

# Precision Tools, Devices & Instruments For Telecom, Computer and Electronic Industries



**OK Industries**

Division of Jonard Industries Corp.

**OK Industries. Connecting Technologies.**

Catalog #104

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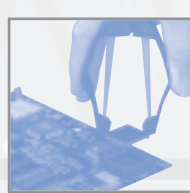
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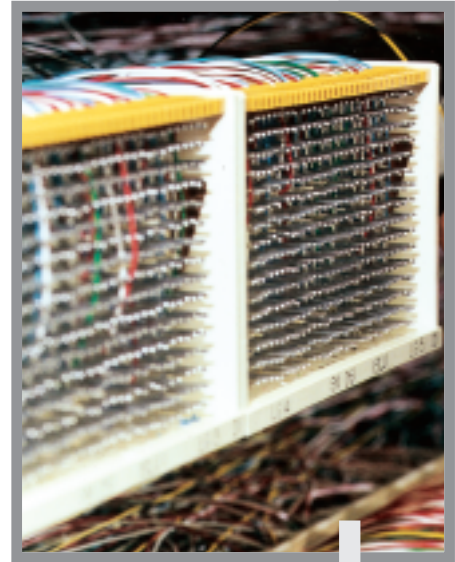
**TECHNOLOGY**

**PRECISION**

**QUALITY**

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# ENHANCING NETWORK RELIABILITY WITH OK INDUSTRIES



Founded in 1946, OK Industries is a major force in the telecommunications and electronics industries and is a division of Jonard Industries Corp. We are a global manufacturer of hand tools for the interconnection of communications networks. Our dependable products employ precision technologies for the preparation and connection of copper cables in applications including public and enterprise voice and data communications. Ask for OK Industries when you wish to build reliability into your networks.

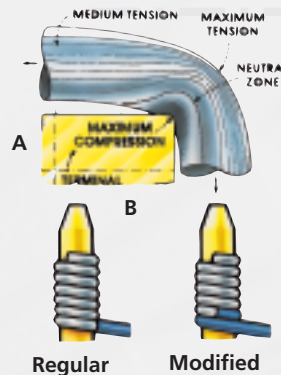


# WIRE WRAPPING OVERVIEW

Wire Wrapping is a method of making a wire connection by coiling the bare wire around the sharp corners of a terminal under mechanical tension. The technology was developed as an alternative to soldering, which presents various safety and reliability problems in many applications. A principal advantage of wire wrapping is that it provides a high-reliability connection that is also easily removed to correct or modify a wiring layout. Wire wrapping subjects the wire to tremendous tension and compression forces, causing the oxide layer on both wire and terminal to be crushed or sheared, resulting in a clean, oxide-free metal-to-metal contact. A standard wrap is generally used for 24 AWG and larger diameter wires; a modified wrap is typically used for 24 AWG and smaller wires, and is used almost exclusively for 28 to 30 AWG wires. In either case, the wrap style affects only the connection's mechanical stability; both styles provide suitable electrical connections.

## METAL-TO-METAL CONTACT

By bending the wire around the sharp corner of the terminal, the oxide layer on both wire and terminal is crushed or sheared, and a clean, oxide-free metal-to-metal contact is obtained.



## STRIP FORCE CHART \*

Wire Size AWG	Dia.		Min. number of turns (Bare Wire)	Min. strip force	
	inches	mm		lbs.	gms
16	.051	1.30	4	15	6800
18	.0403	1.00	4	15	6800
20	.032	0.80	5	8	3600
22	.0253	0.65	5	8	3600
24	.0201	0.50	6	7	3200
26	.0159	0.40	7	6	2700
28	.0126	0.32	7	5	2200
30	.0100	0.25	7	3.3	1500

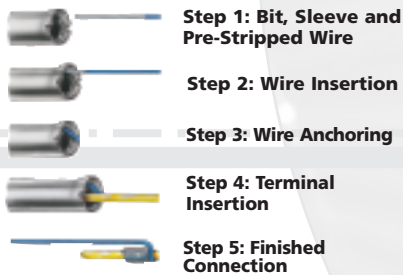
\*Conforms to MIL-STD-1130B

## TYPES OF WRAP

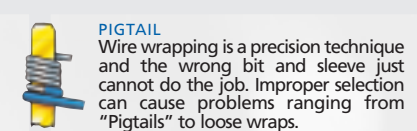
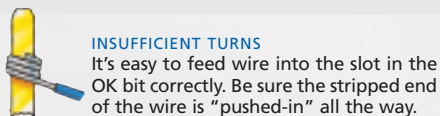
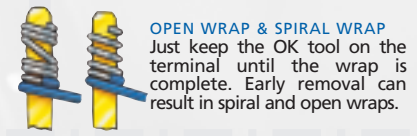
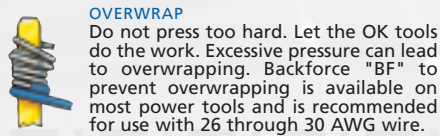
A "Regular" bit wraps the bare wire around the terminal. A "Modified" bit wraps a portion of insulation around the terminal in addition to the bare wire. This greatly increases the ability to withstand vibration.

