

*Centrifuges That
Are Built to Last*



**ROBINSON
MANUFACTURING**
COMPANY INCORPORATED



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ROBINSON MANUFACTURING COMPANY INCORPORATED



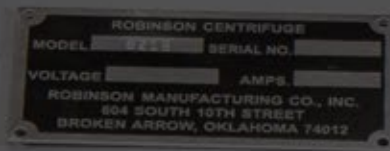
Robinson Manufacturing has been setting the standard for oil centrifuges and petroleum related products since 1954. Family owned and operated, we take pride in our products and believe that there is no substitute for quality. Hand made in the USA with industrial-grade materials and components, our machines are built to last.

Following the highest of API and ASTM oil testing standards, you'll have the peace of mind that your equipment will provide the most accurate and dependable measurements and the results to help your business succeed.

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CENTRIFUGES



- ◆ Field Centrifuges
- ◆ Laboratory Centrifuges
- ◆ Hazardous Area Centrifuges
- ◆ Open Centrifuges
- ◆ Oil Sample Heaters

Field Centrifuges

Robinson's Field Centrifuges are designed for determining sediment and water (S&W) content of crude oil according to API 10.4 testing standards. Intended to operate from a vehicle's 12-volt system, the centrifuges are ideal for field use. The compact housings are made from solid-cast aluminum, making them corrosion-resistant and durable enough to hold up against tough use and job site conditions. A smooth-start variable speed rheostat controller reduces jerking and tube breakage on every startup while giving the operator precise motor control. The lids are equipped with a spring-loaded closure latch to remain secure during operation and feature a center hole that allows the operator to check centrifuge RPMs with a handheld tachometer.

ROBINSON 800 SERIES HEATED CENTRIFUGE

Our flagship product line, the Robinson 800 Series Centrifuge with built-in sample heater provides maximum accuracy, efficiency, and dependability for Crude Oil Haulers. Each model is electrically heated and thermostatically controlled to hold samples at the required testing temperature. Machines come equipped with either a 2-Place or 4-Place revolving head for the 100mL 6-inch short cone sample tubes. The 800 Series is available in both A-Style flip lid and B-Style split lid models.

Centrifuge Features:

- Meets API 10.4 testing standards
- Solid-cast aluminum housing provides strength and durability
- Variable speed, smooth-start rheostat controller reduces tube breakage
- Built-in sample heater adds convenience and saves space
- Thermostatically controlled bowl heaters maintain sample temperatures during testing
- Modular design allows motor, sample heater pockets, and front panel controls to be easily removed and replaced without removing the centrifuge from its mountings
- Lid access hole allows the operator to check centrifuge RPMs with a handheld tachometer
- Circular bowl design and ball bearing motor shaft support improve efficiency and extend motor life
- IP 68 rated heater switches protect against dust and moisture to extend switch life
- Length: 23.5", Width: 20", Height: 11.5", Weight: 72 lbs



A-Style Flip Lid

The A-Style Flip Lid is made of solid-cast aluminum and features a spring-loaded latch to keep the lid firmly closed while operating. A pivot hinge allows the lid to swing up and open towards the rear of the centrifuge. Lid support springs hold the lid open while the operator exchanges samples.

Model	Lid Style	Trunnion Head	Heater Pockets
820A4	A-Style	4-Place	4
821A	A-Style	2-Place	2

B-Style Split Lid

Designed for applications where overhead space is limited, the B-Style Split Lid consists of two solid-cast aluminum sections that open to either side of the centrifuge. The left and right sections of the lid move independently from one another on single pivot points at the back of the centrifuge. The lid uses friction tension to remain securely closed during operation.

Model	Lid Style	Trunnion Head	Heater Pockets
820B4	B-Style	4-Place	4
821B	B-Style	2-Place	2

ROBINSON MODELS 500 and 610 CENTRIFUGES

The Robinson Models 500 and 610 Centrifuges offer the same great efficiency and dependability as our flagship 800 Series in a smaller, more portable package. Designed for Chemical Treaters and Field Technicians, these compact and lightweight units are perfect for those operating out of personal or non-commercial vehicles. Each centrifuge is built with a solid-cast, corrosion-resistant aluminum housing and spins four (4) 12.5mL sample tubes. The Model 500 is non-heated, while the Model 610 incorporates a built-in sample heater that heats up to six (6) samples to 140°F in minutes and a bowl heater that maintains sample temperatures throughout testing.



Model	500
Voltage	12 VDC
Heated	No
Length (in)	16
Width (in)	16
Height (in)	10
Weight (lbs)	28



Model	610
Voltage	12 VDC
Heated	Yes
Length (in)	19
Width (in)	16
Height (in)	10
Weight (lbs)	45

Laboratory Centrifuges

Delivering results more accurately and efficiently, Robinson's Laboratory Centrifuges combine the same excellent quality that has made our Field Centrifuges so sought-after with additional features that add convenience in a laboratory setting. Following API and ASTM oil testing standards, units operate on 115 or 230 AC power voltages and are available in heated and non-heated models. With multiple options available, we have the centrifuge to meet your needs.

ROBINSON 900 SERIES HEATED CENTRIFUGE

Designed and built to meet ASTM D4007 specifications, the 900 Series is the first Robinson Centrifuge that spins the 100mL 8-inch long cone tube. Each unit is equipped with thermostatically controlled heaters and comes standard with a digital timer, tachometer, and temperature controller to give the operator full control over testing conditions. The polyurethane injection molded housing reduces noise and maintains the heat inside the machine. A safety locking lid prevents the motor from running when open to ensure the operator's safety. Available models operate on 115VAC or 230VAC power sources. Our specially designed cushion allows the Model 910 and 920 to spin the traditional 8-inch long cone tube, or a capillary tipped tube.

Centrifuge Features:

- Polyurethane injection molded housing offers weight and noise reduction without sacrificing durability.
- Smooth-start variable speed rheostat controller reduces jerking and tube breakage.
- Digital timer with LCD readout automatically stops motor when testing is complete.
- Digital tachometer with LCD readout shows real-time motor speed.
- Digital temperature controller with LED readout allows operators to control heater temperature.
- Safety locking lid keeps lid closed during operation and prevents the motor from running when open.
- Power-On indicator lamps illuminate when motor and heaters are in use.
- Length: 31.5", Width: 24.5", Height: 13.75", Weight: 58 lbs



Model	Voltage	Tube	Revolving Head
910	115VAC 50/60Hz	100mL Long Cone	4-Place
930	115VAC 50/60Hz	100mL Short Cone	4-Place
950	115VAC 50/60Hz	100mL Pear Shape	4-Place
970	115VAC 50/60Hz	12.5mL	20-Place

Model	Voltage	Tube	Revolving Head
920	230VAC 50/60Hz	100mL Long Cone	4-Place
940	230VAC 50/60Hz	100mL Short Cone	4-Place
960	230VAC 50/60Hz	100mL Pear Shape	4-Place
980	230VAC 50/60Hz	12.5mL	20-Place

ROBINSON 800 SERIES HEATED CENTRIFUGE

The laboratory version of our popular Field Centrifuge, the Robinson 800 Series Heated Centrifuges are designed to operate from 115VAC or 230VAC power sources. The electric heaters are thermostatically controlled to maintain proper temperatures during testing. Each machine is equipped with an analog timer that allows the operator to set the testing time from 1 to 15 minutes. Optional models are available with a revolving head that spins four (4) 100mL 6-inch short cones, four (4) 100mL pear shape tubes, or sixteen (16) 12.5mL tubes.

Centrifuge Features:

- Smooth-start variable speed rheostat controller reduces jerking and tube breakage.
- Built-in sample heater offers convenience and saves space by eliminating the need for a separate heater.
- Thermostatically controlled bowl heaters maintain sample temperatures for the entire duration of testing.
- Modular design allows motor, sample heater pockets, and front panel controls to be easily removed and replaced without removing the centrifuge from its mountings.
- Spring-loaded lid-latch keeps lid closed during operation.
- Lid access hole allows the operator to check centrifuge RPMs with a handheld tachometer while the lid is closed.
- Circular bowl design and ball bearing motor shaft support improve efficiency and extend motor life.
- IP 68 rated heater switches protect against dust and moisture to extend switch life.
- Front panel indicator lamp lights up while the centrifuge is in use.
- Length: 23.5", Width: 20", Height: 11.5", Weight: 72 lbs



Model	Voltage	Tube	Revolving Head
870AT4	115VAC 50/60Hz	100mL Short Cone	4-Place
871AT	115VAC 50/60Hz	12.5mL	16-Place
874AT4	115VAC 50/60Hz	100mL Pear Shape	4-Place

Model	Voltage	Tube	Revolving Head
872AT4	230VAC 50/60Hz	100mL Short Cone	4-Place
873AT	230VAC 50/60Hz	12.5mL	16-Place
876AT4	230VAC 50/60Hz	100mL Pear Shape	4-Place

ROBINSON 800 SERIES NON-HEATED CENTRIFUGE

The Robinson 800 Series Non-Heated Centrifuge is designed to operate from AC power voltages. The solid-cast aluminum lightweight housing withstands tough use, and the variable speed rheostat controller reduces jerking and tube breakage on startup. The lid is equipped with a spring-loaded lid-latch to remain closed during operation, and an access hole that allows the operator to check centrifuge RPMs with a handheld tachometer while the lid is closed.

