



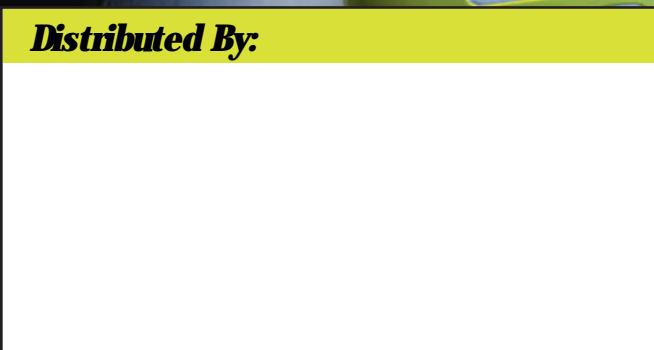
The Value Leader

HVAC/R

V102



Distributed By:



Test Products International, Inc.
Headquarters:
9615 SW Allen Blvd.
Beaverton, OR 97005 USA
503-520-9197 • Fax: 503-520-1225
e-mail: info@tspi-thevalueleader.com

**Test Products International, Ltd.
Canada**
905-693-8558 • Fax: 905-693-0888
e-mail: info@tpicanada.com

Test Products International Europe Ltd.
Tel: +44 (0)1293 561212
Fax: +44 (0)1293 813465
e-mail: info@tspi-uk.com

Combustion Flue Gas Analyzers

No furnace installation or service work should be performed without doing a gas leak and Carbon Monoxide (CO) Test.

- Check all pipes, fittings, and valves for combustible gas leaks.
- A Carbon Monoxide test should be performed in the plenum, to ensure proper operation of the furnace. An ambient CO test around the furnace and throughout the building should also be completed.

708



PRODUCT NO.	MEASUREMENTS	RANGES	FEATURES & BENEFITS	APPLICATIONS
708 Combustion Efficiency Analyzer	CO O2 CO2 Temp/Diff. Temp Efficiency Excess air CO/CO2 ratio CO Air Free	0 to 9,999ppm 0 to 25% 0 to 25% calculated -50°C to 1,000°C 0 to 100% calculated Calculated Calculated Calculated	<ul style="list-style-type: none"> • Quick and simple operation • Large, easy-to-read, 3-line display • Printing capabilities • 10 pre-programmed fuels • Flue probe for built in thermocouple • Real time/ Date display • 50 data store capabilities 	<ul style="list-style-type: none"> • Tuning of residential and furnaces and domestic boilers • Ambient and stack testing for CO • CO safety measurements in and around combustion sources • Temperature checking, including superheat and hydronic differential temperatures
709/709R Combustion Efficiency Analyzer w/ Differential Digital Manometer	CO O2 CO2 Temp/Diff. Temp Efficiency Excess air CO/CO2 ratio CO Air Free Pressure	0 to 9,999ppm 0 to 25% 0 to 25% calculated -50°C to 1,000°C 0 to 100% calculated Calculated Calculated Calculated -150 to 150mBar	<ul style="list-style-type: none"> • Quick and simple operation • Large, easy-to-read, 3-line display • Printing capabilities • 10 pre-programmed fuels • Flue probe for built in thermocouple • Real time/ Date display • 50 data store capabilities • Protective rubber boot 	<ul style="list-style-type: none"> • Tuning of residential and furnaces and domestic boilers • Ambient and stack testing for CO • CO safety measurements in and around combustion sources • Temperature checking, including superheat and hydronic differential temperatures • Dual input differential manometer
709R	Same features as the 709 with the addition of rechargeable battery and larger A795 water trap/filter assembly			
712 Flue Gas Analyzer	CO O2 CO2 Temp/Diff. Temp Efficiency Excess air CO/CO2 ratio CO Air Free Pressure Leak Detector	0 to 9,999ppm 0 to 25% 0 to 25% calculated -50°C to 1,000°C 0 to 100% calculated Calculated Calculated Calculated -150 to 150mBar 0 to 10,000ppm Methane	<ul style="list-style-type: none"> • Quick and simple operation • Large, easy-to-read, 3-line display • Printing capabilities • 10 pre-programmed fuels • Flue probe for built in thermocouple • Real time/ Date display • 50 data store capabilities • Protective rubber boot • Data logger (100 step, 4pages) • PC data analysis software available • Ni-MH or AC/DC adapter operation 	<ul style="list-style-type: none"> • Tuning of residential and furnaces and domestic boilers • Ambient and stack testing for CO • CO safety measurements in and around combustion sources • Temperature checking, including superheat and hydronic differential temperatures • Detecting gas leak in gas lines and around gas fueled appliances. Dual input differential manometer with 3 selectable units of measure: kPa, mBar, inH2O • Built in tightness pressure test • Built in CO room test
714 Flue Gas Analyzer	CO O2 CO2 NO NOX Temp/Diff. Temp Efficiency Excess air CO/CO2 ratio CO Air Free Pressure	0 to 9,999ppm 0 to 25% 0 to 25% calculated 0 to 5,000ppm Calculated -50°C to 1,000°C 0 to 100% calculated Calculated Calculated Calculated -150 to 150mBar	<ul style="list-style-type: none"> • Quick and simple operation • Large, easy-to-read, 3-line display • Printing capabilities • 10 pre-programmed fuels • Flue probe for built in thermocouple • Real time/ Date display • 50 data store capabilities • Protective rubber boot • Data logger (100 step, 4pages) • PC data analysis software available • Ni-MH or AC/DC adapter operation 	<ul style="list-style-type: none"> • Tuning of residential and furnaces and domestic boilers • Ambient and stack testing for CO • CO safety measurements in and around combustion sources • Temperature checking, including superheat and hydronic differential temperatures • Upgradeable to NOX • Dual input differential manometer with 3 selectable units of measure: kPa, mBar, inH2O

