378-100-C16	100	0.015	3 to 15
378-150-C16	150	0.035	7 to 35

Cannon®-Ubbelohde - Suspended level viscometer for transparent liquids. Requires approximately 11mL of sample. Use with K23361 rectangular holder or K23384 round holder. Length: 335mm

Catalog No.	Size	Approximate Constant, cSt/s	Kinematic Viscosity Range, cSt
378-025-C11	25	0.002	0.5 to 2
378-050-C11	50	0.004	0.8 to 4
378-075-C11	75	0.008	1.6 to 8
378-100-C11	100	0.015	3 to 15
378-150-C11	150	0.035	7 to 35
378-200-C11	200	0.1	20 to 100
378-300-C11	300	0.25	50 to 200
378-350-C11	350	0.5	100 to 500
378-400-C11	400	1.2	240 to 1,200
378-450-C11	450	2.5	500 to 2,500
378-500-C11	500	8.0	1,600 to 8,000
378-600-C11	600	20.0	4,000 to 20,000
378-650-C11	650	45.0	9,000 to 45,000
378-700-C11	700	100.0	20,000 to 100,000

Cannon®-Ubbelohde Dilution - Suspended level viscometer for the measurement of intrinsic viscosity of transparent liquids. Requires approximately 8mL of sample. Use with K23361 rectangular holder or K23384 round holder. Length: 385mm. Note: 18" Depth bath required to accommodate tubes.

Catalog No.	Size	Approximate Constant, cSt/s	Kinematic Viscosity Range, cSt
378-025-C15	25	0.002	0.5 to 2
378-050-C15	50	0.004	0.8 to 4
378-075-C15	75	0.008	1.6 to 8
378-100-C15	100	0.015	3 to 15
378-150-C15	150	0.035	7 to 35
378-200-C15	200	0.1	20 to 100
378-300-C15	300	0.25	50 to 200
378-350-C15	350	0.5	100 to 500
378-400-C15	400	1.2	240 to 1,200
378-450-C15	450	2.5	500 to 2,500
378-500-C15	500	8.0	1,600 to 8,000
378-600-C15	600	20.0	4,000 to 20,000

Cannon®-Ubbelohde Semi-Micro - For transparent liquids. Requires approximately 1.0mL of sample. Use with K23361 rectangular holder or K23384 round holder. Length: 335mm

Catalog No.	Size	Approximate Constant, cSt/s	Kinematic Viscosity Range, cSt
378-025-C12	25	0.002	0.5 to 2
378-050-C12	50	0.004	0.8 to 4
378-075-C12	75	0.008	1.6 to 8
378-100-C12	100	0.015	3 to 15
378-150-C12	150	0.035	7 to 35
378-200-C12	200	0.1	20 to 100
378-300-C12	300	0.25	50 to 200
378-350-C12	350	0.5	100 to 500
378-400-C12	400	1.2	240 to 1,200
378-450-C12	450	2.5	500 to 2,500
378-500-C12	500	8.0	1,600 to 8,000



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Kinematic Viscosity

Cannon®-Manning Semi-Micro - For transparent liquids. Requires a sample of approximately 1.0mL. Use with K23310 and K23350 rectangular holders or K23381 and K23351 round holders. Length: 275mm

Catalog No.	Size	Approximate Constant, cSt/s	Kinematic Viscosity Range, cSt
378-025-C10	25	0.002	0.5 to 2
378-050-C10	50	0.004	0.8 to 4
378-075-C10	75	0.008	1.6 to 8
378-100-C10	100	0.015	3 to 15
378-150-C10	150	0.035	7 to 35
378-200-C10	200	0.1	20 to 100
378-300-C10	300	0.25	50 to 200
378-350-C10	350	0.5	100 to 500
378-400-C10	400	1.2	240 to 1,200
378-450-C10	450	2.5	500 to 2,500
378-500-C10	500	8.0	1,600 to 8,000
378-600-C10	600	20.0	4,000 to 20,000

Cannon®-Manning Semi-Micro Extra Low Charge - For transparent liquids. Requires a sample of approximately 0.5mL. Use with K23350 rectangular holders or K23351 round holders. Length: 200mm

Catalog No.	Size	Approximate Constant, cSt/s	Kinematic Viscosity Range, cSt
378-025-C17	25	0.002	0.5 to 2
378-050-C17	50	0.004	0.8 to 4
378-075-C17	75	0.008	1.6 to 8
378-100-C17	100	0.015	3 to 15
378-150-C17	150	0.035	7 to 35
378-200-C17	200	0.1	20 to 100
378-300-C17	300	0.25	50 to 200
378-350-C17	350	0.5	100 to 500
378-400-C17	400	1.2	240 to 1,200
378-450-C17	450	2.5	500 to 2,500
378-500-C17	500	8.0	1,600 to 8,000
378-600-C17	600	20.0	4,000 to 20,000