## HOW TO MAKE WIRE

### WRAPPED CONNECTIONS



## SOME HINTS ON MAKING WRAPPED CONNECTIONS



## TERMINAL DIAGONAL CHART

## DIMENSION B

In.	.010	.015	.020	.025	.030	.035	.040	.045	.050	.055	.060	.065	.070	.075	.080	.085	.090	.095	.100
mm	0.25	0.38	0.51	0.64	0.76	0.89	1.02	1.14	1.27	1.40	1.52	1.65	1.78	1.91	2.03	2.16	2.29	2.41	2.54
.010	.014	.018	.022	.027	.032	.036	.041	.046	.051	.056	.061	.066	.071	.076	.081	.086	.091	.096	.101
.025	0.36	0.46	0.56	0.69	0.81	0.91	1.04	1.17	1.30	1.42	1.55	1.68	1.80	1.93	2.06	2.18	2.31	2.44	2.57
.015	.018	.021	.025	.029	.033	.038	.043	.047	.052	.057	.062	.067	.072	.077	.082	.087	.092	.097	.102
.038	0.46	0.53	0.64	0.74	0.84	0.97	1.09	1.19	1.32	1.45	1.58	1.70	1.83	1.96	2.08	2.21	2.34	2.46	2.59
.020	.022	.025	.028	.032	.036	.040	.045	.049	.053	.058	.063	.068	.073	.078	.083	.088	.093	.098	.103
.051	0.56	0.64	0.71	0.81	0.91	1.02	1.14	1.25	1.35	1.47	1.60	1.73	1.85	1.98	2.11	2.24	2.36	2.49	2.62
.025	.027	.029	.032	.035	.039	.043	.047	.050	.056	.060	.065	.069	.074	.079	.084	.089	.094	.099	.104
.064	0.69	0.74	0.81	0.89	0.99	1.09	1.19	1.27	1.42	1.52	1.65	1.75	1.88	2.01	2.13	2.26	2.39	2.52	2.64
.030	.032	.033	.036	.039	.042	.046	.050	.054	.058	.062	.067	.071	.076	.080	.085	.090	.095	.100	.105
.076	0.81	0.84	0.91	0.99	1.07	1.17	1.27	1.37	1.47	1.58	1.70	1.80	1.93	2.03	2.16	2.29	2.41	2.54	2.67
.035	.036	.038	.040	.043	.046	.049	.052	.056	.060	.064	.069	.073	.078	.082	.087	.091	.096	.101	.106
.089	0.91	0.97	1.02	1.09	1.17	1.25	1.32	1.42	1.52	1.63	1.75	1.85	1.98	2.08	2.21	2.31	2.44	2.57	2.69
.040	.041	.043	.045	.047	.050	.052	.056	.060	.064	.068	.072	.076	.080	.084	.089	.092	.097	.102	.107
.102	1.04	1.09	1.14	1.19	1.27	1.32	1.42	1.52	1.63	1.73	1.83	1.93	2.03	2.13	2.26	2.34	2.46	2.59	2.72
.045	.046	.047	.049	.050	.054	.056	.060	.063	.067	.071	.074	.078	.083	.087	.091	.096	.101	.105	.109
.114	1.17	1.19	1.25	1.27	1.37	1.42	1.52	1.60	1.70	1.80	1.88	1.98	2.11	2.21	2.31	2.44	2.57	2.67	2.77
.050	.051	.052	.053	.056	.058	.060	.064	.067	.071	.074	.078	.082	.086	.090	.094	.098	.103	.107	.111
.127	1.30	1.32	1.35	1.42	1.47	1.52	1.63	1.70	1.80	1.88	1.98	2.08	2.18	2.29	2.39	2.49	2.62	2.72	2.82

Example: If "A"=.020". "B"=.060". The terminal diagonal is .063" as shown on chart.

# PTX SERIES

## WIRE WRAPPING & UNWRAPPING TOOLS



The PTX Series Wire Wrapping Tools from OK Industries bring revolutionary new benefits to installers, telecom technicians and other users. With worker safety in mind, we consulted a certified ergonomist and created an ergonomic tool, which includes a lightweight, well-balanced construction, dual-finger short-throw trigger, and a long handle to mitigate pressure on the palm. These features help to prevent repetitive stresses and result in an industry-leading design from a comfort and safety standpoint. Ask for the PTX Series Wire Wrapping Tools from OK Industries — and arm your workers with the tools that offer efficiency and worker safety in your interconnect activity.

