



Hydrometers

Specific Gravity Hydrometers
Twaddle and Baumé
BS 718 and ASTM Hydrometers

Density Hydrometers
Alcohol Hydrometers
Hydrometer Accessories




Hydrometers - Introduction



The traditional hydrometry scale of Specific Gravity (density, relative to that of water at 60°F) used in the 1960 edition of the British Standard 718 is still much in demand and the General Purpose hydrometers at the beginning of this catalogue section use this scale.

For the Specification Density Hydrometers to BS 718 : 1991, the internationally accepted basis of scale is grams per millilitre (g/ml) with a reference temperature of 20°C (or, exceptionally 15°C). For use in tropical countries, ISO 387 proposes that hydrometers be adjusted at a higher reference temperature, 27°C (as opposed to the previously used high adjustment of 84°F).



Instruments adjusted at this higher temperature can be supplied to special order. In addition to being adjusted for use at a specific reference temperature, hydrometers are adjusted with regard to the Surface Tension of the materials whose density is to be determined. Surface tension may be expressed specifically for example 55 mN/m (millinewtons per metre) or described as a band. Low surface tension is less than 35 mN/m and medium surface tension is between 35 and 55 mN/m.



<h1>CERTIFICATE OF CALIBRATION</h1>																															
ISSUED BY : S.Brannan and Sons Limited																															
CALIBRATION DATE	CERTIFICATE NUMBER	SERIAL NUMBER																													
11/03/2015	2426 / 3	123456789																													
S.Brannan and Sons Ltd. 14, Lonsdale Road, Oldham Greater Man. M20 2LW Tel: 0161 275 1101 Fax: 0161 275 1102 www.sbrannan.co.uk		 Thermometers and Gauges																													
		Telephone : +44 (0) 161 275 1101 Fax : +44 (0) 161 275 1102 E Mail : sales@sbrannan.co.uk Web : www.sbrannan.co.uk Registered in : 0355 OF ENGLAND																													
<table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">Specification:</td> <td style="width: 35%;">BS 718 M100</td> <td style="width: 15%;"></td> <td style="width: 35%;"></td> </tr> <tr> <td>Instrument Type:</td> <td>10.401.0</td> <td></td> <td></td> </tr> <tr> <td>Range:</td> <td>0.700 to 0.800</td> <td></td> <td></td> </tr> <tr> <td>Resolution:</td> <td>0.002</td> <td></td> <td></td> </tr> <tr> <td>Basis of Scale:</td> <td>g/ml</td> <td></td> <td></td> </tr> <tr> <td>Surface Tension:</td> <td>Low @ 30.0°C</td> <td></td> <td></td> </tr> <tr> <td>Hydrometer Weight:</td> <td>19.685g</td> <td></td> <td></td> </tr> </table>				Specification:	BS 718 M100			Instrument Type:	10.401.0			Range:	0.700 to 0.800			Resolution:	0.002			Basis of Scale:	g/ml			Surface Tension:	Low @ 30.0°C			Hydrometer Weight:	19.685g		
Specification:	BS 718 M100																														
Instrument Type:	10.401.0																														
Range:	0.700 to 0.800																														
Resolution:	0.002																														
Basis of Scale:	g/ml																														
Surface Tension:	Low @ 30.0°C																														
Hydrometer Weight:	19.685g																														
<table style="width: 100%; border: none;"> <thead> <tr> <th style="width: 25%;">Apparent Reading g/ml</th> <th style="width: 25%;">True Reading g/ml</th> <th style="width: 25%;">Correction g/ml</th> <th style="width: 25%;">Standard Instrument References</th> </tr> </thead> <tbody> <tr> <td>0.7000</td> <td>0.6996</td> <td>-0.0004</td> <td>10736011 15504402</td> </tr> <tr> <td>0.7500</td> <td>0.7494</td> <td>-0.0006</td> <td>10736011 15504402</td> </tr> <tr> <td>0.8000</td> <td>0.7994</td> <td>-0.0006</td> <td>10736011 15504402</td> </tr> </tbody> </table>				Apparent Reading g/ml	True Reading g/ml	Correction g/ml	Standard Instrument References	0.7000	0.6996	-0.0004	10736011 15504402	0.7500	0.7494	-0.0006	10736011 15504402	0.8000	0.7994	-0.0006	10736011 15504402												
Apparent Reading g/ml	True Reading g/ml	Correction g/ml	Standard Instrument References																												
0.7000	0.6996	-0.0004	10736011 15504402																												
0.7500	0.7494	-0.0006	10736011 15504402																												
0.8000	0.7994	-0.0006	10736011 15504402																												
Signed:  J. Henderson		Calibration Assistant and Approved Signatory 																													
Laboratory Temperature 20°C +/- 0.5°C		Laboratory Humidity 20% to 90%																													
<p><small>S.Brannan and Sons operate an ISO9001 certified Quality Management System in order to ensure the accuracy and reliability of every instrument we produce.</small></p> <p><small>The readings were determined by comparison with traceable standard instruments, the reference numbers of which are shown above. We recommend that periodic recalibration should be carried out on this instrument yearly, but the recalibration frequency is best determined by the user depending upon the frequency and conditions of use, as well as the level of accuracy required by the process.</small></p>																															

