



PRODUCT CATALOG

Petroleum Testing Equipment



LETTER FROM THE PRESIDENT

Dear Valued Customer,

Since 1930, we have taken great pride in building high quality products, performing accurate instrument calibrations and providing excellent customer service. Our original Melton centrifuge set the standard in 1957 and continues to inspire our product development today. We look forward to continuing the rich traditions that have made LKIG successful and to manufacturing the next generation of petroleum equipment and instruments.

Thank you for your business.

Best regards,

The Management Team

 **L-K INDUSTRIES**

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Transport Centrifuge Series

The Transport Series is designed for determining S&W (Sediment and Water) content on crude oil haulers, per API MPMS Ch. 10.4 (withdrawn ASTM D96). There are heated or non-heated, as well as 2 or 4-place trunnion arm configurations. The Transport centrifuges are compatible with finger (A), pear-shaped (B) or short cone (D) style tubes. The Sulfur-in-Oil Test Prep Centrifuge (Transport 3100) is ideal for preparing samples for sulfur analysis, in compliance with ASTM 4294. Petroleum samples are spun to separate sediment and suspended particulates that skew sulfur content output in X-ray fluorescence spectrometry.

FEATURES	BENEFITS
Rugged steel case assembly with reinforced mounting points and double insulation	Outdoor use and longer lifespan; reduced heat loss
Compact design	Easy installation and maintenance
Pre-heater pocket (2 slots plus extra storage)	Faster sample heating
Bowl heater	Maintain sample temperature up to 250°F
LCD temperature display (optional)	Accurate feedback of bowl temperature
Solid-state motor control with epoxy-coated electronics	No rheostat headaches; longer field life
Tachometer accessible with lid closed	Safe speed verification



"Transport 9100"

Heated Centrifuge with adjustable controls

Weight & Size

65 lbs, 18"x22.5"x12.5"



"Transport 7100"

Heated Centrifuge

Weight & Size

65 lbs, 18"x22.5"x12.5"



"Sulfur-in-Oil"

Non-Heated Centrifuge (Transport 3100)

Weight & Size

60 lbs, 18" x 22.5" x 12.5"

Available Configurations

- A, B or D tube styles
- 12VDC or 115VAC
- 2-Place or 4-Place Trunnion arm
- Heated or Non-Heated
- Optional LCD Displays

Ask About LK's 24hr Replacement Guarantee

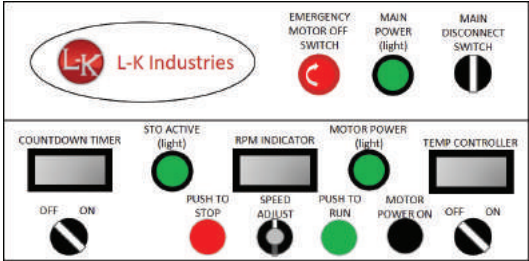
*Recommended configuration shown (see details in appendix). For pricing on other configurations, please visit www.lk-ind.com.

Benchmark C Laboratory Centrifuge

Class I, Division 2

The Benchmark C is the first oil centrifuge with Class I, Division 2 certification. The ETL certification allows for use in Class I, Division 2 Groups B, C and D Hazardous and Ordinary Locations. It is designed for determining S&W content in crude oil or refined petroleum products. It meets the requirements for ASTM D4007/API 10.3, ASTM D1796, ASTM D2709, ASTM D2273, ASTM D91, ASTM D96/API 10.4, ASTM D893 and API 2542. It also conforms to UL 61010-1, ANSI/ISA-STD 12.12.01, CAN/CSA C22.2 No. 213, CAN/CSA-C22.2 No. 61010.1 (2nd addition) and UL 823. The Benchmark C is ideal for installation on benchtops in laboratories or refineries using 100-mL capacity tubes. It comes with a standard 4-place trunnion arm configuration and MUST be hard-wired to maintain Class I, Division 2 certification.

FEATURES	BENEFITS
High speed capability (2300 RPM)	Unmatched precision in S&W determination
Digital temperature control (Ambient to 200°F)	Better process control for testing heavy crude oil
Integrated timer	Reduces variation in testing
Internal motor control	Linear acceleration results in more consistent testing; actual (not theoretical) speed shown
Specifically designed collars and cushions	Less tube breakage at higher G-forces
Latching emergency stop button, motor lockout circuits and locking lid	Prevents unsafe operation
720-watt dual heating element	Faster recovery
Fully insulated body; outer solvent-resistant, powder coating	Better temperature control (prevents heat loss); sturdy and resilient



"Benchmark C"

Includes 4 Centrifuge Tubes

Weight	Size
110 lbs	28" x 33" x 18"

Available Configurations

- B, C, D or E tube styles
- 120VAC or 240VAC (50-60 Hz, single phase)

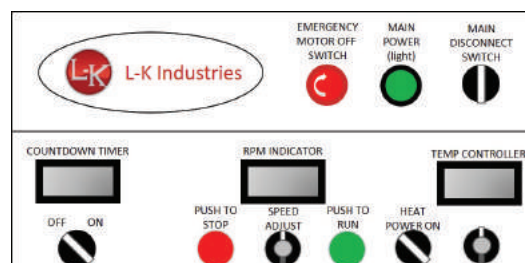
Our Benchmark Maintenance Plan! - Pg 24

*Recommended configuration shown (see details in appendix). For pricing on other configurations, please visit www.lk-ind.com.