### KEY FEATURES

- Ergonomic Design — Minimizes Repetitive Stress
- Rugged Construction for Field Usage
- Battery and Electric Powered Versions Available
- Wraps and Unwraps 20 to 30 AWG Wire
- Rated Maximum Usage: 2,500 cycles/day
- For Bits & Sleeves: see Pages 7, 10-12

### ORDERING INFORMATION AND PRODUCT SPECIFICATIONS

Part No.	Description	Weight	Voltage	RPM
PTX	Battery Wrap/Unwrap Tool (Battery not included)	1.2 lb.	3.6V*	3700
PTX-1	Electric Wrap/Unwrap Tool - 115V	0.86 lb.	115V	3700
PTX-1BF	Electric Wrap/Unwrap Tool w/Backforce - 115V	0.86 lb.	115V	3700
PTX-2	Electric Wrap/Unwrap Tool - 230V	1.0 lb.	230V	4200
PTX-2BF	Electric Wrap/Unwrap Tool w/Backforce - 230V	1.0 lb.	230V	4200
PTX-KIT1	115V battery tool kit (tool, charger, (2) batteries)	1.2 lb.	3.6V*	3700
PTX-KIT1DH	PTX-KIT1 w/DFB224 and H-1000	1.2 lb.	3.6V*	3700
PTX-KIT2	230V battery tool kit (tool, charger, (2) batteries)	1.2 lb.	3.6V*	4200

\* Powered by long-life NiMH battery

### ACCESSORIES

- **PTX-B** PTX Battery, 3.6V
- **PTX-BC1** 115V Battery Charger
- **PTX-BC2** 230V Battery Charger
- **H-1000** Cordura Tool Pouch



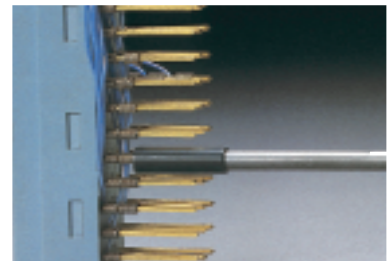
PTX-BC1



PTX-B



H-1000



**OK Industries**

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# PTX-KIT1DH

## BATTERY WIRE WRAPPING & UNWRAPPING KIT

### ERGONOMIC

**BATTERY POWERED BY  
LONG-LIFE NIMH BATTERY**



#### KEY FEATURES

- Ergonomic Design—  
Minimizes Repetitive Stress
- Rugged Construction for  
Field use
- Wraps and Unwraps  
18 to 30 AWG Wire
- Dual Finger Short-throw  
Trigger
- Rated for 2,500 Cycles/Day

#### PRODUCT SPECIFICATIONS



PTX-B



H-1000



PTX-BC1



DFB 224

**Part No.:** PTX-Kit1DH

**Kit Contains:** PTX Battery wrap/unwrap tool  
PTX-BC1 Charger  
PTX-B 2 Batteries  
DFB224 (dual function wrapping/unwrapping  
bit/sleeve set, 22-24 AWG)  
H-1000 Cordura Tool Pouch

**Weight:** 1.2 lbs.

**Voltage:** 3.6V (NiMH Battery)

**RPM:** 3,700

For a complete listing of bits and sleeves- see pages 7, 10-12

# DUAL FUNCTION

## WRAP/UNWRAP BIT & SLEEVE SETS



### OK INDUSTRIES INTRODUCES THE DFB224 & DFB2426 DUAL FUNCTION BIT/SLEEVE SETS

This innovative product represents a truly revolutionary approach to wire wrapping, by combining both the wrap and the unwrap functions into one bit/sleeve set. The bit is precision machined for high quality wrapping in the clockwise direction, but also includes the removal mechanism that is used to unwrap when operated counterclockwise. The user can quickly and easily switch back and forth between wrap and unwrap mode by retracting or extending the retractable sleeve, and flipping the switch on a wrap/unwrap power tool (i.e., a power wire wrapping tool with reversible motor). This product, which can wrap or unwrap 22–26 AWG wire (depending on set), enables the user to maximize operating efficiency while eliminating the need to purchase and carry extra tools or bits for unwrapping. Also, to prevent pin-to-pin shorting, the retractable sleeve is coated with a durable 1000V dielectric material.

