

Recommended for Fusion-Bonded Coatings

ALL
NEW!
COMPLETELY
SEALED

AP/S1

HOLIDAY DETECTOR

Regulated Inspection Voltage

RENTALS
AVAILABLE

FEATURES INCLUDE:

- A. (1) Model AP/S1 Holiday Detector Instrument
- B. (1) Battery holder
- C. (2) Rechargeable 6 volt batteries
- D. (1) Battery charger with indicator light
- E. (1) 18" Wand with electrode coupler
- F. (1) Flexible 20' ground cable
- G. (1) Screw driver
- H. (1) Carrying case plywood & aluminum banding compartmented for each component
- (1) Operator instruction sheet and parts list (Not shown)

OPTIONAL ACCESSORIES:

- I. Conductive rubber electrode paddle
- J. Full circle heavy duty spring electrodes 2" & up
- K. Half circle heavy duty spring electrodes 3/4" - 12"
- L. Conductive Silicone Rubber electrodes 2" & up
- M. Wire brush electrodes 2" & up

Call or write for price quotes.
All electrodes shipped day of order.

The Tinker & Rasor **Model AP/S1** Holiday Detector is a portable quality control inspection instrument used to electrically locate defects in protective coatings **UP TO 30 MILS** applied to metallic or concrete structures. The **AP/S1** detector converts low voltage direct current (rechargeable batteries) into regulated high voltage pulses. Output voltage is selectable from **1,000 to 3,000 volts** in 10 settings. This versatile unit can be used to inspect protective coatings applied to pipelines, tanks, pilings or any similar conductive surface. The solid state capacitor discharge circuit provides genuine regulated output voltages that ensure unchanged inspection voltages regardless of weather conditions, type or size of exploring electrode or structure.

The Tinker & Rasor **Model AP/S1** detector is completely sealed against dirt, water and corrosion, permitting an unusually high degree of reliability. The **AP/S1** is virtually unaffected by climatic conditions. The selected regulated output voltage does not change during the useful life of the battery (+/-5%).

The **Model AP/S1** Holiday Detector is available for sale or rental and shipped the same day as ordered. All units shipped complete with all accessories needed for coating inspections.

AP/S2

HOLIDAY DETECTOR

ALL
NEW!
COMPLETELY
SEALED

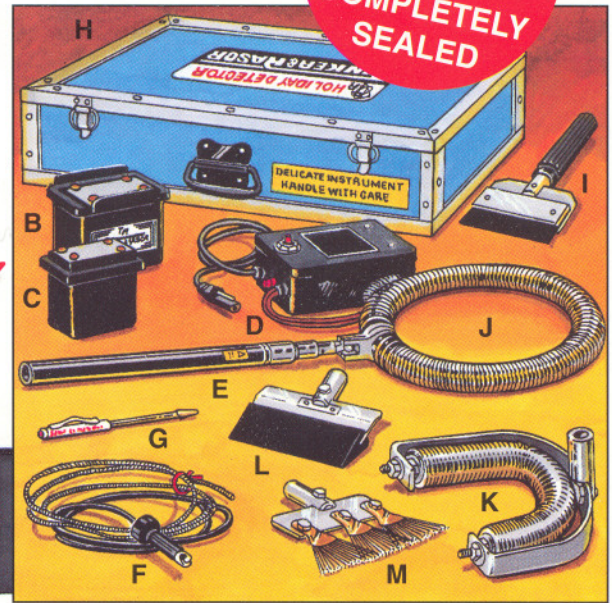
RENTALS
AVAILABLE

Regulated Inspection Voltage

The Tinker & Rasor **Model AP/S2** Holiday Detector is a portable quality control inspection instrument used to electrically locate defects in protective coatings **30 MILS** or greater, applied to metallic or concrete structures. The **AP/S2** detector converts low voltage direct current (rechargeable batteries) into regulated high voltage pulses. Output voltage is selectable from **6,000 to 15,000 volts** in 10 settings. This versatile unit can be used to inspect protective coatings applied to pipelines, tanks, pilings or any similar conductive surface. The solid state capacitor discharge circuit provides genuine regulated output voltages that ensure unchanged inspection voltages regardless of weather conditions, type or size of exploring electrode or structure.

