

# W-Series

## Portable MPI Equipment Kits & Accessories

Yokes



### Portable Yokes

Compact, Light Weight  
Comfortable to Handle  
High Quality Power Cord  
Rugged Strain Relief / Cord Protector  
Sealed Switch, Urethane Rubber Housing  
CE / UL / CSA Certified

### Portable Coils

AC, AC/DC, Pulse DC, Full Wave DC  
Full Featured, Light Weight, Powerful  
High Quality Power Cord,  
Rugged Strain Relief / Cord Protector  
Sealed Switch  
Urethane Rubber Housing  
CE / UL / CSA Certified

### Accessories & Kits

Yoke Kits, Inspection Booths  
Pocket Magnetometers  
Pull Test Bars  
Centrifuge Tubes, Pie Gauges  
QQI's, Castrol Strips, Powder Bulbs  
MTU Blocks, Portable Inverter Yoke Supplies

Coils



Kits & Accessories



# Western Instruments

Established 1965

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## **W-Series of Portable Magnetic Particle Inspection Equipment**

Western Instruments has manufactured Quality Inspection Equipment for over 50 Years. W-Series are portable MT tools consist of 25 models of Yokes, 18 Models of Coils, Yoke Kits, Mobile Inspection Stations, and Accessories.

### **INTRODUCTION TO W-SERIES YOKES**

Virtually all of our Yokes are Compact in size, making them lighter and more comfortable to hold than other competitive models, but still meeting industry specifications. Our Yokes are offered in 2 basic design types, the WC and WE-Series. Construction materials and techniques used in the manufacture of W-Series Yokes ensure they outlast any competitive products.

WC-Series Yokes are not like traditional designs of Yokes. Switching the power load is done with an easily replaceable electronic Power Module, housed between the Power Cord and the Yoke's internal coil. As the Module handles the load, the finger activation switch only handles half a watt of power and is why we warranty this switch for 2 years.

WE-Series Yokes are only similar to traditional designs of Yokes in that we use a typical switch found in most competitive Yokes. Unlike competitive designs, WE-Series Yokes use Western Instrument's superior power cord strain relief assembly. This same series of Yoke has resulted in our WE-3LT, which is the worlds lightest and most comfortable Yoke.

### **AC YOKES**

#### **WC-6 AC Safety Yoke**

The WC-6 is the W-Series AC Safety Yoke, as it is totally grounded (Switch, Module, Frame, and Coil), giving the operator confidence in his electrical protection.

Western Instruments offers models similar to the WC-6, but designed for low voltage operation common in Europe (42 and 48 VAC). The success of the WC-6 lead to the development of Western's WC-6x2, designed for testing coated workpieces, as it lifts over 20 pounds (9kg). The WC-6 is available in Water Resistant and Underwater versions.



Models:	WC-6 (115V) WC-6K (230V)
Current:	4 Amps (115V/60Hz), 2 Amps (230V/50Hz)
Weight:	WC-6 - 6.5 Pounds (3Kg)
Voltage:	115 (WC-6) and 230 (WC-6K)
Frequency:	50 or 60 Hz
Lift:	10 Pounds (4.6Kg) Minimum
Capacity:	0-11" (280mm)
Cord:	8', 3-18 SOOW
Finish:	Red Urethane Rubber

## WE-3 SERIES YOKES

The WE-3HD is not our lowest price Yoke, that position is held by the WE-3, which uses the same low cost power cord and strain relief as competitive Yokes.