Part #	Description	Wire Size AWG MM	Min. Terminal Diagonal		Max. Terminal Diagonal		Terminal Hole Depth		Terminal Hole Diameter		Effective Radius	
			IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM
DFB224	Wrap/Unwrap Bit/Sleeve Set 22-24 AWG	22/24 .50/.65	.054	1.37	.073	1.85	0.50	25.40	.075	1.90	.111	2.82
KB-DF224	Replacement bit for DFB224											
P-DF224	Replacement Sleeve for DFB224											
DFB2426	Wrap/Unwrap Bit/Sleeve Set 22-24 AWG	24/26 .40/.50	.054	1.37	.065	1.65	0.50	25.40	.066	1.67	.098	2.48
KB-DF2426	Replacement bit for DFB2426											
P-DF2426	Replacement Sleeve for DFB2426											

### HOW TO USE THE DFB224 & DFB2426

The Wrap/Unwrap bit is shipped with the sleeve set in the wrap position. To change to the unwrap function simply pull the sleeve out approximately 1/4" (the sleeve is spring loaded and you should feel some tension while pulling forward), rotate the sleeve in either direction 180° and release. The sleeve should now be seated approximately 1/4" lower than in the wrap position. This will expose the unwrap feature on the bit.

To change back to the wrap position pull the sleeve out approximately 1/2" and rotate the sleeve in either direction 180° and release. The spout should be in the 12:00 position and the sleeve should be locked in position.

Note: If you cannot rotate the sleeve, you need to pull the sleeve out further before trying to rotate the sleeve.



**OK Industries**

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# MANUAL WIRE

## WRAPPING & UNWRAPPING TOOLS



G100/R3278INS Insulated



G200/R3278 Lexan™



G100/R3278 Aluminum

### MANUAL WIRE WRAPPING TOOLS

- G200/R3278 : Lexan™
- G100/R3278 : Aluminum
- G100/R3278INS : Aluminum (insulated)
- For Bits & Sleeves : see pages 7, 10-12

For precise reliable wraps, choose the tool you want. We offer durability with our rugged aluminum tool, G100/R3278, added protection with our insulated version, G100/R3278INS, providing 1000V of dielectric strength across most of the housing, and the same reliability, light weight plus a lower cost with our Lexan® model, G200/R3278. These tools accommodate wire sizes from 22 AWG (0.65mm) thru 32 AWG (0.20mm).

### MANUAL WIRE UNWRAPPING TOOL

The combination of the G100/R3394CT unwrap tool and the PUW unwrap bit & sleeve set gives you the best tool for high speed wire unwrapping. High production, long life, low maintenance. Use Unwrap Set PUW2226 for wire AWG 20 thru 26 (0.80 thru 0.40mm).

- G100/R3394CT : Manual Wire Unwrapping Tool  
(See bit & sleeve listed below)



G100/R3394CT



Unwrap Bit Part No.	Unwrap Sleeve Part No.	Bit and Sleeve Set Set No.	Wire Size		Terminal Hole Diameter	
			AWG	mm	Inches	mm
2026-UB	SOK2230	PUW2226	20-26	0.80-0.40	.070	1.77



# MANUAL WIRE

## WRAPPING TOOL KITS

These are complete kits for technicians working at a Main Distributing Frame or for field service where wire wrapping is required. The WWK-1 Wire Wrap kit is our standard version for all 22-24 AWG applications. Our WWK-11NS Insulated Wire Wrap Kit provides the same AWG applications, plus the added safety of 1000V dielectric protection across most of the housing of the G100/R3278INS Insulated Wire Wrap Gun. Other components (P2224INS sleeve and UW4) also possess insulated properties. Both kits include our popular H-1000 cordura pouch for carrying convenience.

### TELECOM WIRE WRAP KITS

**Part No.:** WWK-1: Wire Wrap Kit

**Kit Contains:** G200/R3278 Speed Wrap Tool  
KB224 coilbite bit 22-24 AWG  
P2224 coilbite sleeve 22-24 AWG  
HW-UW-224 Wrap/unwrap tool  
ST-100 wire stripper 22-24 AWG  
H-1000 Cordura Pouch



P2224

KB224

ST-100

HW-UW-224

G200/R3278

WWK-1



WWK-11NS

**Part No.:** WWK-11NS: Insulated Wire Wrap Kit

**Kit Contains:** G100/R3278INS Insulated Speed Wrap tool  
KB224 coilbite bit 22-24 AWG  
P2224INS Insulated coilbite sleeve 22-24 AWG  
UW4 sleeved unwrapping tool 20-26 AWG  
ST-100 Wire stripper 22-24 AWG  
H-1000 Cordura Pouch



G100/R3278INS

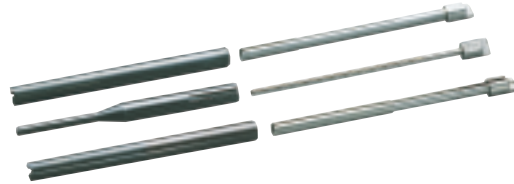
UW4

ST-100

KB224

P2224INS

# BITS & SLEEVES WIRE WRAPPING



Fully compatible with any make or model wire wrapping tool.

