

# Specifications D1298



- ⊕ Small footprint
- ⊕ Detachable leakage tray
- ⊕ Easy to drain and clean
- ⊕ Stainless steel
- ⊕ Leveling feet
- ⊕ Complete sight over full tube length

## General

This specific method covers following laboratory determinations by hydrometer method:

- Density,
- Relative density(Specific gravity),
- American Petroleum Institute Gravity of:
  - Crude petroleum,
  - Liquid Petroleum products,

Products must have a Reid vapor pressure of 26 lb or less.

## Construction

A Tamson TLC15-5 refrigerator circulates a (cold) flow through the double walls of the cylinders. The TLC15-5 maintains the bath temperature within 0.25°C of the test temperature required by the method.

The PTFE valves ensure fast drainage and cleaning of the tube. The easy detachable leakage tray prevents that portions of the sample are spilled on the workbench.

The tripod offers full view on the hydrometer. Our special ASTM D1298 support eliminates the problem of mounting brackets or portions of a thermostatic bath blocking the view.

Item	Unit			
<b>Ordering</b>		230V	230V	115V
		50Hz	60Hz	60Hz
		00T2000	00T2001	00T2002
Reading	°C or °F	menu selectable		
Interface		RS232		
Setting ±	[°C/F]	0.1		
Stability	[°K]	Better than 0.1		
<b>Circulator TLC15</b>				
Bath volume	[L]	5		
Opening bath	[mm]	85 x 150 (Effective use)		
Depth bath	[mm]	150		
Length	[mm]	420 (460 incl drain)		
Width	[mm]	265		
Height	[mm]	565		
Weight	[kg]	30		
Power	[Watt]	1100 (1 heater)		
<b>Tripod</b>				
Length tripod	[mm]	360 (front to back)		
Width tripod	[mm]	320 (left to right)		
Height tripod	[mm]	800		
Weight tripod	[kg]	9 (glass parts included)		
Ambient* temperature	[°C]	18 .. 23		
CE		Products conform to CE regulation		

The Tamson D1298 solution is a complete setup existing of three glass cylinders, support and circulator. Our system offers an interesting price advantage compared to other solutions based on a combination of a thermostatic bath with an external chiller.

The new ASTM D1298 setup can also be used for ASTM D287, standard test method for API gravity of crude petroleum and petroleum products having a Reid vapour pressure of 26 psi (180 kPa) or less. For this method the gravities are determined at 60°F.

## Accuracy

The system keeps the glass tube within 0.25°C of the test temperature.

## Fine adjustment and offset

After the bath has stabilized the set point may be more accurately adjusted in the range of -5.00° to + 5.00°, if necessary.

## Ambient condition

For proper cooling performance within the specifications it is preferred that the ambient temperature is within the range indicated above\*.

## Hydrometers


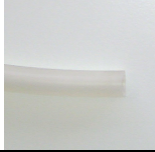





The precision hydrometers are manufactured and certified to BS 718 or DIN12791. As an option a UKAS accredited to ISO 17025 calibration certificate can be orderd with each individual hydrometer using ordering code 25T2400

## Liquid density standards

Manufactured in accordance to ISO Guide 34.  
Certified to ISO 17025 under UKAS.  
Densities quoted at 15°C or 20°C.

## Spareparts

Delivery include a full operational system. Listed below are spare parts to be used for maintenance or repair.

25T0911	ASTM thermometer (12C), range from -20 to +102°C with certificate of conformity.	
25T0911W	ASTM thermometer (12C), range from -20 to +102°C with works certificate.	
09T0000	Glass tube, fluid jacketed hydrometer cylinder with stopper valve. In total 3 per D1298 apparatus	
08T0100	Tubing 8 x 12mm per 1 mtr -60.. +180, siliconen Approx 3 mtr per set	
08T0120	Plastic screw cap red with opening GL 14 In total 6 per D1298 apparatus	
08T0122	Plastic hose connection angle GL14 In total 3 per D1298 apparatus	
08T0121	Plastic hose connection straight GL14 In total 3 per D1298 apparatus	
08T0125	Y split Polypro Pylene In total 2 per D1298 apparatus	
08T0126	T Split Polypro Pylene In total 2 per D1298 apparatus	

## Reference densities

To verify the performance of your instrument Tamson also supplies liquid density standards. These are manufactured in accordance with ISO Guide 34 and certified to ISO 17025 under UKAS with densities quoted at 15°C or 20°C. They are supplied in 2 x 500 mL bottles with tamper proof caps to prevent contamination. Density standards are available at various densities from 0.7136 to 0.8788 g/m<sup>3</sup> at 15 °C or 0.6732 to 0.8706 g/m<sup>3</sup> at 20 °C