Benchmark S Laboratory Centrifuge

The Benchmark S is an economical alternative to the Benchmark C and offers features distinct from the Melton Centrifuge. It meets requirements for ASTM D4007/API 10.3, ASTM D1796, ASTM D2709, ASTM D2273, ASTM D91, ASTM D96/API 10.4, ASTM D893 and API 2542. It is designed for determining S&W content in crude oil or refined petroleum at locations without Class I, Division 2 requirements. The Benchmark S is optimal for laboratory settings or refineries using 100-mL capacity tubes and preferably installed on benchtops. It comes with a standard 4-place trunnion arm configuration. The unit may be hard-wired, or a power cord may be purchased separately from L-K Industries.

FEATURES	BENEFITS
Variable speed motor with LCD Display and electronic braking	Reach speeds up to 2000 rpm; controlled stops
Manual temperature control (Ambient to 200°F)	Real-time adjustment; better process control
Integrated timer	Reduces variation in testing
Specifically designed collars, shields and cushions	Less tube breakage at higher G-forces
Latching emergency stop button and locking lid	Prevents unsafe operation
Fully insulated body; outer solvent-resistant, powder coating	Better temperature control (prevents heat loss); sturdy and resilient



"Benchmark S"

Weight

Size

110 lbs

28" x 33" x 18"

Available Configurations

B, C, D or E tube styles

120VAC or 240VAC (50-60 Hz, single phase)

Our Benchmark Maintenance Plan! - Pg 24

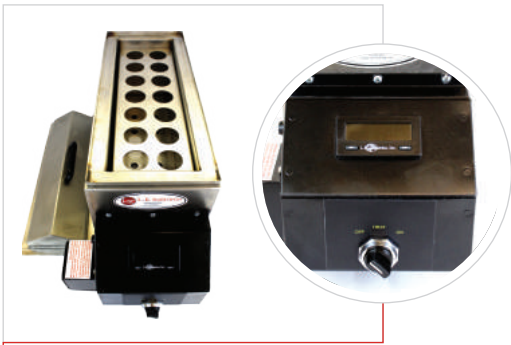
* Recommended configuration shown (see details in appendix). For pricing on other configurations, please visit www.lk-ind.com.

Criterion Water Bath

Class I, Division 2

The Criterion Water Bath Heater distributes 900 watts of heating power and uses water to transfer heat. The unit is designed to provide precise heating of solvents and samples prior to use in a centrifuge or other equipment in a laboratory setting. It can accommodate two 1-gallon bottles of solvent, 14 Long Cone (C) centrifuge tubes, 14 Capillary (E) tubes or 12 Short Cone (D) style tubes. The unit is certified by ETL (Electrical Testing Laboratory) for Class I, Division 2, indoor use and is rated for Group A, B, C and D Hazardous and Ordinary Locations (Pollution Degree 2). It meets the requirements of UL 61010-1, ANSI/ISA-STD 12.12.01, CAN/CSA C22.2 No. 213 and CAN/CSA-C22.2 No. 61010.1 (2nd addition). Due to these certifications, the unit requires hard-wiring.

FEATURES	BENEFITS
Digital, programmable temperature control with resistive heating element	Maintain selected temperature with high accuracy for extended periods
Accommodates two 1-gal solvent bottles	Enables efficient rotation of heated solvent samples
Accommodates 14 C/E or 12 D style tubes	Optimal tube capacity means less down time
Modular top with hinged lid	Versatility of lab configurations; minimizes evaporation
Fully-insulated body	Reduces heat loss
Optimally designed unit size	Reduces corrosion and makes bath more robust



14-Place "C" or "E" Tubes



2-Place, 1-Gallon Bottles

Weight	Size
30 lbs	26" x 16" x 18"

Weight	Size
30 lbs	26" x 16" x 18"

Available Configurations

- Full SS body available
- C, D or E tube styles
- 1-gal bottle size
- 110VAC or 220VAC (single phase, 50/60 Hz)

Full system available with purchase discount - Pg 23

*Recommended configuration shown (see details in appendix). For pricing on other configurations, please visit www.lk-ind.com.

TradeMark Heater Series

Class I, Division 2

TradeMark Heater

The TradeMark Heater is a 250-watt, dry block unit ideal for use on a laboratory benchtop. It is certified for Class I, Division 2 locations and rated for Groups A, B, C and D Hazardous and Ordinary Locations (Pollution Degree 2). It meets the requirements of UL 61010-1, ANSI/ISA-STD 12.12.01, CAN/CSA C22.2 No. 213 and CAN/CSA-C22.2 No. 61010.1 (2nd addition). Due to these certifications, the unit requires hard-wiring. The unit is designed to provide precise heating of solvents and crude oil samples prior to use in a centrifuge or other equipment. The digital programmable temperature controller is adjustable from 72°F to 250°F.