See pages 10 & 11 for a list of combustion and digital manometer accessories

CO Analyzers & Ambient CO & Combustible Gas

National Ambient Air Quality Primary Standards in the US call for less than 9ppm carbon monoxide for an 8 hour average during any 12 month period. Concentrations of 1 to 2 ppm may be found in homes with a normal operating gas furnace, to well over 1,000ppm in homes with a faulty furnace. Just 200ppm CO over 2 to 3 hours can cause slight headache, fatigue, dizziness, and nausea. Carbon Monoxide testing is crucial service provided by HVAC/R technicians.

PRODUCT No.	MEASUREMENTS	RANGES	FEATURES & BENEFITS	APPLICATIONS
706 Advanced High CO Meter	CO	0 to 9,999ppm 1.0 to 9.999%	<ul style="list-style-type: none"> • Quick and simple operation • Large, easy-to-read, 3-line display • Printing capabilities • Real time/ Date display • 50 data store capabilities • Auto range • Protective rubber boot 	<ul style="list-style-type: none"> • Check forklift exhaust gases for the presence and location of carbon monoxide leaks
707 Advanced CO Meter	CO	0 to 9,999ppm	<ul style="list-style-type: none"> • Quick and simple operation • Large, easy-to-read, 3-line display • Printing capabilities • Real time/ Date display • 50 data store capabilities • Protective rubber boot 	<ul style="list-style-type: none"> • Ambient CO safety checks • Checking flue gasses at home or office spaces for the presence and location of carbon monoxide leaks • Built-in CO room test



706



707



775



770

PRODUCT No.	MEASUREMENTS	RANGES	FEATURES & BENEFITS	APPLICATIONS
775 Ambient CO & Combustible Gas Leak Detector	CO Methane	0 to 2,000ppm > 50ppm	<ul style="list-style-type: none"> • Quick and simple operation • Large, easy-to-read LCD • Visual and audible tic rate • 16" gooseneck handle length • Optional earphone attachment • One hand operation • Visual and audible alarm 	<ul style="list-style-type: none"> • CO safety measurements in and around combustion sources • Ambient CO safety checks
770 Carbon Monoxide Monitor	CO	0 to 999ppm	<ul style="list-style-type: none"> • Quick and simple operation • Large, easy-to-read LCD • Visual and audible alarm • Optional earphone attachment • Built-in alarm 	<ul style="list-style-type: none"> • Ambient CO safety checks
A771 Carbon Monoxide Adapter	CO	0 to 2,000ppm	<ul style="list-style-type: none"> • Quick and simple operation • Visual and audible alarm • One-hand operation • Built-in alarm is preset to 30ppm 	<ul style="list-style-type: none"> • Ambient CO safety checks



A771



725

PRODUCT No.	MEASUREMENTS	SENSITIVITY	FEATURES & BENEFITS	APPLICATIONS
725 Pocket Combustible Gas Leak Detector	Combustible Gasses	>1,000ppm Methane	<ul style="list-style-type: none"> • Fits in shirt pocket • Fast and simple operation • Visual and audible leak detection • One-hand operation 	<ul style="list-style-type: none"> • Trace natural gas lines and fittings for leaks • Check gas generation for leaks
720b Combustible Gas Leak Detector	Combustible Gasses	>10ppm Methane	<ul style="list-style-type: none"> • Quick and simple operation • Visual and audible leak detection • Adjustable tic rate • Optional earphone attachment • One-hand operation • 16" gooseneck handle length 	<ul style="list-style-type: none"> • Detect combustible gasses including natural gas methane, propane (LPG), gasoline, diesel, and kerosene • Trace natural gas lines and fittings for leaks • Check gas generation for fuel leaks



720b

Digital Manometers



608



620



621



625

PRODUCT No.	MEASUREMENTS	SENSITIVITY	FEATURES & BENEFITS	APPLICATIONS
608 Single Input Manometer	inH2O mbar kPa psi	±60 ±150 ±15 ±2.175	<ul style="list-style-type: none"> • Four units of measure • Temperature compensated • Auto power off after 20 min. • Backlight display • Wall hook and magnets for no-hand use 	<ul style="list-style-type: none"> • Adjust appliance regulators • Setting delivery pressures • Leakage "shut-in" tests • Regulator adjustments for pressure and lock-up tests • Test pressure switch operation on a 2-stage gas furnace in both positive and negative pressures
620 Dual Input Differential Manometer	inH2O	±80.29	<ul style="list-style-type: none"> • Autoranging provides high resolution & accuracy at low pressure where it is needed • Auto power off • Record/ Min/Max • Zero function 	<ul style="list-style-type: none"> • Replace messy U-tube manometers • Test low pressure gas systems for leaks • Replace expensive pressure gauges
621 Dual Input Manometer (Three Decimal Place Resolution)	inH2O mbar kPa psi mmH2O mmHg inHg	±120 ±300 ±30 ±5 ±3,000 ±220 ±9	<ul style="list-style-type: none"> • 0.004 inH2O resolution less than 40 inches of water; 0.04 inH2O resolution over 40 inches • Dual input & differential • Autoranging • Seven units of pressure 	<ul style="list-style-type: none"> • Adjust appliance regulators • Setting delivery pressures • Leakage "shut-in" tests • Regulator adjustments for pressure and lock-up tests • Test pressure switch operation on a 2-stage gas furnace in both positive and negative pressures
625 Dual Input Differential Manometer	inH2O mbar kPa psi mmH2O mmHg inHg	±80.29 ±200 ±20 ±2.9 2,039 ±150 ±5.9	<ul style="list-style-type: none"> • Autoranging provides high resolution & accuracy at low pressure where it is needed • Auto power off • Record/Min/Max • Zero function 	<ul style="list-style-type: none"> • Replace messy U-tube manometers • Test low pressure gas systems for leaks • Replace expensive pressure gauges
665L	Same specifications as the 655 PLUS 655L can be used with non-corrosive water/liquid applications			