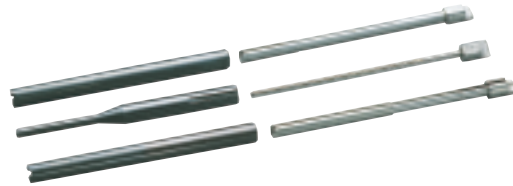
## 3" BITS AND SLEEVES CHART (AWG) INCHES

Wire Gauge (AWG)	Regular	Modified	Bit Part No.	Sleeve Part No.	Maximum Insulation Diameter Inches	Minimum Terminal Diagonal Inches	Maximum Terminal Diagonal Inches	Terminal Hole Depth Inches	Effective Radius Inches	Terminal Hole Diameter Inches
20		●	WB20M	P194LN	.059	.042	.073	1.000	.150	.075
20-22	●		KB2075	P2224	-	.042	.073	1.000	.123	.075
22	●		KB22	P2224	-	.054	.073	.750	.117	.075
22		●	WB2275M	P2224	.052	.049	.074	1.000	.132	.075
22-24	●		KB224LH	P2224	-	.061	.085	1.000	.117	.086
22-24	●		KB224-1	P2224	-	.054	.073	1.000	.111	.075
22-24	●		KB224	P2224	-	.054	.073	.807	.111	.075
22-24		●	WB224M	P2224	.050	.049	.074	1.250	.121	.075
24		●	WB24DH	P2224	.046	.054	.073	1.750	.117	.075
24	●		KB24	P2426	-	.055	.074	.750	.100	.075
24		●	*WB24SM	P3032LN	.044	.024	.043	.750	.098	.044
24-26		●	WB2426M	P2224	.046	.054	.073	.750	.118	.075
26	●		KB26	P2426	-	.058	.073	1.000	.100	.075
26		●	*WB26SM	P26LN	.031	.023	.038	.750	.075	.040
26		●	WB26M	P2224	.046	.054	.073	1.000	.118	.075
26		●	*WB2644M	P3032LN	.046	.024	.043	.750	.098	.044
26		●	WB2669M	P2426	.041	.053	.068	1.000	.109	.069
28		●	WB2870M	P2426	.034	.053	.068	1.000	.103	.070
28		●	WB285HM	P3032	.030	.031	.035	.750	.066	.036
30		●	*SB30MSH-B	P3032	.027	.031	.035	.750	.064	.036
30		●	*SB30MMK	P3032	.023	.031	.035	.750	.064	.036
30-32		●	*WB3032M	P3032	.027	.034	.038	.750	.064	.040
30-32	●		KB3032	P3032	-	.034	.038	.750	.064	.040

\*These tools are recommended for .025" square terminals on .100" centers

# BITS & SLEEVES

# WIRE WRAPPING BITS & SLEEVES



Fully compatible with any make or model wire wrapping tool.

## 3" BITS AND SLEEVES CHART METRIC

Wire Gauge mm	Regular	Modified	Bit Part No.	Sleeve Part No.	Maximum Insulation Diameter mm	Minimum Terminal Diagonal mm	Maximum Terminal Diagonal mm	Terminal Hole Depth mm	Effective Radius mm	Terminal Hole Diameter mm
0.80		●	WB20M	P194LN	1.50	1.07	1.85	25.40	3.81	1.90
0.65-0.80	●		KB2075	P2224	-	1.07	1.85	25.40	3.12	1.90
0.65	●		KB22	P2224	-	1.37	1.85	19.05	2.97	1.90
0.65		●	WB2275M	P2224	1.32	1.24	1.87	25.40	3.35	1.90
0.50-0.65	●		KB224LH	P2224	-	1.54	2.15	25.40	2.97	2.18
0.50-0.65	●		KB224-1	P2224	-	1.37	1.85	25.40	2.82	1.90
0.50-0.65	●		KB224	P2224	-	1.37	1.85	20.50	2.82	1.90
0.50-0.65		●	WB224M	P2224	1.27	1.24	1.87	31.75	3.07	1.90
0.50		●	WB24DH	P2224	1.17	1.37	1.85	44.50	2.97	1.90
0.50	●		KB24	P2426	-	1.39	1.87	19.05	2.54	1.90
0.50		●	*WB24SM	P3032LN	1.11	0.60	1.09	19.05	2.48	1.11
0.40-0.50		●	WB2426M	P2224	1.17	1.37	1.85	19.05	2.99	1.90
0.40	●		KB26	P2426	-	1.47	1.85	25.40	2.54	1.90
0.40		●	*WB26SM	P26LN	0.79	0.58	0.96	19.05	1.90	1.02
0.40		●	WB26M	P2224	1.17	1.37	1.85	25.40	2.99	1.90
0.40		●	*WB2644M	P3032LN	1.17	0.60	1.09	19.05	2.48	1.11
0.40		●	WB2669M	P2426	1.04	1.34	1.72	25.40	2.77	1.75
0.32		●	WB2870M	P2426	0.86	1.35	1.72	25.40	2.61	1.78
0.32		●	*WB285HM	P3032	0.76	0.79	0.89	19.05	1.67	0.91
0.25		●	*SB30MSH-B	P3032	0.69	0.79	0.89	19.05	1.62	0.91
0.25		●	*SB30MMK	P3032	0.58	0.79	0.89	19.05	1.62	0.91
0.20-0.25		●	*WB3032M	P3032	0.69	0.86	0.96	19.05	1.62	1.02
0.20-0.25	●		KB3032	P3032	-	0.86	0.96	19.05	1.62	1.02