MSRP: \$2,860*

Weight & Size

28 lbs, 9" x 11½" x 12¾"

FEATURES	BENEFITS
Insulated body	Efficient heating; reduction of heat loss
Adjustable temperature with LCD display and RTD feedback	Versatility for multiple applications; prevents
Aluminum dry bath	Less corrosive operation; heat transferred directly to tubes

Available Configurations

- A, B, C or D tube styles
- 1-gallon Toluene bottle
- 110VAC or 220VAC (50/60 Hz)

Refined Fuel Test Cylinder Heater

The Refined Fuel Test Cylinder Heater conforms to the corresponding TradeMark standards. It is used to prepare samples for the ASTM and NGPA silver strip corrosion testing of engine fuels. The unit MUST be hard-wired. It pairs with the Fuel Corrosion Test Cylinder (Pg 17) and is ideal for laboratory benchtops.



Refined Fuel Test Cylinder Heater

MSRP: \$2,288*

Weight & Size

28 lbs, 9" x 11½" x 12¾"

FEATURES	BENEFITS
Insulated body	Efficient heating; reduction of heat loss
Adjustable temperature with LCD display and RTD feedback	Versatility for multiple applications; prevents runaway heating
Dry bath	Less corrosive operation; heat transferred directly to tubes

Available Configurations

- 110VAC or 220VAC
- Water bath model also available

*Recommended configuration shown (see details in appendix). For pricing on other configurations, please visit www.lk-ind.com.

Melton Heater

The Melton Heater is an explosion-resistant unit ideal for laboratory settings. The 4 or 8-place tray is compatible with long cone (C) and short cone (D) style tubes and available in 115VAC or 220VAC. The Melton Heater is designed for hard-wiring; thus, a power cord is not included.



FEATURES	BENEFITS
Intrinsically safe	Worry-free operation
Robust construction	Durability; less down time
Preset temperature	Repeatability; ideal temperature maintained

Weight

32 lbs

Size

C-8: 12 $\frac{7}{8}$ " x 14 $\frac{1}{4}$ " x 7 $\frac{7}{8}$ "
D-4: 8" x 8 $\frac{3}{8}$ " x 8"

Available Configurations:

- 115VAC or 220VAC
- 4 or 8-place

*Starting price shown. For pricing on other configurations, please visit www.lk-ind.com.

Hydrometer Cylinder Heater

The Hydrometer Cylinder Heater is available in 115VAC with thermostatic control or with a 12VDC rheostat control. The units include a Pyrex inner cylinder.



Pyrex inner cylinder



Heated hydrometer cylinder

FEATURES	BENEFITS
User controlled temperature	Testing versatility
Custom design	Fits Pyrex cylinder

Weight

12 lbs

Size

14" x 14" x 14"

Available Configurations:

- 12VDC or 115VAC

LP Gas Corrosion Test Cylinder Heater

Class I, Division 2

The LP Gas Corrosion Test Cylinder Heater is used to prepare samples for the ASTM and NGPA copper strip corrosion testing of liquefied petroleum gas. It is certified for Class I, Division 2 locations and rated for Groups A, B, C and D Hazardous and Ordinary Locations (Pollution Degree 2). It meets the requirements of UL 61010-1, ANSI/ISA-STD 12.12.01, CAN/CSA C22.2 No. 213 and CAN/CSA-C22.2 No. 61010.1 (2nd addition). Due to these certifications, the unit requires hard-wiring. It is designed specially to pair with the LP Gas Corrosion Test Cylinder (Pg 17) in laboratory settings.



LP Gas Corrosion Test Cylinder Heater

Weight & Size
28 lbs, 10⅝" x 14⅞" x 12½"

FEATURES	BENEFITS
Explosion resistant	Assured safety
Adjustable temperature with LCD display and RTD feedback	Verified accuracy; prevents runaway heating
Solid aluminum block	Uniform heat transfer

Available Configurations:

- 6-place water bath model available (custom made)
- 12VDC, 110VAC or 220VAC
- Non-certified (not Class I, Division 2)

Centrifuge Tube Viewer Stand

The Centrifuge Tube Viewer Stand was designed to improve viewing of sediment and water cuts in tubes after centrifugation. The stand is designed to fit long cone (c), short cone (d) and capillary (e) style tubes.



Centrifuge Tube Viewer Stand

Weight & Size
3.4 lbs, 11" x 5" x 8.5"

FEATURES/ BENEFITS
High-intensity adjustable blue LED lights
High magnification with fixed focal length +10 diopter lens (3.5X magnification)
Built-in flush mount precision bubble level
Height adjustable tube platform allows readings from: <ul style="list-style-type: none">Long cone: 0% to 9%Short cone: 0% to 16%
Optional timer mode to automatically shut off LEDs
Easily swap between short and long cone tubes with the included inserts
Universal power adapter allows 100 VAC to 240 VAC 50/60 Hz input

Centrifuge Tubes

All L-K Industries centrifuge tubes are made in-house. Tubes are calibrated volumetrically in the manufacturing facility or gravimetrically in our onsite ISO/IEC 17025 accredited laboratory. With innovations such as 2-mm wall thickness and wide-neck threads, L-K Industries can take pride in being a market front-runner in glassware.

Tube Types:



Finger (A)
12.5-ml

Hand-crank or Mini-Melton

Applicable Standards:
API 2542



Pear-Shaped (B)
100-ml

Extended capillary tip for accurate readings

Applicable Standards:
API 2542, ASTM D96/API 10.4



Long Cone (C)
8", 100-ml

Laboratory settings (Benchmark models)

Applicable Standards:
ASTM D4007/API 10.3
ASTM D96/API 10.4



Short Cone (D)
6-3/8", 100-ml

Transport models with limited space

Applicable Standards:
ASTM D4007/API 10.3
ASTM D96/API 10.4



Capillary (E)
8", 100-ml

Best for refined fuel products

Applicable Standards:
ASTM D2709

*Starting price shown. Complete price list is available in the appendix (Pg 26).
 Settling tubes for magna particle testing also available.