Pressure Kit 621C3



- Temperature compensated to improve accuracy
- Adjust appliance regulators
- Set delivery pressures
- Leakage "shut-in" tests
- Regulator adjustments for pressure and lock-up tests
- Test pressure switch operation on a 2-stage gas furnace in both positive and negative pressures
- Test air flow, static pressure drop, and draft pressure measurements
- When setting up a high efficiency gas hot water heater, you need to

check the static pressure in the exhaust stack. Do this by using the static tip and firing up the gas hot water heater, then capture the min and max readings. If not enough pressure out the exhaust, wind can blow down the exhaust and extinguish the pilot light.

621C3 Pressure Kit includes:

- 621 Dual Input Digital Manometer
- A774 6' silicone tubing
- A776 (2) static tip
- A605 (2) 1/4" tapered "T"
- A603 (2) brass fitting, 1/4" NPT to 1/4" barb
- A908 shoulder strap carrying case

665/
?655L?

4

See pages 10 & 11 for a list of digital manometer and combustion and accessories.

Indoor Air Quality: Air Flow, Humidity, Temperature (IAQ)



555C1



565C1



595C1

PRODUCT NO.	MEASUREMENTS	RANGES	FEATURES & BENEFITS	APPLICATIONS
555C1 Digital Vane Anemometer	Air Velocity *Low friction ball Conventional twist vane wheel Temperature * Precision thermistor	1.3 to 80 f/s 0.4 to 25 m/s -5°F to 175°F -20°C to 80°C	<ul style="list-style-type: none"> • Compact and rugged housing • Easy to read LCD • Measure air velocity and temperature simultaneously • Record & recall Max, Min, & Avg • Data hold • Auto power off (10 min.) • Low battery display • Multiple measuring units: (m/s, k/h, mile/h, knots, ft./min) • Download to a computer using the RS-232 port and optional A500 cable • 39" cable length, hard-wired 	<ul style="list-style-type: none"> • Air velocity measurements in heating, ventilation, and air conditioning systems • Air duct analysis • Fume hoods • Floor registers • Exhaust grills
565C1 Digital Vane Anemometer	Air Velocity *Low friction ball Conventional twist vane wheel Temperature * Precision thermistor Air Flow Area	1.3 to 100 f/s 0.4 to 30 m/s -5°F to 175°F -20°C to 80°C 0 to 999,900 CMM & CFM 0.001 to 9,999	<ul style="list-style-type: none"> • Compact and rugged housing • Easy to read LCD • Measure air velocity, air flow with area and temperature simultaneously • Record & recall Max, Min, & Avg • Data logger and log send function • Data hold • Auto power off (10 min.) • Low battery display • Multiple measuring units: (m/s, k/h, mile/h, knots, ft./min) CMM (cubic meter minute) • Download to a computer using the RS-232 port and optional A500 cable • 39" cable length, hard-wired 	<ul style="list-style-type: none"> • Air velocity measurements in heating, ventilation, and air conditioning systems • Air duct analysis • Fume hoods • Floor registers • Exhaust grills
595C1 Digital Hotwire Anemometer	Air Velocity *Low friction ball Conventional twist vane wheel Temperature * Precision thermistor	0.7 to 66 f/s 0.2 to 20 m/s -5°F to 175°F -20°C to 80°C	<ul style="list-style-type: none"> • Compact and rugged housing • Easy to read LCD • Measure air velocity and temperature simultaneously • Glass bead thermistor allows accurate measurements of subtle low-range air velocity • Record & recall Max, Min, & Avg • Data hold • Auto power off (10 min.) • Low battery display • Multiple measuring units: (m/s, k/h, mile/h, knots, ft./min) • Download to a computer using the RS-232 port and optional A500 cable • 39" cable length, hard-wired • Protective boot included 	<ul style="list-style-type: none"> • Air velocity measurements in heating, ventilation, and air conditioning systems • Where low and high feet per minute readings are critical you must use a hotwire below 80 ft. per minute
597C1 Digital Hygrometer/ Psychrometer	Relative humidity (RH) Ambient temperature Dew point temp. Wet bulb temp.	0 to 100% -40°F to 176°F -40°C to 80°C -40°F to 176°F -40°C to 80°C 41°F to 140°C 5°C to 60°C	<ul style="list-style-type: none"> • Data record function for maximum & minimum temperature of humidity reading • Serial output through RS-232 • 39" cable length, hard wired • Auto power off • Protective rubber boot 	<ul style="list-style-type: none"> • Building maintenance • Computer rooms • Heating & air conditioning systems • Bakeries • Humidistats calibration