\*These tools are recommended for .025" square terminals on .100" centers

# BITS & SLEEVES



OK Industries

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email: sales@jonard.com

# SPECIALIZED BITS & SLEEVES

## Bits and Insulated Sleeves

The insulated sleeves are covered with a material that provides 1000V dielectric strength which helps to prevent shorting between pins and enhances worker safety.



KB22



P2224INS

Bit Part No.	Sleeve Part No.	Wire Size		Regular	Modified	Maximum Insulation Diameter		Minimum Terminal Diagonal		Maximum Terminal Diagonal		Terminal Hole Depth		Effective Radius		Terminal Hole Diameter	
		AWG	mm			In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm
KB22	P2224INS	22	0.65	●		-	-	.054	1.37	.073	1.85	.750	19.05	.117	2.97	.075	1.90
KB224	P2224INS	22-24	0.50-0.65	●		-	-	.054	1.37	.073	1.85	.807	20.50	.111	2.82	.075	1.90
KB24	P2426INS	26	0.50	●		-	-	.055	1.39	.074	1.87	.750	19.05	.100	2.54	.075	1.90
KB26	P2426INS	26	0.40	●		-	-	.058	1.47	.073	1.85	1.0	25.40	.100	2.54	.075	1.90
KB3032	P3032INS	30-32	0.32	●		-	-	0.034	0.86	0.038	0.96	0.75	19.05	0.064	1.62	0.04	1.02

## 2" (5cm) Longer than Standard Bits & Sleeves Extended Length (5") Bits Plus Insulated and Noninsulated Sleeves

These bits and sleeves are designed for wire wrapping in areas requiring deep penetration. Their 5" (127mm) length ensures "true" connections in hard-to-get-at locations. Available with or without insulation.



KB24-5

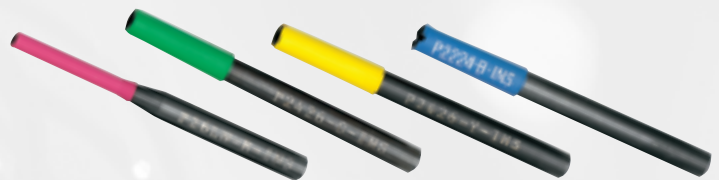


P2426-5INS

Bit Part No.	Insulated Sleeve Part No.	Uninsulated Sleeve Part No.	Wire Size		Regular	Maximum Insulation Diameter		Minimum Terminal Diagonal		Maximum Terminal Diagonal		Terminal Hole Depth		Effective Radius		Terminal Hole Diameter	
			AWG	mm		In.	mm	In.	mm	In.	mm	In.	mm	In.	mm		
KB22-5	P2224-5INS	P2224-5	22	0.65	●	-	-	.054	1.37	.073	1.85	.750	19.05	.117	2.97	.075	1.90
KB24-5	P2426-5INS	P2426-5	24	0.50	●	-	-	.055	1.39	.073	1.85	.750	19.05	.100	2.54	.075	1.90
KB26-5	P2426-5INS	P2426-5	26	0.40	●	-	-	.058	1.47	.073	1.85	.750	19.05	.100	2.54	.075	1.90

## 3" Bit & Sleeve Sets With Insulated Color Coded Sleeves

Enjoy the convenience of pre-assembled sets with insulated color-coded sleeves for easy identification of wire sizes based on color.