The Tinker & Rasor **Model AP/S2** detector is completely sealed against dirt, water and corrosion, permitting an unusually high degree of reliability. The **AP/S2** is virtually unaffected by climatic conditions. The selected regulated output voltage does not change during the useful life of the battery (+/-5%).

The **Model AP/S2** Holiday Detector is available for sale or rental and shipped the same day as ordered. All units shipped complete with all accessories needed for coating inspections.



FEATURES INCLUDE:

- A. (1) **Model AP/S2** Holiday Detector Instrument
- B. (1) Battery holder
- C. (2) Rechargeable 6 volt batteries
- D. (1) Battery charger with indicator light
- E. (1) 18" Wand with electrode coupler
- F. (1) Flexible 20' ground cable
- G. (1) Screw driver
- H. (1) Carrying case plywood & aluminum banding compartmented for each component
- (1) Operator instruction sheet and parts list (Not Shown)

OPTIONAL ACCESSORIES:

- I. Conductive rubber electrode paddle
- J. Full circle heavy duty spring electrodes 2" & up
- K. Half circle heavy duty spring electrodes 3/4" - 12"
- L. Conductive Silicone Rubber electrodes 2" & up
- M. Wire brush electrodes 2" & up

Call or write for price quotes.
All electrodes shipped day of order.

PULSE TYPE REGULATED

HOLIDAY DETECTOR

AP

QUALITY CONTROL FOR ALL COATING APPLICATIONS

FEATURES INCLUDE:

- Regulated voltage
- 20 different voltage settings
- Output ranges 1KV to 14KV enables you to inspect coatings thick or thin
- Completely sealed from the elements
- Easy battery access
- Light weight (6 1/2 lbs.)
- Durable construction for all field conditions



REGULATED VOLTAGE IS THE REASON WHY!

Regulated voltage output allows you to maintain a given inspection voltage regardless of varying pipe diameters, surface moisture or even battery level. **The Model AP automatically adjusts its output** so the voltage reading remains constant despite the electrical load on the circuit. In this way you can be assured that **the voltage selected is the voltage applied!**

20 VOLTAGE SELECTIONS FOR MAXIMUM VERSATILITY!

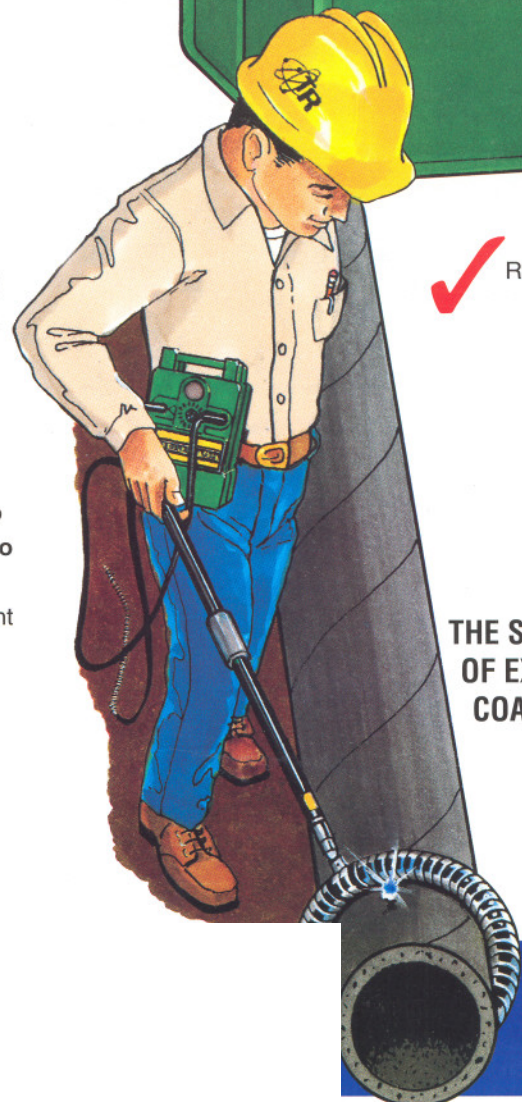
The AP provides 20 different voltage settings, from 1,000 volts to 14,000 volts - the best range for any single portable unit. This feature enables you to inspect coatings, from the thinnest fusion bonded epoxies to thick hot applied enamels.

