Tamson Instruments

Specification sheet

Corrosiveness to Copper of Liquefied Petroleum Gases

ASTM D1838 - EN/ISO 6251 - IP411 - BS6924 - NF M41 007

Item	Unit	Description
P/N TB30 230V/50-60Hz		00T0065
P/N TB30 115V/60Hz		00T0066
Power	[kW]	2.9
Range	°C °F	Ambient..80 Ambient..176
Reading		°C or °F
Setting	[°]	0.01
Stability ±	[°C]	0.02
Heating	[kW]	2 x 1.4
Bath volume	[L]	30
Bath opening	[mm]	163 x 192
Bath depth	[mm]	460
Length	[mm]	285
Width	[mm]	450 (490 incl. drain)
Height	[mm]	680
Materials	Used inside bath: stainless steel 304, brass bearings	
CE	Conforms to CE regulations	

- **Stainless steel bath**
- **Overflow outlet & bath drain**
- **Cooling fan to use at 37.8°C**
- **Cooling coil for sub-ambient**
- **Easy to operate**
- **Position for four LPG test cylinders**

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General

The TB30 bath is designed to cover the detection of the corrosiveness to copper of liquefied petroleum gases conform to ASTM D1838, IP 411, and ISO 6251.

A test involves the immersion of a polished copper strip in approximately 100 mL of sample. The sample is exposed at a temperature of 37.8°C (100°F) for one hour in a cylinder of suitable working pressure. At the end of this period, the copper strip is removed and rated as one of the four classifications of the ASTM copper corrosion standard.

The TB30 is specifically designed to hold a temperature stable at 37.8°C without the use of an external cooling circulator. At exceptional high ambient temperatures the built-in cooling coil can be used. The bath is deep enough to accommodate four corrosion test cylinders in an upright position.

The corrosion test cylinder is also manufactured by Tamson. It is supplied with a works certificate that the cylinder is pressure tested to withstand a minimum pressure of 6900 kPa (1000 psig) and leak free when tested at 3450 kPa.

Accuracy

The insulation of the bath and electronic design result in a stable working temperature of ± 0.02°C. The set point can be set in steps of 0.01° in the range of 0°C up to 80°C (33.8 to 176°F). The display readout is in two decimals (0.00°C). Temperature range of the TB30 is from ambient up to +80°C (176°F).

Temperature readout

Standard available in °C, on request in °F.

Safety

The bath conforms to CE regulation. It is further equipped with a mechanical and resettable safety thermostat.

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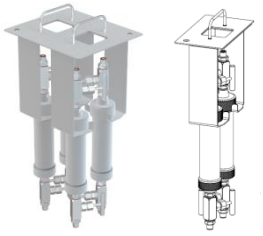
Table 1: TB30		
P/N	**Picture**	**Description**
00T0065		TB30 bath (230V/50-60Hz) (without lids).
00T0066		TB30 bath (115V/60Hz) (without lids).

Table 2: Necessary accessories for ASTM D1838 tests			
P/N	**Picture**	**Quantity**	**Description**
03T2322		2	Half lid and immersion holder. Contains opening in lid to view test cylinder when submerged. Two pieces of P/N 03T2322 needed per bath or a combination of: 1 x P/N 03T2322 + 1 x P/N 03T2320 (see table 5)

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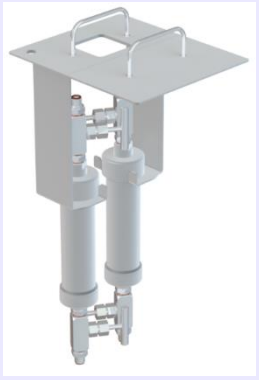

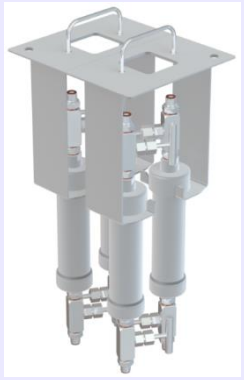

Combination of lids offers several possibilities for this D1838 setup. For example the combination enabling two or four positions for LPG test cylinders.

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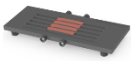
Table 3: ASTM D1838 accessories			
P/N	**Picture**	**Suggested quantity**	**Description**
14T0115		4	Corrosion test cylinder including a works certificate: - withstand a hydrostatic test pressure of 6900 kPa - leakfree when tested at 3450 kPa with nitrogen (N2). Delivered complete with two needle valves, 1/4" BSP cylindrical inner thread. **Do not use tapered thread**, or other (low pressure) adapters, hoses or accessories which are not tested for use above 6900 kPa (69 Bar)
31T0003		1	ASTM copper strip corrosion test standard.
31T0007		10	Copper strip with a 3.2 mm hole (one piece).
31T0001.100		1	Sanding paper silicon carbide P220 (box of 100 pieces).
12T1070		4	Flexible inert hose: - Stainless steel connectors, - 1/4" BSP cylindrical inner thread. - Length 60 cm, - For use with gas, - Tested up to 10000 kPa (100 Bar) **Do not use tapered thread**, or combine with (low pressure) adapters, hoses or accessories which are not tested for use above 6900 kPa (69 Bar).
31T0000		1	Multistrip vise, holds up to four strips while polishing.
31T0005		1	Silicon carbide powder 105 µm (1 kg).
09T0011		4	Flat viewing test tube.
25T0928BW		1	ASTM thermometer similar to 34C with blue filling (low-hazardous) to ship. Temperature range +23°C - 105°C:0.2°C. Supplied with works certificate.
25T2154		1	Thermometer holder 425 x 10 mm.

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Table 4: Spareparts for LPG cylinder			
P/N	**Picture**	**Suggested Quantity**	**Description**
23T0079		2	Stainless steel nipple 1/4" x 1/4" BSP **cylindrical** thread. **Do not use tapered thread**, or combine with adapters, hoses or accessories which are not tested for use above 6900 kPa (69 Bar).
23T0200		10	Washer cupper 13 x 17 x 1.5 mm.
23T0201		10	Washer cupper 8 x 12 x 1 mm.
24T0388		10	O-Ring NBR 37 x 43 x 3 mm.
23T0009		2	High pressure (400 Bar) needle valve, 2 x BSP 1/4" **cylindrical** thread. **Do not use tapered thread**, or combine with adapters, hoses or accessories which are not tested for use above 6900 kPa (69 Bar).

Table 5: Options for TB30 bath			
P/N	**Picture**	**Suggested Quantity**	**Description**
03T2320		2	Half lid Can be combined with P/N 03T2322 1 x P/N 03T2320 + 1 x P/N 03T2322
03T2324		1	Adapter lid for P/N 14T0101 and P/N 14T0100 (ASTM D130, D7667 and D7671). Used in combination with other lid, like P/N 03T2322 or P/N 03T2320.
14T0101		3	Lid and mounting hook. Three pieces needed in combination with P/N 03T2324.

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