All hydrometers can be supplied with UKAS certification, certificate traceable to Recognised National Standard or Statement of Conformity, if required.

The specific gravity 60/60°F scale compares the relative density of a given liquid with that of water, at 60°F (15.6°C). The instruments listed are similar to hydrometers included in ISO 650 and in the (now superseded) 1960 issue of British Standard 718. Three of the 'series' of hydrometers are listed below and a further series is on the next page with some wider range types.

All hydrometers can be supplied with UKAS certification, certificate traceable to Recognised National Standard or Statement of Conformity, if required.

UKAS
Calibration Certificate
upon request

**Statement
of Conformity**
upon request

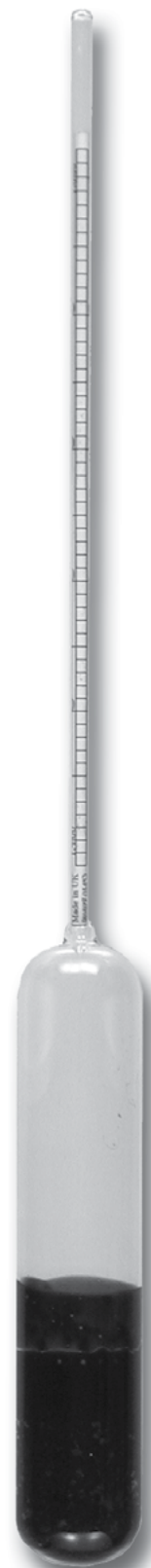
Traceable
Calibration Certificate
upon request

Series S50 190mm long, covering a range span of 0.050°, divided in 0.002°

Series M50 270mm long, covering a range span of 0.050°, divided in 0.001°

Series L50 335mm long, covering a range span of 0.050°, divided in 0.0005°.