Length: 21", Width: 20", Height: 11.5", Weight: 58 lbs

Model	Voltage	Tube	Revolving Head
850A	115VAC 50/60Hz	100mL Short Cone	4-Place
851A	230VAC 50/60Hz	100mL Short Cone	4-Place
852A	115VAC 50/60Hz	12.5mL	16-Place
853A	230VAC 50/60Hz	12.5mL	16-Place
860A	115VAC 50/60Hz	100mL Pear Shape	4-Place
861A	230VAC 50/60Hz	100mL Pear Shape	4-Place



ROBINSON 700 SERIES HEATED CENTRIFUGE

The Robinson 700 Series Centrifuge is electrically heated and spins eight (8) 12.5mL tubes. Designed to be light-weight for easy maneuverability, the outer shell is constructed from steel and the bowl is made from solid cast aluminum. All housing components are epoxied and welded together to ensure a strong bind that will never come apart. Each centrifuge comes standard with a 15-minute analog timer that automatically stops the centrifuge once testing is completed. The slow-start rheostat controller eliminates jerking and gives the operator precise motor control. The lid is equipped with a spring-loaded lid-latch to remain closed when operating, and an access hole that allows centrifuge RPMs to be checked with a handheld tachometer.

Length: 20", Width: 17", Height: 10.5", Weight: 47 lbs

Model	Voltage
703A	115/230VAC 50/60Hz
720A	115VAC 50/60Hz
721A	230VAC 50/60Hz



Hazardous Area Centrifuges

The Robinson Hazardous Area Centrifuges are designed to safely operate in hazardous areas that are deemed Class 1, Division 2, Group D. The centrifuges use an air-driven motor and explosion-proof switches eliminating the chance of electrical spark and potential accidents. Used for determining sediment and water (S&W) content of crude oil, the centrifuges are available in both heated and non-heated models.

Centrifuge Features:

- Solid-cast aluminum housing withstands harsh field conditions.
- Pressure regulator control with an "off" position for a slow, smooth start, and speed control.
- Non-lubricated air motor eliminates the need for oil, service and maintenance.
- Spring-loaded lid-latch holds lid closed during operation.
- Lid access hole allows operator to check centrifuge RPMs with a handheld tachometer while lid is closed.
- Built-in sample heater offers convenience and saves space by eliminating the need for a separate heater. Heats up to four (4) samples. Available on heated models only.
- Explosion proof factory sealed heater switches prevent ignition of external, flammable atmospheres in hazardous locations. Available on heated models only.

ROBINSON MODEL 890A NON-HEATED CENTRIFUGE



Model	890A
Tube	100mL Short Cone
Revolving Head	4-Place
Heated	No
Length (in)	21
Width (in)	20
Height (in)	11.5
Weight (lb)	58

ROBINSON MODEL 894A HEATED CENTRIFUGE



Model	894A
Heater Voltage	115VAC 50/60Hz
Tube	100mL Short Cone
Revolving Head	4-Place
Heated	Yes
Length (in)	24
Width (in)	28
Height (in)	11.5
Weight (lb)	78

Open Centrifuges

ROBINSON STATIONARY/ PORTABLE CENTRIFUGE

The Robinson Stationary and Portable Centrifuges are designed to be temporarily mounted during testing, and easily stored away while not in use. Centrifuges operate from a vehicle's 12-volt system. Stationary models connect directly to the vehicle battery and can be screwed or bolted to the work surface. Portable models plug into the cigarette lighter of the vehicle and use suction cup feet to mount to non-porous work surfaces. Both stationary and portable models use a separate motor controller box that allows the operator to maintain a safe distance when running the centrifuge.



Model 572 - Portable Type



Model 574 - Stationary Type

Model	Type	Tube Style	Revolving Head	Swing Diameter (in)	Weight (lbs)
570	Stationary	12.5mL	2-Place	13.5	5.25
571	Stationary	12.5mL	4-Place	13.5	5.25
572	Portable	12.5mL	2-Place	13.5	5.25
573	Portable	12.5mL	4-Place	13.5	5.5
574	Stationary	100mL SC	2-Place	11.5	5.5
575	Portable	100mL SC	2-Place	11.5	5.5

ROBINSON HAND CRANK CENTRIFUGE

The Robinson Hand Crank Centrifuge includes a die-cast aluminum body. The centrifuge can be securely mounted to a workbench using the built-in clamp handle. A 16 to 1 gear ratio allows the operator to attain high speeds with less effort. The wide sweeping crank handle uses a spring clutch to ensure easy and safe start-up and stopping. 12.5mL tube and 100mL short cone tube models are available.

Model	Tube Style	Revolving Head	Swing Diameter (in)	Weight (lbs)
560	12.5mL	2-Place	13.5	6
561	100mL Short Cone	2-Place	16.25	7
563	12.5mL	4-Place	13.5	6.25



Oil Sample Heaters

ROBINSON OIL SAMPLE HEATER

Oil Sample Heaters are the perfect option for pre-heating samples prior to centrifuging. Samples reach API testing temperatures in just minutes. The 100mL short cone heaters are equipped with a high-low switch giving the operator precise control of sample temperatures. Available in 12VDC, 115VAC, and 230VAC models.



Product No.	Voltage	Tube	Sample Quantity
100B028	12 VDC	12.5mL	4
100B029	12 VDC	100mL Short Cone	2
100B030	115 VAC 50/60Hz	12.5mL	4
100B031	115 VAC 50/60Hz	100mL Short Cone	2
100B844	115 VAC 50/60Hz	12.5mL	8
100B845	230 VAC 50/60Hz	12.5mL	8

TUBES AND ACCESSORIES

- ◆ Tubes
- ◆ Tube Accessories
- ◆ Sample Bottles



Tubes

Made to API/ASTM oil testing standards, Robinson's Testing Tubes are constructed from clear annealed glass and feature white markings on the outside of the tubes for accurate readings. All tubes are available with the conventional neck opening to accept a cork stopper (corks sold separately), or with a threaded neck to accept a screw style cap (screw caps included).

As an added option, tubes can come factory verified or third-party certified. Factory verified tubes are accompanied by a certificate of accuracy. Certified tubes are volumetrically checked by an independent third-party laboratory according to API standards and come with a certificate depicting volume corrections at each checkpoint. (additional charges apply)



12.5mL TUBE

Graduated in Percent
Product No. 404A001

Sold in boxes of 12.

The divisions of graduation:

- 0 to 3% in 0.2%
- 3 to 10% in 0.5%
- 10 to 50% in 1%
- and at 100%.



100mL SHORT CONE TUBE

Graduated in Milliliters

Sold in boxes of 6.

The divisions of graduation:

- 0 to 0.5mL in 0.05mL
- 0.5 to 2mL in 0.1mL
- 2 to 3mL in 0.2mL
- 3 to 5mL in 0.5mL
- 5 to 10mL in 1mL
- 10 to 25mL in 5mL
- and at 50, 75, and 100mL

Product No.	Description
404A002	100mL Short Cone Tube
404A002FV	100mL Short Cone Tube, Factory Verified
404A002SC	100mL Short Cone Tube with Screw Cap
404A002SCFV	100mL Short Cone Tube with Screw Cap, Factory Verified



100mL SHORT CONE TUBE

Graduated in Percent

Sold in boxes of 6.

Graduated in 200 parts to permit the direct reading of S&W percentages in test samples.

The divisions of graduation:

- 0 to 1% in 0.1%
- 1 to 4% in 0.2%
- 4 to 6% in 0.4%
- 6 to 10% in 1%
- 10 to 20% in 2%
- 20 to 50% in 10%
- and at 100%, 150%, and 200%

Product No.	Description
404A031	100mL Short Cone Tube, 200% Markings
404A031FV	100mL Short Cone Tube, 200% Markings , Factory Verified
404A031SC	100mL Short Cone Tube with Screw Cap, 200% Markings
404A031SCFV	100mL Short Cone Tube with Screw Cap, 200% Markings, Factory Verified



100mL PEAR SHAPE TUBE

Graduated in Milliliters

Sold in boxes of 6.