Coming Soon! Indoor Air Quality Monitor 1001

- Check air concentration for the following gasses: Carbon Dioxide, Formaldehyde, Toluene, cigarette smoke, etc.
- Air Temperature
- Humidity



Coming Soon! Portable Air Quality Monitor 1010

- Check air concentration for the following gasses: Carbon Dioxide, Formaldehyde, Toluene, cigarette smoke, etc.
- Air Temperature and humidity
- Wet bulb and dew point measurement
- Carbon monoxide levels

Digital Clamp-On Meters



265



270/275



293/296

PRODUCT NO.	MEASUREMENTS	RANGES	FEATURES & BENEFITS	APPLICATIONS
265 Digital Clamp-On Meter	Basic DC Accuracy DC Voltage (max) AC Voltage (max) AC Amps (max) Frequency (max) Capacitance(max) Resistance(max)	0.5% 600V 600V 400A 40MHz 4,000uF 40MΩ	<ul style="list-style-type: none"> • Auto & manual ranging • Data hold button • Auto power off after 10 minutes of inactivity • Slim-jaw and body design for use in crowded electrical panels • 4,000 count display • Capacitance range up to 4,000 microfarads to test run and start capacitors • 0.1 DC millivolt resolution to accurately measure thermocouples and use optional adapters • 0.01 AC amp resolution to measure heat anticipator current • Frequency measurement capability 	<ul style="list-style-type: none"> • Test start and run capacitors • Measure motor run current • Measure heat anticipator current • Determine thermocouple voltage • Test line and control voltage • Measure heating element resistance • Measure and adjust variable frequency drives
270 Digital Clamp-On Meter	Basic DC Accuracy DC Voltage (max) AC Voltage (max) AC Amps (max) Resistance (max) Frequency (max) Capacitance (max) Temperature	0.5% 600V 600V 400A 40MΩ 400MHz 4,000uF 1,000°F	<ul style="list-style-type: none"> • Measure motor in-rush current • Measure temperature differential with relative mode • Non-contact voltage feature can be used to see if power is being supplied to the 24VAC control circuit of thermostats • Frequency, Min/Max/Record, Date hold, and Peak hold • Up to 4,000 microfarads to test run and start capacitors • 4,000 count display with 41 segment analog bargraph • Auto and manual ranging 	<ul style="list-style-type: none"> • Measure flame safety control current • Test run and start capacitors & motors • Measure motor run current and capture peak motor start up and amperage • Measure heat anticipator current • Determine thermocouple voltage • Test line and control voltage • Measure heating element resistance • Measure air temperature in ducts • Test for the presense of voltage in circuits without contacting the circuit • Measure temperature differential using relative mode
275 Digital Clamp-On Meter with True RMS, 11,000 Count	Basic DC Accuracy DC Voltage (max) AC Voltage (max) AC Amps (max) Resistance (max) Frequency (max) Capacitance (max) Temperature	0.5% 600V 600V 400A 110MΩ 110MHz 4,000uF 1,000°F	<ul style="list-style-type: none"> • Measure motor in-rush current • Measure temperature differential with relative mode • Non-contact voltage feature can be used to see if power is being supplied to the 24VAC control circuit of thermostats • Frequency, Min/Max/Record, Date hold, and Peak hold • Up to 4,000 microfarads to test run and start capacitors • 11,000 count display with 41 segment analog bargraph • Auto and manual ranging • True RMS 	<ul style="list-style-type: none"> • Measure flame safety control current • Test run and start capacitors & motors • Measure motor run current and capture peak motor start up and amperage • Measure heat anticipator current • Determine thermocouple voltage • Test line and control voltage • Measure heating element resistance • Measure air temperature in ducts • Test for the presense of voltage in circuits without contacting the circuit • Measure temperature differential using relative mode
293 Digital Clamp-On Meter with True RMS,	Basic DC Accuracy DC Voltage (max) AC Voltage (max) AC Amps (max) Resistance (max) Frequency (max)	0.75% 600V 600V 700A 40MΩ 10KHz	<ul style="list-style-type: none"> • Measure AC/DC volts • Measure AC Amps • True RMS • Trim mode for stable readings • 4,000 count with 34 segment bar graph • Data hold • Sleep mode • HDR mode to determine if signal is clean or dirty 	<ul style="list-style-type: none"> • Heat anticipator current in thermostats • Line voltage • Control circuit voltage • Heating element resistance • Compressor winding resistance • Contactor and relay coil resistance • Motor and compressor start up current • Continuity of wiring • Frequency on control and line voltage • Record/Min/Max voltage of controls and line voltages • Bar graph to indicate rapid fluctuations
296	All the features of the 293 plus DC amp measurement up to 700A			