Range °SG	To suit Surface Tension	Product Number		
		Series S50	Series M50	Series L50
0.60 to 0.65°SG	Low	10/899/0	10/960/0	10/870/0
0.65 to 0.70°SG		10/900/0	10/961/0	10/871/0
0.70 to 0.75°SG		10/901/0	10/962/0	10/872/0
0.75 to 0.80°SG		10/902/0	10/963/0	10/873/0
0.80 to 0.85°SG		10/903/0	10/964/0	10/874/0
0.85 to 0.90°SG		10/904/0	10/921/0	10/875/0
0.90 to 0.95°SG		10/905/0	10/922/0	10/876/0
0.95 to 1.00°SG		10/906/0	10/923/0	10/877/0
1.00 to 1.05°SG	Medium	10/907/0	10/924/0	10/878/0
1.05 to 1.10°SG		10/908/0	10/925/0	10/879/0
1.10 to 1.15°SG		10/909/0	10/926/0	10/880/0
1.15 to 1.20°SG		10/910/0	10/927/0	10/881/0
1.20 to 1.25°SG		10/911/0	10/928/0	10/882/0
1.25 to 1.30°SG		10/912/0	10/929/0	10/883/0
1.30 to 1.35°SG		10/913/0	10/930/0	10/884/0
1.35 to 1.40°SG		10/914/0	10/931/0	10/885/0
1.40 to 1.45°SG		10/915/0	10/932/0	10/886/0
1.45 to 1.50°SG		10/916/0	10/970/0	10/887/0
1.50 to 1.55°SG		10/917/0	10/971/0	10/888/0
1.55 to 1.60°SG		10/918/0	10/972/0	10/889/0
1.60 to 1.65°SG		10/919/0	10/973/0	10/890/0
1.65 to 1.70°SG		10/990/0	10/974/0	10/891/0
1.70 to 1.75°SG		10/991/0	10/975/0	10/892/0
1.75 to 1.80°SG		10/992/0	10/976/0	10/893/0
1.80 to 1.85°SG		10/993/0	10/977/0	10/894/0
1.85 to 1.90°SG		10/994/0	10/978/0	10/895/0
1.90 to 1.95°SG		10/995/0	10/979/0	10/896/0
1.95 to 2.00°SG		10/996/0	10/980/0	10/897/0



The hydrometers on this page are adjusted at 60°F (15.6°C).

All hydrometers can be supplied with UKAS certification, certificate traceable to Recognised National Standard or Statement of Conformity, if required.

UKAS
Calibration Certificate
upon request

Statement
of Conformity
upon request

Traceable
Calibration Certificate
upon request

Series M100

250mm long,
covering a span of 0.100°,
divided in 0.002°

Range °SG	To suit Surface Tension	Product Number
0.60 to 0.70°SG	Low	10/940/0
0.70 to 0.80°SG		10/941/0
0.80 to 0.90°SG		10/942/0
0.90 to 1.00°SG		10/943/0
1.00 to 1.10°SG	Medium	10/944/0
1.10 to 1.20°SG		10/945/0
1.20 to 1.30°SG		10/946/0
1.30 to 1.40°SG		10/947/0
1.40 to 1.50°SG		10/948/0
1.50 to 1.60°SG		10/949/0
1.60 to 1.70°SG		10/950/0
1.70 to 1.80°SG		10/951/0
1.80 to 1.90°SG		10/952/0
1.90 to 2.00°SG		10/953/0

200 Series

250mm long, covering a span of 0.200°, divided in 0.002°

Range °SG	To suit Surface Tension	Product Number
0.60 to 0.80°SG	Low	10/500/0
0.80 to 1.00°SG		10/501/0
1.00 to 1.20°SG	Medium	10/502/0
1.20 to 1.40°SG		10/503/0
1.40 to 1.60°SG		10/504/0
1.60 to 1.80°SG		10/505/0
1.80 to 2.00°SG		10/506/0

Range Finder Hydrometers

These instruments are suitable for less accurate readings and are frequently used to help select the appropriate hydrometer for subsequent accurate determinations.

Range °SG	To suit Surface Tension	Length mm	Division	Product Number
0.70 to 1.00°SG	Low	250mm	0.005	10/530/0
1.00 to 1.50°SG	Medium	250mm	0.005	10/531/0
1.50 to 2.00°SG	Medium	250mm	0.005	10/532/0
0.70 to 2.00°SG	Medium	320mm	0.010	10/550/0
0.70 to 2.00°SG	Medium	250mm	0.010	10/551/0



Twaddle Hydrometers

The Twaddle scale is a simplified scale based on specific gravity where 0° Twaddle equates to SG60/60°F of 1.00 (that of water) and each degree Twaddle equals 0.005°SG. These hydrometers are available in 2 lengths, 160mm or 300mm, each with single degree divisions and are adjusted for use at 15.6°C (60°F) for medium surface tension liquids.