The divisions of graduation:

- 0 to 1.5mL in 0.1mL
- 1.5 to 5mL in 0.5mL
- 5 to 10mL in 1mL
- 10 to 25mL in 5mL
- and at 50, and 100mL

Product No.	Description
404A003	100mL Pear Shape Tube
404A003FV	100mL Pear Shape Tube, Factory Verified
404A003SC	100mL Pear Shape Tube with Screw Cap
404A003SCFV	100mL Pear Shape Tube with Screw Cap, Factory Verified



100mL PEAR SHAPE TUBE

Graduated in Percent

Sold in boxes of 6.

Graduated in 200 parts to permit the direct reading of S&W percentages in test samples.

The divisions of graduation:

- 0 to 3% in 0.1%
- 3 to 5% in 0.5%
- 5 to 10% in 1%
- 10 to 100% in 10%
- and from 100 to 200% in 20%

Product No.	Description
404A005	100mL Pear Shape Tube, 200% Markings
404A005FV	100mL Pear Shape Tube, 200% Markings , Factory Verified
404A005SC	100mL Pear Shape Tube with Screw Cap, 200% Markings
404A005SCFV	100mL Pear Shape Tube with Screw Cap, 200% Markings, Factory Verified



100mL LONG CONE TUBE

Graduated in Milliliters

Sold in boxes of 6.

The divisions of graduation:

- 0 to 0.5mL in 0.05mL
- 0.5 to 2mL in 0.1mL
- 2 to 3mL in 0.2mL
- 3 to 5mL in 0.5mL
- 5 to 10mL in 1mL
- 10 to 25mL in 5mL
- and at 50, 75, and 100mL

Product No.	Description
404A006	100mL Long Cone Tube
404A006FV	100mL Long Cone Tube, Factory Verified
404A006SC	100mL Long Cone Tube with Screw Cap
404A006SCFV	100mL Long Cone Tube with Screw Cap, Factory Verified



100mL LONG CONE TUBE

Graduated in Milliliters: "California Style"

Sold in boxes of 6.

The divisions of graduation:

- 0 to 1mL in 0.05mL
- 1 to 3mL in 0.1mL
- 3 to 6mL in 0.2mL
- 6 to 10mL in 0.5mL
- and 10 to 100mL in 1mL

Product No.	Description
404A007	100mL Long Cone Tube
404A007FV	100mL Long Cone Tube , Factory Verified
404A007SC	100mL Long Cone Tube with Screw Cap
404A007SCFV	100mL Long Cone Tube with Screw Cap, Factory Verified



100mL LONG CONE TUBE

Graduated in Percent

Sold in boxes of 6.

The divisions of graduation:

- 0 to 1% in 0.1%
- 1 to 4% in 0.2%
- 4 to 6% in 0.4%
- 6 to 10% in 1%
- 10 to 20% in 2%
- 20 to 50% in 10%
- and at 100, 150, and 200%

Product No.	Description
404A074	100mL Long Cone Tube, 200% Markings
404A074FV	100mL Long Cone Tube, 200% Markings, Factory Verified
404A074SC	100mL Long Cone Tube with Screw Cap, 200% Markings
404A074SCFV	100mL Long Cone Tube with Screw Cap, 200% Markings, Factory Verified



100mL LONG CONE TUBE

Graduated in Percent: "California Style"

The divisions of graduation:

- 0 to 2% 0.1%
- 2 to 6% in 0.2%
- 6 to 12% in 0.4%
- 12 to 20% in 1%
- and 20 to 200% in 2%

Product No.	Description
404A054	100mL Long Cone Tube, 200% Markings
404A054FV	100mL Long Cone Tube, 200% Markings, Factory Verified
404A054SC	100mL Long Cone Tube with Screw Cap, 200% Markings
404A054SCFV	100mL Long Cone Tube with Screw Cap, 200% Markings, Factory Verified



100mL LONG CONE TUBE

Weathering – Graduated in Milliliters

Sold in boxes of 6.

For determination of residues in liquified petroleum gases (LP). Made with a 3mm vent hole located 180 degrees from the front of the tube. ASTM method D1837 and D2158.

The divisions of graduation:

- 0 to 0.5mL in 0.05mL
- 0.5 to 3mL in 0.1mL
- 3 to 5mL in 0.5mL
- 5 to 100mL in 1mL

Product No.	Description
404A038	Weather Tube
404A038FV	Weathering Tube, Factory Verified
404A038SC	Weathering Tube, Screw Cap
404A038SCFV	Weathering Tube, Screw Cap, Factory Verified



100mL LONG CONE TUBE

Capillary Tip – Graduated in Milliliters

Sold in boxes of 6.

The divisions of graduation:

- 0 to 0.5mL in 0.05mL
- 0.5 to 3mL in 0.1mL
- 3 to 5mL in 0.5mL
- 5 to 100mL in 1mL

Product No.	Description
404A078	Capillary Tip Tube
404A078FV	Capillary Tip Tube, Factory Verified
404A078SC	Capillary Tip Tube, Screw Cap
404A078SCFV	Capillary Tip Tube, Screw Cap, Factory Verified

Tube Accessories



CENTRIFUGE TUBE STOPPERS

Designed specifically for use with 100mL centrifuge tubes, the stoppers help to prevent samples from spilling or leaking. The tube stoppers are available in both cork and neoprene rubber.

Product No.	Description
404A008	Cork Stopper
404A042	Neoprene Rubber Stopper



CENTRIFUGE TUBE BRUSHES

Tube brushes allow for deep cleaning of centrifuge tubes. Available in two different sizes, the brushes help to remove sample residue and debris from hard to reach areas.

Product No.	Description
404A040	Centrifuge Tube Brush, 100mL
404A041	Centrifuge Tube Brush, 12.5mL

Sample Bottles

Plastic Bottles

Plastic style bottles meet the requirements of the most demanding applications. Rugged and durable, the bottles are the safe, shatterproof alternatives to glass bottles for collection, storage, or shipping of samples. All plastic bottles are translucent and are equipped with leak-proof screw caps.



WIDE MOUTH OPENING

Low density polyethylene bottle, the wide mouth opening is perfect for sample collection and allows easy filling and emptying of samples.

Product No.	Capacity (mL/oz)
404A029	125/4
404A013	250/8
404A014	500/16
404A015	1000/32



WASH BOTTLE

Designed to eliminate contamination and mismatching of delivery spouts when refilling bottles, contents can be dispensed without tipping the bottle. The wide mouth offers quick and easy filling.

Product No.	Capacity (mL/oz)
404A016	500/16
404A019	1000/32

Glass Bottles

Clear glass bottles that offer maximum visibility and sample integrity. These general use bottles are perfect for liquids, product storage, and field or lab sampling projects. These environmentally sensitive bottles help eliminate waste and help to ensure product integrity for long term storage.



CLEAR BOSTON ROUND

The Boston Round style bottle features a round body, rounded shoulders, and narrow screw neck opening. Bottles are equipped with paper-lined screw caps.

Product No.	Capacity (mL/oz)
404B017	500/16
404B018	1000/32



FRENCH SQUARE

The wide mouth design of the French Square style bottles is ideal for mixing, storing, and sampling. The space saving square design maximizes shelf and storage space. Paper-lined screw caps included.

Product No.	Capacity (mL/oz)
404A072	15/0.5
404B021	30/1
404B022	120/4
404B023	250/8
404B024	1000/32



OVAL PRESCRIPTION GRADUATED

Clear Oval Prescription bottles are graduated in milliliters and ounces and provide a narrow mouth improving poring of samples. Paper-lined screw caps included.

Product No.	Capacity (mL/oz)
404B025	175/6



POLYSEAL CAPS

The Polyseal Caps form an exceptionally tight seal and offer a great chemical barrier. This liner molds itself around the sealing areas as the cap is screwed on, virtually eliminating leakage, evaporation, contamination, binding and backing off.

Product No.	Description
404A046	Polyseal Cap (33-400)
404A051	Polyseal Cap for Centrifuge Tube

OIL THIEVES AND SAMPLERS

- ◆ Oil Thieves
- ◆ Oil Thief Accessories
- ◆ Samplers
- ◆ Sampler Accessories

Oil Thieves

Robinson Oil Thieves are the ideal instrument used to collect crude oil samples from on-site storage tanks. Oil Thieves allow for quick extraction of samples to manually assess the initial quality of raw oil including, color, texture, and viscosity. Barrels are constructed from clear plastic, brass, or aluminum, and are available in 12-inch, 16-inch, and 18-inch lengths. Butterfly-valve and slide-valve closure models are available. Each thief has four legs in the bottom casting which make the thief a stable hydrometer cylinder. The top casting includes a hanger for hanging the thief on a tank hatch or equipment case. Thieves offer a single trip action, simple closure tension adjustment, and adjustable trip rod graduated at standard extension intervals. Drain valves are sold separately and can be installed at most heights on the barrel.

