

## APPARATUS

CODE	PART NAME	REMARKS
ABL-00-001	<b>abl-8a</b>	Abel Closed Cup Flash Point Tester, Air Cooling Model
ABL-00-002	<b>abl-8l</b>	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 $\phi 9 \times \phi 16$ , 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	

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# 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 8<sup>th</sup> generation series has been released. The theme of 8<sup>th</sup> 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 STORAGE.
- 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) $\leq 6$  (2)SDI(Smoke Damage Index) $\leq 0.4$

### 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

<b>TYPE</b>	All –in one, microprocessor controlled
<b>TEST STANDARDS</b>	ISO 13736/ IP170, ISO 1516, ISO 1523
<b>MEASURING RANGE</b>	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
<b>MEASUREMENT MODES</b>	ISO13736 Normal, ISO13736 SPE (search), ISO13736 Rapid, ISO1516, ISO1523, and User Custom
<b>BATH</b>	Metal Block
<b>SAMPLE COOLING/HEATING</b>	By Peltier Device
<b>DISPLAY</b>	5.7 inch (117 x 88mm) color LCD with LED back light
<b>STIRRING</b>	0, 30 rpm (selectable)
<b>TEMPERATURE SENSOR</b>	PT-100 in stainless steel sheath
<b>FLASH DETECTOR</b>	CRC Thermocouple
<b>IGNITION SOURCE</b>	Gas ignition with automatic lighting or electric ignition. Interchangeable
<b>BAROMETRIC CORRECTION</b>	Automatic correction by built-in barometric pressure sensor
<b>I/O PORT</b>	RS-232C = 1 channel (for PC or Optional Printer) USB=1 channel (for USB keyboard or USB Flash Memory)
<b>SAFETY SHUTDOWN</b>	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)
<b>GAS SUPPLY (When Gas Ignition is used)</b>	LP gas or natural gas (Max. pressure:10kPa)
<b>POWER SUPPLY</b>	100/120VAC or 220/240 VAC, 50/60Hz
<b>POWER CONSUMPTION</b>	250VA MAX.
<b>ELECTRICITY CONSUMPTION</b>	30Wh for 1 test (about 30 min), 11.34gCO <sub>2</sub> (@ 0.378kgCO <sub>2</sub> /1kWh)
<b>AMBIENT TEMP. RANGE</b>	10°C to 35°C
<b>DIMENSIONS &amp; WEIGHT</b>	230mm (W) × 470mm (D) × 390mm (H) 16kg

### CHILLER REQUIREMENTS for abl-8l

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

Julabo F25-ED is suitable for this specification.