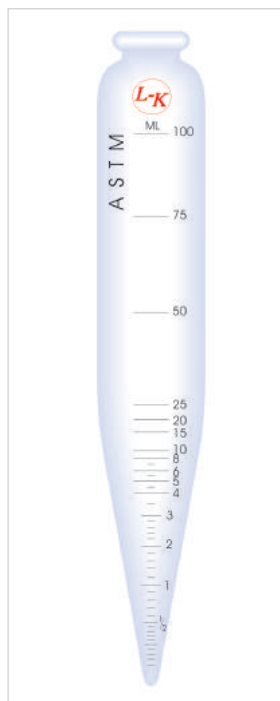
FEATURES	BENEFITS
Conforms to ASTM & API standards	Can be used in regulatory environments
ISO/IEC 17025 calibrations	Unmatched accuracy
Permanently etched, yellow markings	Higher visibility and longer life
Sand spot	Hand-labeling tubes in field or laboratory
Customizable & serialized	Specific to customer needs & traceable
Manufactured in-house	Short lead times
Wide-thread, thick-wall configurations	Durability; high-speed capability

Available Configurations:

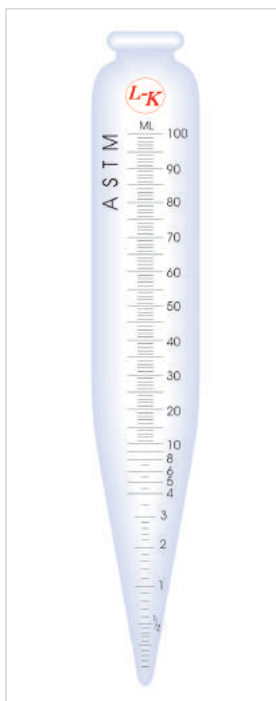
- A, B, C, D, E tube styles
- Wide-neck or standard threads
- 100-ml or 200% markings
- ISO/IEC 17025 calibration
- Standard or detailed markings

Centrifuge Tubes

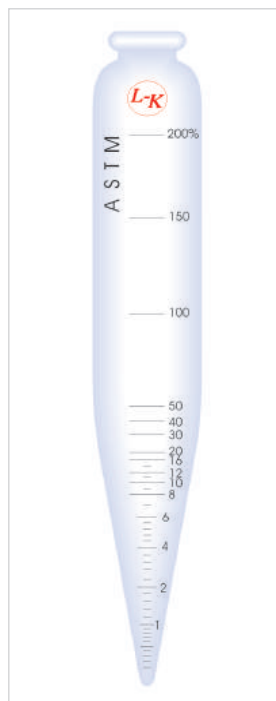
Available Markings:



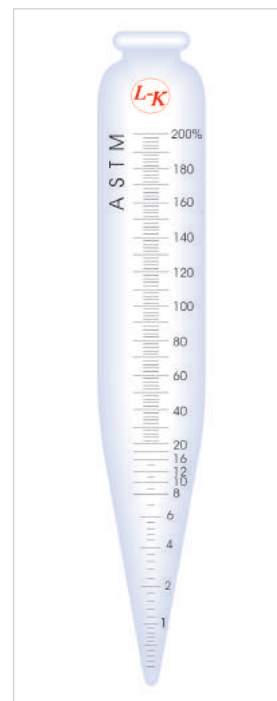
Standard
100-ml*



Detailed
100-ml*



Standard
200%*



Detailed
200%*

*All tubes shown are tooled top. Standard tubes have detailed markings up to 10-ml (20%) mark; detailed tubes have detailed markings up to 100-ml (200%) mark.

Tips & Definitions:

- When using 100-ml tubes, ADD the S&W volume of two separate samples to account for dilution
- When using 200% tubes, take the AVERAGE of two sample tubes
- Certified – marked tubes are gravimetrically calibrated by an accredited laboratory
- Verified – marked tubes are volumetrically checked in-house (factory)
- Non-verified – marked tubes sold directly to the customer off the production line without verification

Available Tops & Threads:



Cork



Wide-Neck Twist Cap



Rubber Stopper



Standard Twist Cap



Tool Top



Wide-Neck Threaded



Tool Top



Standard Threaded

Please see the Appendix for most common tube configurations.

Thermohydrometers

L-K Industries API hydrometers have multiple ranges that are precision grade. Hydrometers are available with a thermometer inside the center and with or without certification. Non-mercury hydrometers are available as well. All hydrometers are designed to be used with the Hydrometer Cylinder Heater.