DMMs & Specialty Electrical Testers

100



PRODUCT No.	MEASUREMENTS	RANGES	FEATURES & BENEFITS	APPLICATIONS
100 Easy, One Button Operation DMM	Basic DC Accuracy DC Voltage (max) AC Voltage (max) Resistance (max)	0.5% 600V 600V 40MΩ	<ul style="list-style-type: none"> • Easy, one button operation • Automatically measures DC volts, AC volts, and ohms (resistance) • 0 to 600 volts AC and DC • 10M ohm impedance • Auto power off after 10 minutes • Protective rubber boot 	<ul style="list-style-type: none"> • Measure line and control circuit voltages • Measure resistance of motor windings, transformers, and solenoids • Make general AC and DC voltage and resistance measurements • Measure the resistance of elements and electric heater cores • Test continuity of wiring • Verify voltage at breakers and outlets • Use as a back-up meter in your tool box



133

133 Manual Ranging DMM	Basic DC Accuracy DC Voltage (max) AC Voltage (max) AC Amps DC Amps Resistance (max)	0.5% 1,000V 750V 10A 10A 20MΩ	<ul style="list-style-type: none"> • 2,000 count LCD • Measures AC/DC volts, AC/DC amps, resistance, diodes, and continuity • Data hold • Protective rubber boot 	<ul style="list-style-type: none"> • Thermocouples in furnaces and gas appliances • Heat anticipator current in thermostats • Line and control voltages • Flame safety control current • Heating element resistance • Continuity of wiring • Line current up to 10 amps • Power supply current
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183A

183A True RMS DMM with temperature, capacitance, duty cycle, & low-pass filter	Basic DC Accuracy DC Voltage (max) AC Voltage (max) DC Microamps Temperature Capacitance Resistance AC Amps DC Amps Frequency	0.5% 1,000V 750V 40uA -40°C to 1,300°C 4,000uF 40MΩ 10A 10A Up to 10MHz	<ul style="list-style-type: none"> • 4,000 count • True RMS for more accurate measurements • Auto/manual ranging • Temperature measurement • Duty cycle to measure the amount of time the motor is on • Low pass filter for noisy environments • Separate battery and fuse compartment • Auto power off after 10 minutes • IR serial interface 	<ul style="list-style-type: none"> • Test run and start capacitors • Measure ambient and duct temp. • Test control (thermostat, thermocouple, flame safety) and line voltages • Measure resistance and test for continuity • Line current up to 10amps (in series)
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440

440 Handheld Oscilloscope with True RMS DMM	Bandwidth Sample Rate Basic DC Accuracy DCV ACV DCA/ACA Ohms Capacitance Frequency	1MHz 20 megasamples per second sampling rate 0.3% Up to 1,000 volts Up to 750 volts Up to 10 amps Up to 30MΩ Up to 400uF Up tp 2 MHz	<ul style="list-style-type: none"> • 4,000 count • True RMS DMM • 1MHz oscilloscope • Trend mode • Component test • Logic test • Frequency counter • PC/printer capability 	<ul style="list-style-type: none"> • View industrial signals such as motor control, UPS, switching power supplies, and PLC controls with 1MHz bandwidth • Capture noise spikes, glitches, and intermittents with 20 megasamples per second sampling rate • Full autoranging, True RMS, DMM capabilities • Continually updated display provides a live presentation
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50

50 AC Safety Volt Check	Non-contact voltage	50 to 1,000 VAC	<ul style="list-style-type: none"> • Prevent electrical shocks • Troubleshoot electrical circuits • No switch required/always ready for use • Sound & visual alert • Bright red glow indicates voltage • UL listed 	<ul style="list-style-type: none"> • Check for presence or absence of AC voltage in: wires, wall receptacles, fuses, junction boxes, switches, defective grounds, and any other voltage carrying electrical circuits
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40

40 Low AC Locator	Non-contact voltage	24 to 90 VAC	<ul style="list-style-type: none"> • Sensor glows red in presence of low AC voltage • Detects 24 to 90 VAC • UL listed 	<ul style="list-style-type: none"> • Check lawn irrigation equipment, thermostat controls, vending machine changers, and other low voltage equipment
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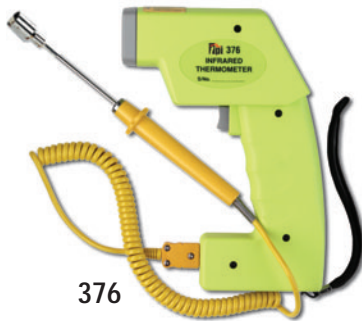
Non-Contact (IR) & K-type Temperature Probes



