

**ROBINSON
MANUFACTURING**
COMPANY INCORPORATED

MANUFACTURING SINCE 1954

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ROBINSON MANUFACTURING
COMPANY INCORPORATED

PRODUCT WARRANTY

Robinson Manufacturing warrants products manufactured by Robinson Manufacturing to be free of defective material and workmanship for one year from the date of shipment by Robinson Manufacturing. The liability of Robinson Manufacturing for defective equipment during the warranty period shall be limited to the repair of such equipment or replacement thereof without charge for parts or labor provided by Robinson Manufacturing. Robinson Manufacturing shall be so liable only if Robinson Manufacturing is contacted in regard to such defect immediately after its discovery

Buyer should return the defective product under warranty to Robinson Manufacturing only after receipt of Robinson Manufacturing's specific permission to do so. This warranty does not extend to any Robinson Manufacturing product which has been subject to misuse, neglect, accident, modification or improper installation, or any product which has been repaired or altered by persons not expressly approved by Robinson Manufacturing. Robinson Manufacturing will not be liable for damages, loss or expense directly or indirectly arising from the use of the products or for any liability from their use either separately or in combination with other equipment or material or for any other cause.

MERCHANDISE RETURNS

No goods should be returned to Robinson Manufacturing without specific authorization. All authorized returns for merchandise shipped by Robinson Manufacturing less than 6 months previously which are returned for any reason other than valid warranty claims will be charged a 15% restocking charge plus any expense necessary to place the merchandise in saleable condition. The restocking charge shall be 25% for goods shipped by Robinson Manufacturing more than 6 months but less than 1 year previously. No returns for credit will be accepted after 1 year from original Robinson Manufacturing shipment. Returns should be shipped freight prepaid.



HYDROMETERS

Made in accordance with API specifications and calibrated to API scale Modulus 141.5 at 60°F. All hydrometers are of precision grade. The hydrometers are constructed with a solid alloy ballast and designed to permit quick penetration to the settling point, creating no air bubbles. Scale is sealed in place by a red glass strap fused to the stem and at the top of the gravity scale even with the last number line.

CERTIFIED HYDROMETER

Certified hydrometers are available upon request.

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



HYDROMETERS, API, Combined. Thermometer in the bottom. Length 15"

Catalog Number	Range Deg.	Division	Temp. Range °F
403A021	-1 to 11	0.1	0 to 150
403A022	9 to 21	0.1	0 to 150
403A023	19 to 31	0.1	0 to 150
403A024	29 to 41	0.1	0 to 150
403A025	39 to 51	0.1	0 to 150
403A026	49 to 61	0.1	0 to 150
403A027	59 to 71	0.1	0 to 150
403A028	69 to 81	0.1	0 to 150
403A029	79 to 91	0.1	0 to 150
403A030	89 to 101	0.1	0 to 150
403A032	29 to 45	0.1	0 to 150
403A033	10 to 30	0.2	0 to 150
403A034	20 to 40	0.2	0 to 150
403A035	30 to 50	0.2	0 to 150
403A036	40 to 60	0.2	0 to 150
403A037	50 to 70	0.2	0 to 150
403A038	60 to 80	0.2	0 to 150
403A039	70 to 90	0.2	0 to 150
403A040	80 to 100	0.2	0 to 150
403A041	10 to 45	0.5	0 to 150
403A042	45 to 90	0.5	0 to 150
403A043	30 to 90	1.0	0 to 150
403A045	-1 to 11	0.1	30 to 220
403A046	9 to 21	0.1	30 to 220
403A047	19 to 31	0.1	30 to 220
403A048	29 to 41	0.1	30 to 220
403A049	39 to 51	0.1	30 to 220
403A050	49 to 61	0.1	30 to 220
403A051	59 to 71	0.1	30 to 220
403A052	69 to 81	0.1	30 to 220
403A053	79 to 91	0.1	30 to 220

HYDROMETERS, API Combination Form. Thermometer in Stem. Length 15"

Catalog Number	Range Deg.	Division	Temp. Range °F
403A054	-1 to 11	0.1	30 to 220
403A055	9 to 21	0.1	30 to 220
403A056	19 to 31	0.1	30 to 220
403A057	29 to 41	0.1	30 to 220
403A058	39 to 51	0.1	30 to 220
403A059	49 to 61	0.1	30 to 220
403A060	10 to 30	0.2	30 to 220
403A061	20 to 40	0.2	30 to 220
403A062	30 to 50	0.2	30 to 220