Common Hydrometer Types:

Hydrometer Type	Part #	Size
Non-Certified, 0.1 Div, API Range (9 to 21)	S10-1001	16.5x5x1.5
Non-Certified, 0.1 Div, API Range (19 to 31)	S10-1002	16.5x5x1.5
Non-Certified, 0.1 Div, API Range (29 to 41)	S10-1003	16.5x5x1.5
Non-Certified, 0.1 Div, API Range (39 to 51)	S10-1004	16.5x5x1.5
Non-Certified, 0.1 Div, API Range (49 to 61)	S10-1005	16.5x5x1.5
Non-Certified, 0.1 Div, API Range (59 to 71)	S10-1006	16.5x5x1.5
Non-Certified, 0.1 Div, API Range (69 to 81)	S10-1007	16.5x5x1.5
Non-Certified, 0.1 Div, API Range (79 to 91)	S10-1008	16.5x5x1.5
Non-Certified, 0.1 Div, API Range (89 to 101)	S10-1009	16.5x5x1.5
Non-Certified, 0.1 Div, API Range (29 to 45)	S10-1010	16.5x5x1.5
Non-Certified, 0.5 Div, API Range (30 to 90)	S10-3000	16.5x5x1.5
Non-Certified, 0.5 Div, API Range (10 to 45)	S10-3001	16.5x5x1.5
Non-Certified, 0.5 Div, API Range (45 to 90)	S10-3002	16.5x5x1.5
Non-Certified, 0.5 Div, API Range (10 to 30)	S10-3003	16.5x5x1.5
Non-Certified, 0.5 Div, API Range (20 to 40)	S10-3004	16.5x5x1.5
Non-Certified, 0.5 Div, API Range (30 to 50)	S10-3005	16.5x5x1.5
Non-Certified, 0.5 Div, API Range (40 to 60)	S10-3006	16.5x5x1.5
Non-Certified, 0.5 Div, API Range (50 to 70)	S10-3007	16.5x5x1.5
Non-Certified, 0.5 Div, API Range (60 to 80)	S10-3008	16.5x5x1.5
Non-Certified, 0.5 Div, API Range (70 to 90)	S10-3009	16.5x5x1.5

Miller-Weber Thermometers

L-K Industries opened its accredited ISO/IEC 17025 Laboratory in the summer of 2016 after acquiring Miller-Weber. Our highly trained technical staff manufactures thermometers and other glassware, and performs instrument calibrations in-house. Each thermometer is manufactured and calibrated for total immersion in accordance with ASTM and ISO 17025:2017. Certification is available upon request. The following table shows our most popular thermometers. See the Appendix (pg. 29) for more details on these thermometers.



Best Sellers

Part #	Part #	Part #
T-3330/CT60	T-3750/59FYLBT	T-7502SFC/230F1
T-3426S/120FPY	T-3750/59FYLCCT	T-SPECC7/135C1
T-3426S/BT/124FPY	T-3750/59FYLNCT	T-SPECC9/20CS1
T-3502S/230F1	T-3950/S18F	T-SPECF18/160F1
T-3750/63C	T-3950/S62C	T-SPECF2/110FS1
T-3750/63F	T-3950/S63C	S10-5000
T-3750/12C	T-3950/S63F	S10-5001
T-3750/12F	T-3950/S64C	S10-5002
T-3750/58FYLCCT	T-3950/S64F	S10-5100N
T-3750/58FYLNCT	T-3970S/S230FT	S10-5101N
T-3750/59CYLCCT	T-4580	S10-5102N

Miller-Weber Thermometers (Non-Mercury)

PerformaTherm™

The PerformaTherm™ series thermometers have precise tolerances, low uncertainty and quick response times (like mercury) that meet ASTM standards. The blue liquid is a patented, safe alternative to mercury and traditional spirit liquids, and the dark color is easy to read. They are available in complete sets or individually, and with a NIST-traceable, ISO/IEC 17025 accredited Report of Calibration. See the Appendix for more details on these thermometers.



EnviraTherm™

The EnviraTherm™ series is a precision alternative to traditional spirit thermometers and common laboratory thermometers. The liquid is non-toxic, non-hazardous and biodegradable and is offered in an easy to read purple color. Please visit www.lk-ind.com for more details on these thermometers.



Typical Comparisons: 12" -20/110°C, 1°, Total Immersion Thermometer*

	Performa Therm™	Mercury	Envira Therm™	Traditional Spirit
Tolerance	±0.1°C	±0.1°C	±1.0°C	±2.0°C
Uncertainty (Over Range)	±0.05°C	±0.05°C	±0.5°C	±0.5°C
Response Time	<3 min	<3 min	3-15 min	Up to 15 min

*Other spirit thermometers are available. Please visit www.lk-ind.com for more information.



Miller-Weber Accredited Calibration Services

Miller-Weber has focused on accreditation and conforming to relevant industry standards to ensure that customers have a high level of confidence in all calibrations performed. The ISO/IEC 17025 Calibration Laboratory is housed in the Houston manufacturing facility and offers calibration services for Thermometers, Hydrometers, Densitometers, Centrifuges and Centrifuge Tubes.

Key Attributes

- Established traceability of measurement standards and instruments to the International System of Units (SI) – linking them to relevant primary standards.
- Application of procedures to estimate uncertainty of measurement for all calibrations performed, and minimizing calibration uncertainty such that adequacy of measurement is not affected.
- Official Standards & Accreditations: ISO/IEC 17025:2017 (E) & ANSI/NCSL Z540-1-1994

Scope of Accreditation for Miller-Weber of Texas Calibration Laboratory

Type	Range
Temperature	-80 to 405°C -112°F to 761°F
Density	0.6250 to 1.910 Relative Density (SG), -1° to 101 API
Gravimetric Volume	Up to 100 ml
Rotational Speed	Up to 6,000 rpm

Miscellaneous Charges

Miscellaneous & Service

Teflon® Encapsulation

Etched in Serial Number (thermometer)

Anton-Paar DMA 35 Calibration

Corrosion Test Cylinders

LP Gas Corrosion Test Cylinder

The LP Gas Corrosion Test Cylinder is designed especially for conducting ASTM and NGPA copper strip corrosion tests of liquefied petroleum gas. It conforms to ASTM D1838 and NPGA Publication 2140 standards. It is compatible with the L-K Industries LP Gas Corrosion Test Cylinder Heater (Pg 10).