368



381 & 383



376

PRODUCT NO.	MEASUREMENTS	RANGES	FEATURES & BENEFITS	APPLICATIONS
368* Infrared Thermometer	Surface Temperatures (IR)	-8°F to 248°F -22°C to 120°C	<ul style="list-style-type: none"> Easily fits in your pocket Min/Max function 	<ul style="list-style-type: none"> Tubing, piping, and sheet metal temperature Leaks around cooler or freezer doors
381* IR Thermometer	Surface Temperatures (IR)	-4°F to 572°F -20°C to 300°C	<ul style="list-style-type: none"> Fast and simple operation Pocket size and easy to use Non-contact measurement for quick, safe surface measurements °C/°F Laser pointer 	<ul style="list-style-type: none"> Remote vent and return temperature measurement Tubing, piping, and sheet metal temperature Leaks around cooler or freezer doors
383* IR Thermometer	Surface Temperatures (IR)	-31°F to 999°F -35°C to 537°C	<ul style="list-style-type: none"> Fast and simple operation Pocket size and easy to use Non-contact measurement for quick, safe surface measurements °C/°F Laser pointer 	<ul style="list-style-type: none"> Remote vent and return temperature measurement Tubing, piping, and sheet metal temperature Leaks around cooler or freezer doors
384* IR Thermometer	Surface Temperatures (IR)	-4°F to 1,832°F -20°C to 1,000°C	<ul style="list-style-type: none"> Fast and simple operation Pocket size and easy to use Non-contact measurement for quick, safe surface measurements °C/°F Laser pointer 	<ul style="list-style-type: none"> Remote vent and return temperature measurement Tubing, piping, and sheet metal temperature Leaks around cooler or freezer doors
376* Digital Hygro-Thermometer	Surface Temperatures (IR) K-type Thermometer	-58°F to 950°F -50°C to 510°C -40°F to 2,192°F -40°C to 1,200°C	<ul style="list-style-type: none"> Fast and simple operation Large, easy to read Non-contact and contact probes in one device Adjustable emissivity (0.3 to 0.99) for precise measurements °C/°F Selectable Laser pointer Record function Display data hold Operation lock function 	<ul style="list-style-type: none"> Heating & AC/R system measurements on all non-metallic and many metallic surfaces Troubleshooting overheat devices Remote vent and return temperature measurements Tubing, piping, and sheet metal temperature

**All TPI non-contact IR thermometers have a distance-to-spot ratio of 8:1. The 368 is close-focus 1/8 in. at 1.5in.*



GK11M

- Standard K-type thermocouple probe
- 4' fiberglass covered lead
- Exposed junction for fast response



GK12M

- Standard K-type thermocouple probe with oven clip
- 4' fiberglass covered lead
- Oven clip to shield sensor from direct radiated heat
- Exposed junction for fast response



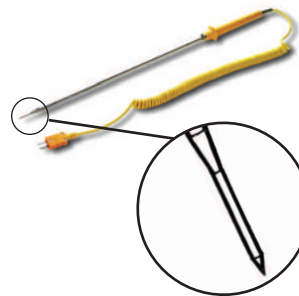
GK13M

- Standard K-type thermocouple probe
- 4' FDA approved insulated lead
- Exposed junction for fast response



CK22M

- K-type surface probe
- Quick response and excellent heat transfer
- 45° angle stem to measure hard to reach surfaces
- 3' coiled lead for durability and long reach
- Exposed junction for fast response



FK12M

- Heavy-duty K-type penetration probe
- 11" sealed stem for immersion into liquids, gels and semi solids
- 6.4 mm diameter stem for durability and strength
- 3' coiled lead for durability and long reach
- Stem sealed to protect sensing area



PIPE CLAMP PROBE CK21M

- K-type thermocouple pipe clamp
- For pipe diameters up to 1.2" (30 mm)
- For temperatures up to 212° F (100° C)
- Lead length 40" (100 cm) purpose probe

Refrigeration Leak Detectors, Digital Vacuum Gauge & Contact Thermometers



PRODUCT No.	MEASUREMENTS	SENSITIVITY	FEATURES & BENEFITS	APPLICATIONS
750A Refrigeration Leak Detector	Detects all refrigerants including blends R404A, R410A, and R507	0.3 oz	<ul style="list-style-type: none"> • Quick and simple operation • Visual & audible leak detection • Two selectable tic rates • Optional earphone attachment • One-hand operation • 16" gooseneck handle length • Pump driven for fast response 	<ul style="list-style-type: none"> • Automatically detects all existing refrigerants including blends: R-404A, R-410A, and R-507 • Testing for leaks in air conditioning, refrigeration, or automotive AC
753 Refrigeration Leak Detector	Detects all refrigerants including blends R404A, R410A, and R507	0.2 oz	<ul style="list-style-type: none"> • Quick and simple operation • Visual & audible leak detection • Two selectable tic rates • Optional earphone attachment • One-hand operation • 16" gooseneck handle length • Pump driven for fast response 	<ul style="list-style-type: none"> • Automatically detects all existing refrigerants including blends: R-404A, R-410A, and R-507 • Testing for leaks in air conditioning, refrigeration, or automotive AC



PRODUCT No.	MEASUREMENTS	RANGES	FEATURES & BENEFITS	APPLICATIONS
605 Digital Vacuum Gauge	Vacuum	Down to 15 microns	<ul style="list-style-type: none"> • Fast and simple operation • Easy-to-read LCD • Seven selectable units • Display updates every 0.5 seconds • Auto power off after 10 minutes when vacuum above 12,000 microns (12 Torr) 	<ul style="list-style-type: none"> • Verify the vacuum before you change a refrigeration system • Prevents moisture and air being left in the system • Finds small leaks • 300 PSL overpressure



PRODUCT No.	MEASUREMENTS	RANGES	FEATURES & BENEFITS	APPLICATIONS
343C2 Dual K-type Thermometer for Low Temperature Under 400°F	Low Temperature	> 400°F	<ul style="list-style-type: none"> • Field calibrateable • Large, easy-to read display • Record / Min/ Max • Temperature differential • Hold • °C/°F selectable • Protective rubber boot 	<ul style="list-style-type: none"> • Ambient air • Calibrate thermostats • Compressor heads • Registers • Temperature differential • Vents • Grill and surface temperatures
343C1	High Temperature	< 400°F	(Comes complete with (2)GK11M fiberglass, beaded K-type probes)	
343C3	Differential Temperature		(Comes complete with (2)CK21M pipe clamp probes and (1)GK13M teflon, beaded k-type probe)	