ROBINSON OIL THIEF BUTTERFLY VALVE CLOSURE

Originally designed and created by Robinson Manufacturing, the Butterfly Valve Oil Thief has quickly become the preferred choice for many thieving applications. The quarter-turn concentric valve opening/closing assembly is located within the barrel making the unit more compact and allows the thief to pass through openings as small as 5 inches in diameter. The thief allows for a quick release of samples through the bottom end of the barrel. The rotating valve disk includes a replaceable rubber "O" ring that ensures a tight seal and prevents leaking.



CLEAR BARREL

Product No.	Size (in)	Capacity (ml/oz)	Weight (lbs)
110D002	12	673/22	4.5
110D003	16	928/31	5
110D004	18	1057/35	5.5

BRASS BARREL

Product No.	Size (in)	Capacity (ml/oz)	Weight (lbs)
110D010	12	756/25	5
110D011	16	1044/34	6.5
110D012	18	1188/39	7

ALUMINUM BARREL

Product No.	Size (in)	Capacity (ml/oz)	Weight (lbs)
110D014	12	756/25	4.5
110D015	16	1044/34	5
110D016	18	1188/39	5.25

ROBINSON OIL THIEF SLIDE VALVE CLOSURE

The Robinson Slide Valve Oil Thief features a horizontally sliding closure assembly equipped with a Delrin valve disc to ensure proper sealing and prevention of leaks. The Thief allows for a quick release of samples through the bottom end of the barrel.



CLEAR BARREL

Product No.	Size (in)	Capacity (ml/oz)	Weight (lbs)
110D006	12	710/24	5
110D007	16	976/33	5.5
110D008	18	1125/38	5.75

BRASS BARREL

Product No.	Size (in)	Capacity (ml/oz)	Weight (lbs)
110D018	12	799/27	6.5
110D019	16	1065/36	7
110D020	18	1243/42	7.5

ALUMINUM BARREL

Product No.	Size (in)	Capacity (ml/oz)	Weight (lbs)
110D022	12	799/27	5
110D023	16	1065/36	5.5
110D024	18	1243/42	5.75

Oil Thief Accessories



DRAIN VALVES

Specially designed Drain Valves can be installed at most positions on thief barrels. Oil is drained by simply depressing the valve head. Drain valves come completely assembled and ready to be installed. Extended and low-profile valve models are available.

Product No.	Description
110B012	Low Profile Drain Valve
110B013	Extended Drain Valve



THIEF ROPE

Made from ¼-inch 100% cotton sash cord, sampler ropes come complete with a trigger snap hook on one end. Marked and unmarked ropes are available. Marked ropes are indicated at every two feet with brass ferrules so sampler depth can easily be discerned. Both styles of rope are available in standard lengths of 25-feet, 33-feet, 50-feet, 66-feet, 75-feet, and 100-feet.

Product No.	Description	Marked Every
110B016	Thief Rope, Unmarked	N/A
110B017	Thief Rope, Marked for 12" Thief	2-Feet
110B018	Thief Rope, Marked for 16" Thief	2-Feet
110B019	Thief Rope, Marked for 18" Thief	2-Feet

Samplers

Robinson Oil Samplers play an important role in accurately determining the quality of crude oil. The style of sampler used is entirely dependent on specific applications, needs, and preferences. Robinson offers a large variety of oil samplers that cater to any and all measurements and holding needs. All samplers are made from the highest quality materials for proven dependability and follow API/ASTM oil testing standards.



QUICK THIEF

The Robinson Quick Thief (100cc) is made entirely of brass. Machined to the highest quality, the top inlet opening provides a sure seal seat. Samples may be collected at intermediate levels by simply lowering the thief and snapping the wrist. Each thief is equipped with a 25-foot lowering rope that is marked in one-foot intervals so thief depth can easily be discerned.

Product No.	Description
110B001	Quick Thief
110B026	Rope, Quick Thief



BACON BOMB

Design for taking samples of liquid products at the bottom or intermediate points of the tank, the Robinson Bacon Bomb oil sampler, is made of nickel-plated brass and features an eyelet at the upper end of the plunger to attach a thief rope or chain. The sampler opens once the plunger strikes the bottom of the tank and seals closed when raised.

Product No.	Description	Capacity (oz)
110A109	Bacon Bomb	32
110A110	Bacon Bomb	16
110A111	Bacon Bomb	8
110A112	Bacon Bomb	4



FLASK SAMPLER

The Robinson Flask Sampler is used for obtaining a running sample and/or collecting samples at intermediate levels of various types of storage tanks. The sampler is made with a solid brass weight at the bottom of the flask to help pull the sampler down into the tank when empty. This model uses two thief ropes or chains, one for lowering/raising the sampler and a second for releasing the cork to begin sample collection. Samplers with $\frac{3}{4}$ -inch wide and 1 $\frac{1}{2}$ -inch wide neck openings are available. This sampler follows ASTM D4057 testing standards.

Product No.	Description	Capacity (oz)
110B037	Flask Sampler, Large Neck	32
110B038	Flask Sampler, Small Neck	32



GLASS BOTTLE SAMPLER

Available in brass or stainless steel the Glass Bottle Samplers are designed to hold either a 16oz or 32oz Boston Round glass bottle offering maximum visibility and sample integrity. The Boston Round style bottle features a round body, rounded shoulders, and narrow neck opening to accept a leak-proof cork style stopper. At the top of the sampler is a pull rod eye hook that allows for the attachment of a thief rope or chain. The sampler is used to take running samples from tanks at all levels. This sampler follows ASTM D4057 testing standards.

Product No.	Description	Capacity (oz)
110B032	Glass Bottle Sampler, Brass	32
110B033	Glass Bottle Sampler, SS	32
110B036	Glass Bottle Sampler, Brass	16
110B042	Glass Bottle Sampler, SS	16



ZONE SAMPLER

Designed to take samples of liquids from any section or level (zone) from various types of storage tanks, the Robinson Zone Sampler is made out of stainless steel and features a metal bail at the top end used to attach a lowering rope or chain. As the sampler descends through the liquid, the top cover and bottom valve open, allowing the liquid to pass through. When the sampler reaches the desired zone and stops lowering, the top cover and bottom valve close to secure the sample.

Product No.	Description	Capacity (mL)
110B035	Zone Sampler, Large	800
110B046	Zone Sampler, Small	190



MULTI-FUNCTION SAMPLER

For taking various types of samples on oil and chemical tankers where closed or restricted sampling systems are used. The Robinson Multi-Function Sampler uses a modular design that allows the operator to change the sampler functionality by simply exchanging a few components. Each sampler comes standard with an adjustable opening top cap, a low-pressure bottom cap for taking zone or running samples, and a high-pressure bottom cap and trip funnel for obtaining RVP samples. The supplied 12-inch barrel, 16-inch barrel, and barrel coupler give the operator the ability to adjust the sampler volume capacity to fit their needs. Additional barrels and couplers can be used to increase capacity. All components are available individually upon request.

Product No.	Description
110B053	Multi-Level Sampler, Brass
110B070	Multi-Level Sampler, Stainless Steel

Sampler Accessories



SAMPLER CHAIN Product No. 110B025

Brass Sampler Chains come complete with a trigger snap hook on one end and a split key ring on the other. The sampler chain is available in standard lengths of 25-feet, 33-feet, 50-feet, 66-feet, 75-feet, and 100-feet.



BOTTLE CARRIER

The Robinson Bottle Carrier is used to carry Boston Round style 32oz bottles. Its lightweight design makes it easy to move samples quickly and safely. The bottle carrier is available in 6-place and 8-place models.

Model	Description
110B031	6-Place Bottle Carrier
110B050	8-Place Bottle Carrier



OIL THIEF WIND JAMMER Product No. 110A321

The Oil Thief Wind Jammer is a 6-inch clear plastic cylinder that protects the hydrometer stem from the wind, allowing more accurate gravity readings. The Wind Jammer connects to the top inside edge of the thief barrel and gives 360-degree protection. Hydrometer readings can be taken from any angle.



TWO POUND WEIGHT

Available in stainless steel and brass models, the two-pound (lbs.) weights are utilized for weighted bottles. They feature round cylinder design with an eye hook at the top end.

