TANAKA Automatic Petroleum Tester

AUTOMATED ABEL CLOSED CUP FLASH POINT TESTER

abl-8a/abl-8l

All New

Model abl-8 series is the automated Abel Closed Cup flash point tester from Tanaka. Based on 45 years experience of manufacturing the automated flash point testers, innovative 8th generation series has been released. The theme of 8th generation is "Ergonomic, Versatile and Premium".

- **ERGONOMIC COLOR-COORDINATED DISPLAY FOR HIGH VISIBILITY FOR EVERYBODY (UNIVERSAL DESIGN) AND INTUITIVE SWITCH OPERATION.**
- **ENHANCED VERSATILITY INCLUDING USB PORT FOR OPTIONAL FLASH MEMORY OR KEYBOARD, PASSWORD PROTECTION AND DATA STRAGE.**
- **ALL-IN-ONE CHASSIS DESIGN: COMPACT, LIGHT-WEIGHT AND PREMIUM EXTERIOR DESIGN.**
- **CONFORMS TO STANDARD TEST METHOD (ISO 13736/IP170, ISO 1516, ISO 1523)**

SINGLE ACTION SETTING

The cup cover and the stirrer are permanently mounted on a swing-arm assembly, which allows an easy handling of the test cup cover. It makes free from handling the hot cup cover after completing a test.
The swing arm assembly can be lifted up to vertical position for easier test cup cleaning.

EASY OPERATION

Select a test mode and enter the expected flash point; while the instrument executes the test, you are free to do other lab work. The instrument follows the exact procedures prescribed in the test method, and the completion of the test cycle is signaled by beeps. The test result is brightly shown on the color LCD module.

INTERCHANGEABLE IGNITION SOURCE

abl-8a/l is equipped with both gas and electric igniter as the ignition source. It only takes a few minutes to switch from gas to electric or vice versa.

DRAFT PROTECTION SHIELD COVER

A FM4910 conforming cover insures the flame integrity. This material shall meet the numerical criterion of each index. (1)FPI(Fire Propagation Index)≤6　(2)SDI(Smoke Damage Index)≤0.4

DATA HANDLING

The unit is equipped to store up to 200 successive test results and export to an optional printer or to a LIMS through an RS-232 port or USB memory.

USB PORT

A USB port allows connecting USB keyboard for easy entering sample name and connecting USB flash memory for data copy to a PC or test conditions/parameters copy to the tester.

COMPACT DESIGN & ENERGY EFFICIENT

Use of Peltier Cells for sample cooling/heating made this tester not only compact in design but energy efficient. Depending on the temperature range, either air or small chiller with water suffices the cooling requirement. No methanol is required.
A control part and a test part are put into one body which culminated in achieved in the light weighting of the unit. An air-cooling model and a liquid-cooling model are available by different measurement temperature range.

SPECIFICATIONS

TYPE	All –in one, microprocessor controlled
TEST STANDARDS	ISO 13736/ IP170, ISO 1516, ISO 1523
MEASURING RANGE	abl-8a: +10°C to +110°C at room temperature of 10 to 30°C abl-8l: -30°C to +80°C at cooling medium of 10°C 0°C to +110°C at cooling medium of 40°C
MEASUREMENT MODES	ISO13736 Normal, ISO13736 SPE (search), ISO13736 Rapid, ISO1516, ISO1523, and User Custom
BATH	Metal Block
SAMPLE COOLING/HEATING	By Peltier Device
DISPLAY	5.7 inch (117 x 88mm) color LCD with LED back light
STIRRING	0, 30 rpm (selectable)
TEMPERATURE SENSOR	PT-100 in stainless steel sheath
FLASH DETECTOR	CRC Thermocouple
IGNITION SOURCE	Gas ignition with automatic lighting or electric ignition. Interchangeable
BAROMETRIC CORRECTION	Automatic correction by built-in barometric pressure sensor
I/O PORT	RS-232C = 1 channel (for PC or Optional Printer) USB=1 channel (for USB keyboard or USB Flash Memory)
SAFETY SHUTDOWN	Automatically shuts off and the problem is reported by buzzer and display, in case: (a) EFP+10 °C or 70 °C (ISO13736)110 °C(ISO1516,ISO1523) is reached, (b) temperature sensor is found defective, (c) flash detector is found defective, (d) thermofuse is blown, (e) electric Igniter is blown, (f) built-in battery is found drained out, (g) test cover is not set in place, (h)control computer runs away (no display)
GAS SUPPLY **(When Gas Ignition is used)**	LP gas or natural gas (Max. pressure:10kPa)
POWER SUPPLY	100/120VAC or 220/240 VAC, 50/60Hz
POWER CONSUMPTION	250VA MAX.
ELECTRICITY CONSUMPTION	30Wh for 1 test (about 30 min), 11.34gCO_2 (@ 0.378kgCO_2/1kWh)
AMBIENT TEMP. RANGE	10°C to 35°C
DIMENSIONS & WEIGHT	230mm (W) × 470mm (D) × 390mm (H) 16kg

CHILLER REQUIREMENTS for abl-8l

TYPE	Circulator with heating/cooling capacities. Open bath type.
TEMPERATURE RANGE	5°C to +40°C or wider
PUMP CAPACITY	Pressure:0.2bar minimum Flow rate:2L/min minimum
COOLING CAPACITY	250W@10°C minimum
HEATER CAPACITY	500W minimum
BATH VOLUME	3L minimum

APPARATUS

CODE	PART NAME	REMARKS
ABL-00-001	**abl-8a**	Abel Closed Cup Flash Point Tester, Air Cooling Model
ABL-00-002	**abl-8l**	Abel Closed Cup Flash Point Tester, Liquid Cooling Model, External Chiller excluded

STANDARD ACCESSORIES

CODE	PART NAME	Qty	REMARKS
ABL-01-411	**Test Cup**	1	
320-00-035	**Thermofuse**	1	Pack of 5, with Insulating Tube.
-----	**Gas Hose ϕ9 x ϕ16, 1.5m, with Hose Bands**	1	
ABL-01-401	**Windscreen for abl-8**	1	
210-02-191	**Insulated Tubing, 2m**	2	For abl-8l only
170-01-051	**Hose Band, SPN-8**	4	For abl-8l only
MPC-02-032	**AC Power Cord**	1	3.0m, For 100 to 120V
MPC-02-033			2.5m, For 220 to 240V
———	**abl-8a/l Manuals**	1	Manuals for abl-8a and abl-8l.

OPTIONAL ACCESSORIES

CODE	PART NAME	REMARKS
070-00-068	**Printer, BS2-80TS**	Prints out test data and instrument settings.
070-00-281	**Mini USB Keyboard**	Sample ID entering
	CHILLER	For abl-8l only, Temperature range +5 to 40°C

SUGGESTED SPARES for 2 YEARS

CODE	PART NAME	Qty	REMARKS
ABL-01-411	**Test Cup**	1	Refer to Standard Accessories.
320-00-035	**Thermofuse**	1	Pack of 5, with Insulating Tube.
ABL-01-003	**Electric Igniter, EI-8**	2	
ABL-01-011	**Temperature Sensor**	1	
ABL-01-012	**Flash Detector**	1	

Printed in Japan 1203(E)

DISTRIBUTED BY

TANAKA SCIENTIFIC LIMITED
7-10-3 Ayase, Adachi-ku, Tokyo 120-0005 JAPAN
TEL: +81-3-3620-1711 FAX: +81-3-3620-1713
URL: http://www.tanaka-sci.com
E-mail: overseas-group@tanaka-sci.com