Twaddle Number	Range	Division	Product Number	
			L = 160mm	L = 300mm
1	0 to 24	1	10/101/0	10/151/0
2	24 to 28	1	10/102/0	10/152/0
3	48 to 74	1	10/103/0	10/153/0
4	74 to 102	1	10/104/0	10/154/0
5	102 to 138	1	10/105/0	10/155/0
6	138 to 170	1	10/106/0	10/156/0

Baumé Hydrometers

The Baumé hydrometers listed are for liquids heavier than water. Zero degrees Baumé equates to an SG 60/60°F of 1.00. This scale uses the accepted relationship for degrees Baumé where:

$$1 = 145 - \frac{145}{\text{SG } 60/60^\circ\text{F}}$$

The instruments are all 250mm long and are adjusted at 15.6°C (60°F) and suitable for medium surface tension liquids.

UKAS
Calibration Certificate
upon request

Statement
of Conformity
upon request

Traceable
Calibration Certificate
upon request

Range	Division	Product Number
0 to 30	0.5	10/200/0
0 to 50	1.0	10/201/0
0 to 70	1.0	10/202/0
0 to 10	0.1	10/203/0
10 to 20	0.1	10/204/0
20 to 30	0.1	10/205/0
30 to 40	0.1	10/206/0
40 to 50	0.1	10/207/0
50 to 60	0.1	10/208/0
60 to 70	0.1	10/209/0

UKAS
Calibration Certificate
upon request

Statement
of Conformity
upon request

Traceable
Calibration Certificate
upon request



Milk Hydrometers



UKAS
Calibration Certificate
upon request

Statement
of Conformity
upon request

Traceable
Calibration Certificate
upon request

Specific Gravity & Quevenne Lactometers

160mm long milk hydrometers, adjusted at 15.6°C (60°F).

Scales calibrated in specific gravity or Quevenne.

1° Quevenne equals 0.001°SG.

Range	Length mm	Division	Product Number
1.025 to 1.035°SG	160mm	0.001	10/601/0
1.015 to 1.025°SG	160mm	0.1	10/660/0

Lactometers to BS 734 : Part 1 : 1973

Calibrated in grams/ml and adjusted at 20°C. Designations 1 and 2 are for milk of normal density, 1A and 2A for milk of low density.

Designation	Range	Length mm	Division	Product Number
No 1	1.025 to 1.035°SG	220mm	0.0002	10/602/0
No 1A	1.015 to 1.025°SG	220mm	0.0002	10/603/0
No 2	1.025 to 1.035°SG	215mm	0.0005	10/604/0
No 2A	1.015 to 1.025°SG	215mm	0.0005	10/605/0

Colostrum Hydrometers

232mm long hydrometers to estimate immunoglobins in colostrum by measuring the specific gravity of colostrum and assist with dairy/milk production.

Also available with glass hydrometer jar.

Description	Range	Length mm	Division	Product Number
Colostrum Hydrometer	0.025 to 1.075°SG	232mm	0.1	10/690/0
Colostrum Hydrometer with Jar	0.025 to 1.075°SG	232mm	0.1	10/691/0

Battery Testing Hydrometer Kit

Adjusted for use at 15.6°C and comprising a glass or plastic body with rubber bulb and nozzle, to withdraw a sample of the electrolyte, and a glass hydrometer with a range of 1.08 to 1.3°SG.

Body Material	Range	Division	Product Number
Plastic	1.080 to 1.030°SG	0.005	10/722/0
Glass	1.080 to 1.030°SG	0.005	10/723/0



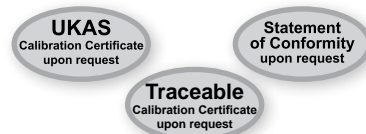
Draft Survey Hydrometer

320mm long and adjusted for use at 15°C. Supplied with or without certificate.

Measuring the apparent density in kg/litres, commonly used for ship draft survey calculations.

Description	Range	Length mm	Division	Product Number
Hydrometer with Chart	0.99 to 1.04	320mm	0.0005	10/750/0
Hydrometer without Chart	0.99 to 1.04	320mm	0.0005	10/751/0

All hydrometers can be supplied with UKAS certification, certificate traceable to Recognised National Standard or Statement of Conformity, if required.