Cross-Arm - Reverse-flow type viscometer for transparent and dark liquids having kinematic viscosities of up to 100,000cSt. Requires a sample of approximately 1-3mL. Use with K23362 and K23350 rectangular metal holders or K23383 and K23351 round plastic holders. Length: 305mm

Catalog No.	Size	Approximate Constant, cSt/s	Kinematic Viscosity Range, cSt
378-001-C09	1	0.003	0.6 to 3
378-002-C09	2	0.01	2 to 10
378-003-C09	3	0.03	6 to 30
378-004-C09	4	0.1	20 to 100
378-005-C09	5	0.3	60 to 300

BS/IP/RF U-Tube Opaque - Reverse-flow viscometer for opaque liquids having kinematic viscosities of up to 300,000cSt. Requires a sample of 12-25mL. Use with K23330 rectangular metal holders or K23387 round plastic holders. Length: 275mm

Catalog No.	Size	Approximate Constant, cSt/s	Kinematic Viscosity Range, cSt
378-001-C08	1	0.003	0.6 to 3
378-002-C08	2	0.01	2 to 10
378-003-C08	3	0.03	6 to 30
378-004-C08	4	0.1	20 to 100
378-005-C08	5	0.3	60 to 300
378-006-C08	6	1.0	200 to 1,000
378-007-C08	7	3.0	600 to 3,000
378-008-C08	8	10.0	2,000 to 10,000
378-009-C08	9	30.0	6,000 to 30,000
378-010-C08	10	100.0	20,000 to 100,000
378-011-C08	11	300.0	60,000 to 300,000

BS/U-Tube Transparent - U-Tube viscometer for transparent liquids having kinematic viscosities of up to 10,000cSt. Requires a sample of 7-23mL. Length: 300mm

Catalog No.	Size	Approximate Constant, cSt/s	Kinematic Viscosity Range, cSt
378-00A-C08	A	0.003	0.9 to 3
378-00B-C08	B	0.01	2.0 to 10
378-00C-C08	C	0.03	6 to 30
378-00D-C08	D	0.1	20 to 100
378-00E-C08	E	0.3	60 to 300
378-00F-C08	F	1.0	200 to 1,000
378-00G-C08	G	3.0	600 to 3,000
378-00H-C08	H	10.0	2,000 to 10,000

BS/U/M Miniature U-Tube - Miniature U-Tube viscometer for transparent liquids having kinematic viscosities of up to 100cSt. Requires a sample of 2mL. Length: 250mm

Catalog No.	Size	Approximate Constant, cSt/s	Kinematic Viscosity Range, cSt
378-0M1-C18	M1	0.001	0.2 to 1
378-0M2-C18	M2	0.005	1 to 5
378-0M3-C18	M3	0.015	3 to 15
378-0M4-C18	M4	0.04	8 to 40
378-0M5-C18	M5	0.1	20 to 100
378-600-C12	600	20.0	4,000 to 20,000

Vacuum Manifold - Designed for use with Koehler capillary-type viscometer tube baths and vacuum regulator. Manifold includes seven position valves and tubing for applying vacuum or pressure as per ASTM D2171.

ordering information

catalog no.	description
K23467	Vacuum Manifold

Kinematic Viscosity

BS/IP/MSL Miniature Suspended Level - Miniature suspended level viscometer for transparent liquids having kinematic viscosities of up to 3,000cSt. Requires a sample of 4mL. Length: 345mm

Catalog No.	Size	Approximate Constant, cSt/s	Kinematic Viscosity Range, cSt
378-001-C19	1	0.003	0.6 to 3
378-002-C19	2	0.01	2 to 10
378-003-C19	3	0.03	6 to 30
378-004-C19	4	0.1	20 to 100
378-005-C19	5	0.3	60 to 300
378-006-C19	6	1.0	200 to 1,000
378-007-C19	7	3.0	600 to 3,000

BS/IP/SL Suspended Level - Suspended level viscometer for transparent liquids having kinematic viscosities of up to 100,000cSt. Requires a sample of 11mL. Length: 250mm

