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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.



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

* UKAS Calibration carried out at external laboratory.

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General Purpose Specific Gravity Hydrometers

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 The instruments listed are similar to hydrometers included in ISO 650 and in the (now superseded) 1960 issue of British Standard 718.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.

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°.

| Pango | To suit | Product Number | | |
|-----------------|------------------|----------------|------------|------------|
| Range | Surface Tension | Series S50 | Series M50 | Series L50 |
| °SG | Juliace lelision | | | |
| 0.60 to 0.65°SG | | 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 | Low | 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 | | 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 | Medium | 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 | 1 | 10/992/0 | 10/976/0 | 10/893/0 |
| 1.80 to 1.85°SG | 1 | 10/993/0 | 10/977/0 | 10/894/0 |
| 1.85 to 1.90°SG | 1 | 10/994/0 | 10/978/0 | 10/895/0 |
| 1.90 to 1.95°SG | 1 | 10/995/0 | 10/979/0 | 10/896/0 |
| 1.95 to 2.00°SG | | 10/996/0 | 10/980/0 | 10/897/0 |





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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 | Range | Division | Product | Number |
|---------|------------|----------|-----------|-----------|
| Number | Kange | DIVISION | L = 160mm | L = 300mm |
| 1 | 0 to 24 | 1 | 10/101/0 | 10/151/0 |
| 2 | 24 to 48 | 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 |



UKAS

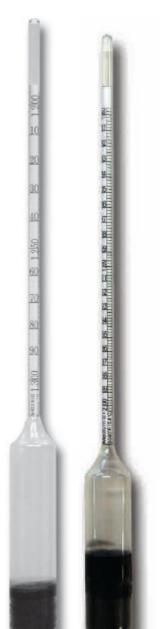
Traceable

Hydrometers

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.

Brannan General Purpose Specific Gravity Hydrometers





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 | | 10/940/0 |
| 0.70 to 0.80°SG | Law | 10/941/0 |
| 0.80 to 0.90°SG | Low | 10/942/0 |
| 0.90 to 1.00°SG | | 10/943/0 |
| 1.00 to 1.10°SG | | 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 | Medium | 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°

| 200mm long, cover | ing a spair of 0.200 ; | divided iii 0.00 |
|-------------------|----------------------------|-------------------|
| Range °SG | To suit Surface Tension | Product Number |
| 0.60 to 0.80°SG | 1. | 10/500/0 |
| 0.80 to 1.00°SG | Low | 10/501/0 |
| 1.00 to 1.20°SG | | 10/502/0 |
| 1.20 to 1.40°SG |] | 10/503/0 |
| 1.40 to 1.60°SG | Medium | 10/504/0 |
| 1.60 to 1.80°SG |] | 10/505/0 |
| 1.80 to 2.00°SG | 1 | 10/506/0 |



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:

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



| | 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 |
| Г | 40 to 50 | 0.1 | 10/207/0 |
| Г | 50 to 60 | 0.1 | 10/208/0 |
| | 60 to 70 | 0.1 | 10/209/0 |



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

| Rang °SG | | To suit Surface Tension | Length mm | Division | Product Number |
|--------------|------|----------------------------|--------------|----------|-------------------|
| 0.70 to 1.0 | 0°SG | Low | 250mm | 0.005 | 10/530/0 |
| 1.00 to 1.50 |)°SG | Medium | 250mm | 0.005 | 10/531/0 |
| 1.50 to 2.0 | 0°SG | Medium | 250mm | 0.005 | 10/532/0 |
| 0.70 to 2.0 | 0°SG | Medium | 320mm | 0.010 | 10/550/0 |
| 0.70 to 2.0 | 0°SG | Medium | 250mm | 0.010 | 10/551/0 |

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Brannan Special Purpose Hydrometers

Special Purpose Hydrometers

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Hydrometers

Milk Hydrometers



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 1.300°SG | 0.005 | 10/722/0 |
| Glass | 1.080 to 1.300°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 |