HYDROMETERS, API, Combination Form. Thermometer in the Bottom. Length 7 1/2"

Catalog Number	Range Deg.	Division	Temp. Range °F
403A063	-1 to 11	0.2	20 to 130
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
403A072	89 to 101	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
403A079	70 to 90	0.5	20 to 130
403A080	80 to 100	0.5	20 to 130
403A081	10 to 45	1.0	20 to 130
403A082	45 to 90	1.0	20 to 130



HYDROMETERS, API, Plain, Length 13"

Catalog Number	Range Deg.	Division
403A001	-1 to 11	0.1
403A002	9 to 21	0.1
403A003	19 to 31	0.1
403A004	29 to 41	0.1
403A005	39 to 51	0.1
403A006	49 to 61	0.1
403A007	59 to 71	0.1
403A008	69 to 81	0.1
403A009	79 to 91	0.1
403A010	89 to 101	0.1

HYDROMETERS, Specific Gravity, Plain Form for general testing of heavy liquids. Temperature of Standardization 60/60°F

Catalog Number	Range	Divisions	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"

HYDROMETER, Specific Gravity LPG. Combined Form. ASTM No. 101H. 360mm

Catalog Number	Range Deg.	Divisions	Temp. Range °F
* 403A093	0.500 to 0.650	0.001	30 to 90
403A094	0.500 to 0.650	0.001	0 to 120
403A235	0.450 to 0.650	0.002	30 to 120

* For use in 407B046, Pressure Hydrometer Cylinder

HYDROMETER, Brine

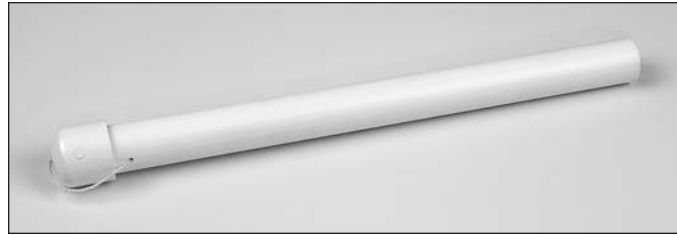
Catalog Number	Range Deg.	Divisions	Length
403A095	0 to 100%	1%	12"

HYDROMETERS, ASTM DENSITY, Kg/m³ Combined Form. Temperature Standardization 15°C Thermometer in Body. Length 380mm

Catalog Number	ASTM Number	Range kg/m ³	Div. kg/m ³	I Body Therm. Rge.
403A236	300H	600/650	0.5	-20/65°C
403A237	301H	650/700	0.5	-20/65°C
403A238	302H	700/750	0.5	-20/65°C
403A239	303H	750/800	0.5	-20/65°C
403A240	304H	800/850	0.5	-20/65°C
403A241	305H	850/900	0.5	-20/65°C
403A242	306H	900/950	0.5	-20/65°C
403A243	307H	950/1000	0.5	-20/65°C
403A244	308H	1000/1050	0.5	-20/65°C
403A245	309H	1050/1100	0.5	-20/65°C

HYDROMETERS, ASTM DENSITY, Kg/m³ Plain Form. Temperature Standardization 15°C Length 330mm

Catalog Number	ASTM Number	Range kg/m ³	Div. kg/m ³
403A236	311H	600/650	0.5
403A247	312H	650/700	0.5
403A248	313H	700/750	0.5
403A249	314H	750/800	0.5
403A250	315H	800/850	0.5
403A251	316H	850/900	0.5
403A252	317H	900/950	0.5
403A253	318H	950/1000	0.5
403A254	319H	1000/1050	0.5
403A255	320H	1050/1100	0.5



CASE, HYDROMETER, Auxiliary

For field storage of extra, spare or seldom used (certified) hydrometers. This case will protect the hydrometer from shock or rough handling. Constructed of heavy wall PVC tubing, fully cushioned with a felt liner.

