TANAKA **Automatic Petroleum Tester**

MINI POUR/CLOUD POINT TESTER

-New Standard
ASTM D6749 (PP)
ASTM D7683 (CP)
-No Methanol

Model MPC-602

This model is Make To Order

(Model MPC-602)

Model **MPC-602** has been designed for automatic determination of **Pour Point (PP) and Cloud Point (CP)** with small specimen size and shorter test time while securing better test precision than the conventional manual method's. PP measurement is made by utilizing a new automatic method, namely Air Pressure method, which yields eventually no bias against the conventional test method's, repeatability of 1 °C, and reproducibility of 2 °C.(*) This epoch-making accuracy has made PP determination at 1 °C intervals make more sense. The CP/PP mode executes a CP determination and then a PP determination consecutively, which further improves the test throughput. MPC-602 is a 6 tests version of its original single test model (MPC-102L). ASTM has approved the PP test method: ASTM D6749 on "Standard Test Method for Pour Point of Petroleum Products (Automatic Air Pressure Method)".

*Accuracy information is for typical samples.

POUR POINT AT 1 °C INTERVALS FOR HIGHER YIELD IN PROCESS: The conventional PP test methods yield a rough PP numbers of multiple of 3 °C, and thus higher resolution in PP determination has been long awaited for more elaborate process control. With the patented Air Pressure method, PP can be now determined at 1 °C intervals with high accuracy, since the disturbance on the formation of wax crystal structure through the test process is at a minimal level. When PP is measured at 1 °C intervals, typical repeatability and reproducibility are 1 °C and 2 °C, respectively.

EASY SAMPLE HANDLING: Since the required specimen volume is a mere 4.5 ml and the specimen cup is a test-tube type removable jar, the sample handling is extremely easy.

EASY, QUICK, AND PRECISE PP/CP DETERMINATION: Just set up the specimen, set test parameters, and then press the START key to start a test. Specimen is cooled at the steepest possible rate without affecting the formation/growth of wax crystal, which has been known to be critical in PP/CP determination. For fuel oils, the specimen may be even pre-heated automatically and then cooled for CP/PP determination, which further improves test throughput.

TANAKA

Mini Pour/Cloud Point Tester, MPC-602

SPECIFICATIONS:

TYPE:
Mini Pour Point(**PP**) and Cloud Point(**CP**) tester with 6 test heads in Bench-top package.
With sequential CP and PP measurement capability.
Sample cooling and pre-heating by Peltier modules with external cooling liquid.

TEST STANDARDS:
ASTM D6749/D97, ISO 3016(PP) ,
ASTM D7683/D2500, ISO 3015 (CP)

SPECIMEN VOLUME: 4.5ml

MEASURING RANGE: (typical*)
+51 °C to -65 °C with cooling liquid of -35 °C
+51 °C to -60 °C with cooling liquid of -25 °C
+51 °C to -40 °C with tap water of 20 °C
*:Sample viscosity, etc. affects on lowest temperature of the measuring range.

MEASUREMENT MODES:
Selectable from various modes.
1.CP mode (0.1 or 1.0 °C, Selectable)
2.PP modes: Programmed by the user. Programmable parameters are:
*Amount of applied air pressure for PP detection, to accommodate different sample types: **L**(low) for diesel fuels, **H**(high) for lube oils, **VH**(very high) and **UH** (ultra high) for residual fuels and similar samples.
*Testing intervals: 1.0°C, 2.5°C, or 3.0°C
(In total, 4x3=12 modes for PP.)
3.CP/PP modes: CP is determined and then PP. PP detection is programmable by the user with the same parameters as PP modes'. (12 modes in total.)

SAMPLE AUTOMATIC PRE-HEATING:
Automatic preheating at either +45 °C or **EPP**+10 °C.
(EPP=**Expected Pour Point**)

DISPLAY:
Test parameters, EPP, bath temperature, sample temperature, PP, and CP displayed on VFD.
Temperatures displayed with 0.1 °C increments.

PRINTER: (built-in, thermal type)
PP, CP, mode, EPP, etc. printed by thermal printer.

EPP SETTING:
EPP(Expected Pour Point) needs to be set prior to test starts.

SPECIMEN CUP:
Cylindrical glass test jar with 4.5ml sample volume.

SENSORS:
Compound type sensor assembly for PP and CP.
PP detected by air pressure method (patented). CP detected photo-electrically. PT100 temp. sensors.

SAMPLE COOLING RATE:
As standard, 4 °C/min. till EPP+40 °C, and 1 °C/min. thereafter. Cooling process is programmable.

SAFETY SHUTDOWN:
As hot side of Peltier module reaches 60 °C while preheating, warning buzzer beeps and heating stops.

DATA OUTPUT: RS-232C 1 channel

POWER REQUIREMENTS:
100, 120, 220, or 240VAC 1.5kW

DIMENSIONS AND WEIGHT:
800Wx550Dx850H, 100kg

ORDERING INFORMATION:

STANDARD ACCESSORIES:

1.Specimen Cup with Reflex Seal	20 pcs
2.Spare Pressure Conducting Tube	6 pcs
3.AC power cord, 3.0m (<125V) or 2.5m (>200V)	1 pc
4.Hose and clamps for Chillers	1 set
5.Instruction manual	1 copy

OPTIONAL ACCESSORIES:
Water Regulator with Pressure Gauge
(for Connecting Tap Water, -40C measurement)
Chillers for -60 °C of Measurement:
TANAKA TCU-40B, or Julabo FP40-MA(*1)
or Thermo AC150 A40(*2)
Use above chiller x 3 sets
Chiller for -40 °C of Measurement (instead of tap water):
TANAKA TCU-40B, or Julabo FP40-MA(*1)
or Thermo AC150 A40(*2) x 1 set
*1: Made in Germany *2: Made in USA

SUGGESTED SPARES: **602**

1.Specimen Cup with Reflex Seal	100 pcs
2.Reflex Seal	120 pcs
3.Pressure Conducting Tube	30 pcs
4.O-Ring set (G-35 and P-8)	12 sets
5.Printing Roll Paper	40 pcs

Specifications subject to change without prior notice.

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