Model	Description
110B047	Stainless Steel Weight
110B049	Brass Weight

TANK GAUGING AND MEASURING EQUIPMENT

- ◆ Oil Gauging Tapes
- ◆ Plumb Bobs
- ◆ Thermobob
- ◆ Oil Gauging Tape Accessories
- ◆ Tank Strapping Equipment

Oil Gauging Tapes

Oil Gauging Tapes are an invaluable tool for anyone needing to measure the depth of oil in storage tanks and other containers. Operating as a distributor for U.S. Tape®, Robinson Manufacturing stocks a variety of gauging tape styles, lengths, and refills to ensure you get superior tapes at great prices.

The gauging tapes are constructed from durable, quality components to withstand harsh working conditions for long-term performance. Tapes feature a corrosion-resistant frame, a long crank arm to speed retraction, a grounding wire and clip to discharge static electricity, and an abrasive and chemical resistant coating. All gauging tapes meet or exceed API and ASTM oil testing standards. Tapes can be NIST (formerly NBS) certified upon request (additional charges apply).



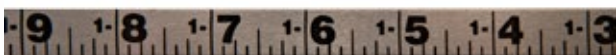
U.S. TAPE® DOUBLE DUTY GAUGING TAPE

Also known as Chrome/Nubian tapes, the Double Duty Gauging tapes have a chrome-plated blade with a black strip along the bottom edge, making it useful for working with both dark and light oils/liquids. The coating on the blade helps to reduce the wear caused by chemicals and tough working conditions. Complete tapes 75-feet and shorter are housed in the small frame design. Made in USA.

Complete tapes and refills are available in:

- Standard lengths from 18-feet to 100-feet
- English: Markings to 8ths

Blade Length	Blade Width	Markings	Complete Tape No.	Refill Tape No.
18'	1/2"	English: 1/8"	401B000	401A021
25'	1/2"	English: 1/8"	401B001	401A022
33'	1/2"	English: 1/8"	401B002	401A023
50'	1/2"	English: 1/8"	401B003	401A024
50'	1/2"	English: 1/10"	401B042	401A046
66'	1/2"	English: 1/8"	401B004	401A025
75'	1/2"	English: 1/8"	401B005	401A026
100'	1/2"	English: 1/8"	401B006	401A027



U.S. TAPE® CHROME PLATED GAUGING TAPE

Plated Gauging tapes are ideal for use in dark oils or liquids. The coating on the blade makes them corrosion and wear resistant for use in harsh environments. Complete tapes 75-feet and shorter are housed in the small frame design. Made in USA.

Complete tapes and refills are available in:

- Standard lengths from 18-feet to 100-feet
- English: Markings in 8ths, 10ths

Blade Length	Blade Width	Markings	Complete Tape No.	Refill Tape No.
18'	1/2"	English: 1/8"	401B007	401A028
25'	1/2"	English: 1/8"	401B008	401A029
33'	1/2"	English: 1/8"	401B009	401A030
50'	1/2"	English: 1/8"	401B010	401A031



U.S. TAPE® BLACK ETCHED GAUGING TAPE

Black Etched Gauging tapes and refills feature a black steel blade with etched numbers and markings which better resist abrasion. The black background makes it easier to see light colored oils/liquids. All Black Etched complete tapes are housed in the small frame design.

Complete tapes and refills are available in:

- Standard lengths from 25-feet to 100-feet
- English: Markings to 16ths

Blade Length	Blade Width	Markings	Complete Tape No.	Refill Tape No.
25'	1/2"	English: 1/16"	401B015	401A036
50'	1/2"	English: 1/16"	401B017	401A038



U.S. TAPE® ETCHED STAINLESS GAUGING TAPE

Etched Stainless Steel Gauging Tapes have an uncoated blade with etched numbers and markings. The etched stainless blade will withstand more caustic conditions than coated blades, therefore it is useful for almost all oils/liquids. All Etched Stainless complete tapes are housed in the small frame design.

Complete tapes and refills are available in:

- Standard lengths from 33-feet
- English: Markings to 16ths



Blade Length	Blade Width	Markings	Complete Tape No.	Refill Tape No.
33'	1/2"	English: 1/16"	401B049	401A054
50'	1/2"	English: 1/16"	401B050	401A055

Plumb Bobs

Robinson Manufacturing makes a variety of Innage and Outage Plumb Bobs to fit your tank gauging needs. All plumb bobs are machined and manufactured in-house from solid brass or stainless steel and feature a serration on one side for use with water/gas finding paste. The eyelet at the top of each bob is precisely machined for accurate measurements. Marked plumb bobs have clearly defined black graduations for reliable and effortless readings.

Innage Bobs

Innage Plumb Bobs are used with gauging tapes to determine vertical reference measurements of the amount of oil and viscous liquids in storage tanks. The plumb bob is attached to the gauging tape to help pull the tape down to the bottom of the tank.



PLUMB BOB: 6" BRASS **Product No. 401A096**

- Weight: 21oz
- Material: Brass, one-inch solid round
- Length: 6-inch
- Point: Short tapered



PLUMB BOB: 6" BRASS – LONG POINT **Product No. 401A096L**

- Weight: 20oz
- Material: Brass, one-inch solid round
- Length: 6-inch
- Point: Long tapered



PLUMB BOB: 6" BRASS – ENGLISH MARKINGS **Product No. 401A099**

- Weight: 21oz
- Material: Brass, one-inch solid round
- Length: 6-inch
- Point: Short tapered
- Division of Graduation: Inches and 1/8 inches



PLUMB BOB: 6" BRASS – 10THS AND 100THS **Product No. 401A100**

- Weight: 21oz
- Material: Brass, one-inch solid round
- Length: 6-inch
- Point: Short tapered
- Division of Graduation: 10ths and 100ths of a foot



**PLUMB BOB: 6" BRASS –
METRIC MARKINGS**

Product No. 401A101

- Weight: 21oz
- Material: Brass, one-inch solid round
- Length: 6-inch
- Point: Short tapered
- Division of Graduation: Centimeters and 2-millimeter subdivisions



**PLUMB BOB: 6" BRASS –
ENGLISH/METRIC MARKINGS**

Product No. 401A102

- Weight: 21oz
- Material: Brass, one-inch solid round
- Length: 6-inch
- Point: Short tapered
- Division of Graduation: Inches and 1/8 inches on one side, and centimeters and 2-millimeter subdivisions on the other side



**PLUMB BOB: 6" BRASS –
16THS**

Product No. 401A394

- Weight: 21oz
- Material: Brass, one-inch solid round
- Length: 6-inch
- Point: Short tapered
- Division of Graduation: Inches and 1/16 inches



**PLUMB BOB: 6" BRASS
WITH RUBBER TIP –
ENGLISH MARKINGS**

Product No. 401B299

- Weight: 21oz
- Material: Brass, one-inch solid round
- Length: 6-inch
- Point: Rubber safety tip
- Division of Graduation: Inches and 1/8 inches



**PLUMB BOB: 6" STAINLESS
STEEL – ENGLISH/METRIC
MARKINGS**

Product No. 401A296

- Weight: 20oz
- Material: Stainless Steel, one-inch round
- Length: 6-inch
- Point: Short tapered
- Division of Graduation: Inches and 1/8 inches on one side, and centimeters and 2-millimeter subdivisions on the other side



**PLUMB BOB: 6" STAINLESS
STEEL – ENGLISH MARKINGS**

Product No. 401A300

- Weight: 20oz
- Material: Stainless Steel, one-inch round
- Length: 6-inch
- Point: Short tapered
- Division of Graduation: Inches and 1/8 inches



**PLUMB BOB: 6" STAINLESS
STEEL – METRIC MARKINGS**
Product No. 401A301

- Weight: 20oz
- Material: Stainless Steel, one-inch round
- Length: 6-inch
- Point: Short tapered
- Division of Graduation: Centimeters and 2-millimeter subdivisions



**PLUMB BOB: 18" BRASS –
ENGLISH MARKINGS**
Product No. 401A104

- Weight: 34oz
- Material: Brass, 5/8 inch square
- Length: 18-inch
- Point: Short tapered
- Division of Graduation: Inches and 1/8 inches
- Note: Gauging tapes can be cut to fit the 401A104 plumb bob upon request. Additional charges apply.



**PLUMB BOB: 18" BRASS –
10THS AND 100THS**
Product No. 401A304

- Weight: 34oz
- Material: Brass, 5/8 inch square
- Length: 18-inch
- Point: Short tapered
- Division of Graduation: 10ths and 100ths of a foot
- Note: Gauging tapes can be cut to fit the 401A304 plumb bob upon request. Additional charges apply.



