

# Precision Tools Devices & Instruments

For Telecom, Computers & Electronic Industries

Fiber Optic Stripper for the  
Present and the Future.



JIC-125

# 106 YEARS SERVICING THE TELECOM COMPUTER & ELECTRONICS INDUSTRIES

**DESIGN      TECHNOLOGY      PRECISION      QUALITY**

## **Jonard Industries Corp. Established 1958**

Established in 1958; Jonard Industries Corp is a prime manufacturer of Tools, Devices and Instruments for the Telecom, Computer, Military and Electronic Industries. The company was founded by engineers and technically oriented professionals whose spirit, guidance and influence continue to this very day.

Jonard products are used in diversified applications. Our tools are used on "Airforce-One", the space shuttle, nuclear submarines, and down to earth applications such as computers, telephone installations and production lines.

We are proud to include AT&T, The Bell Companies, IBM, Xerox, Kodak, Hewlett Packard, Boeing and many other prestigious companies on the list of satisfied Jonard customers. Our customers now number in the tens-of-thousands, due to our reputation, technical skills, dedication and our ability to meet their ever-increasing demands.

Established in 1946; OK Industries blossomed as a major force in the telecommunications and electronics industries. In February 2003 Jonard Industries merged the operations of OK Industries into the "Jonard Family of Companies." The result of this acquisition is a **Global Manufacturing Powerhouse** with over 100 years of combined experience.



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## JONARD INDUSTRIES

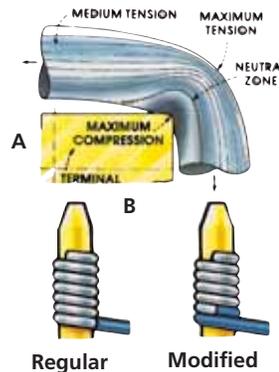
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# WIRE WRAPPING OVERVIEW

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 26 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 \*

AWG	Wire Size		Min. number of turns (Bare Wire)	Min. strip force	
	Dia. inches	Dia. 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

### HOW TO MAKE WIRE WRAPPED CONNECTIONS



### SOME HINTS ON MAKING WRAPPED CONNECTIONS



#### OVERWRAP

Do not press too hard. Let the OK tools do the work. Excessive pressure can lead to overwrapping. Backforce "BF" to prevent overwrapping is available on most power tools and is recommended for use with 26 through 30 AWG wire.



#### OPEN WRAP & SPIRAL WRAP

Just keep the OK tool on the terminal until the wrap is complete. Early removal can result in spiral and open wraps.



#### PIGTAIL

Wire wrapping is a precision technique and the wrong bit and sleeve just cannot do the job. Improper selection can cause problems ranging from "Pigtails" to loose wraps.