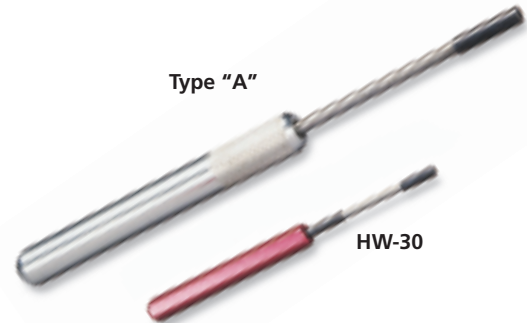


Kit Number	Bit Part No.	Sleeve Part No. Color	Wire Size		Regular	Modified	Maximum Insulation Diameter		Minimum Terminal Diagonal		Maximum Terminal Diagonal		Terminal Hole Depth		Effective Radius		Terminal Hole Diameter	
			AWG	mm			In.	mm	In.	mm	In.	mm	In.	mm	In.	mm		
KT22B	KB22	P2224-B-INS Blue	22	0.65	●		-	-	.054	1.37	.073	1.85	.750	19.05	.117	2.97	.075	1.90
KT224B	KB224	P2224-B-INS Blue	22-24	0.50-0.65	●		-	-	.054	1.37	.073	1.85	.807	20.05	.111	2.82	.075	1.90
KT24Y	KB24	P2426-Y-INS Yellow	24	0.50	●		-	-	.055	1.39	.074	1.87	.750	19.05	.100	2.54	.075	1.90
KT26G	KB26	P2426-G-INS Green	26	0.40	●		-	-	.058	1.47	.073	1.85	1.000	25.40	.100	2.54	.075	1.90
KT26R	WB26SM	P26LN-R-INS Red	26	0.40		●	.031	0.79	.023	0.58	.038	0.96	.750	19.05	.750	1.90	.040	1.02

# HAND WRAPPING AND UNWRAPPING TOOLS

## HAND WRAPPING TOOLS

These Hand Wrapping Tools are carefully designed to produce perfect wire wrapped connections. Precision, long-lasting tools for use where occasional wraps are required or where power wire-wrapping tools are not practical. Compact and convenient.



Part No.	Reg.	Mod.	Type	Wire Size		Max. Insulation Diameter		Terminal Hole Diameter		Terminal Hole Depth		Outside Diameter	
				AWG	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm
HW-20	●		A	20	0.80	-	-	.075	1.90	1.000	25.40	.218	5.53
HW-224	●		A	22-24	0.65-0.50	-	-	.075	1.90	.807	20.50	.218	5.53
HW-224LH	●		A	22-24	0.65-0.50	-	-	.086	2.18	1.000	25.40	.218	5.53
HW-26	●		A	26	0.40	-	-	.075	1.90	1.000	25.40	.218	5.53
*HW-30		●		30	0.25	.027	0.69	.036	0.91	.750	19.05	.125	3.17

\*These tools are recommended for .025" (0.63mm) square terminals on .100" (2.54mm) centers

## HAND UNWRAPPING TOOLS

These tools are used to remove wire connections using 18 thru 32 gauge wire.



Part No.	Type	Wire Size		Type of Unwrap	Terminal Hole Diameter		Terminal Hole Depth		Outside Diameter	
		AWG	mm		Inches	mm	Inches	mm	Inches	mm
UW1	D	20-26	0.80-0.40	Left Hand	.070	1.77	1.000	25.40	.156	3.96
UW2	C	20-26	0.80-0.40	Left and Right Hand	.070	1.77	1.000	25.40	.156	3.96
UW4	B	20-26	0.80-0.40	Left Hand	.070	1.77	2.360	60.00	.187	4.74
UW5	B	20-26	0.80-0.40	Left and Right Hand	.070	1.77	2.360	60.00	.187	4.74
UW093R	D	24-32	0.50-0.20	Left Hand	.038	0.96	1.000	25.40	.093	2.36
UWD93-93	C	24-32	0.50-0.20	Left and Right Hand	.038	0.96	1.000	25.40	.093	2.36
UW2832C	B	28-32	0.32-0.20	Left and Right Hand	.038	0.96	.750	19.05	.156	3.96

# HAND WRAPPING AND UNWRAPPING TOOLS

## HAND WRAPPING TOOLS

These Hand Wrapping Tools are carefully designed to produce perfect wire wrapped connections. Precision, long-lasting tools for use where occasional wraps are required or where power wire-wrapping tools are not practical. Compact and convenient.



## HAND WRAPPING AND UNWRAPPING TOOLS

To switch from wire wrapping to unwrapping takes only seconds - just a quick change of the cap from one end to the other.