Catalog Number	Capacity	Size
403B086	Single	15"
403B087	Single	7-1/2"



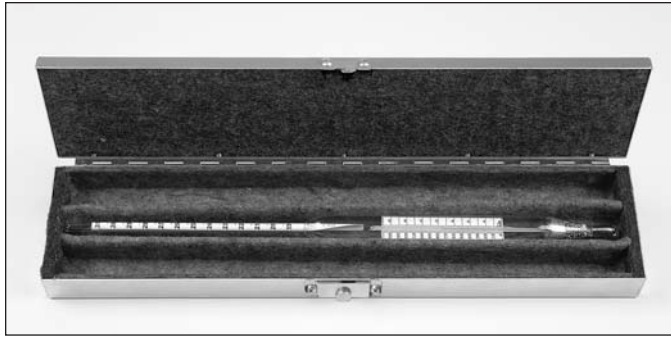
403B088 Spring loaded hinge. 16-1/2 x 4-3/4 x 2

CASE, HYDROMETER, Three Place. Flip Top

For carrying three 15 inch hydrometers. It is made of plastic with separate compartments, each compartment lined with felt. The lid has a 30° angle cut, which allows it to arc away from the hydrometers when open, thus preventing stem breakage. There are two models to choose from. The model (**403B088**) above has a spring loaded hinge that holds the lid open or closed under spring tension and the model below (**403B089**) is equipped with a standard hinge and a positive tension-type latch which holds the lid securely closed until released.



403B089 Positive tension latch. 16-1/2 x 4-3/4 x 2



CASE, HYDROMETER, Three Place. Aluminum

For carrying three 15 inch hydrometers. Suite case style.
Dimensions 15-3/4" x 4-5/8" x 1-3/8", Weight 1-1/2 lbs.

Catalog Number 403B092



401B171

HEATER, HYDROMETER Gravity Sample.

For low gravity oil where the hydrometer gravity test cannot be made without heating the oil sample. Two models are available.

Catalog Number	Type Mounting	Heating Source	Size In's	Weight Lbs.
403B171	Floor	12 VDC	16 x 7	7
403B172	Floor	120 VAC	16 x 7	7

CYLINDER, Replacement.

403B114 Replacement cylinder for floor mounted units.
Aluminum.

403A261 Replacement cylinder for floor mounted units.
Glass.



CYLINDER, HYDROMETER, Plastic.



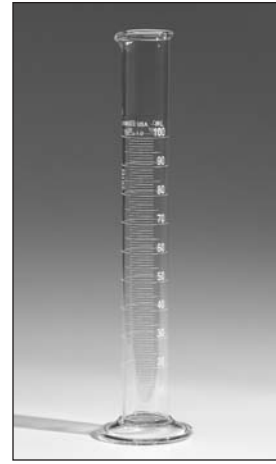
CYLINDER, HYDROMETER, Brass.



CYLINDER, HYDROMETER, Glass with pour spout.



CYLINDER, GRADUATED, Plastic.



CYLINDER, GRADUATED, Glass.

CYLINDER, HYDROMETER, Plastic

Ideal for use in testing the gravity of crude oil. Transparent and light weight.

Catalog Number	Cylinder ID	Height
403B096	1 - 3/8"	15"
403B097	1 - 7/8"	8"
403B098	1 - 7/8"	15"
403B256 (with pour spout)	1 - 7/8"	15"

CYLINDER, HYDROMETER, Brass

Catalog Number	Cylinder ID	Height
403B099	1 - 7/8"	15"

CYLINDER, HYDROMETER, Glass with pourout.

Catalog Number	Cylinder ID	Height	Capacity
403A100	38 mm	375 mm	340 ml
403A101	50 mm	375 mm	600 ml

CYLINDERS, GRADUATED, Plastic

Calibrated to contain/deliver at 20°C. Single molded-in metric scale, transparent with pour-out spout. Compatible with virtually any chemical for typical brief use. Shatterproof with large base.

Catalog Number	Capacity ml	Sub-Division ml
403A102	100	1
403A103	500	5
403A104	1000	10
403A105	2000	20

CYLINDERS, GRADUATED, Glass.

Calibrated to deliver. Single metric scale with 0 at the bottom and total graduated capacity at the top line. With pour out spout.

Catalog Number	Capacity ml	Sub-Division ml
403A106	25	1
403A107	50	1
403A108*	100	1
403A109	500	5
403A110	1000	10
403A111	2000	20

* ASTM distillation test



WIND JAMMER, hydrometer cylinder

Clear plastic cylinder that protects the hydrometer stem from the wind, allowing more accurate gravity readings. Slides over the hydrometer cylinder and gives 360 degree protection. The wind will not affect the hydrometer stem. The reading can be taken from any side.

Catalog Number 403A257