WORKS IN ANY ENVIRONMENT!

Housed in durable ABS "Cyclac" case the **Model AP is also watertight and completely sealed against the elements, so it can operate in any climate.** The AP's battery can be charged in the instrument or be removed through a convenient sliding door for easy maintenance. Weighing only 6 1/2 pounds the **Model AP is the most lightweight detector on the market** and is ideal for all kinds of rugged field use and inclement weather.



✓ RENTALS AVAILABLE



THE STANDARD OF EXCELLENCE IN COATING INSPECTION. . .

AP

A REMARKABLE BREAKTHROUGH IN HOLIDAY DETECTION

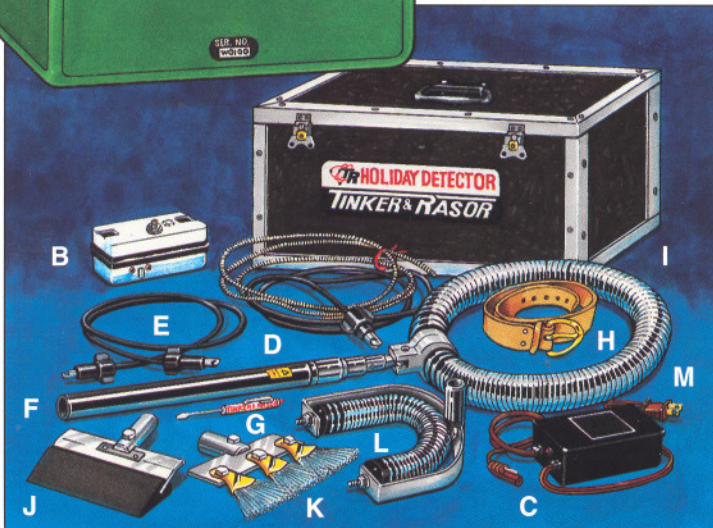
"THE Model AP" **TINKER & RASOR**

combines its renowned technology
with the innovation of regulated
voltage to create a quality instrument
that is top of the line in its field.



RENTALS AVAILABLE

A



Model AP Holiday Detector Consists of:

- A 1 - Holiday detector with battery, housed in a 6" x 10 1/2" x 4" ABS "Cyclac" case
- B 1 - Extra 6-volt sealed lead acid, rechargeable battery
- C 1 - Battery charger with red LED indicator
- D 1 - Flexible 20' ground cable
- E 1 - Power output cable
- F 1 - 18" Wand handle with electrode coupler
- G 1 - Screw driver
- H 1 - Operators belt
- I 1 - Carrying case compartmented for each component
- 1 - Operators instruction manual and parts list (Not shown)

OPTIONAL ACCESSORIES:

- J 1 - Silicone brush electrode 2" to 36"
 - K 1 - Wire brush electrode 2" to 36"
 - L 1 - Half circle spring electrode 3/4" to 8" and up
 - M 1 - Full circle spring electrode 2" to 48" and up
- CUSTOM ELECTRODES UPON REQUEST

VOLTAGE SELECTION TABLE

LOW SETTINGS		HI-SETTINGS	
1. 1000	6. 2000	1. 4000	6. 8000
2. 1200	7. 2250	2. 4800	7. 9000
3. 1400	8. 2500	3. 5600	8. 10,000
4. 1600	9. 3000	4. 6400	9. 12,000
5. 1800	10. 3500	5. 7200	10. 14,000

SPECIFICATIONS:

Output Voltage: 1,000 to 14,000 Volts

Accuracy: $\pm 5\%$

Battery: Sealed lead acid, rechargeable, 6-volt

Shipping Weight: 30 lbs. *(13.6 Kg)

*Weight varies with electrode choices

QUALITY CONTROL FOR COATING APPLICATION

MODEL AP-W

TINKER & RASOR

MODEL AP-W

HOLIDAY DETECTOR

Completely of Solid State Construction

FEATURES: Plug-in high voltage pulse transformers with wide selection of fixed output voltages. **Re-chargeable dry-cell NICAD battery** which averages over two years life expectancy. Lightweight, belt-mounted instrument housed in tough, rugged, injection molded "CYCOLAC".