PRODUCT No.	MEASUREMENTS	RANGES	FEATURES & BENEFITS	APPLICATIONS
310C Pocket Digital Thermometer	Temperature	-58°F to 300°F	<ul style="list-style-type: none"> • Field calibrateable to ±2°F • Reversible LCD head rotates for best viewing • Easy-to-read LCD • Data hold • Penetration tip • Auto off 	<ul style="list-style-type: none"> • Ambient air • Calibrate thermostats • Vents • Compressor heads • Registers • Grill & surface temperatures • Serving temperatures
315C Pocket Digital Thermometer	Temperature	-58°F to 300°F	<ul style="list-style-type: none"> • Field calibrateable to ±2°F • Rugged and waterproof • 3.1mm stem for "Pete's" plug • Magnetic clip • Penetration tip • Auto off 	<ul style="list-style-type: none"> • Ambient air • Calibrate thermostats • Vents • Compressor heads • Registers • Grill & surface temperatures • Serving temperatures
317C	Same features as the 315C but with an air tip			
318C	Same features as the 315C but with a chisel tip			
319C	Same features as the 315C but with a contact tip			

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For additional products, specifications, and info contact TPI at tpi-thevalueleader.com or 800.368.5719

Combustion & Digital Manometer Accessories

TPI Analyzer Care

The combustion analyzers use state of the art electrochemical sensors. This sensor technology provides the longest lasting, most accurate and reliable means for performing combustion tests. The sensors in will need to be replaced periodically and calibration is recommended once every year.

- Always keep the battery of your analyzer charged/fresh so power is constantly being supplied to your sensors.
- Always use the mini pump filter when testing flue gases and periodically check and replace the filter as needed.
- Always make sure the in-line filter/water trap is installed properly and periodically check and replace the filter as needed.
- Always remove water or condensation from the inside of the in-line filter/water trap assembly prior to performing tests.
- Always use the optional oil filter (p/n A773) when performing tests on oil burning equipment.



Gas Valve Pressure Adapter A611

Use for checking gas pressure on gas valve where the inert gas is in a tight or hard to reach location. Can be used with any TPI digital manometer.



Protective Rubber Boot A612

Protective rubber boot with tilt stand for the following meters: 610, 615, 620, and 625.



Universal T Fitting A605

Ideal for use on setting pressure switches



Sulfur Filter for Oil Application A773

Use the A773 when working on oil fired appliances to extend the life of your sensors by eliminating acid gas exposure to your analyzer



Replacement CO Sensor A760

Replacement carbon monoxide sensor for the 707 through 714 combustion analyzers. Price includes installation and calibration at TPI



Brass Hose Barb Fitting A603

Use for checking gas pressure on gas valves 1/4" hose barb x 1/8 NPT thread



Static Tip A776

Measure static pressure with A776. It has a magnet to secure in place in duct work 1/4" hole required to use



Silicone Tubing A774

6 foot length of silicone tubing for pressure measurements. Very flexible and will not go hard in cold temperatures.



Pneumatic Thermostat Adapter A610

Measure and calibrate pneumatic thermostats. Most pneumatic thermostats operate around 15psi, so the 645 and 645NPT are the best choices for use with the A610. Check manufacturers specifications before selecting a digital manometer to use with the A610



Replacement Oxygen Sensor A761

Replacement oxygen sensor for the 708 through 715 combustion analyzers. Price includes installation and calibration at TPI



Replacement Filter for Watertrap A762F

Replacement particle filter for A762 watertrap. Indicating filter gets dirty from the inside out. When you see black on the filter, it's time to change (5 pack)



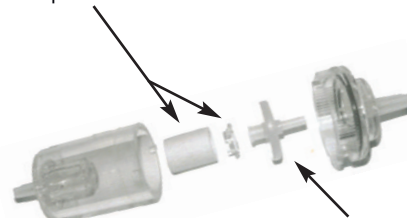
Watertrap / Filter Assembly A794

For use with condensing boilers

ALSO AVAILABLE:

- Large watertrap/filter assembly A795
- Replacement particle filter A794F
- Replacement water filter A794W

- Replacement particle filter A794F



- Replacement water filter A794W

Combustion Accessories, Smoke Test Pump & Fiber Optic Inspection Tool

IR Printer A740

IR printer for use with 708, 712, and 714, Combustion Efficiency Analyzers



Replacement Paper Roll A746

Replacement thermal paper roll for the A740 (2 pack)



Threaded Pipe Plug TP-1

Use for plugging combustion efficiency test holes in high efficiency furnaces.

Material: High density polythlene

Temperature: up to 414°F

1/8" NPT thread



4" Adapter Tubing for Pressure Connection A791

Flexible tubing for connecting to larger fittings

PC Software for 712 A772

Allows the 712 to communicate with a PC

IRDA Adapter A767

Allows the 712 to communicate with a PC



Smoke Test Pump A788

Includes:

- Smoke pump tester
- Smoke pump test paper
- Smoke scale

Smoke Pump Accessories

Replacement smoke pump test paper A789

TDS/Salt Meter 390



- Test condensate water in cooling tower and humidifier reservoir applications to prevent bacterial growth
- Test TDS levels in make-up water to prevent scale formation, corrosion, and embrittlement
- Determine when to perform blowdown and add make-up water
- Prevent contamination and corrosion of control valves, heat exchangers, and steam traps
- Verify automated TDS controllers are functioning properly
- Prevent low quality wet steam generation in boilers due to foaming caused by high TDS levels

Handheld Refractometer 395



The 395 is designed to give an accurate reading regarding the freezing point of fluids used in hydronic heating systems.