**WE-3HD**  
Heavy Duty  
AC Yoke

Voltage: 115 and 230 VAC Nominal (60r12VDC)  
Models: WE-3 / WE-3HD (115 Volt)  
WE-3 / WE-3HDK (230 Volt)  
Current: 4.0 Amps (115V), 2 Amps (230V)  
Frequency: 50 or 60Hz



**WE-3**  
Economy  
AC Yoke

Cord Length: WE-3 / 8'(2.5m), AWG3-16 SJOW  
WE-3HD / 8'(2.5m), AWG3-16 SOOW  
Lift: 10 pounds (4.6kg) minimum  
Capacity: 0 to 11" (280mm)  
Finish: Black Urethane Rubber  
Weight: 7.2 pounds (3.3kg) with cord

## WE-3LT

Light Weight AC Yoke



Voltage: 115 or 230 VAC Nominal  
Models: WE-3LT (115 Volt)  
WE-3LTK (230 Volt)  
Current: 4.0 Amps (115V), 2 Amps (230V)  
Weight: 5.2 Pounds (2.4Kg)  
Cord Length: 8' (2.5m), 3-18 SOOW  
Frequency: 50-60 Hz  
Lift: 10 pounds (4.6kg) minimum  
Capacity: 0 to 11" (280mm)

The WE-3LT lifts over 5kg (10 Pounds), but is far more compact than any other AC Yoke. This model uses Grain Oriented Iron Laminations, so there is 40% less weight and size than any other AC Yoke.

## W-6CS

Convay Access AC Yoke (WE-Series)



Model: W-6CS or W-6CSK  
Voltage: 115VAC @ 60Hz or 230VAC @ 50Hz(K)  
Current: 4 Amps(115VAC) or 2 Amps(230VAC)  
Lift: 10 Pounds (4.6kg) minimum  
Pole Spacing: 0 - 15" (0 - 380mm)  
Weight: 8 Pounds (3.6kg)  
Power Cord: 8 feet, 3-16 SOOW  
Housing: Urethane Rubber

This Yoke was developed due to customer requests for safer and faster Wet Method Inspection in tight spaces or unusual work piece configurations, such as inside pump housings, castings, etc.

## AC/DC Yokes WE-7 • AC/DC Yoke



Models:	WE-7 (115V) WE-7K (230V)
Voltage:	115V/60Hz or 230V/50Hz
Current:	4.0 Amps (WE-7) 2.0 Amps (WE-7K)
Cord Length:	12'(3.7m), 3-18 SOOW
Lift:	AC-10 pounds (4.6kg) DC-50 pounds (23kg)
Capacity:	0 to 11" (0-280mm)
Finish:	Black Urethane Rubber
Weight:	7.5 pounds (3.5kg)

The WE-7 is Western Instrument's 5th generation of AC/DC Yoke, and finally the industries most rugged and reliable unit. The output field is changed from AC to DC with a simple toggle switch, however DC intensity is infinitely adjustable for operator convenience.

## DC Yokes WC-8 • 12 Volt DC Yoke



Weight:	6.5 pounds (3kg)
Voltage:	12 Volts DC
Current:	1 Amp
Capacity:	0 to 11" (280mm)
Lift:	50 Pounds minimum (23kg)
Cord:	2' Coil, extends to 6'
Finish:	Red Urethane Rubber
Charger (Gel Cells):	100 to 250VAC, 50 to 60 Hz
Batteries:	3, 7, & 12 Amp Hour

Offered with 3 different models of Battery Packs and a universal 100 to 240VAC Charger. The WC-8 draws less than 1 Amp, so even the smallest battery pack gives an inspector a full day of testing capability. A dual output battery pack allows the connection of a 12 Volt UV Lamp.

## WC-9 Cordless DC Yoke



Models:	WC-9
Voltage:	Battery - 13.2 VDC
Charger:	100 to 250 VAC, 50 to 60 Hz
Amperage:	Yoke - 0.5 Amps @ 13.2 VDC
Battery:	3 AMP Hour, NiMH
Capacity:	0-11" (280mm)
Lift:	50 Pounds (23Kg) Min
Weight:	7.8 Pounds (3.5Kg)

The WC-9 draws 1 Amp, so the 13.2 Volt Battery (3 Amp Hours) provides a full 3 hours of continuous operation, or a full working day for most inspectors. The individual cells of the WC-9's Battery Pack are not 'potted', so the Pack can be rebuilt. The universal 100 to 240VAC Charger allows the WC-9 to be used anywhere in the world.