The Tinker & Rasor **Model AP-W Holiday Detector** is a completely transistorized, portable electrical inspection instrument. Adaptable for use on both large and small diameter pipe as well as flat surfaces when such surfaces are coated with a high electrical resistant material and the surface beneath the coating is electrically conductive. The Model AP-W operates well on damp surfaces so is desirable where humid conditions prevail.

The **Model AP-W** supplies a wide range of output voltages suitable for the inspection of almost all modern day protective coatings including thin film epoxies, vinyls, poly-ethylenes etc. and thicker coatings such as hot applied coal tar, asphalt and heavy mastic materials.

Interchangeable pulse transformers are described on reverse side. Each transformer develops **SIX** fixed output voltages selective through externally mounted switch. The plug-in pulse transformer becomes an integral part of the wand assembly and transformers can be interchanged in a matter of seconds.

The current for the detector is furnished by a **completely sealed, rechargeable, dry cell nickel cadmium battery** which requires **NO** maintenance other than recharging. A full day's work of field inspection is possible before the battery needs recharging (**battery is rechargeable in instrument case**). The detector can be stored for long periods of time with **no adverse effects**.

Weighing only **eight pounds**, the detector can be comfortably belt-mounted or carried by the handle. When faults or foreign particles in the protective coating are encountered by the inspection electrode, a **distinctive audible signal** is activated in the instrument.

Dependability assured by **ABSOLUTE solid state construction** (without vibrators, relays, bell signal contacts or other moving parts). Maintenance and down time virtually eliminated through advanced design engineering.

Quality Control for Coating Application

Tinker & Rasor
Holiday Detectors
approved and
specified by leading
utility companies,
contractors, coating
manufacturers,
applicators, and
various governmental
agencies.

Meets U.S. Govern-
ment regulations
for air shipment.

**MODEL
AP-W**

"ALL PURPOSE—ALL WEATHER" PERFECTION

REVOLUTIONARY

FULLY TRANSISTORIZED
**HOLIDAY
DETECTOR**
THE NEW MODEL AP-W



**MODEL AP-W DETECTOR
COMPLETE CONSISTS OF:**

- 1 - Instrument housed in an indestructible, shock-proof, injection molded "Cyclac" case.
- 1 - Battery: Nickel Cadmium Battery.
- 1 - Battery Charger with light indicator.
- 1 - Battery Tester.
- 1 - Belt: Adjustable leather belt.
- 1 - Ground Wire; 20' of flexible speedometer cable.
- 1 - Powerpak* Assembly (Specify Voltage) complete with one powerpak, 18" wand with head, 18" wand extension, 5' cable and puller attachment.
- 1 - Electrode (half circle spring Electrode U.S. Patent No. 2,615,077) for any one size pipe to 8" Dia. or full circle spring electrode for any one size pipe 2" to 36" dia. or conductive silicone brush electrode to 8" in width. Electrodes are complete with attachments and couplings.
- 1 - Instruction manual with parts list.
- 1 - Carrying Case: Compartmented carrying case of heavy duty, aluminum banded plywood. Size 8 1/2" x 12 1/4" x 19 3/4".

*NOTICE: Additional Powerpaks available.

OUTPUT VOLTAGE DATA:

Output high voltage pulse transformers referred to as "powerpaks" are available from stock. Approximate voltage ranges as follows —

- 900V - 1,400V - 2,000V - 2,500V - 3,000V and 3,400 volts
- 3,500V - 5,000V - 6,000V - 7,500V - 8,500V and 10,000 volts.
- 6,000V - 8,000V - 10,000V - 12,500V - 15,000V and 16,000 volts.
- 12,500V - 17,500V - 20,000V - 27,000V - 31,000V and 35,000 volts.