Sea Water Hydrometers

Measuring the percentage of salt in seawater.
Adjusted at 15°C. Can also be supplied adjusted at 20°C on request.

Range g/l	Length mm	Division	Product Number
1.000 to 1.030g/ml	175mm	0.002	10/630/0
1.000 to 1.040g/ml	220mm	0.001	10/631/0
1.000 to 1.030g/ml	200mm	0.002	10/632/0
1.000 to 1.040g/ml	200mm	0.002	10/633/0
1.000 to 1.030g/ml	250mm	0.002	10/634/0
1.000 to 1.040g/ml	250mm	0.002	10/635/0
1.000 to 1.050g/ml	250mm	0.002	10/636/0

Brinometer

Measuring the percentage saturated solution of brine in water at 15.6°C (60°F), these hydrometers are 230mm long.

Range % Brine	Length mm	Division	Product Number
0 to 100	230mm	1.0	10/621/0

Latexometer

These instruments are calibrated in grams of dry rubber per litre of latex and adjusted at 15.6°C (60°F). 160mm long.

Range g/l	Length mm	Division	Product Number
50 to 450	160mm	10.0	10/611/0
50 to 250	160mm	10.0	10/612/0

Urinometer

Measuring the specific gravity of urine at 15.6°C (60°F), these hydrometers are 160mm long.

Range °SG	Length mm	Division	Product Number
1.00 to 1.06	160mm	0.001	10/650/0

Aviation Fuel Hydrometers

Measuring in specific gravity or density.

Range S60/60F	Adjusted	Length mm	Division	Product Number
0.75 to 0.85	60°F	185mm	0.002	10/640/0

Range °SG	Adjusted	Length mm	Division	Product Number
0.775 to 0.825	15°C	270mm	0.001	10/641/0



Wine & Beer Hydrometer

Measuring the specific gravity of wine and beer and designed for home use, this hydrometer will monitor the fermentation process and allows the percentage of alcohol to be determined easily with a zoned scale. Adjusted for use at 20°C.

UKAS
Calibration Certificate
upon request

Statement
of Conformity
upon request

Traceable
Calibration Certificate
upon request

Range °SG	Length mm	Division	Product Number
0.98 to 1.120	230mm	0.002	10/801/0

Wine & Beer Thermometer

Red spirit filled tube with easy to read scale. Suitable for use with wine and beer hydrometer.

Range °C&F	Length mm	Division	Product Number
15 to 105°C&F	205mm	1°C	21/594/3

Brix Hydrometer

Measuring the percentage of sugar and commonly used in wine production. The Brix scale is the equivalent to Balling and Plato scales. Adjusted for use at 15.6°C (60°F), for a surface tension 55mN/m.

Range	Length mm	Division	Product Number
0 to 10	300mm	0.1	10/250/0
10 to 20	300mm	0.1	10/251/0
20 to 30	300mm	0.1	10/252/0
30 to 40	300mm	0.1	10/253/0
40 to 50	300mm	0.1	10/254/0
50 to 60	300mm	0.1	10/255/0
60 to 70	300mm	0.1	10/256/0
0 to 20	250mm	0.2	10/257/0
20 to 40	250mm	0.2	10/258/0
40 to 60	250mm	0.2	10/259/0
60 to 80	250mm	0.2	10/260/0

Gay Lussac (Alcoholometer)

250mm hydrometer, measuring alcohol % by volume and adjusted at 15°C.

Range % Brine	Length mm	Division	Product Number
0 to 100	250mm	1.0	10/670/0

Alcohol Hydrometer

These Alcohol Hydrometers, for measuring the density of ethanol/water mixtures in kg/m³ at 20°C are to BS 5470.