Catalog No.	Size	Approximate Constant, cSt/s	Kinematic Viscosity Range, cSt
378-001-C20	1	0.01	3.5 to 10
378-01A-C20	1A	0.03	6 to 30
378-002-C20	2	0.1	20 to 100
378-02A-C20	2A	0.3	60 to 300
378-003-C20	3	1.0	200 to 1,000
378-03A-C20	3A	3.0	600 to 3,000
378-004-C20	4	10.0	2,000 to 10,000
378-04A-C20	4A	30.0	6,000 to 30,000
378-005-C20	5	100.0	20,000 to 100,000

BS/IP/SL(S) Suspended Level - Shortened suspended level viscometer for transparent liquids having kinematic viscosities of up to 100,000cSt. Requires a sample of 10mL. Length: 255mm

Catalog No.	Size	Approximate Constant, cSt/s	Kinematic Viscosity Range, cSt
378-001-C21	1	0.0008	3.5 to 10
378-002-C21	2	0.003	6 to 30
378-003-C21	3	0.01	20 to 100
378-004-C21	4	0.03	60 to 300
378-005-C21	5	0.1	200 to 1,000
378-006-C21	6	0.3	600 to 3,000
378-007-C21	7	1.0	2,000 to 10,000
378-008-C21	8	3.0	6,000 to 30,000
378-009-C21	9	10.0	20,000 to 100,000

Cannon®-Manning Vacuum - For highly viscous materials, including asphalt cement at 140°F (60°C) in accordance with ASTM D2171. Requires approximately 6mL of sample. Use with K23360 rectangular holder or K23388 round holder. Length: 230-260mm

Catalog No.	Size	Approximate Constant at 300mm Hg vacuum, poise/second			Viscosity Range, Poise
		Bulb B	Bulb C	Bulb D	
378-004-C13	4	0.0002	0.0006		0.36 to 0.8
378-005-C13	5	0.006	0.002		0.12 to 2.4
378-006-C13	6	0.02	0.006		0.36 to 8
378-007-C13	7	0.06	0.02		1.2 to 24
378-008-C13	8	0.2	0.06		3.6 to 80
378-009-C13	9	0.6	0.2		12 to 240
378-010-C13	10	2	0.6		36 to 800
378-011-C13	11	6	2		120 to 2,400
378-012-C13	12	20	6		360 to 8,000
378-013-C13	13	60	20		1,200 to 24,000
378-014-C13	14	200	60		3,600 to 80,000

Asphalt Institute Vacuum - Similar to Cannon®-Manning Vacuum type, but with graduated capillary instead of two timing bulbs. Requires a sample of approximately 4mL. Use with K23360 rectangular holder or K23388 round holder. Length: 230-260mm

Catalog No.	Size	Approximate Constant at 300mm Hg vacuum, poise/second			Viscosity Range, Poise
		Bulb B	Bulb C	Bulb D	
378-025-C14	25	2	1	0.7	42 to 800
378-050-C14	50	8	4	3	180 to 3,200
378-100-C14	100	32	16	10	600 to 12,800
378-200-C14	200	128	64	40	2,400 to 52,000
378-400-C14	400	500	250	160	9,600 to 200,000

Modified Koppers Vacuum - For highly viscous materials in accordance with ASTM D2171. Requires a sample of 2mL. Use with K23364 rectangular holder or K23363 round holder. Length: 270mm

Catalog No.	Size	Approximate Constant at 300mm Hg vacuum, poise/second			Viscosity Range, Poise
		Bulb B	Bulb C	Bulb D	
378-025-C06	25	2	1	0.7	42 to 800
378-050-C06	50	8	4	3	180 to 3,200
378-100-C06	100	32	16	10	600 to 12,800
378-200-C06	200	128	64	40	2,400 to 52,000
378-400-C06	400	500	250	160	9,600 to 200,000

Vacuum Regulator

vacuum regulator

For ASTM D2171, "Viscosity of Asphalts by Vacuum Capillary Viscometers." Precisely controls vacuum from 28 to 411 mm Hg below atmospheric pressure to an accuracy of ± 0.5 mm Hg. Recommended for use with Cannon®-Manning, Asphalt Institute or Modified Koppers vacuum viscometers. All solid-state—contains no mercury. Amount of vacuum is shown on digital display. Ten different units of vacuum measurement may be selected through keypad on the meter.

ordering information

catalog no. description

K23463	Vacuum Regulator (vertical orientation), 115V 60Hz
K23464	Vacuum Regulator (vertical orientation), 220-240V 50/60Hz
K23465	Vacuum Regulator (horizontal orientation), 115V 60Hz
K23466	Vacuum Regulator (horizontal orientation), 220-240V 50/60Hz



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