Special output voltages available within these limits on one week delivery.

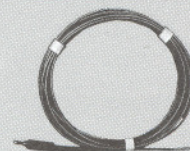
Quality Control for Coating Application



**COMPARTMENTED
CARRYING CASE**



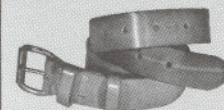
BATTERY CHARGER



GROUND CABLE



BATTERY TESTER



CARRYING BELT



COIL SPRING ELECTRODES



POWER-PAK

PEAK READING VOLTMETER

For Measuring The Output Voltage Of Pulse Type D.C. Holiday Detectors

PRM

The **TINKER & RASOR Model PRM Peak Reading Voltmeter** is designed to measure the peak value of high voltage D.C. pulse within its scale range, with a maximum capacity of 40 Kilovolts.

Measurement can be made of peak values with rise time of less than one microsecond.

The **Model PRM Voltmeter** is portable and is ideal for use in the field or laboratory.

The **Model PRM** may also be used in design or production testing to measure ignition voltages, over-voltages caused by switching of electrical circuits and other voltages that often accompany high potential testing.

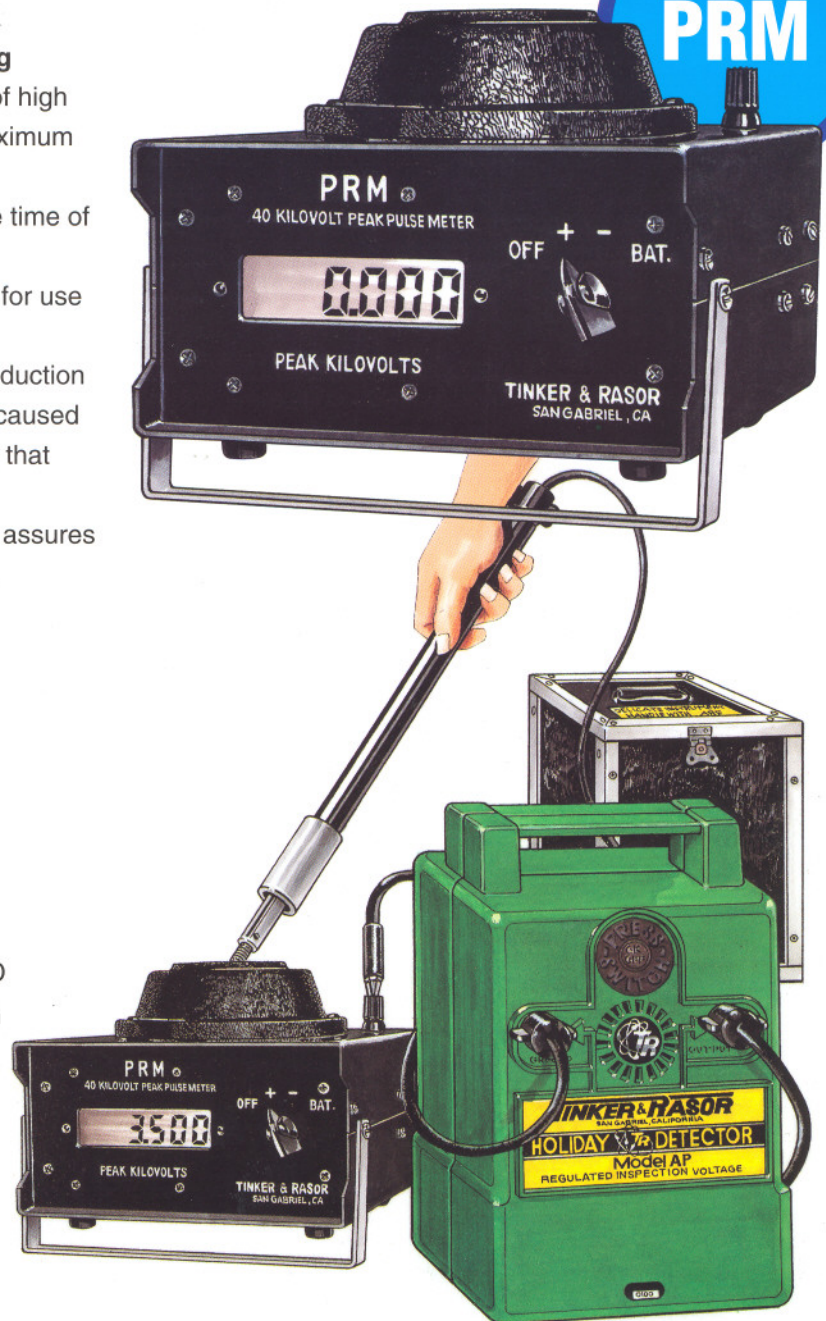
Absolute High tech Integrated circuitry construction assures dependability and virtually eliminates maintenance.