Range kg/m³	Length mm	Division	Product Number
780 to 800	300mm	0.2	10/850/0
800 to 820	300mm	0.2	10/851/0
820 to 840	300mm	0.2	10/852/0
840 to 860	300mm	0.2	10/853/0
860 to 880	300mm	0.2	10/854/0
880 to 900	300mm	0.2	10/855/0
900 to 920	300mm	0.2	10/856/0
920 to 940	300mm	0.2	10/857/0
940 to 960	300mm	0.2	10/858/0
960 to 980	300mm	0.2	10/859/0
980 to 1000	300mm	0.2	10/860/0

Alcohol Sikes Hydrometer

These Alcohol Sikes Hydrometers, for measuring ethanol/water mixtures using an arbitrary Sikes scale at 51°C. Overall length 255mm.

Range Sikes	Length mm	Division	Product Number
0 to 20 A	255mm	0.2	10/810/0
0 to 20	255mm	0.2	10/811/0
20 to 40	255mm	0.2	10/812/0
40 to 60	255mm	0.2	10/813/0
60 to 80	255mm	0.2	10/814/0
80 to 90	255mm	0.2	10/815/0

BS 718 : 1991 is generally aligned with ISO 387 and ISO 649. The specification includes five series and three sub-series of hydrometers, of which the most widely used are listed below. They are calibrated using the accepted units of grams per millilitre (g/ml) and are adjusted, except for the "SP" sub-series, at 20°C.

- Series S50** 190mm long, divided in 0.002g/ml, range spans of 0.050g/ml
Series M50 270mm long, divided in 0.001g/ml, range spans of 0.050g/ml
Series L50 330mm long, divided in 0.0005g/ml, range spans of 0.050g/ml



Range g/ml	To suit Surface Tension	Product Number		
		Series S50	Series M50	Series L50
0.60 to 0.65g/ml	Low	10/300/0	10/330/0	10/360/0
0.65 to 0.70g/ml		10/301/0	10/331/0	10/361/0
0.70 to 0.75g/ml		10/302/0	10/332/0	10/362/0
0.75 to 0.80g/ml		10/303/0	10/333/0	10/363/0
0.80 to 0.85g/ml		10/304/0	10/334/0	10/364/0
0.85 to 0.90g/ml		10/305/0	10/335/0	10/365/0
0.90 to 0.95g/ml		10/306/0	10/336/0	10/366/0
0.95 to 1.00g/ml		10/307/0	10/337/0	10/367/0
1.00 to 1.05g/ml	Medium	10/308/0	10/338/0	10/368/0
1.05 to 1.10g/ml		10/309/0	10/339/0	10/369/0
1.10 to 1.15g/ml		10/310/0	10/340/0	10/370/0
1.15 to 1.20g/ml		10/311/0	10/341/0	10/371/0
1.20 to 1.25g/ml		10/312/0	10/342/0	10/372/0
1.25 to 1.30g/ml		10/313/0	10/343/0	10/373/0
1.30 to 1.35g/ml		10/314/0	10/344/0	10/374/0
1.35 to 1.40g/ml		10/315/0	10/345/0	10/375/0
1.40 to 1.45g/ml		10/316/0	10/346/0	10/376/0
1.45 to 1.50g/ml		10/317/0	10/347/0	10/377/0
1.50 to 1.55g/ml		10/318/0	10/348/0	10/378/0
1.55 to 1.60g/ml		10/319/0	10/349/0	10/379/0
1.60 to 1.65g/ml		10/320/0	10/350/0	10/380/0
1.65 to 1.70g/ml		10/321/0	10/351/0	10/381/0
1.70 to 1.75g/ml		10/322/0	10/352/0	10/382/0
1.75 to 1.80g/ml		10/323/0	10/353/0	10/383/0
1.80 to 1.85g/ml		10/324/0	10/354/0	10/384/0
1.85 to 1.90g/ml		10/325/0	10/355/0	10/385/0
1.90 to 1.95g/ml		10/326/0	10/356/0	10/386/0
1.95 to 2.00g/ml		10/327/0	10/357/0	10/387/0



Series M100

Adjusted at 20°C, these hydrometers have a range span of 0.100g/ml with a length of 250mm and are divided every 0.002g/ml.