Refined Fuel Corrosion Test Cylinder

The Refined Fuel Corrosion Test Cylinder is used for ASTM and NGPA silver strip corrosion tests of engine fuel. It is compatible with the L-K Industries Refined Fuel Corrosion Test Cylinder Heater and in compliance with industry standard ASTM 7671. Each cylinder is precision-machined from stainless-steel for non-corrosive product (Pg 8) applications. It is design tested to 3000 psi.

FEATURES	BENEFITS
All stainless-steel construction	Durability and long life
No tools necessary	Can be used anywhere
Easy-to-replace O-ring seal	Less down time



LP Gas Corrosion Test Cylinder*

Ideal for

*Copper Strip Testing
(ASTM D1838)*



Fuel Corrosion Test Cylinder*

Ideal for

*Silver Strip Testing
(ASTM 7671)*

Water baths for test cylinders are available upon request.

Gauging Accessories



L-K Industries offers Gauge tapes from Lufkin and US Tape. Units feature heavy gauge construction, a snap swivel hook, and folding handle. Various lengths available. Certified units available on request.

**Lufkin Gauge
Tape 25'**



The oil thief has an adjustable trip rod and adjustable tension. All cylinders are graduated. Custom configurations are available upon request.

Oil Thief

16' 2 Petcock



Trays, ropes, plumb bobs and other miscellaneous accessories available online or by contacting L-K Industries directly.

Aluminum Gauger's Tray

*Starting price is shown. Complete price list is available in the appendix.

Glassware Accessories



**Cushion
and Collar
Package**

(Includes 6
Benchmark cushions
and collars)



**Cushion
Replacement
Package**

(Includes 12 cushions)



**Tooled Top
Accessory
Package**

(Includes 12 stoppers
& 3 brushes)



**Wideneck
Accessory
Package**

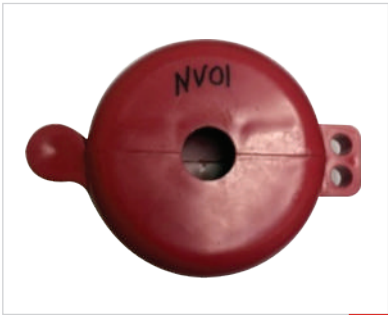
(Includes 6 caps &
3 brushes)



Racks

To see all of LK's accessories, please visit www.lk-ind.com
or contact LK directly.

Security Sealing Devices



Needle Valve Handle Sealing Device

This sealing device covers the handle of any needle valve.

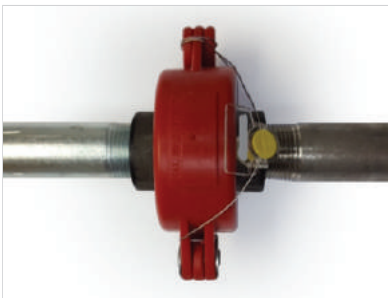
P/N	Valve Size
SP-NV01	3/8" - 2" -
SP-NV02	> 2" -



Tubing Nut Sealing Device

These sealing devices come in assorted sizes and are designed specifically to fit Swagelok® tubing nuts. Each size may fit tubing nuts made by other manufacturers and may be used for assorted fittings.

P/N	Nut Size
SP-TN01	1/4" -
SP-TN02	3/8" -
SP-TN03	1/2" -



Pipe Union Sealing Device

The pipe union sealing device is designed to cover the entire pipe union. It comes in multiple hole sizes (bored through both sides) to accommodate each pipe union. The device sizes are based on Class 3000 unions. Ensure the hole size on the device matches the union collar size

P/N	Pipe Size	Hole Size*
SP-PU01	1/2"	1-3/16" -
SP-PU02	3/4"	1-15/32" -
SP-PU03	1"	1-25/32" -
SP-PU04	1 1/2"	2-35/64" -
SP-PU05	2"	3-1/16" -

** Approximate Hole size*

Security Sealing Devices



Sealing Device (¾" Sched 40 PVC Pipe)

This multipurpose sealing device comes in 1' long Schedule 40 PVC pipe sections and has ⅝" diameter holes drilled through, every ½". It can be cut into the desired fitting size with pipe cutters.

P/N	Hole Size*
SP-LK01	⅝" -

* Approximate Hole size



Sight Glass Packing Sealing Device (2" Sched 40 PVC Pipe)

These devices cover the top and bottom of a sight glass, such that the sight glass may not be removed. Each edge of the sealing device has four ⅝" diameter holes. These devices should be purchased together, along with the Sight Glass Valve Packing Nut Sealing Device (SP-LK04). Replacement devices can be ordered individually.