**PLUMB BOB: 18" BRASS –
ENGLISH/METRIC MARKINGS**
Product No. 401A305

- Weight: 34oz
- Material: Brass, 5/8 inch square
- Length: 18-inch
- Point: Short tapered
- Division of Graduation: Inches and 1/8 inches on one side, and centimeters and 2-millimeter subdivisions on the other side
- Note: Gauging tapes can be cut to fit the 401A305 plumb bob upon request. Additional charges apply.

Outage Bobs



PLUMB BOB: 6" BRASS – ENGLISH MARKINGS

Product No. 401A103

- Weight: 20oz
- Material: Brass, 7/8 inch square
- Length: 6-inch
- Division of Graduation: Inches and 1/8 inches



PLUMB BOB: 6" BRASS – ENGLISH/METRIC MARKINGS

Product No. 401A341

- Weight: 20oz
- Material: Brass, 7/8 inch square
- Length: 6-inch
- Division of Graduation: Inches and 1/16 inches on one side, and centimeters and 2-millimeter subdivisions on the other side



DRAFT SURVEY T-BAR

Product No. 401A372

Used to take measurements for draft survey calculations according to API standards. This T-bar is made from stainless steel and is precision machined for accurate results.

Thermobob

The Thermobob is used to determine vertical reference measurements of the amount of oil and viscous liquids left in storage tanks while reading the temperature of the liquid. The thermobob can be attached and suspended from the end of a gauging tape to help to pull the measuring device to the bottom of the tank.

The Robinson Thermobob is machined and manufactured in-house from brass and features a hollow interior with a built-in thermometer, an eyelet at the top for attaching a tape, and clearly defined markings for accurate readings.



THERMOBOB: 6" BRASS – ENGLISH MARKINGS

- Weight: 16oz
- Material: Brass, hollowed with built-in thermometer
- Length: 6-inch
- Point: Short tapered
- Division of Graduation: Inches and 1/4 inches

Temp Range °F.	Complete Bob No.	Refill No.
-20 to 120	401B106	401B112
20 to 180	401B107	401B113
20 to 220	401B108	401B114

Oil Gauging Tape Accessories



LINE WIPER

The Line Wiper attaches to the handle of most oil gauging tapes. The wiper squeegees (wipes) oil/liquids from the tape blade as you rewind, eliminating hand wiping and the risk of dangerous cuts. The line wiper features a lightweight heavy-duty aluminum construction with oil-resistant replaceable rubber wiping pads. The wiping pads are fixed and do not move acting as both a line braking system and wiping system for the gauging tape. Stainless steel screws, nuts, and pivot pins keep the rubber pads secure and are all replaceable.

Product No.	Description
401A118	Line Wiper
401A193	Replacement Cylinders and Core
401A194	Replacement Cylinders with Hardware

KOLOR KUT® PASTES

Robinson Manufacturing carries a full line of Kolor Kut® brand gauging/finding pastes. Kolor Kut® pastes offer a simple, instant visual solution for checking the depth of water or fuel in storage tanks. The type of paste used is completely dependent on the specific application of the operator and can be applied to several different measuring devices such as; gauge tape/line, sticks/rods, ropes/string, spatulas, and plumb bobs.



Kolor Kut® Modified Water Finding Paste

Product No. 401A397

Kolor Kut® Modified Water Finding Paste suitable with reformulated and oxygenated fuels, such as ethanol, MTBE, and ether and is used for testing the presence of miscible water in bio-ethanol/gasoline blends. Paste is applied to the measuring device of choice and inserted into a fuel sample. The dark-brown paste changes color to brilliant red if it detects that miscible water is present in the fuel.

Kolor Kut® Water Finding Paste

Product No. 401A119

Kolor Kut® Water Finding Paste is suitable for checking the presence of water at the bottom of petroleum fluid storage tanks such as; petrol, diesel, kerosene, gas oil, heating oil, heavy oil, and lubricating oil. Paste is applied to the measuring device of choice and lowered into the tank. The golden-brown paste instantly changes color to a bright red where it comes into contact with water, successfully gauging the water content depth that is present.

Kolor Kut® Gasoline Gauging Paste

Product No. 401A120

Kolor Kut® Gasoline Gauging Paste is used for checking the depth of gasoline, diesel, biodiesel, kerosene, and many other fuel oils in fuel tanks. The product is not so effective with alcohols because the alcohols evaporate off the dipping tape quickly returning the paste to its original state. Paste is applied to the measuring device of choice and lowered to the bottom of a gasoline tank. The light-pink paste changes color to red where it comes into contact with gasoline/petrol, visual indicating the depth of the gasoline.

Tank Strapping Equipment



Item	Product No.	Description
1	401A121	Strapping Tape, Chrome Clad, 100'
	401A124	Strapping Tape Refill, Chrome Clad 100'
2	401A127	4" Interlocking Stencils, A-Z
	401A128	4" Interlocking Stencils, 0-9
	401A129	2" Interlocking Stencils, A-Z
	401A130	2" Interlocking Stencils, 0-9
	401A406	3" Interlocking Stencils, A-Z
	401A427	3" Interlocking Stencils, 0-9
3	401A131	Magnet
4	401A132	Stencil Paint, Black
5	401A134	Stencil Paint, White
6	401A136	Tape Tension Handle
7	401A137	Tape Ring
8	401A138	6' Folding Ruler
9	401A139	Clamp Handle
10	401A147	Crayon, Blue
11	401A148	Tool Box



DERRICK TAPE

For measuring castings or pipe standings in an oil derrick, this 100' tape features a corrosion resistant frame and long crank arm for faster retraction. The chrome coated blade resists wear and scratches. Graduated in feet and decimal feet.

Product No.	Description
401A149	Complete Tape
401A150	Refill Tape
401A151	Hook and Ring



TANK STRAPPING POLE

Product No. 401B200 and 401B201

The Tank Strapping Pole allows tanks to be strapped from the ground. Constructed of aluminum, the 18-foot telescopic pole features a strapping head, chalk holder, and scribe holder. The scribe and chalk are used to mark the height of each tank ring that is to be measured. The strapping tape ring is attached to the strapping head and the tape is walked around the tank. The line is then moved into position over the marks. PVC carrying case is sold separately.

HYDROMETERS AND ACCESSORIES

- ◆ Hydrometers
- ◆ Hydrometer Accessories



Hydrometers

Hydrometers are instruments used to measure the specific gravity (or relative density) of liquids; that is, the ratio of the density of the liquid to the density of water. Made of glass, the hydrometers consist of a cylindrical stem, a bulb weighted with mercury or lead shot to make them float upright, and a scale inside the stem, so that the specific gravity can be read directly. Depending on the specific application a variety of scales can be used.

Robinson Hydrometers' precision grade design meets API oil testing specifications and is calibrated to API scale Modulus 141.5 at 60°F. The hydrometers are constructed with a solid alloy ballast and designed to permit quick penetration to the setting point, creating no air bubbles.

All hydrometers can be certified upon request. Hydrometers are certified at three points on the hydrometer scale as specified by NIST (formerly NBS). On combined form hydrometers, the thermometer is provided with a 60°F test point correction. Each certified instrument is accompanied by a document of certification that includes the correction of each point tested.

15" COMBINED FORM API HYDROMETERS THERMOMETER IN BODY

Product No.	Range Degree	Division	Temperature Range (°F)	ASTM
403A021	-1 to 11	0.1	0 to 150	51HL
403A022	9 to 21	0.1	0 to 150	52HL
403A023	19 to 31	0.1	0 to 150	53HL
403A024	29 to 41	0.1	0 to 150	54HL
403A025	39 to 51	0.1	0 to 150	55HL
403A026	49 to 61	0.1	0 to 150	56HL
403A027	59 to 71	0.1	0 to 150	57HL
403A028	69 to 81	0.1	0 to 150	58HL
403A029	79 to 91	0.1	0 to 150	59HL
403A030	89 to 101	0.1	0 to 150	60HL
403A033	10 to 30	0.2	0 to 150	N/A
403A034	20 to 40	0.2	0 to 150	N/A
403A035	30 to 50	0.2	0 to 150	N/A
403A036	40 to 60	0.2	0 to 150	N/A
403A037	50 to 70	0.2	0 to 150	N/A
403A038	60 to 80	0.2	0 to 150	N/A
403A039	70 to 90	0.2	0 to 150	N/A
403A040	80 to 100	0.2	0 to 150	N/A
403A041	10 to 45	0.5	0 to 150	N/A
403A042	45 to 90	0.5	0 to 150	N/A
403A043	30 to 90	1.0	0 to 150	N/A
403A045	-1 to 11	0.1	30 to 220	N/A
403A046	9 to 21	0.1	30 to 220	N/A
403A047	19 to 31	0.1	30 to 220	N/A
403A048	29 to 41	0.1	30 to 220	N/A
403A049	39 to 51	0.1	30 to 220	N/A
403A050	49 to 61	0.1	30 to 220	N/A
403A051	59 to 71	0.1	30 to 220	N/A
403A052	69 to 81	0.1	30 to 220	N/A
403A053	79 to 91	0.1	30 to 220	N/A