## TERMINAL DIAGONAL CHART

### DIMENSION B

		.10	.15	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70	.75	.80	.85	.90	.95	.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
DIMENSION A	.10	.014	.018	.022	.027	.032	.036	.041	.046	.051	.056	.061	.066	.071	.076	.081	.086	.091	.096	.101	
	.25	.036	.046	.056	.069	.081	.091	.104	.117	.130	.142	.155	.168	.180	.193	.206	.218	.231	.244	.257	
	.15	.018	.021	.025	.029	.033	.038	.043	.047	.052	.057	.062	.067	.072	.077	.082	.087	.092	.097	.102	
	.38	.046	.053	.064	.074	.084	.097	.109	.119	.132	.145	.158	.170	.183	.196	.208	.221	.234	.246	.259	
	.20	.022	.025	.028	.032	.036	.040	.045	.049	.053	.058	.063	.068	.073	.078	.083	.088	.093	.098	.103	
	.51	.056	.064	.071	.081	.091	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	
	.25	.027	.029	.032	.035	.039	.043	.047	.050	.056	.060	.065	.069	.074	.079	.084	.089	.094	.099	.104	
	.64	.069	.074	.081	.089	.099	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	
	.30	.032	.033	.036	.039	.042	.046	.050	.054	.058	.062	.067	.071	.076	.080	.085	.090	.095	.100	.105	
	.76	.081	.084	.091	.099	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	
.35	.036	.038	.040	.043	.046	.049	.052	.056	.060	.064	.069	.073	.078	.082	.087	.091	.096	.101	.106		
.89	.091	.097	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		
.40	.041	.043	.045	.047	.050	.052	.056	.060	.064	.068	.072	.076	.080	.084	.089	.092	.097	.102	.107		
1.02	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		
.45	.046	.047	.049	.050	.054	.056	.060	.063	.067	.071	.074	.078	.083	.087	.091	.096	.101	.105	.109		
1.14	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		
.50	.051	.052	.053	.056	.058	.060	.064	.067	.071	.074	.078	.082	.086	.090	.094	.098	.103	.107	.111		
1.27	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 Patented 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 18 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)	1.1 lb.	3.6V*	3700
PTX-1	Electric Wrap/Unwrap Tool - 115V	2.0 lb.	115V	3700
PTX-1BF	Electric Wrap/Unwrap Tool w/Backforce - 115V	2.0 lb.	115V	3700
PTX-2	Electric Wrap/Unwrap Tool - 230V	2.2 lb.	230V	4200
PTX-2BF	Electric Wrap/Unwrap Tool w/Backforce - 230V	2.2 lb.	230V	4200
PTX-KIT1	115V battery tool kit (tool, charger, (2) batteries)	3.5 lb.	3.6V*	3700
PTX-KIT1DH	PTX-KIT1 w/DFB224 and H-1000	3.6 lb.	3.6V*	3700
PTX-KIT2	230V battery tool kit (tool, charger, (2) batteries)	3.5 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
- **DFB224** Wrap/Unwrap Bit & Sleeve Set



DFB224



PTX-BC1  
PTX-BC2



PTX-B



H-1000

# PTX-KIT1DH

## BATTERY WIRE WRAPPING & UNWRAPPING KIT

### ERGONOMIC

BATTERY POWERED

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



PATENTED

#### PRODUCT SPECIFICATIONS



H-1000



PTX-BC1



PTX-B



DFB224

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 Patented 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 24-26 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.

# 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 10-12

Also available— bits and sleeves for old style chuckless wire wrapping tools

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

## TELECOM WIRE WRAP KITS

These are complete kits for technicians working at a Main Distributing Frame or for field service where wire wrapping is required.

**WWK-CO Insulated Wire Wrapping Kit-**  
designed specifically for the Central Office.

Part No.: WWK-CO: Wire Wrapping Kit

### Kit Contains:

- G100/R3278INS
- Speed Wrap Insulated Tool
- KB224 coiltite bit
- 22-24 AWG
- P2224INS Insulated coiltite sleeve
- 22-24 AWG
- H-1000 Cordura Pouch
- JIC-21257 Telecom long nose pliers
- JIC-22035 Probe pick
- UW4 Sleeved unwrapping tool
- JIC-2257 Insulated wire loop puller



WWK-CO

JIC-2257

JIC-22035

JIC-21257

G100/R3278INS

UW4

KB224

P2224INS

Part No.: WWK-1: Wire Wrapping Kit

Kit Contains: G200/R3278 Speed Wrap Tool  
KB224 coiltite bit 22-24 AWG  
P2224 coiltite 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-1INS

Part No.: WWK-1INS: Insulated Wire Wrapping Kit

### Kit Contains:

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



UW4

ST-100

KB224

P2224INS

G100/R3278INS

# 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
18	●		KB18	P194		.060	.073	1.000	.150	.075
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
24-26	●		OK2426	P2426		.058	.073	.750	.100	.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		●	WB28SHM	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



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
1.00	●		KB18	P194		1.52	1.85	25.40	3.81	1.90
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
0.40-0.50	●		OK2426	P2426		1.47	1.85	19.05	2.54	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		●	*WB28SHM	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



OK Industries

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# 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.