Range g/ml	To suit Surface Tension	Product Number
0.60 to 0.70g/ml	Low	10/400/0
0.70 to 0.80g/ml		10/401/0
0.80 to 0.90g/ml		10/402/0
0.90 to 1.00g/ml		10/403/0
1.00 to 1.10g/ml	Medium	10/404/0
1.10 to 1.20g/ml		10/405/0
1.20 to 1.30g/ml		10/406/0
1.30 to 1.40g/ml		10/407/0
1.40 to 1.50g/ml		10/408/0
1.50 to 1.60g/ml		10/409/0
1.60 to 1.70g/ml		10/410/0
1.70 to 1.80g/ml		10/411/0
1.80 to 1.90g/ml		10/412/0
1.90 to 2.00g/ml		10/413/0



BS 718 : 1960 Specific Gravity Hydrometers

Sub-series M50 SP

BS 718 : 1991 is generally aligned with ISO 387 and ISO 649.

This sub-series has a greater accuracy than the standard M50 Series and is only available over a limited range of density. The length is 270mm and the range span covers 0.050 g/ml with divisions 0.001g/ml. They are adjusted at 15°C and suitable for low surface tension.

This sub-series is commonly used in the Petroleum industry and corresponds to IP160.

Range g/ml	To suit Surface Tension	Product Number
0.60 to 0.65	Low	10/450/0
0.65 to 0.70		10/451/0
0.70 to 0.75		10/452/0
0.75 to 0.80		10/453/0
0.80 to 0.85		10/454/0
0.85 to 0.90		10/455/0
0.90 to 0.95		10/456/0
0.95 to 1.00		10/457/0
1.00 to 1.05		10/458/0
1.05 to 1.10		10/459/0

Sub-series L50 SP

BS 718 : 1991 is generally aligned with ISO 649.

This sub-series has a greater accuracy than the standard L50 Series and is only available over a limited range of density. The length is 335mm and the range span covers 0.050 g/ml with divisions 0.0005g/ml. They are adjusted at 15°C and suitable for low surface tension.

This sub-series is commonly used in the Petroleum industry and corresponds to IP160.

Range g/ml	To suit Surface Tension	Product Number
0.60 to 0.65	Low	10/460/0
0.65 to 0.70		10/461/0
0.70 to 0.75		10/462/0
0.75 to 0.80		10/463/0
0.80 to 0.85		10/464/0
0.85 to 0.90		10/465/0
0.90 to 0.95		10/466/0
0.95 to 1.00		10/467/0
1.00 to 1.05		10/468/0
1.05 to 1.10		10/469/0

BS 718 : 1991 Density Hydrometers

Sub-series S60/60F M50 SP

BS 718 : 1991 is generally aligned with ISO 387 and ISO 650.

This sub-series has a greater accuracy than the standard M50 Series and is only available over a limited range of density. The length is 270mm and the range span covers 0.050 S60/60F with divisions 0.001 S60/60F. They are adjusted at 60/60°F and suitable for low surface tension.

This sub-series is commonly used in the Petroleum industry and corresponds to IP 160.

Range S60/60F	To suit Surface Tension	Product Number
0.60 to 0.65	Low	10/450/5
0.65 to 0.70		10/451/5
0.70 to 0.75		10/452/5
0.75 to 0.80		10/453/5
0.80 to 0.85		10/454/5
0.85 to 0.90		10/455/5
0.90 to 0.95		10/456/5
0.95 to 1.00		10/457/5
1.00 to 1.05		10/458/5
1.05 to 1.10		10/459/5

Sub-series S60/60F M50 SP

BS 718 : 1960 is generally aligned with ISO 650.

This sub-series has a greater accuracy than the standard M50 Series and is only available over a limited range of density. The length is 335mm and the range span covers 0.050 S60/60F with divisions 0.0005 S60/60F. They are adjusted at 60/60°F and suitable for low surface tension.

This sub-series is commonly used in the Petroleum industry and corresponds to IP160.