15" COMBINED FORM API HYDROMETERS THERMOMETER IN BODY – SAFETY BLUE LIQUID

Product No.	Range Degree	Division	Temperature Range (°F)
403A272	9 to 21	0.1	0 to 150
403A273	19 to 31	0.1	0 to 150
403A274	29 to 41	0.1	0 to 150
403A275	39 to 51	0.1	0 to 150
403A276	49 to 61	0.1	0 to 150
403A277	59 to 71	0.1	0 to 150
403A278	69 to 81	0.1	0 to 150
403A279	79 to 91	0.1	0 to 150
403A281	10 to 30	0.2	0 to 150
403A282	30 to 50	0.2	0 to 150
403A283	45 to 90	0.5	0 to 150

7-1/2" COMBINED FORM API HYDROMETERS THERMOMETER IN BODY

Product No.	Range Degree	Division	Temperature Range (°F)
403A064	9 to 21	0.2	20 to 130
403A065	19 to 31	0.2	20 to 130
403A066	29 to 41	0.2	20 to 130
403A067	39 to 51	0.2	20 to 130
403A068	49 to 61	0.2	20 to 130
403A069	59 to 71	0.2	20 to 130
403A070	69 to 81	0.2	20 to 130
403A071	79 to 91	0.2	20 to 130
403A073	10 to 30	0.5	20 to 130
403A074	20 to 40	0.5	20 to 130
403A075	30 to 50	0.5	20 to 130
403A076	40 to 60	0.5	20 to 130
403A077	50 to 70	0.5	20 to 130
403A078	60 to 80	0.5	20 to 130
403A081	10 to 45	1.0	20 to 130
403A082	45 to 90	1.0	20 to 130





13" PLAIN FORM API HYDROMETERS

Product No.	Range Degree	Division	ASTM
403A001	-1 to 11	0.1	1H
403A002	9 to 21	0.1	2H
403A003	19 to 31	0.1	3H
403A004	29 to 41	0.1	4H
403A005	39 to 51	0.1	5H
403A006	49 to 61	0.1	6H
403A007	59 to 71	0.1	7H
403A008	69 to 81	0.1	8H
403A009	79 to 91	0.1	9H
403A010	89 to 101	0.1	10H

PLAIN FORM SPECIFIC GRAVITY HYDROMETERS STANDARD TEMPERATURE 60°F

Product No.	Range	Division	Length
403A090	1.000 to 1.220	.002	12"
403A091	1.000 to 2.000	.01	12"
403A092	1.000 to 1.225	.002	6"

15" COMBINED FORM SPECIFIC GRAVITY HYDROMETER STANDARD TEMPERATURE 60°F

Product No.	Range Degree	Division	Temperature Range (°F)	ASTM
403A093	0.500 to 0.650	0.001	30 to 90	101H

BRINE HYDROMETER

Product No.	Range Degree	Division	Length
403A095	0 to 100%	1%	12"

Hydrometer Accessories



HYDROMETER CASE: SINGLE

Constructed of heavy walled PVC tubing, the single hydrometer case is designed to protect a hydrometer from accidental breakage during transport. The case is fully cushioned with felt interior liner which is perfect for field storage of extra, spare or seldom used hydrometers.

Product No.	Length (in)
403B086	15
403B087	7-1/2



HYDROMETER CASE: THREE PLACE FLIP-TOP

Product No. 403B088 & 403B089

The Three Place Flip-Top Hydrometer case is designed to conveniently carry three 15-inch API thermohydrometers. The black case features a rugged plastic outer shell with separate interior compartments, each lined with felt. The felt-lined lid is cut at a 30° angle to allow it to arc from the hydrometers when opening and closing, preventing stem breakage. Two models are available. The 403B088 model uses a spring-loaded hinge to hold the lid in the open or closed position; the 403B089 model uses a positive tension latch that holds the lid closed until released.



HYDROMETER CASE: THREE PLACE SUITCASE

Product No. 403B092

For maximum protection, the Three Place-Suitcase case houses three soft felt interior compartments to carry 15-inch API hydrometers. Its aluminum outer casing is lightweight and durable to withstand field use and rough transport. The lid latch keeps the case securely closed and can be released with a single press of the button.



HYDROMETER GRAVITY SAMPLE HEATER

Used for low gravity oil where the hydrometer gravity test cannot be made without heating the oil sample, the Hydrometer Gravity Sample Heater is the ideal device for the job. This floor-mounted sample heater allows operators the ability to control temperature for optimal testing versatility. Available in glass and aluminum cylinder models. Replacement cylinders are available upon request.

Product No.	Voltage
403B171	12 VDC
403B172	115 VAC 50/60Hz

REPLACEMENT CYLINDERS

Product No.	Material
403B114	Aluminum
403A261	Glass



HYDROMETER CYLINDER: PLASTIC

Designed to measure gravity readings quickly and accurately, the Plastic Hydrometer Cylinder is perfect for 7-inch to 15-inch hydrometers. Available in different capacities, the one-piece unit features a non-beaded top for quick emptying, transparent body for maximum visibility, and square base for stability.

Model	Capacity (mL)	Height (in)
403B096	340	15
403B097	340	8
403B098	600	15
403B256 (With Pour Spout)	600	15



HYDROMETER CYLINDER: BRASS

Made entirely of brass, the one-piece Brass Hydrometer Cylinder is used to precisely test the gravity of oil samples. The cylinder features a non-beaded top for quick emptying and has superior chemical resistance to handle a range of samples and temperatures. The fully brass construction provides weight and stability to the unit minimizing the risk of accidental spilling.

Product No.	Capacity (mL)	Height (in)
403B099	500	15



HYDROMETER CYLINDER: GLASS

The Glass Hydrometer Cylinders are ideal for fast and accurate testing of the relative density of crude oil samples. The clear glass design offers excellent visibility for quick readings and includes a beaded top with pouring spout for improved emptying.

Model	Capacity (mL)	Height (in)
403A100	340	15
403A101	600	15



HYDROMETER CYLINDER: PLASTIC – GRADUATED

With accurate and easy to read markings, the Graduated Plastic Hydrometer Cylinder can help measure the gravity of samples with ease. It is designed to deliver true measurements while remaining resistant to chemicals and breakage. The cylinder includes a beaded top and pouring spout.

Model	Capacity (mL)	Divisions (mL)
403A102	100	1
403A103	500	5
403A104	1000	10
403A105	2000	20



HYDROMETER CYLINDER: GLASS – GRADUATED

The Graduated Glass Hydrometer Cylinder provides maximum visibility and includes a beaded top rim. The white markings along the length of the cylinder are optimal for correctly reading measurements against darker colored oils and liquids.

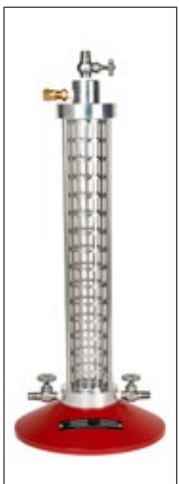
Model	Capacity (mL)	Divisions (mL)
403A106	25	1
403A107	50	1
403A108	100	1
403A109	500	5
403A110	1000	10
403A111	2000	20



WIND JAMMER

Product No. 403A257

The Wind Jammer extends the height of the plastic hydrometer cylinder to protect the hydrometer stem from the wind for more accurate gravity readings. The Wind Jammer gives 360-degree protection and allows readings to be taken from any angle. ****Not compatible with hydrometer cylinders that have pour spouts.**



LPG PRESSURE HYDROMETER CYLINER

Product No. 407B046

The LPG Pressure Hydrometer Cylinders are used to determine the specific gravity of liquified petroleum gas (LPG), such as propane, butane, and other light hydrocarbons under vapor pressure conditions corresponding to the temperature of the liquid. The cylinder is constructed of a transparent plastic barrel held between aluminum end plates with stainless-steel tie-rods and a stainless-steel safety guard. The cylinder has a working pressure of 200 psi and is equipped with a relief valve that is set for this pressure. ASTM designation D1657, and GPA2140.

Please see page 38 for the companion specific gravity hydrometers.