FEATURES INCLUDE:

- ALUMINUM INSTRUMENT CASE
- LARGE 5 DIGIT LED DISPLAY
- EASY TO OPERATE
- LIGHTWEIGHT AND PORTABLE
- (6) "AA" BATTERIES
- ALUMINUM BANDED LAMINATED PLYWOOD CARRYING CASE WITH INTERIOR PADDING

Model PRM Voltmeter consists of:

- 1-Instrument (AA Batteries included)
- 1-Ground Cable
- 1-High Voltage Cable with Clamp (Not shown)
- 1-Carrying Case
- 1-Operating Instructions (Not shown)



HALF-CIRCLE ELECTRODES

HCE
HALF CIRCLE
ELECTRODES

Tinker & Rasor Half-Circle Spring Electrodes for Faster Inspection of Pipe Line Coatings

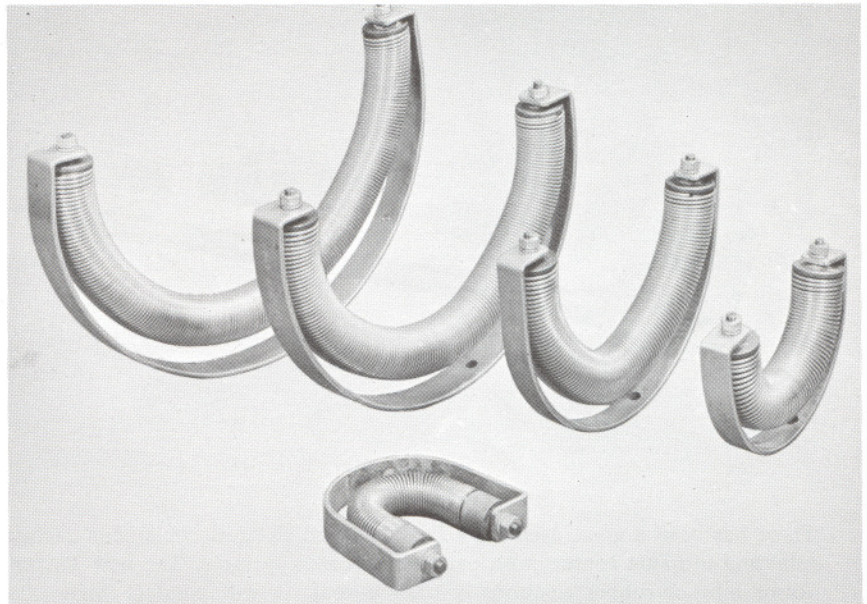
With Tinker & Rasor's half-circle, rolling spring electrodes you can greatly speed your pipe line testing. These precision-made inspection tools will apply high voltage to the surface of the pipe for detection of holidays, burned, coked or thin spots in the pipe coating.

To quickly examine half of the pipe line surface at one pass, attach the proper size electrode to the phenolic wand handle and roll the spring electrode along the pipe. To test the other half of the pipe's surface, walk along the opposite side from that first tested. Because these electrodes contact the whole surface of the pipe so well, rapid inspection can be made.

These spring electrodes are designed for use with Tinker & Rasor Portable-type holiday detectors and permits inspection around skids without uncoupling.