Photo / Contact Tachometer Surface Speed 505



The 505 is a combination photo and contact tachometer that also measures surface speeds of belts and wheels.

Photo Tach: 6 to 30,000 RPM
Contact Tach: 6 to 20,000 RPM
Surface Speed: 0.9 to 3,046 m/min
 2.0 to 9,990 ft/min

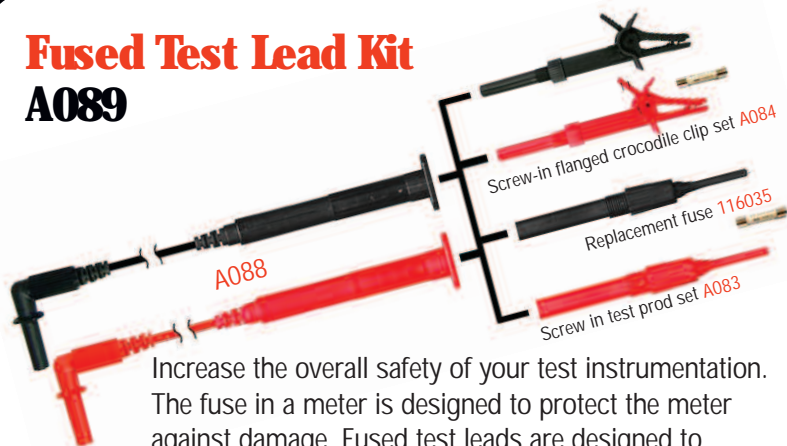


PRODUCT NO.	MEASUREMENTS	FEATURES & BENEFITS	APPLICATIONS
810 Fiber Optic Inspection Tool	Visually check for cracked heat exchangers <div data-bbox="683 1520 906 1583" data-label="Section-Header"> <h3>Heavy Duty Carrying Case</h3> </div> <div data-bbox="678 1591 899 1787" data-label="Image"> </div> <div data-bbox="683 1793 883 1881" data-label="Text"> <p>Easy handling and storage for the 810 Fiber optic inspection tool (Standard 810 accessory)</p> </div>	<ul style="list-style-type: none"> • Machined aluminum housing is easy to hold and durable • Coated flexible fiber optic cable for accessibility to tight areas with bends and curves • Fiber optic cable maintains position after adjustment and fiber optic bundle • Hi-resolution 8,000 pixel image offers enhanced vision and clarity • One hand focus adjustment • 45° glass inspection mirror for side viewing • Super bright LED flashlight source lowers heat build-up during operation while providing longer battery life with no bulb replacement necessary 	<ul style="list-style-type: none"> • Perform non-destructive inspections of heat exchangers • Examine heating & cooling ductwork integrity • Check for blocked evaporator coils in air conditioning equipment • Inspect boilers without costly disassembly • Look inside oil burning furnaces for igniter components • Use to show customers evidence of a cracked heat exchanger

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Fused Test Lead Kit

A089



Increase the overall safety of your test instrumentation. The fuse in a meter is designed to protect the meter against damage. Fused test leads are designed to protect the user. The A089 fused test lead kit offers versatility and safety featuring in-line 1,000V 0.5A fuses for maximum protection.

Test Leads A085

Consists of the A080 UL listed silicone test lead set with A150 screw on alligator clips.

- CULus 61010-1
- IEC 61010
- Flexible (stranded wire)
- Long life (silicone insulation)
- Safety (double insulated CAT IV 600V 10A, CAT III 1000V 10A)
- Flame resistant
- Can be used with A052 modular banana adapter to increase versatility



Deluxe Modular Test Lead Kit TLS2000RB

High-quality silicone rubber test leads. Kit contains:

- Right angle red and black test lead, 1.2M
- Red and black sprung hook
- Red and black test prod
- Red and black shrouded croc. clip
- Red and black spade terminal



About TPI Test Leads

In-Line Fuse:

Each fused test lead has a user replaceable in line fuse designed to protect the user.

Silicone Insulated High Strand Count Leads:

Greater flexibility and resistance to temperature extremes.

Double Insulation:

More protection than single insulated leads. The inner insulation is white informing the user if the outer layer is worn.

Agency Listed:

cULus 61010-1 and IEC 61010 CAT IV 600V 10A, CATIII 1000V 10A

Modular Back Probes A057

Back probes provide the ability to probe connectors without removing them from the circuit. Can also pierce insulation and fit into tight locations. Use with A052 male banana plug adapters.



Modular Banana Adapters A052

Screw on male banana plug adapters for use with TPI screw tip test leads like the A080. Enables the use of female banana lead accessories like the A057 back probes.



Modular 1,000V Crocodile Clip A066

Fully insulated large crocodile clips provide the ability to safely connect to larger electrical buses and connectors. Can be used with the A052 banana adapters.



Modular Grabber Clips A067

Push activated grabber clips provide long reach and secure connection to electrical bus bars and connectors. Can be used with the A052 banana adapters.



ADDITIONAL TEST LEAD SETS

Flamed test lead set	A020
Test lead set	A040
10' shielded test lead set	A065
Alligator clips for A040	A140