Range S60/60F	To suit Surface Tension	Product Number
0.60 to 0.65	Low	10/460/5
0.65 to 0.70		10/461/5
0.70 to 0.75		10/462/5
0.75 to 0.80		10/463/5
0.80 to 0.85		10/464/5
0.85 to 0.90		10/465/5
0.90 to 0.95		10/466/5
0.95 to 1.00		10/467/5
1.00 to 1.05		10/468/5
1.05 to 1.10		10/469/5



The American Society for Testing and Materials (ASTM) Specification E 100 describes hydrometers using the API (American Petroleum Institute) scale and others in degrees Specific Gravity.

Statement of Conformity upon request

UKAS Calibration Certificate upon request

Traceable Calibration Certificate upon request

330mm Long Plain Hydrometers

Adjusted at 60°F for petroleum products and other liquids of low surface tension.

ASTM Number	API Range	Division	Product Number
1H	-1 to 11	0.1	09/001/0
2H	9 to 21	0.1	09/002/0
3H	19 to 31	0.1	09/003/0
4H	29 to 41	0.1	09/004/0
5H	39 to 51	0.1	09/005/0
6H	49 to 61	0.1	09/006/0
7H	59 to 71	0.1	09/007/0
8H	69 to 81	0.1	09/008/0
9H	79 to 91	0.1	09/009/0
10H	89 to 101	0.1	09/010/0

ASTM Number	Range °SG	Division	Product Number
82H	0.650 to 0.700°SG	0.0005	09/082/0
83H	0.700 to 0.750°SG	0.0005	09/083/0
84H	0.750 to 0.800°SG	0.0005	09/084/0
85H	0.800 to 0.850°SG	0.0005	09/085/0
86H	0.850 to 0.900°SG	0.0005	09/086/0
87H	0.900 to 0.950°SG	0.0005	09/087/0
88H	0.950 to 1.000°SG	0.0005	09/088/0
89H	1.000 to 1.050°SG	0.0005	09/089/0
90H	1.050 to 1.100°SG	0.0005	09/090/0

330mm Long Hydrometers

Adjusted at 60°F for heavier liquids of medium surface tension.

ASTM Number	Range °SG	Division	Product Number
98H	0.950 to 1.000°SG	0.0005	09/098/0
111H	1.000 to 1.050°SG	0.0005	09/111/0
112H	1.050 to 1.100°SG	0.0005	09/112/0
113H	1.100 to 1.150°SG	0.0005	09/113/0
114H	1.150 to 1.200°SG	0.0005	09/114/0
115H	1.200 to 1.250°SG	0.0005	09/115/0
116H	1.250 to 1.300°SG	0.0005	09/116/0
117H	1.300 to 1.350°SG	0.0005	09/117/0
118H	1.350 to 1.400°SG	0.0005	09/118/0
119H	1.400 to 1.450°SG	0.0005	09/119/0
120H	1.450 to 1.500°SG	0.0005	09/120/0

Soil Hydrometers

ASTM Soil Hydrometers

ASTM Specification E 100 describes hydrometers using the API (American Petroleum Institute) scale and others in degrees Specific Gravity. 200mm long and adjusted at 68°F.

ASTM Number	Range °SG	Division	Product Number
151H	0.995 to 1.038°SG	0.001	09/151/0

ASTM Number	Range g/ml	Division	Product Number
152H	-5 to 60g/ml	1.0	09/152/0

BS 1377 Soil Hydrometers

This soil hydrometer is to BS 1377 for the determination of particle size distribution in soil. 345mm long, adjusted at 20°F.

BS Number	Range °SG	Division	Product Number
1377	0.995 to 1.030°SG	0.001	10/681/0



Hydrometer Cylinders



Internal Depth	Suitable for Hydrometer Series	Product Number
200mm	S50	10/000/0
300mm	M50 & M100	10/000/1
330mm	L50	10/000/2

Hydrometer Cylinders

These three cylinders are available with a standard internal diameter of 37mm.

Thermometers for use with Hydrometers

BS 718 : 1991 recommends these thermometers for precision work. They can be supplied with a UKAS Calibration Certificate which should be specified at time of ordering.

Designation	Range °C	Division	Product Number
A40C/Total	-0.5 to +40.5°C	0.1°C	51/061/0
B60C/Total	-21.0 to +61.0°C	0.2°C	51/066/0