## PERMANENT MAGNET YOKES

The W-Series product line includes 3 different models of Permanent Magnet Yokes. These models consist of two traditional hinged frame models and a Cable type configuration, for high performance needs. All 3 models use Rare Earth Magnets, that lift 60 pounds (27kg), so recharging isn't required.



Capacity:	>50 Pounds (23 Kg)
Field Strength with Tips in Contact:	
WM-5C	10900 Gauss 2mm (0.80") Air Gap
Field Strength with 2" (50mm) Air Gap:	
WM-5C	5700 Gauss (Single Pole Only)
Pole Spacing:	
WM-5C	0-24" (0-610mm)
Weight	
WM-5C	2 Pounds (0.9 Kg)



Capacity:	All are >50 Pounds (23 Kg)
Field Strength with Tips in Contact:	
WM-5	9200 Gauss
WM-5LT	8500 Gauss
Field Strength with 2" (50mm) Air Gap:	
WM-5	510 Gauss
WM-5LT	380 Gauss
Pole Spacing:	
WM-5	0-14" (0-350mm)
WM-5LT	0-14" (0-350mm)
Weight:	
WM-5	5 Pounds (2.3 Kg)
WM-5LT	3 Pounds (1.4 Kg)

The Hinged Frame Models have exclusive Dual Contact Foot Surfaces, that rotate to ensure maximized contact. The WM-5 is of a similar size to competitive models, with the WM-5LT being far lighter and smaller. This cable configuration allows a great deal of flexibility to conform to many different workpieces, with the ergonomic hand grips ensure easy removal from the workpiece.

## Portable MPI Kits

Western Instruments offers 6 Models of Portable Yoke Kits, which are packaged in 3 different Cases. These Kits vary from a simple Yoke carrying case, our Basic Dry Method Kit, topped off by our exclusive Self Contained Wet Fluorescent.



### Our most Economical Kit

#### Basic Dry Method (W-DMB)

- Carrying Case
- Customer Selected Yoke
- Powder Bulb
- 2 x ¾ Pounds (350g) of Dry Method Powder: Grey, Red, Black, and Yellow
- Field Indicator (Magnetometer)
- Operator Instruction & Calibration Certificate
- Illustrated as a WC-6-DMB*

### **Deluxe Dry Method (W-DM)**

Carrying Case  
Customer Selected Yoke  
Powder Bulb  
4x1.75 Pounds (800g) of Dry Method  
Powder: Grey, Red, Black, and Yellow  
Field Indicator (Magnetometer)  
Operator Instruction & Calibration Certificate  
*Illustrated as a WE-3HD-DM*



### **Wet Method Basic (W-WMB)**

Carrying Case  
Customer Selected Yoke  
1 Aerosol Can of Cleaner/Remove,  
1 Aerosol can of White Contrast Paint  
1 Aerosol Cans Black Oxide Bath  
Field Indicator (Magnetometer)  
Operator Instruction & Calibration Certificate  
*Illustrated as a WM-5LT-WMB*



### **Wet/Dry Method (W-WD)**

Carrying Case  
Customer Selected Yoke, Powder Bulb  
4x1.75 Pounds (800g) of Dry Method  
Powder: Grey, Red, Black, and Yellow  
2 Aerosol Cans of Cleaner/Remove,  
1 Aerosol can of White Contrast Paint  
1 Aerosol can of Black Oxide Bath  
Field Indicator (Magnetometer)  
Operator Instruction & Calibration Certificate  
*Illustrated as a WC-6-W-WD*



### **Visible Wet Method Kit (W-WM)**

Carrying Case  
Customer Selected Yoke  
Field Indicator (Magnetometer)  
2 Aerosol Cans of Cleaner/Remove,  
White Contrast Paint & Black Oxide Bath  
Operator Instruction & Calibration Certificate  
*Illustrated as a WC-6-WM*