THERMOMETERS, ACCESSORIES, AND OTHER PRODUCTS

- ◆ Tank Thermometers
- ◆ Bi-Metal Thermometer
- ◆ Digital Thermometers
- ◆ Tank Seals
- ◆ Other Accessories

Tank Thermometers

Robinson Tank Thermometers are designed and used in a variety of applications for gauging temperatures of crude oil samples or other liquids in storage and transport tanks. Made to meet API/ASTM oil testing standards, thermometers are lowered into the tank to collect samples by attaching a cord/rope to the eyelet of the thermometer cup case. Spring clips hold the thermometer securely in place and make thermometer replacement quick and easy. Woodback cupcase and stainless steel cupcase models available.

CUP CASE WITH THERMOMETER

Model	Cup Case	Temperature Range (°F)	Divisions (°F)
405B001	Woodback	-30 to 120	1
405B002	Woodback	0 to 180	1
405B003	Woodback	20 to 220	1
405B553	Stainless Steel	-30 to 120	1
405B554	Stainless Steel	0 to 180	1
405B555	Stainless Steel	20 to 220	1

REFILL THERMOMETERS

Model	Temperature Range (°F)	Divisions (°F)
405A025	-30 to 120	1
405A026	0 to 180	1
405A027	20 to 220	1

TANK THERMOMETER CORD

Product No. 405B024

Made from 1/8" diameter cotton cord, the Tank Thermometer Cord comes complete with a split key ring on one end to hang a thermometer cup case. Please specify length when ordering.

Bi-Metal Thermometer

BI-METAL THERMOMETER

The Bi-Metal Thermometer is constructed of stainless steel and is corrosion resistant to most chemicals. Easy-to-read dials are made with a bi-metallic helix coil dampener with silicone for minimum pointer vibration. Both pocket-style and laboratory-style thermometers include a recalibration feature.

Product No.	Temp. Range (°F)	Divisions (°F)
405A033	-40 to 180	2
405A034	0 to 220	2

Digital Thermometers



DIGITAL THERMOMETER

Product No. 405A168

Rugged enough to withstand a 10-foot drop according to API/ASTM oil testing standard, this digital thermometer includes an easy-read LCD display, auto power-off, data hold, and continuous update features.

Specifications:

- Range (°F): -40 to 300
- Accuracy (°F): ± 2
- Stem Length: 5-inch
- Power: Button Battery
- Carrying Case: Stealth



THERMOPROBE® TP7-D

Product No. 405A175

The ThermoProbe TP7-D is a Zone 0 intrinsically safe digital gauging thermometer for use in hazardous areas. Featuring a convenient user interface with a ½-inch alpha-numeric backlit display, buttons that can be easily used with gloves, and an intuitive menu that allows the operator to easily select Celsius or Fahrenheit units and access calibration. The ThermoProbe's rugged instrument body is constructed from stainless-steel and static-dissipative plastic components. The spool-reel design allows the operator to quickly deploy and retrieve the sensor probe into various liquids and chemicals. Available in 50-foot, 75-foot, and 110-foot cable lengths, the ThermoProbe comes equipped with easily replaceable AA batteries, providing up to 200 hours of operational power. Please specify cable length when ordering.



COOPER-ATKINS® THERMISTOR

Product No. 405A176

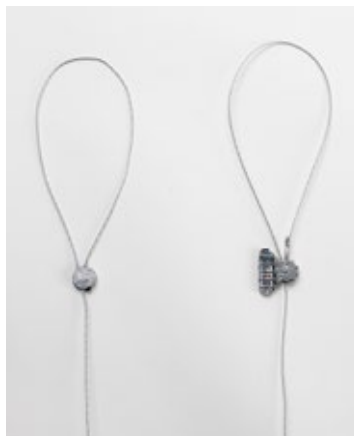
For applications where only one temperature is read at a time, the Cooper-Atkins® TM99A Thermistor is an industry standard. It features minimum/maximum memory, hold, auto shut-off, and LCD backlit display for dark environments. The TM99A comes complete with a black protective pouch and 1075 general purpose probe.

Specifications:

- Range (°F): -40 to 300
- Accuracy (°F): ± 0.2
- Stem Length: 5-inch
- Power: Button Battery
- Range (°F/°C): -40 to 302/ -40 to 150
- Carrying Case: Stealth
- Accuracy (°F/°C): $\pm 0.3/0.2$
- Dimensions: 5" x 2" x 10"
- Weight: 5oz (without probe)
- Battery Type: AAA

Tank Seals

LEAD SEALS



Lead seals are made from 18-inch, 4-ply, 30-gauge galvanized wire. Numbered seals be can customized to include company initials on one side, up to five characters, with consecutive numbers, up to six digits, on the other side. The minimum order quantity is 1,000 units.

Product No.	Description
406A009	Lead Seal, 7/16" Head, Galvanized Wire
406A009SS	Lead Seal, 7/16" Head, Stainless Steel Wire
406A010	Lead Seal, Numbered, Galvanized Wire
406A010SS	Lead Seal, Numbered, Stainless Steel Wire
406A026	Pull Tight Seal, Blue, Galvanized Wire

LEAD SEALING PRESS



This hand sealing press is designed to quickly and permanently crimp lead seals. The sealing press is available with blank or marking dies for one or both sides of the lead disc. There is a four-character maximum per die. Replacement dies are available upon request.

Product No.	Description
406A007	Lead Sealing Press with Dies
406A011	Replacement Dies

GLOBE MECHANICAL SEAL Product No. 406A012



Precision built to stay securely locked, Globe Mechanical Seals, are numbered consecutively and can be embossed with the company identity up to 18 characters including spaces and periods. Seals are 8-1/2" long with a 5/16" head. The minimum order quantity is 1,000 units.

PREMIER AUTOMATIC SEAL Product No. 406A013



Self-locking with permanent mechanical closure, Premier Automatic Seals, are numbered consecutively and can be embossed with the company identity up to 15 characters including spaces and periods. Seals are 8-1/2" long with 5/16" head. The minimum order quantity is 1,000 units.

Other Accessories



DISPENSER PUMP

Product No. 401B178

Suitable for light application, the Dispenser Pump is ideal for allowing solvents to dilute oil samples and/or cleaning gauging and testing equipment. The heavy-gauge steel pump delivers a drop or stream of fluid from the 12" flexible hose. Its easy-to-use filler cap eliminates handling of messy pumps and ensures a tight seal for superior pressure that will stay primed for instant use. The pump is available in a 32-ounce capacity with a copper bronze finish.



INDUSTRIAL STOPWATCH

Product No. 406A001

Featuring a nickel-plated case, this handheld mechanical analog stopwatch includes a white face with a sixty second dial in black and red numbering. The long hand registers fifths of seconds and the small hand registers minutes, up to 30. The start, stop, and flyback functions are all activated from the crown of the watch.



DIGITAL STOPWATCH

Product No. 406A004

Providing greater precision, this digital electronic stopwatch measures with 1/100th of a second resolution. The large digital display can easily be read for greater accuracy. The stopwatch comes with a attached lanyard and features a three-button arrangement which controls the mode, the start-stop function, and the lap time and reset.



MARSH VISCOSITY FUNNEL

Product No. 406A005

The Marsh Viscosity Funnel is used for routinely determining the relative viscosity of drilling mud. The funnel is molded from tough, durable plastic that is resistant to breaking and cracking. It is constructed with a brass lined orifice that assures consistency in all readings and a plastic outer handle to protect the user's hands.



PLASTIC CUP

Product No. 406A006

This plastic 1000mL (32oz) measuring cup is intended to be used in conjunction with the Marsh Viscosity Funnel. The cup is made from strong plastic and features raised markings on the inside, easy-grip handle, and dual pouring spouts, one adjacent to the handle and the other on the side of the cups rim.



OFITE® MUD BALANCE

The Ofite® Mud Balance is used to measure the density of a given volume of liquid. As there is no reliable visual method of determining the density of drilling mud, the mud balance is the most reliable and accurate form a measurement. The balance features a mud cup at one end of the beam that is balanced by a fixed counterweight at the other end, with a sliding-weight rider that moves along a graduated scale permits precise measurements. A level bubble is mounted on the beam to ensure balancing.

Product No.	Description
406A023	Ofite 4- Scale Mud Balance, Plastic Model with Case
406A025	Ofite 4-Scale Mud Balance, Metal Model with Case



LAC SIGHT GLASS BRUSH

For cleaning LAC unit sight glass.

Product No.	Description
406A016	LAC Sight Glass Brush, 30" Long
406A017	LAC Sight Glass Brush, 36" Long
406A018	LAC Sight Glass Brush, 48" Long

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