WRAPPING SIDE											UNWRAPPING SIDE									
Part Number	Reg	Mod	Wire Size		Max. Insulation Diameter		Terminal Hole Diameter		Terminal Hole Depth		Outside Diameter		Wire Size	Terminal Hole Diameter	Terminal Hole Depth	Outside Diameter				
			AWG	mm	In.	mm	In.	mm	In.	mm	AWG	mm					In.	mm		
HW-UW-18-19	●		18-19	1.00 0.91	-	-	.075	1.90	1.000	25.40	.250	6.35	18-19	1.00 0.91	.075	1.90	1.000	25.40	.187	4.74
HW-UW-20	●		20	0.80	-	-	.075	1.90	1.000	25.40	.218	5.53	20-26	0.80 0.40	.070	1.77	1.000	25.40	.156	3.96
HW-UW-224	●		22-24	0.50 0.65	-	-	.075	1.90	.807	20.50	.218	5.53	20-26	0.80 0.40	.070	1.77	1.000	25.40	.156	3.96
HW-UW-224-1	●		22-24	0.50 0.65	-	-	.075	1.90	1.000	25.40	.218	5.53	20-26	0.80 0.40	.070	1.77	1.000	25.40	.156	3.96
HW-UW-224LH	●		22-24	0.50 0.65	-	-	.086	2.18	1.000	25.40	.218	5.53	20-26	0.80 0.40	.086	2.18	.750	19.05	.156	3.96
HW-UW-2426	●		24-26	0.40 0.50	-	-	.075	1.90	.750	19.05	.218	5.53	20-26	0.80 0.40	.070	1.77	1.000	25.40	.156	3.96
HW-UW-26	●		26	0.40	-	-	.075	1.90	1.000	25.40	.218	5.53	20-26	0.80 0.40	.070	1.77	1.000	25.40	.156	3.96
*HW-UW-26SM		●	26	0.40	.031	0.79	.040	1.02	.750	19.05	.125	3.17	24-32	0.50 0.20	.038	0.96	1.000	25.40	.093	2.36
HW-UW-2829M		●	28-29	0.29 0.32	.036	0.91	.040	1.02	.750	19.05	.156	3.96	24-32	0.50 0.20	.038	0.96	1.000	25.40	.093	2.36
HW-UW-30		●	30	0.25	.027	0.69	.036	0.91	.750	19.05	.125	3.17	24-32	0.50 0.20	.038	0.96	1.000	25.40	.093	2.36

\*These tools are recommended for .025" (0.63mm) square terminals on .100" (2.54mm) centers.

# WRAP / STRIP / UNWRAP TOOLS

**WSU-2224**  
(Regular Wrap)

**WSU-24M**  
(Modified Wrap)

**WSU-26M**  
(Modified Wrap)

**WSU-30**  
(Regular Wrap)

**WSU-30M**  
(Modified Wrap)



## Wrap/Strip/Unwrap Tools

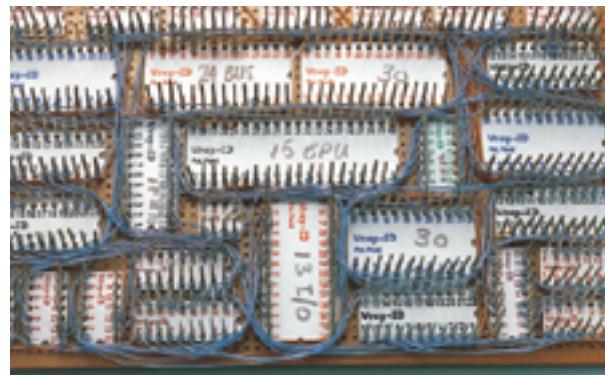
Each WSU tool wraps, unwraps and even strips the appropriate wire diameter with a unique built-in stripper blade. Ideal for bench use or tool kit in all service and repair applications. In addition to versatility, convenience, and reliability, the WSU Series offers exceptional value.

Part No.	Wire Size		Terminal Hole Diameter		Terminal Hole Depth		Outside Diameter		Square Post	
	AWG	mm	In.	mm	In.	mm	In.	mm	In.	mm
WSU-2224	22-24	0.65-0.50	.075	1.90	1.50	38.1	.213	5.4	.045	1.14
WSU-24M	24	0.50	.075	1.90	1.50	38.1	.213	5.4	.045	1.14
WSU-26M	26	0.40	.075	1.90	1.50	38.1	.213	5.4	.045	0.63
WSU-30	30	0.25	.036	0.91	1.50	38.1	.125	3.2	.025	0.63
WSU-30M	30	0.25	.036	0.91	1.50	38.1	.125	3.2	.025	0.63

## SOCKET-WRAP I.D.™

Increase Wiring Speed and Reduce Errors.

Used to identify pin numbers on wire wrapping sockets. Consisting of a socket-sized plastic panel with numbered holes in the pin location, the Socket Wrap-ID is simply slipped onto the socket before wrapping. You can also write on them for easy identification of location, IC Part number, function, etc. These unique items greatly simplify both initial wire wrapping and subsequent troubleshooting or repair. A great help to technicians, and production facilities alike.



Part No.	Pins	Row Spacing	Qty./Pkg.
ID-8-100	8	.3" (7.5mm)	100
ID-14-100	14	.3" (7.5mm)	100
ID-16-100	16	.3" (7.5mm)	100
ID-18-50	18	.3" (7.5mm)	50
ID-20-50	20	.3" (7.5mm)	50
ID-22-50	22	.4" (10mm)	50
ID-24-50	24	.6" (15mm)	50
ID-28-50	28	.6" (15mm)	50
ID-40-25	40	.6" (15mm)	25
ID-96-25	96	.3" (7.5mm)	25