### **Self Contained Wet Fluorescent (W-SWF)**

Carrying Case  
Customer Selected Yoke  
Field Indicator (Magnetometer)  
4 Aerosol Cans of Cleaner/Remove  
2 Aerosol Cans White Contrast Paint  
2 Aerosol Cans Black Oxide Bath  
Complete SPR 365 Fluorescent LED Flash Light Kit  
Operator Instruction & Calibration Certificate  
*Illustrated as a WC-6-SWF*



## INTRODUCTION TO W-SERIES COILS

The W-Series includes 4 general groups of Coils, WA-Series of light duty AC Coils, WP-Series of medium duty AC/HWDC Coils, WS-Series of High Power Pulse DC Coils and the WD-Series of powerful heavy duty DC Coils. WA, WP, and WS-Series Coils share our common A/P/S Platform with 4 ID sizes. WD-Series Coils are powerful DC Coils offered in 6 ID Sizes for Magnetic Particle Inspection, that out power even the largest Power Packs and Cable Wraps

### WA-SERIES

WA-Series can best be described as Light Duty or a Utility Grade Coil. No matter which ID Size, WA-Series Coils have an AC Output of over 4000 Amp Turns on 115 Volt / 60 Hertz Power and over 5000 Amp Turns with 230 Volt / 50 Hertz Power. The 4 models of WA-Series Coils are the WA-8, WA-10, WA-12, and WA-14, with respective ID sizes of 8" (203mm), 10" (254mm), 12" (305mm), and 14" (356mm).

As an entry level Coil, WA-Series Coils are very economically priced. This economy is a result of our consistency in assembly, and limiting the choices to Size and activation by a Foot Switch or an intermittent Energize Button. AC Coils are effective for finding surface breaking defects on work pieces with little wear, but where stress results in the highest cause of component failure. An AC Coil will only affect the surface of a workpiece, and the Eddy Currents that form just below the surface act as a shield to any magnetism in the body of the workpiece. Thus AC only offers a Surface Following Demagnetization Field.



MODEL	ID SIZE	115V/60Hz	230V/50HZ	OUTPUT
WA-8	8"/201 mm	13 Amps	6.5 Amps	4,250
WA-10	10"/254 mm	15 Amps	8 Amps	4,150
WA-12	12"/305 mm	16 Amps	9 Amps	4,050
WA-14	14"/355 mm	16 Amps	9 Amps	3,875

### WP-SERIES

Western Instruments WP-Series of Portable MPI Coils is possible from the completely new A/P/S Coil Platform, not based on any existing type of Coil, but developed from Customer input and our advanced Electro-Mechanical Engineering. WP-Series Coils are offered in 4 different ID Sizes; 8"/203mm, 10"/254mm, 12"/305mm and 14"/355mm, and have been appropriately named; WP-8, WP-10, WP-12, WP-14. Base models of WP-Series Coils are AC, with a Specially Designed Half Wave (Pulsed) DC output, with similar DC characteristics as an AC/DC Yoke. WP-Series Coils are being offered with 4 different Control Packages;



- AC:** 4000 Amp Turns of AC  
WP-8, WP-10, WP-12, WP-14
  - AC/DC:** 4000 Amp Turns of AC and 6000 Amp Turns of DC Output  
WP-8D, WP-10D, WP-12D, WP-14D
  - AC/ Variable DC:** 4000 Amp Turns of AC and 0 to 6000 Amp Turns of DC Output  
WP-8DV, WP-10DV, WP-12DV, WP-14DV
  - AC/ Variable & Reversing DC:** 4000 Amp Turns of AC and 0 to 6000 Turns of DC Output  
WP-8DVR, WP-10DVR, WP-12DVR, WP-14DVR
- Note:** WS-230VAC Models have an AC Output of 5,000 and a DC Output of 7,500