Part	Value	Description
25T2200	0,7136 g/ml	Double Pack, 2 x 0.5ltr, Density Standard @15°C value
25T2201	0,8056 g/ml	
25T2202	0,8435 g/ml	
25T2203	0,8788 g/ml	
Part	Value	Description
25T2210	0.6732g/mL	Double Pack, 2 x 0.5ltr, Density Standard @20°C value
25T2211	0.7096g/mL	
25T2212	0.7716g/mL	
25T2213	0.8021g/mL	
25T2214	0.8112g/mL	
25T2215	0.8148g/mL	
25T2216	0.8225g/mL	
25T2217	0.8333g/mL	
25T2218	0.8403g/mL	
25T2219	0.8480g/mL	
25T2220	0.8546g/mL	
25T2221	0.8610g/mL	
25T2222	0.8668g/mL	
25T2223	0.8670g/mL	
25T2224	0.8706g/mL	



**Hydrometer calibrated at 15°C, length 335mm**

25T2401	Hydrometer L50 cal @15°C 0.600-0.650
25T2402	Hydrometer L50 cal @15°C 0.650-0.700
25T2403	Hydrometer L50 cal @15°C 0.700-0.750
25T2404	Hydrometer L50 cal @15°C 0.750-0.800
25T2405	Hydrometer L50 cal @15°C 0.800-0.850
25T2406	Hydrometer L50 cal @15°C 0.850-0.900
25T2407	Hydrometer L50 cal @15°C 0.900-0.950
25T2408	Hydrometer L50 cal @15°C 0.950-1.000
25T2409	Hydrometer L50 cal @15°C 1.000-1.050
25T2410	Hydrometer L50 cal @15°C 1.050-1.100
25T2411	Hydrometer L50 cal @15°C 1.100-1.150
25T2412	Hydrometer L50 cal @15°C 1.150-1.200
25T2413	Hydrometer L50 cal @15°C 1.200-1.250
25T2414	Hydrometer L50 cal @15°C 1.250-1.300
25T2415	Hydrometer L50 cal @15°C 1.300-1.350
25T2416	Hydrometer L50 cal @15°C 1.350-1.400
25T2417	Hydrometer L50 cal @15°C 1.400-1.450
25T2418	Hydrometer L50 cal @15°C 1.450-1.500
25T2419	Hydrometer L50 cal @15°C 1.500-1.550
25T2420	Hydrometer L50 cal @15°C 1.550-1.600
25T2421	Hydrometer L50 cal @15°C 1.600-1.650
25T2422	Hydrometer L50 cal @15°C 1.650-1.700
25T2423	Hydrometer L50 cal @15°C 1.700-1.750
25T2424	Hydrometer L50 cal @15°C 1.750-1.800
25T2425	Hydrometer L50 cal @15°C 1.800-1.850
25T2426	Hydrometer L50 cal @15°C 1.850-1.900
25T2427	Hydrometer L50 cal @15°C 1.900-1.950
25T2428	Hydrometer L50 cal @15°C 1.950-2.000

L 50 series acc. to BS 718  
 Ref. temperature (Tp.): 15 °C  
 Measuring span: 0.050 g/cm<sup>3</sup>  
 Scale units: 0.0005 g/cm<sup>3</sup>  
 Total length (L): 335 mm  
**Hydrometer is supplied without certificate.  
 For each hydrometer an individual ISO  
 17025 / UKAS calibration certificate can be  
 ordered. When ordering specify code  
 25T2400 in combination with the specific  
 hydrometer ordering code.**



**Hydrometer calibrated at 15°C, length 270mm**

25T2450	Hydrometer M50 cal @15°C 0.600-0.650
25T2451	Hydrometer M50 cal @15°C 0.650-0.700
25T2452	Hydrometer M50 cal @15°C 0.700-0.750
25T2453	Hydrometer M50 cal @15°C 0.750-0.800
25T2454	Hydrometer M50 cal @15°C 0.800-0.850
25T2455	Hydrometer M50 cal @15°C 0.850-0.900
25T2456	Hydrometer M50 cal @15°C 0.900-0.950
25T2457	Hydrometer M50 cal @15°C 0.950-1.000
25T2458	Hydrometer M50 cal @15°C 1.000-1.050
25T2459	Hydrometer M50 cal @15°C 1.050-1.100
25T2460	Hydrometer M50 cal @15°C 1.100-1.150
25T2461	Hydrometer M50 cal @15°C 1.150-1.200
25T2462	Hydrometer M50 cal @15°C 1.200-1.250
25T2463	Hydrometer M50 cal @15°C 1.250-1.300
25T2464	Hydrometer M50 cal @15°C 1.300-1.350

M 50 series acc. to BS 718  
 Ref. temperature (Tp.): 15 °C  
 Measuring span: 0.050 g/cm<sup>3</sup>  
 Scale units: 0.001 g/cm<sup>3</sup>  
 Total length (L): 270 mm  
**Hydrometer is supplied without certificate.  
 For each hydrometer an individual ISO  
 17025 / UKAS calibration certificate can be  
 ordered. When ordering specify code  
 25T2400 in combination with the specific  
 hydrometer ordering code.**