P/N	Device Size
SP-LK02	Lower, 2½" -
SP-LK03	Upper, 3" -



Sight Glass Valve Packing Nut Sealing Device (PVC End Cap)

This device is designed to seal packing nuts on sight glass valves. There is a ⅝" hole on the top of the device with four ⅝" holes around the bottom edge. This device should be purchased along with the Sight Glass Packing Sealing Devices (SP-LK02 and SP-LK03). Replacement devices can be ordered individually.

P/N	Hole Size*
SP-LK04	⅝" top, ⅝" side -

* Approximate Hole size

Security Sealing Devices



Hex Head Bolt/Nut Sealing Device

These nut retainers are designed to fit snugly around a bolt or nut, and prevent it from being loosened.

P/N	Nut Size
SP-LK05	1/4" -
SP-LK06	5/16" -
SP-LK07	3/8" -
SP-LK08	7/16" -



Rosemount Transmitter Cover Sealing Device (for 3144P Temperature Transmitter)

This device is designed to cover the Rosemount 3144P Temperature Transmitter. It is available in plastic or aluminum.

P/N	Material
SP-RT01	Aluminum -
SP-RT03	Plastic -



Rosemount Transmitter Cover Sealing Device (for 3051S Pressure Transmitter)

This aluminum device is designed to cover the Rosemount 3051S Pressure Transmitter.

P/N	Material
SP-RT02	Aluminum -



Solenoid Vent Sealing Device

The solenoid vent has a 1/8" perforation to prevent loosening or removal.

P/N	Hole Size*
SP-SV01	1/8" -

* Approximate Hole size

Security Sealing Devices



Drilled SS Plug Sealing Device

The stainless steel drilled plug has a 1/8" perforation to prevent loosening or removal.

P/N	Plug Size
SP-DP01	1/4" -
SP-DP02	1/2" -



Drilled Head Bolt

The drilled head bolt has a 1/8" perforation to prevent loosening or removal. The bolts are made to order; the customer must specify the head type, size, length and grade.

P/N	Size
SP-DB01	Various



LBY Cover Sealing Device

The LBY cover sealing device prevents the loosening or opening of LBY elbows. It comes in multiple hole sizes (bored on one side) to accommodate the LBY elbow.

P/N	Pipe Size	Hole Size*
SP-LB01	1/2"	1-5/8" -
SP-LB02	3/4"	2" -
SP-LB03	1"	2-1/4" -

* Approximate Hole size

Hauler's Package *Perfect for New Trucks*



Transport 7100 Centrifuge Typical Gauging Supplies

*Ideal for
New Trucks*

Description

- 25-foot gauge line
- Plumb bob
- Little Joe Tape Wiper
- Pocket Thermometer
- Oil Thief/ 2 Petcocks 6" & 10"
- 25-foot thief rope
- Gauger's Tray
- Centrifuge Tubes (6/box)
- Brush to clean tubes
- Woodback Complete
- 25-foot Woodback rope
- 3-Place Hydrometer Case
- 29 to 41 API Range Hydrometer
- 39 to 51 API Range Hydrometer
- 49 to 61 APR Range Hydrometer
- 500 ML Hydrometer Cylinder
- Water Finding Paste, 3oz. tube

Laboratory Package *Perfect for New Lab Configurations*



Benchmark C Centrifuge

Class 1, Division 2, Certified



Criterion Water Bath Heater System

Class 1, Division 2, Certified



Wide-thread tubes

Factory Verified

Available Options:

"Benchmark C" (2014)

- Centrifuge Model LB-14-C120C
- Centrifuge Model LB-14-D120C

Centrifuge Tubes (12 Tubes)

- Model S10CWTHDFV15
- Model S10DWTDFV15

Criterion Water Bath System

- Water Bath Model WB-T2/ T14C - SS
- Water Bath Model WB-T2/ T14D - SS

Preventive Maintenance Plan

Designed to meet the standards of lab users, customers who purchase this plan will have annual maintenance performed on their centrifuge. A detailed list of the services performed is noted below. All work will be done on the client's site at a prearranged date and time.

Service Includes

- Diagnostic check, cleaning, & recalibration
- Validate RPM readings
- Validate temperature
- Clean unit
- Rewire any suspect connections
- Cosmetic touch-up
- Operational validation
- Integrity test
- Balance validation

This package is offered on Benchmark Series centrifuges.

General Maintenance

At any time, equipment may be sent in for maintenance performed on their centrifuge. If available, L-K can make equipment repairs onsite. A detailed list of the services performed is noted below. All work will be done on the client's site at a prearranged date and time.

Available Services

- Preventive Maintenance (see above)
- OEM Service
- ISO/IEC 17025 RPM Calibration
- Repair/replacement of parts
- 24-Hour Tech Helpline (free)

Repairs are also performed at LK Headquarters. Contact LK for a quote.