U. S. PATENT NO. 2,615,077



Tinker & Rasor half-circle, spring electrodes are supplied with arch supports. The half-circle shape fits snug around one side of the pipe and also covers the top and bottom. Flexibility of the coil spring allows it to conform to surface irregularities while still maintaining total and intimate surface contact. Each electrode has a double sealed ball bearing in each coil end. These insure that the coil will always roll freely and never need lubrication. Dirt, moisture and even solvents cannot penetrate into these bearings. Springs and arch supports are Cadmium plated to prevent corrosion. Electrode springs are coiled from high-quality music wire into 1¼-inch diameter coils. The supporting arch or yoke is drilled so that the electrode can quickly be attached or detached from the wand handle by a single cap screw.

TERMS:
DELIVERY:
SHIPPING:

SPECIFICATIONS

Net 30 days with approved credit.
Immediate.
Packed in cardboard carton for domestic delivery.
Added cost for export packing.

PART NO.

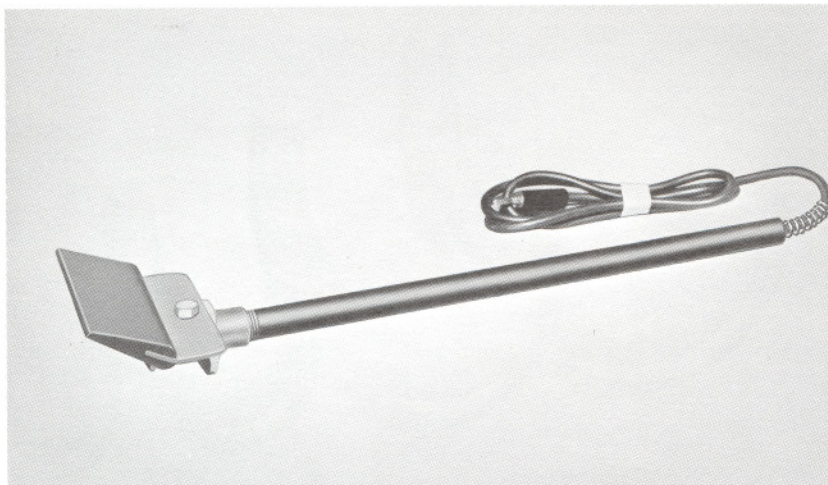
DESCRIPTION

055-001	¾" to 1½" Half-Circle Spring Electrode
055-002	2" Half-Circle Spring Electrode
055-003	3" Half-Circle Spring Electrode
055-004	4" Half-Circle Spring Electrode
055-006	6" Half-Circle Spring Electrode

SILICONE RUBBER ELECTRODES

SILICONE ELECTRODES

Tinker & Rasor Silicone Electrodes Provide a Clean, Flexible Inspection Contact for Coated Surfaces

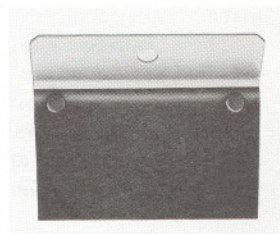


There has been a great need for a flexible-edged electrode which can maintain total and intimate contact with painted or coated surfaces. The new Tinker & Rasor Silicone-rubber electrode is such a tool. It will conduct high-voltage electricity and is sensitive even at low voltages. Its relatively thin edge conforms to surface irregularities without losing contact. It is soft enough so that it will not scratch or mar fine painted surfaces and so can be used on enamelled or lacquered surfaces.

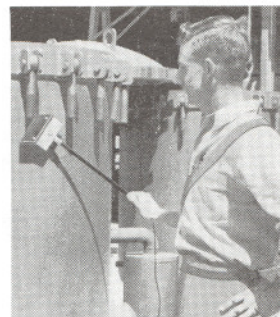
This specially moulded and specially compounded material will wear almost indefinitely. It will retain its shape and conductivity in temperatures from -20°F to -450°F and will not become brittle or soft. It will not "wet" in hot coating material and remains clean at all times. It is recommended for use with all types of holiday detectors using high-voltage electrical energy. Electrodes are available in a full range of sizes and are quickly attached to a phenolic wand handle by a single cap screw.

