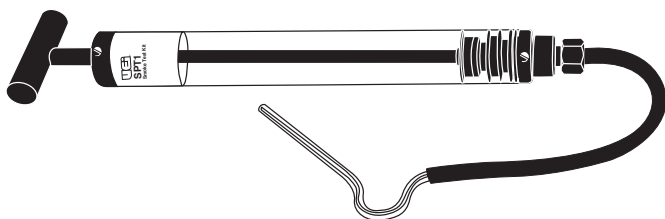


Smoke Pump Tester

INSTRUCTION MANUAL

ENGLISH



1-800-547-5740

www.ueitest.com • email: info@ueitest.com

SPT1 Includes: Smoke Tester , Filter paper , and Smoke Scale Chart

IMPORTANT SAFETY WARNINGS

WARNING ⚠

Read entire Safety Notes section regarding potential hazard and proper instructions before using this tester. In this manual the word “**WARNING**” is used to indicate conditions or actions that may pose physical hazards to the user. The word “**CAUTION**” is used to indicate conditions or actions that may damage this instrument.

WARNING ⚠

- This instrument is designed for trade professionals who are familiar with the hazards of their trade. Observe all recommended safety procedures that include use of personal protective equipment.
- Carbon monoxide is life threatening even at relatively low concentrations. Be sure you understand the risks before using this instrument.
- Do not use the tester if it appears damaged.
- Always adhere to national and local safety codes.
- Any changes or modifications not expressly approved by the manufacturer could void the user’s authority to operate the equipment.

WARRANTY

The SPT1 is warranted to be free from defects in materials and workmanship for a period of one year from the date of purchase. If within the warranty period your instrument should become inoperative from such defects, the unit will be repaired or replaced at UEi’s option. This warranty covers normal use and does not cover damage which occurs in shipment or failure which results from alteration, tampering, accident, misuse, abuse, neglect or improper maintenance. Batteries and consequential damage resulting from failed batteries are not covered by warranty.

Any implied warranties, including but not limited to implied warranties of merchantability and fitness for a particular purpose, are limited to the express warranty. UEi shall not be liable for loss of use of the instrument or other incidental or consequential damages, expenses, or economic loss, or for any claim or claims for such damage, expenses or economic loss.

Warranty only covers hardware and does not extend to software applications.

A purchase receipt or other proof of original purchase date will be required before warranty repairs will be rendered. Instruments out of warranty will be repaired (when repairable) for a service charge.

For more information on warranty and service, contact:

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1-800-547-5740

This warranty gives you specific legal rights. You may also have other rights, which vary from state to state.

GENERAL INFORMATION

The best indicator of incomplete combustion for oil burners is smoke, and heavy smoking will usually occur when high CO concentrations are present.

Apart from intensifying air pollution, smoke also causes soot deposition on heat exchange surfaces and thus results in considerable fuel waste due to decrease of combustion efficiency.

Soot is an excellent insulator and even a relatively thin layer can greatly reduce the thermal conductivity of the heat exchanger.

Smoke over No. 1 on smoke scale for light oils is an obvious sign of incomplete combustion. A variety of reasons, mostly a combination of factors, can be responsible for this: too little excess air, insufficient draught or overtiring, mismatched oil or spray patterns, poorly designed combustion equipment, dirty or fouled nozzle, improper or lopsided oil spray pattern, misadjusted oil pressure or combustion chamber problems.

A flue gas sample is pumped from the sampling point in a flue pipe by pulling and pushing the piston head ten times. Flue gas sample crosses the BRIGON Filterpaper leaving a spot, which must be compared with the BRIGON-Smoke-Scale to determine Smoke Number.

MEASUREMENT

BRIGON Smoke-ester should be at room temperature to ensure a high degree of accuracy. Insert BRIGON Filterpaper in the slot of BRIGON Smoke Tester and screw gently. Insert metal probe of BRIGON Smoke Tester into the sampling point of the flue pipe. Perform the smoke test by pulling and pushing the piston head steadily ten times.

A check valve fitted in the Smoke-Tester prevents the back flow of flue gas and so the loss of soot already accumulated on the filter paper. We recommend to use a cone for the smoke probe.

After the smoke test take out the filter paper and compare it with several spots of BRIGON Smoke Scale to find the exact shade of soot spot and thus determine the matching Smoke Number. The Smoke Number must not be higher than No. 1 for light oil according to the current regulations in Germany.

MAINTENANCE

The high degree of accuracy guaranteed for BRIGON Smoke Tester can only be achieved if all manufacturer's instructions are strictly followed and following maintenance is carried out regularly.

1. Clean cylinder, piston, piston rod and complete sampling probe after each 30 tests; if necessary lubricate piston slightly with BRIGONL lubricant oil.
2. Clean valve and valve seat with ethyl alcohol if leakage has been detected. Also clean nylon insert.
3. Check tightness by closing the sampling probe end with your finger and pulling piston rod back. Check valve must not let go more than 50 mm (2 inches).
4. Use only BRIGON filter paper and BRIGON smoke scale for tests

DISPOSAL



CAUTION: This symbol indicates that equipment and its accessories shall be subject to separate collection and correct disposal.