## WP - Series continued...

MODEL	FEATURES	SIZE	115V/60Hz	OUTPUT	
WP-8	AC only Coil	8"/201 mm	13 Amps	6.5 Amps	4250 AC
WP-8D	AC and DC Coil	8"/201 mm	13 Amps	6.5 Amps	4150 AC / 6000 DC
WP-8DV	AC with Variable DC Coil	8"/201 mm	13 Amps	6.5 Amps	4150 AC / 0 to 6000DC
WP-8DVR	AC with Variable and Reversing DC Coil	8"/201 mm	13 Amps	6.5 Amps	4150 AC / +/- 0 to 6000DC
WP-10	AC only Coil	10"/254 mm	15 Amps	8 Amps	4150 AC
WP-10D	AC and DC Coil	10"/254 mm	15 Amps	8 Amps	4150 AC / 6000 DC
WP-10DV	AC with Variable DC Coil	10"/254 mm	15 Amps	8 Amps	4150 AC / 0 - 6000 DC
WP-10DVR	AC with Variable and Reversing DC Coil	10"/254 mm	15 Amps	8 Amps	4150 AC / +/- 0 to 6000 DC
WP-12	AC only Coil	12"/305 mm	16 Amps	9 Amps	4050 AC
WP-12D	AC and DC Coil	12"/305 mm	16 Amps	9 Amps	4050 AC / 6000 DC
WP-12DV	AC with Variable DC Coil	12"/305 mm	16 Amps	9 Amps	4050 AC / 0 to 6000 DC
WP-12DVR	AC with Variable and Reversing DC Coil	12"/305 mm	16 Amps	9 Amps	4050 AC / +/- 0 to 6000 DC
WP-14	AC only Coil	14"/355 mm	18 Amps	10 Amps	3875 AC
WP-14D	AC and DC Coil	14"/355 mm	18 Amps	10 Amps	3875 AC / 6000 DC
WP-14DV	AC with Variable DC Coil	14"/355 mm	18 Amps	10 Amps	4050 AC / 0 to 6000 DC
WP-14DVR	AC with Variable and Reversing DC Coil	14"/355 mm	18 Amps	10 Amps	3875 AC / +/- 0 to 6000 DC



## WS-Series

Western Instruments WS-Series of Portable MPI Coils is also possible from the completely new A/P/S Coil Platform, not based on any existing type of Coil. These new WS-Series Coils have been specifically developed for Drill Pipe Inspection. This new Coil platform was developed from Customer input for a simple to use, low cost yet powerful Mag-Coil (1,200 Amp Turns per inch of ID). Threaded Connection Inspection on Drill Pipe is typically performed with little regard for precise output controls like those found on our WD-Series Coils. These WS Coils meet the output requirements of DS1 and NS-2 where high Amp Turns are required. However, Auditors typically demand an Amp Meter, and other controls. You won't find AC Output or Demag features just brute magnetizing.

WS-Series can be called the 21st Century version of Drilco® Coils, as their output characteristics are similar to those old successful Smith International® Drill Pipe Coils.

### Specifications:

**Models:** WS-8 (WS-8K), WS-10 (WS-10K), WS-12 (WS-12K), and WS-14 (WS-14K) **Voltage:** 115 VAC - 60 Hz (WS-12) 230 VAC - 50 Hz (WS-12K)

**Current:** 115/60 Models 10 to 18 Amps **Capacity:** 400+ Gauss at Center and 1,200 Amp Turns per inch of ID  
230/50 Models 6 to 11 Amps.

**ID Sizes:** 8" (201mm), 10" (254mm), 12" (305mm) 14" (355mm)

**Depth:** 3" (92mm)

**Weight:** WS-8, 14 pounds (3.7kg), WS-10, 15.5 pounds (7kg); WS -12, 17 pounds (7.7kg), WS-14; 19 pound (8.5kg)

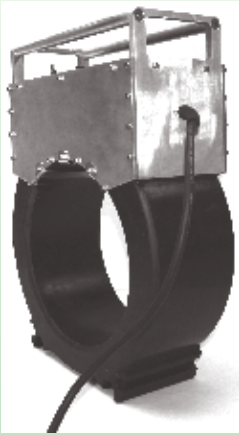


## WD-SERIES

WD-Series Coils are Western Instruments premier products that have gained a World Wide reputation. The WD-Series Power Supply, mounted to the top of the Coil, offers the operator Infinite Variable Control on the DC Output of the Coil. All WD-Series Coils have a DC output greater than 1,000 Amp Turns per inch of ID, meeting the most stringent specifications. WDV-Series Coils have gained a very favorable reputation for their manual Reversing DC Demagnetization capability.