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/I | 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 | Length | Division | Product |
|----------|--------|----------|----------|
| % Brine | mm | | Number |
| 0 to 100 | 230mm | 1.0 | 10/621/0 |

.atexometer

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 |

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





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BS 718: 1991 Density Hydrometers

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.



| 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 | Length | Division | Product |
|-----------|--------|----------|----------|
| % Alcohol | mm | | Number |
| 0 to 100 | 250mm | 1.0 | 10/670/0 |

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

Alcohol Hydrometer

Alcohol Sikes Hydrometer These Alcohol Sikes Hydrometers, for measuring ethanol/water mixtures using an arbitary 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 |

| 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 |

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 270mm long, divided in 0.001g/ml, range spans of 0.050g/ml Series M50 330mm long, divided in 0.0005g/ml, range spans of 0.050g/ml Series L50

| Range | To suit Surface | Product Number | | |
|------------------|--------------------|----------------|------------|------------|
| g/ml | Tension | Series S50 | Series M50 | Series L50 |
| 0.60 to 0.65g/ml | | 10/300/0 | 10/330/0 | 10/360/0 |
| 0.65 to 0.70g/ml | 1 | 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 | Low | 10/304/0 | 10/334/0 | 10/364/0 |
| 0.85 to 0.90g/ml | 1 | 10/305/0 | 10/335/0 | 10/365/0 |
| 0.90 to 0.95g/ml | 1 | 10/306/0 | 10/336/0 | 10/366/0 |
| 0.95 to 1.00g/ml | 1 | 10/307/0 | 10/337/0 | 10/367/0 |
| 1.00 to 1.05g/ml | | 10/308/0 | 10/338/0 | 10/368/0 |
| 1.05 to 1.10g/ml | 1 | 10/309/0 | 10/339/0 | 10/369/0 |
| 1.10 to 1.15g/ml | 1 | 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 | Medium | 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 | 1 | 10/321/0 | 10/351/0 | 10/381/0 |
| 1.70 to 1.75g/ml | 1 | 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 | | 10/400/0 |
| 0.70 to 0.80g/ml | i . i | 10/401/0 |
| 0.80 to 0.90g/ml | Low | 10/402/0 |
| 0.90 to 1.00g/ml | | 10/403/0 |
| 1.00 to 1.10g/ml | | 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 | Medium | 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 |

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Traceable

BS 718: 1991 Density Hydrometers

BS 718 Hydrometers for Petroleum

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.

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

| Range g/ml | To suit Surface Tension | Product Number |
|---------------|----------------------------|-------------------|
| 0.60 to 0.65 | | 10/450/0 |
| 0.65 to 0.70 | | 10/451/0 |
| 0.70 to 0.75 | | 10/452/0 |
| 0.75 to 0.80 | Low | 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 |

| Range g/ml | To suit Surface Tension | Product Number |
|---------------|----------------------------|-------------------|
| 0.60 to 0.65 | | 10/460/0 |
| 0.65 to 0.70 | | 10/461/0 |
| 0.70 to 0.75 | | 10/462/0 |
| 0.75 to 0.80 | Low | 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: 1960 Specif c Gravity Hydrometers

Sub-series S60/60F M50 SP

BS 718: 1960 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.

Sub-series S60/60F L50 SP

BS 718: 1960 is generally aligned with

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 | | 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 | Low | 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 |

| Range S60/60F | To suit Surface Tension | Product Number |
|------------------|-------------------------|-------------------|
| 0.60 to 0.65 | | 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 | Low | 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.

330mm Long Plain Hydrometers

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

| ASTM | API | Division | Product |
|--------|-----------|----------|----------|
| Number | Range | | 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 |

UKAS

330mm Long Hydrometers

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

| ASTM | Range | Division | Product |
|--------|-------------------|----------|----------|
| Number | °SG | Division | 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 |

ASTM

Soil Hydrometers

ASTM Soil Hydrometers

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

| Number | °SG | | 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 |

Range

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 |



Product

Brannan Hydrometers Cylinders





Hydrometer CylindersThese three hydrometer jars are available with a standard internal diameter of 37mm.

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

Notes