

### Corrosiveness to Copper of Liquefied Petroleum Gases

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



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

#### General

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

A test involves the immersion of a polished copper strip in approximately 100 mL of the 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.

| Item  | Unit     | Description  |
|---|----------|--|
| Ordering code<br>TB30 230V / 50<br>or 60Hz bath |          | 00T0065  |
| TB30 115V /<br>60Hz bath                        |          | 00T0066  |
| Power   | [kW]     | 2.9  |
| Range   | °C<br>°F | Ambient..80<br>Ambient..176                          |
| Reading   |          | °C or °F   |
| Setting ±                                       | [°]      | 0.01   |
| Stability ±                                     | [°K]     | 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 bearing |
| CE  |          | Conforms to CE regulations                           |

#### Accuracy

The insulation of the bath and electronic design result in a stable working temperature of  $\pm 0.02^\circ$ . The set point can be set in steps of  $0.01^\circ$  in the range of  $0^\circ\text{C}$  up to  $80^\circ\text{C}$  ( $33.8$  to  $176^\circ\text{F}$ ). The readout on the display is displayed in  $0.01^\circ\text{C}$ . Temperature range of the TB30 is from ambient up to  $+80^\circ\text{C}$  ( $176^\circ\text{F}$ ).

#### Temperature readout

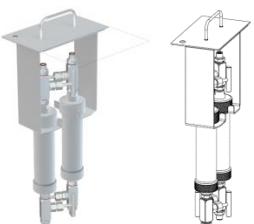
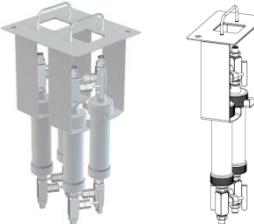
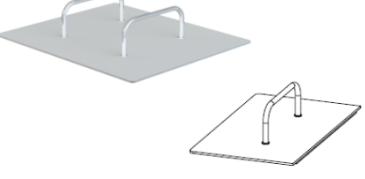
Standard available in  $^\circ\text{C}$ , on request in  $^\circ\text{F}$ .

#### Safety

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

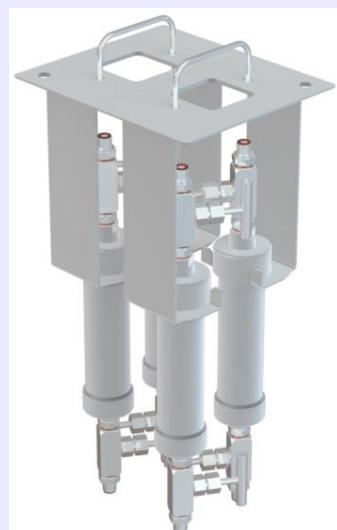
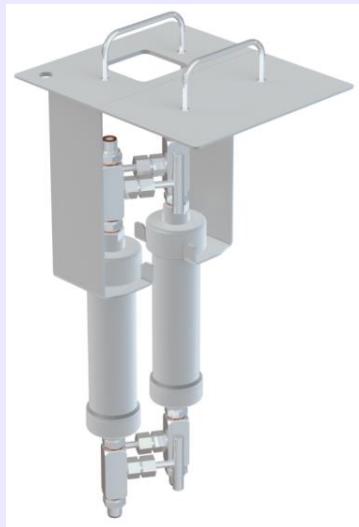
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## Accessories

| ASTM D1838 accessories |   |   |
|------------------------|---|---|
| P/N                    | Picture   | Description   |
| 14T0115                |    | Corrosion test cylinder including a works certificate:<br>- withstand a hydrostatic test pressure of 6900 kPa<br>- leakfree when tested at 3450 kPa with nitrogen (N2).<br>Delivered complete with two needle valves, 1/4" BSP cylindrical inner thread.<br><b>Do not use tapered thread, or other (low pressure) adapters, hoses or accessories which are not tested for use above 6900 kPa (69 Bar)</b> |
| 03T2321                |    | Half lid and immersion holder (support) for corrosion test cylinder.  |
| 03T2322                |   | 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:<br>1 x P/N 03T2322 + 1 x P/N 03T2321<br>1 x P/N 03T2322 + 1 x P/N 03T2320   |
| 03T2320                |  | Half lid<br>Can be combined with P/N 03T2322 or P/N 03T2321<br>1 x P/N 03T2320 + 1 x P/N 03T2321<br>1 x P/N 03T2320 + 1 x P/N 03T2322   |
|                        |  | Combine ASTM D1838 and ASTM D130.   |
| 03T2324                |  | Adapter lid for P/N 14T0101 and P/N 14T0100.<br>Used in combination with other lid like P/N 03T2320 or P/N 03T2321.   |
| 14T0101                |  | Lid and mounting hook. Three pieces needed in combination with P/N 03T2324.   |

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#### Accessories



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

| ASTM D1838 accessories |   |  |
|------------------------|---|--|
| P/N                    | Picture   | Description                                  |
| 31T0003                |  | ASTM copper strip corrosion test standard.   |
| 31T0007                |  | Copper strip with a 3.2 mm hole (one piece). |
| 31T0001                |  | Sanding paper silicon carbide P220.          |

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| ASTM D1838 accessories |   |  |
|------------------------|---|--|
| P/N                    | Picture   | Description  |
| 12T1070                |    | Flexible inert hose:<br><ul style="list-style-type: none"> <li>- Stainless steel connectors,</li> <li>- 1/4" BSP cylindrical inner thread.</li> <li>- Length 60 cm,</li> <li>- For use with gas,</li> <li>- Tested up to 10000 kPa (100 Bar)</li> </ul> <p><b>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).</b></p> |
| 31T0000                |    | Multistrip vise, holds up to four strips while polishing.  |
| 31T0005                |   | Silicon carbide powder 105 µm (1 kg).  |
| 09T0011                |  | Flat viewing test tube.  |
| 25T0911                |  | ASTM 12C thermometer.  |
| 25T2154                |  | Thermometer holder 425 x 10 mm.  |

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#### Spareparts

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