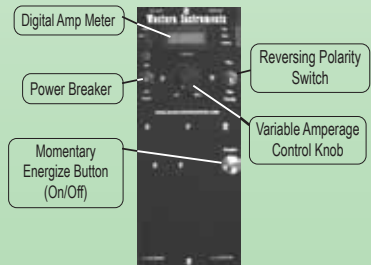


## WD - Series continued...



Reversing DC Demag is accomplished by Reversing the Polarity Switch, Reducing the Amperage followed by a brief shot, by Energizing the Coil. This Reducing - Reversing step is repeated, until the Field is reduced to a desirable level. The AC Option can be selected if the operator wants to Demag small parts, or must inspect in an active AC Field. The AC Option is also variable and provides an output of 0 to over 5000 Amp Turns. The output from WD-Series Coils might be referred to as Rectified DC, but as the current passes through over 1000 Turns of wire, the field is virtually Full Wave DC. To aid particle mobility, WD-Series Coils are also offered with a Pulsed DC Option, for a true Active Field inspection when set on Pulsed, the Coil is turned off and on at over 80 times per minute, again with a fully variable output. These powerful WD-Series Coils operate from just 230/50 or 115/60 AC power.

Model	ID Size	115/60	230/50	Output
WDV-8	8.5"/216 mm	11 Amps	6.5 Amps	11,500
WDV-10	10.5"/267 mm	12 Amps	7 Amps	12,000
WDV-14	14"/368 mm	14 Amps	8 Amps	15,000
WDV-16	16"/406 mm	Not Available	10 Amps	17,000
WDV-18	18"/457 mm	Not Available	11 Amps	19,000
WDV-25	25"/635 mm	Not Available	14 Amps	25,000



### Pipeline Pre-Weld Demag

WD-Series Coils have become the premier Pipeline Pre-Weld Demagnetisation System used to increase weld production and Weld Quality on the right of way, Process Plant, or in the Fab Shop. Welders will agree that defects can be traced to Arc Blow, due to magnetization of the workpiece edges. Western's System uses Reducing and Reversing DC Fields to achieve full Demagnetization.

When dealing with the strength of Magnetic Fields due to the mass of pressure piping, AC Fields simply don't work due to the strength of the field required to neutralize the dipoles that create a magnetic field. When strong magnetic fields exist, Reducing and Reversing DC Fields create a magnetic plug, stopping the ability of the magnetism to creep back toward the pipe end.

### W-IC Inspection Booths

W-Series Products include mobile and fixed Inspection Booths. These W-IC Booths are ordered in a standard width of 800mm (32"), and in lengths of 1200mm (40"), 1.8m (6'), 2.4m (8'), or longer. Specifications for W-IC's have not been listed as configurations are numerous. Inspection Booths are used in conjunction with Yokes and Coils, on either a batch or production basis. However, they have been fitted with small Power Packs and fixed or split coils.





### W-IC Inspection Booths continued...

Inspection Booths are typically supplied with a Wet Fluorescent Bath Agitation and Supply (recirculation) System. Inspection Booths include White, and UV Light Sources, as well as hood Exhaust Fans. Hoods can be either fixed or with a retraction system. To supply these features a power bar, with individual switches, is mounted under the hood to independently control inspection equipment (Yoke, Coil, UV Lamp) and accessories (White Light, Fan, Bath Pump).