### Hydrometer calibrated at 20°C, length 335mm

25T2500	Hydrometer L50 cal @20°C 0.600-0.650
25T2501	Hydrometer L50 cal @20°C 0.650-0.700
25T2502	Hydrometer L50 cal @20°C 0.700-0.750
25T2503	Hydrometer L50 cal @20°C 0.750-0.800
25T2504	Hydrometer L50 cal @20°C 0.800-0.850
25T2505	Hydrometer L50 cal @20°C 0.850-0.900
25T2506	Hydrometer L50 cal @20°C 0.900-0.950
25T2507	Hydrometer L50 cal @20°C 0.950-1.000
25T2508	Hydrometer L50 cal @20°C 1.000-1.050
25T2509	Hydrometer L50 cal @20°C 1.050-1.100
25T2510	Hydrometer L50 cal @20°C 1.100-1.150
25T2511	Hydrometer L50 cal @20°C 1.150-1.200
25T2512	Hydrometer L50 cal @20°C 1.200-1.250
25T2513	Hydrometer L50 cal @20°C 1.250-1.300
25T2514	Hydrometer L50 cal @20°C 1.300-1.350
25T2515	Hydrometer L50 cal @20°C 1.350-1.400
25T2516	Hydrometer L50 cal @20°C 1.400-1.450
25T2517	Hydrometer L50 cal @20°C 1.450-1.500
25T2518	Hydrometer L50 cal @20°C 1.500-1.550
25T2519	Hydrometer L50 cal @20°C 1.550-1.600
25T2520	Hydrometer L50 cal @20°C 1.600-1.650
25T2521	Hydrometer L50 cal @20°C 1.650-1.700
25T2522	Hydrometer L50 cal @20°C 1.700-1.750
25T2523	Hydrometer L50 cal @20°C 1.750-1.800
25T2524	Hydrometer L50 cal @20°C 1.800-1.850
25T2525	Hydrometer L50 cal @20°C 1.850-1.900
25T2526	Hydrometer L50 cal @20°C 1.900-1.950
25T2527	Hydrometer L50 cal @20°C 1.950-2.000

L 50 series acc. to DIN 12791  
Ref. temperature (Tp.): 20 °C  
Measuring span: 0.050 g/cm<sup>3</sup>  
Scale units: 0.0005 g/cm<sup>3</sup>  
Total length (L): 335 mm  
**Hydrometer is supplied without certificate.  
For each hydrometer an individual ISO  
17025 / UKAS calibration certificate can be  
ordered. When ordering specify code  
25T2400 in combination with the specific  
hydrometer ordering code.**



### Hydrometer calibrated at 20°C, length 270mm

25T2550	Hydrometer M50 cal @20°C 0.600-0.650
25T2551	Hydrometer M50 cal @20°C 0.650-0.700
25T2552	Hydrometer M50 cal @20°C 0.700-0.750
25T2553	Hydrometer M50 cal @20°C 0.750-0.800
25T2554	Hydrometer M50 cal @20°C 0.800-0.850
25T2555	Hydrometer M50 cal @20°C 0.850-0.900
25T2556	Hydrometer M50 cal @20°C 0.900-0.950
25T2557	Hydrometer M50 cal @20°C 0.950-1.000
25T2558	Hydrometer M50 cal @20°C 1.000-1.050
25T2559	Hydrometer M50 cal @20°C 1.050-1.100
25T2560	Hydrometer M50 cal @20°C 1.100-1.150
25T2561	Hydrometer M50 cal @20°C 1.150-1.200
25T2562	Hydrometer M50 cal @20°C 1.200-1.250
25T2563	Hydrometer M50 cal @20°C 1.250-1.300
25T2564	Hydrometer M50 cal @20°C 1.300-1.350
25T2565	Hydrometer M50 cal @20°C 1.350-1.400
25T2566	Hydrometer M50 cal @20°C 1.400-1.450
25T2567	Hydrometer M50 cal @20°C 1.450-1.500
25T2568	Hydrometer M50 cal @20°C 1.500-1.550
25T2569	Hydrometer M50 cal @20°C 1.550-1.600
25T2570	Hydrometer M50 cal @20°C 1.600-1.650
25T2571	Hydrometer M50 cal @20°C 1.650-1.700
25T2572	Hydrometer M50 cal @20°C 1.700-1.750
25T2573	Hydrometer M50 cal @20°C 1.750-1.800
25T2574	Hydrometer M50 cal @20°C 1.800-1.850
25T2575	Hydrometer M50 cal @20°C 1.850-1.900
25T2576	Hydrometer M50 cal @20°C 1.900-1.950
25T2577	Hydrometer M50 cal @20°C 1.950-2.000

M 50 series acc. to DIN 12791  
Ref. temperature (Tp.): 20 °C  
Measuring span: 0.050 g/cm<sup>3</sup>  
Scale units: 0.001 g/cm<sup>3</sup>  
Total length (L): 270 mm  
**Hydrometer is supplied without certificate.  
For each hydrometer an individual ISO  
17025 / UKAS calibration certificate can be  
ordered. When ordering specify code  
25T2400 in combination with the specific  
hydrometer ordering code.**