Tinker & Rasor has developed an electrically conductive, flexible, specially moulded and compounded, silicone-rubber electrode for use with any high-voltage holiday detector. These electrodes attach to wand handles and are used in the same manner as wire brush electrodes. The silicone-rubber has a great advantage over wire brushes. It will not pick up coating tar or bituminous materials.

**Highest Quality
Conductive Silicone Rubber
Available**



Each Silicone-rubber electrode is moulded to and mechanically bound to a metal plate. Bolts to wand.



TINKER RASOR
ELECTRODE PRICE LIST FOR USE WITH TINKER RASOR MODEL AP AP/W

PART NO.	DESCRIPTION	LIST PRICE
HALF CIRCLE SPRING ELECTRODES		
055-001	3/4" - 1-1/2" HALF CIRCLE ELECTRODE	\$40.00
055-002	2" HALF CIRCLE ELECTRODE	\$45.00
055-003	3" HALF CIRCLE ELECTRODE	\$50.00
055-004	4" HALF CIRCLE ELECTRODE	\$55.00
055-006	6" HALF CIRCLE ELECTRODE	\$60.00
055-008	8" HALF CIRCLE ELECTRODE	\$65.00
FULL CIRCLE SPRING ELECTRODES W/COUPLINGS		
055-020	2" FULL CIRCLE ELECTRODE	\$48.50
055-030	3" FULL CIRCLE ELECTRODE	\$52.50
055-040	4" FULL CIRCLE ELECTRODE	\$53.50
055-060	6" FULL CIRCLE ELECTRODE	\$61.50
055-080	8" FULL CIRCLE ELECTRODE	\$67.00
055-100	10" FULL CIRCLE ELECTRODE	\$72.50
055-120	12" FULL CIRCLE ELECTRODE	\$79.00
055-140	14" FULL CIRCLE ELECTRODE	\$85.00
055-160	16" FULL CIRCLE ELECTRODE	\$90.50
055-180	18" FULL CIRCLE ELECTRODE	\$96.00
055-200	20" FULL CIRCLE ELECTRODE	\$98.00
055-240	24" FULL CIRCLE ELECTRODE	\$109.00
055-260	26" FULL CIRCLE ELECTRODE	\$115.00
055-300	30" FULL CIRCLE ELECTRODE	\$125.00
055-360	36" FULL CIRCLE ELECTRODE	\$142.00
055-400	40" FULL CIRCLE ELECTRODE	\$152.00
055-420	42" FULL CIRCLE ELECTRODE	\$165.50
055-480	48" FULL CIRCLE ELECTRODE	\$175.00
055-109S	COUPLINGS, ELECTRODE SET	\$31.00
139-002	SPRING, ELECTRODE, 10' LENGTHS	\$221.00
SILICONE - RUBBER BRUSH ELECTRODE:		
055-025	2" WIDTH SILICONE ELECTRODE	\$55.75
055-045	4" WIDTH SILICONE ELECTRODE	\$74.75
055-065	6" WIDTH SILICONE ELECTRODE	\$80.00
055-085	8" WIDTH SILICONE ELECTRODE	\$85.00
055-125	12" WIDTH SILICONE ELECTRODE	\$87.50
055-165A	16" WIDTH SILICONE ELECTRODE	\$90.00
055-365	36" WIDTH SILICONE ELECTRODE	\$174.80
	SILICONE CONDUCTIVE RUBBER:	
	1/8" X 36" X 36" SHEET (\$.49 per SQUARE INCH)	\$640.00
PART NO.	DESCRIPTION	LIST PRICE
WIRE BRUSH ELECTRODE:		
055-041	4" WIDTH WIRE BRUSH ELECTRODE	\$46.00
055-061	6" WIDTH WIRE BRUSH ELECTRODE	\$69.00
055-081	8" WIDTH WIRE BRUSH ELECTRODE	\$92.00
055-121	12" WIDTH WIRE BRUSH ELECTRODE	\$138.00
055-161	16" WIDTH WIRE BRUSH ELECTRODE	\$184.00
055-136	36" WIDTH WIRE BRUSH ELECTRODE	\$414.00
"CUSTOM MADE ELECTRODES ARE AVAILABLE"		
"ALL PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE."		