To assist in an effective inspection or to aid the operator, Inspection Booths can be supplied with workpiece support fixtures, such as Steady Rests for round or cylindrical parts or Part Shelves for small parts. Due to the portable nature of the equipment (Yoke and/or Coil), parts can simply be supported by the operator during magnetizing,

application of bath, inspection or demagnetization. However, Coils are often suspended from the ceiling of the booth, or fixed to Coil Carts on longitudinal travel rails.

## MPI Accessories

The W-Series Product Line offers numerous Magnetic Particle Operating Accessories, to evaluate magnetism, equipment performance, defect sensitivity, etc.

### W-FI Field Indicators



W-FI, Pocket Magnetometers  
W-FI-10, W-FI-20,  
W-FI-50 available with certification

Verification Fixtures for W-FI Magnetic Field Indicators. Available in Positive or negative models to demonstrate linearity.



W-FI Magnetic Field Indicators  
Linearity Demonstration Kit.  
Illustrates linearity between  
3 Models of W-FI's

### W-PT Pull Test Bars

Available as single Bars for AC Yokes and sets of 4 or 5 for DC Yokes. Also available as W-PT-DB with artificial defects. Aid for Training or Demonstration



W-CT for settling tests. This type of Centrifuge Tube is manufactured to meet ASTM requirements for Wet Visible or Wet Fluorescent Baths. Most reliable method for verifying Bath Concentrations and Cleanliness. Also available with Western's unique stand.

### QQI's Quantitative Quality Indicators



The 5 Types are the most advanced Artificial Defect devices available and permit Field Leakage measurements with digital Magnetometers



### Castrol Strips

Western offers both types of Castrol Strips Flexible Magnetic Flux Indicators. Type G or Type I or Gold, Type A or Type II or Silver

### Pie Gauge

The W-PG Pie Gauge is manufactured to all applicable MPI Reference Specifications. Pie Gauges are the most traditional method to confirm field sensitivity. While not as sensitive as Castrol Strips or QQI's, Pie Gauges are extremely robust and part of every seasoned MT Inspectors kit.



### Yoke Portable Power Pack

Western's Portable Power Supply (W-PPS) is designed to work with any of Western's AC or AC/DC Yokes. It provides AC Mains power for up to 2 hours.

### MTU Test Piece #3

This test piece was developed to evaluate the performance of a Wet Method Bath on a known and recorded pattern of Surface Cracks. Not particularly practical for portable inspection applications, but is a widely accepted test standard.



## MPI Accessories continued...



The SPR-365 UV Lamp makes a great addition to Western's W-Series line of Portable Magnetic Particle Testing Equipment. Small and convenient yet powerful as traditional Portable Lamps at a competitive price.

The SPR-365 Kit is supplied with; LED Flashlight (w/Battery), Nylon Pouch, Spare Battery, Battery Charger with 12VDC and 115/230 VAC Adaptors, Spot and Diffusing Reflectors, UV Protective Spectacles, Carrying Case, Operator Manual, and Calibration Certificate.



### Ketos Ring

This test piece is intended to be use to evaluate the performance of Wet Method Bath on a powerful DC Field. Again not particularly practical for portable inspection applications, but is a widely accepted test standard.



**Powder Bulbs - W-PB-4** is Western's most popular Dry Method Powder Bulb. Again an original design and not adapted from another industry. The W-PB-4 is easy to fill, and is optimal for dispensing an even and light dusting of Iron Powder.

**W-PB-12** is an extremely large Dry Method Powder Bulb, and is a modification of Carpenter's Glue Dispencer. Commonly used in the Oilfield on Drill Stems, where large volumes of Powder are applied to the entire surface of a nominal length of Drill Pipe.



### Berthold Pentameter

The Berthold Pentameter is an alternate test piece with the Pie Gauge (W-PG). This test piece is somewhat obsolete due to its delicate adjustment mechanism, and cost of manufacture.

Distributed By



# Western Instruments

Established 1965

Portable MPI Equipment - Pit Gauges - UT Systems - NDT Accessories