

Pour Point of Crude oils - Procedure B

ASTM D5853 - IP 441



- ⊕ **Stainless steel bath**
- ⊕ **Cooling coil**
- ⊕ **Bath drain**
- ⊕ **Easy to operate**
- ⊕ **Position for 6 test cylinders (9 optional)**

| Item | Unit | TC16 |
|---------------------|--|---------------------------------|
| P/N 230V/50-60Hz | | 31T0671 |
| P/N 115V/60Hz | | 31T0861 |
| Power | [kW] | 1.5 |
| Range | °C °F | Ambient .. 250 Ambient ..482 |
| Reading | | °C or °F |
| Setting | [°] | 0.1 |
| Stability | [°C] | 0.02 |
| Heating | [kW] | 1.4 |
| Bath volume | [L] | 16 |
| Bath opening | [mm] | 6 x ø51 mm (9 x ø51 optional) |
| Bath depth | [mm] | 220 |
| Length | [mm] | 480 |
| Width | [mm] | 295 |
| Height | [mm] | 480 |
| Materials | Used inside bath: stainless steel 304, brass | |
| CE | Conforms to CE regulation | |

General

The test method covers the determination of the pour point temperatures of crude oil down to -36°C. This specification sheet covers the baths needed for this test method to preheat the sample. Tamson also supplies a single adjustable pour point bath. Please see the separate D97 and D2500 specification sheet.

The TC16 oil bath is used to preheat the sample in the pressure vessel at 105°C. The cover of the oil bath has six openings, each opening comes with a lid and hook for suspending a pressure vessel (P/N 14T0100). The temperature range is from ambient +5°C to 250°C. Please see table 1 for more information. Accessories for this test are also supplied by Tamson, please see table 2. Optional is a cover with nine openings to test up to nine samples (P/N 03T2311), please see table 3.

For procedure A and B, an additional TC16 water bath as in table 1 can be used to preheat the sample in a pour point jar at 48°C or at a temperature 12°C higher than the expected pour point, whichever is higher. Please see table 4 for the required accessories.

Accuracy

The insulation of the bath and electronic design result in a very stable working temperature of $\pm 0.02^\circ\text{C}$. The set point can be set in steps of 0.1°C in the range of 0°C up to 250°C ($-148..482^\circ\text{F}$). The accuracy on the display is displayed in 0.1°C . However the controller has an internal accuracy of 0.01°C .

Temperature readout

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

Pump

When not used for pour point determinations, the pump can be used to circulate the bath content to an external application.

Safety


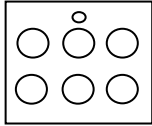

The bath conforms to CE regulation. It is further equipped with a mechanical resettable safety thermostat. Optional is a low liquid float (P/N 07T0080).






Alternative

We also offer a TC40 bath with a cover for 18 positions (P/N 03T2313). Please see table 5

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| Table 1: Apparatus P/N 31T0671 or P/N 31T0861 standard consists of: | | | |
|---|---|----------|--|
| P/N | Picture | Quantity | Description |
| 00T0671 |  | 1 | TC16 circulator bath, 230V/50-60Hz |
| 00T0861 | | | TC16 circulator bath, 115V/60Hz |
| 13T8000 |  | 1 | Top lid with six ø51 mm openings and a thermometer opening |
| 14T0101 |  | 6 | Lid and mounting hook |

| Table 2: Accessories for Pour Point of Crude Oil Procedure B | | | |
|--|---|--------------------|---|
| P/N | Picture | Suggested quantity | Description |
| 14T0100 |  | 6 | Pressure vessel (test cylinder with o-ring). Cylinder is supplied with works certificate. |
| 08T0001 |  | 1 | Bath fluid silicon oil 20..150°C 20ltr |
| 25T0908BW |  | 1 | ASTM thermometer similar to 9C with blue filling (low-hazardous to ship). Temp. range -5°C - +110°C:0.5°C. Supplied with works certificate. |
| 31T0423 |  | 1 | Cork for bath thermometer, pack of ten pieces |
| 24T0385 |  | 6 | O-ring for test cylinder (P/N 14T0100) |

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Table 3: Optional for ASTM D5853 Procedure B



| P/N | Picture | Suggested quantity | Description |
|---------|---|--------------------|--|
| 03T2311 |  | 1 | Top lid with nine ø51 mm openings. Please separately order 3 * P/N 14T0101 additionally. |
| 14T0101 |  | 3 | Lid and mounting hook for P/N 03T2311 |

Table 4: Required accessories for water bath for procedures A and B





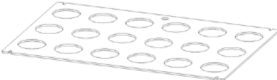

| P/N | Picture | Suggested quantity | Description |
|---------|---|--------------------|--|
| 14T0109 |  | 6 | Test tube holder test jar conform ASTM D5853 |
| 31T0012 |  | 6 | Test jar ASTM D5853 |
| 31T0013 |  | 1 | Vented cork for test jar (P/N 31T0012). 10 pieces. |

Table 5: Alternative apparatus for 18 positions

| P/N | Picture | Quantity | Description |
|---------|---|----------|---|
| 00T0681 |  | 1 | TC40 230V/50-60Hz |
| 00T0851 | | | TC40 115V/60Hz |
| 03T2313 |  | 1 | Cover with 18 * ø 51 mm openings |
| 14T0101 |  | 18 | Lid + mounting hook; number of pieces to be ordered separately, depending on number of test cylinder used |