Appendix A: Common Product Configurations

PRODUCT	RECOMMENDED CONFIGURATION
Transport Series	"9100" 2 Place, 12V, D-Model, Heated, Digital Readouts
Transport Series	"7100" 2 Place, 12V, D-Model, Heated
Transport Series	"3100" 2 Place, 12V, D-Model
Benchmark Series	120V, C-Model
Melton	115V, D-Model
Light Duty Centrifuge	Mini-Melton, A-Model
Criterion Water Bath	14 Place, C/E-Model, Stainless Steel
TradeMark Heater	115 VAC, D-Model
Melton Heater	115 VAC, C-Model
Hydrometer Cylinder Heater	115 VAC
Gauge Tape	Lufkin, 25ft, Complete Unit
Gauge Tape	US Tape, 25ft, Complete Unit
Oil Thief	Protek, 16inch, 2 Petcock

Appendix B: Common Centrifuge Tube Configurations

PRODUCT	DESCRIPTION	TOP	THREAD
S10AW	Finger Tubes (A)		
S10B	Pear Shaped (B)	Tooled Top	
S10B2	Pear Shaped (B)	Tooled Top	
S12EFV15	Pear Shaped (B)	Tooled Top	
S12E2FV15	Pear Shaped (B)	Tooled Top	
S12CFV15	Long Cone 8 in (C)	Tooled Top	
S12CAV15	Long Cone 8 in (C)	Tooled Top	
S12C2FV15	Long Cone 8 in (C)	Tooled Top	
S12C2AV15	Long Cone 8 in (C)	Tooled Top	
S12CWTHDFV15	Long Cone 8 in (C)	Threaded	Wide Neck
S12C2WTHDFV15	Long Cone 8 in (C)	Threaded	Wide Neck
S10D	Short Cone 6 in (D)	Tooled Top	
S10D2	Short Cone 6 in (D)	Tooled Top	
S12D	Short Cone 6 in (D)	Tooled Top	
S12D2	Short Cone 6 in (D)	Tooled Top	Wide Neck
S10DWTHDFV15	Short Cone 6 in (D)	Threaded	Wide Neck
S10D2WTHDFV15	Short Cone 6 in (D)	Threaded	Wide Neck
S12DWTHDFV15	Short Cone 6 in (D)	Threaded	Wide Neck
S12D2WTHDFV15	Short Cone 6 in (D)	Threaded	
S12EAV15	Capillary 8 in (E)	Tooled Top	
S12E2AV15	Capillary 8 in (E)	Tooled Top	Wide Neck
S12EWTHDFV15	Capillary 8 in (E)	Threaded	Wide Neck
S12E2WTHDFV15	Capillary 8 in (E)	Threaded	

*For a full list of tube configurations, please visit www.lk-ind.com.

Appendix C: *Common Replacement Parts List*

Transport 7100 Centrifuge

DESCRIPTION	PART #
Motor Control Circuit Board	J-124-LKREV5
Shields	J-292
Cushions	J-051
Motor	J-099S
Preheater Thermostat 1	J-218
Preheater Thermostat 2	J-214
Bowl Thermostat	J-329
Preheater Assembly	J-333-7100
Relay	J-240
3-Position Switch (for Preheater)	J-204
2-Position Switch (for Bowl Heater)	J-202

Transport 9100 Centrifuge

DESCRIPTION	PART #
Motor Control Circuit Board	J-124-LKREV5
Shields	J-292
Cushions	J-051
Motor	J-099S
Relay	J-240
2-Position Switch (for Bowl Heater)	J-202
LCD Display	J-285
Sensor	J-286
Temperature Controller	J-282

Appendix C: *Common Replacement Parts List*

Melton Centrifuge

DESCRIPTION	PART #
Short Cone (D) Shields	J-066
Short Cone (D) Cushions	J-051
Long Cone (C) Shields	J-065
Long Cone (C) Cushions	J-050
Brake Pad	J-170
Tachometer	J-071
Tachometer Driver	J-072
Motor Switch	J-146

Benchmark C Centrifuge

DESCRIPTION	PART #
Short Cone (D) Shields	LAB-177
Short Cone (D) Cushions	J-051
Short Cone (D) Collars	LAB-182
Long Cone (C) Shields	LAB-008X
Long Cone (C) Cushions	LAB-176
Long Cone (C) Collars	LAB-175

Appendix D: Miller-Weber Product Information

Best-Selling Standard Thermometers

PART #	THERMOMETER TYPE
S10-5000	Non-Certified, Woodback, -30 - 120°F
S10-5001	Non-Certified, Woodback, 0 - 180°F
S10-5002	Non-Certified, Woodback, 20 - 220°F
S10-5100N	Non-Certified, Refill, -30 - 120°F
S10-5101N	Non-Certified, Refill, 0 - 180°F
S10-5102N	Non-Certified, Refill, 20 - 220°F

Best-Selling PerformaTherm™ Thermometers

PART #	ASTM #	RANGE	DIVISIONS
T-3950/S62C*	S62C	-38 to +2°C	0.1°C
T-3950/S62F*	S62F	-36 to + 35°F	0.2°F
T-3950/S63C*	S63C	-8 to 32°C	0.1°C
T-3950/S63F*	S63F	18 to 89°F	0.2°F
T-3950/S64C*	S64C	25 to 55°C **	0.1°C
T-3950/S64F*	S64F	77 to 131°F **	0.2°F
T-3950/S65C*	S65C	50 to 80°C **	0.1°C
T-3950/S65F*	S65F	122 to 176°F **	0.2°F
T-3950/S66C*	S66C	75 to 105°C **	0.1°C
T-3950/S66F*	S66F	167 to 221°F **	0.2°F
T-3950/S18F***	N/A	94 to 108°F	0.2°F
T-3970S/S230FT***	N/A	0 to 230°F	1°F

*Made in strict accordance with ASTM E2251.

**Thermometer has auxiliary ice point.

***Non-ASTM Thermometer

For all other thermometer ranges, please contact sales@lk-ind.com or 713-926-2623.



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