P2224INS



KB22

Bit Part No.	Sleeve Part No.	Wire Size		Regular	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	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	1.000	25.40	.100	2.54	.075	1.90
KB3032	P3032INS	30-32	0.32	●	.034	.86	.038	.96	.75	19.05	.064	1.62	.040	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.



P2426-5INS



KB24-5

Bit Part No.	Insulated Sleeve Part No.	Uninsulated Sleeve Part No.	Wire Size		Regular	Minimum Terminal Diagonal		Maximum Terminal Diagonal		Terminal Hole Depth		Effective Radius		Terminal Hole Diameter	
			AWG	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	0.65-0.50	●		-	-	.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 20 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.

Part Number	Reg	Mod	WRAPPING SIDE										UNWRAPPING SIDE							
			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	In.	mm	AWG	mm	In.	mm	In.	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	6.35	20-26	1.00-0.91	.070	1.77	1.000	25.40	.156	3.96
HW-UW-224	●		22-24	0.65-0.50	-	-	.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	0.65-0.50	-	-	.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-LH	●		22-24	0.65-0.50	-	-	.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	0.50-0.40	-	-	.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	0.32-0.29	.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

## 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.

**WSU-2224**  
(Regular Wrap)

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

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

**WSU-30**  
(Regular Wrap)

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



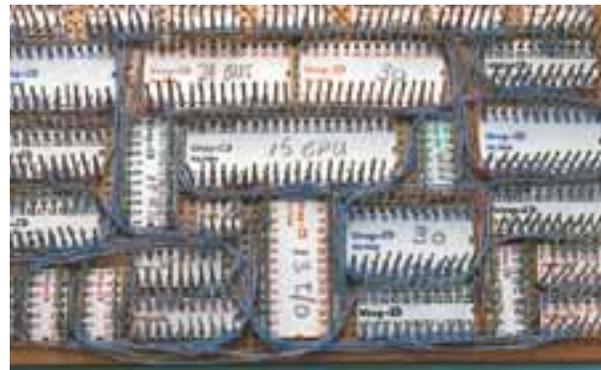
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Part No.	Reg		Mod		Wire Size		Terminal Hole Diameter		Terminal Hole Depth		Outside Diameter		Square Post	
	Reg	Mod	AWG	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm
WSU-2224	●		22-24	0.65-0.50	.075	1.90	1.50	38.1	.213	5.4	.045	1.14		
WSU-24M		●	24	0.50	.075	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

# COPPER WIRE CUT & STRIP TOOLS

## WIRE CUT-AND-STRIP TOOLS - ST-100 SERIES

A revolutionary concept for easy and clean stripping of wires for wire wrapping, electronic and appliance applications. Biomechanically designed for maximum efficiency.

Easy to operate... place wire (up to 4) in stripping slot with ends extending beyond cutter blades... press tool and pull... wire is cut and stripped to proper "wire wrapping" length. The hardened steel cutting blades and sturdy construction of the tool ensure long life. Strip length easily adjustable for your application. Blades are made from specially tempered spring steel for clean, nick-free wire stripping.



ST-100-30

Part No.	Wire Size		Adjustable Strip-Off Length		Replacement Blade
	AWG	mm	Inches	mm	
ST-100	22-24	0.65-0.50	1 5/16" to 1 9/16"	33.33 to 39.68	OK-3907B
ST-100-26	26	0.40	1 15/16" to 1 11/16"	33.33 to 42.86	OK-3907-26B
ST-100-28	28	.32	7/8" to 1 1/8"	22.22 to 28.57	OK-3907-28B
ST-100-30	30	.25	7/8" to 1 1/8"	22.22 to 28.57	OK-3907-30B

## ADJUSTABLE PRECISION WIRE STRIPPERS OK-3907 SERIES

The OK-3907 Series from OK Industries is the industry's leading cut-and-strip tool for copper interconnect applications. Installers and telecom technicians enjoy its rugged construction, comfortable rubber grips, and high-leverage handle design, which allows time savings through the simultaneous cutting of multiple wires. Blades are made from specially tempered spring steel for clean, nick-free wire stripping.



OK-3907

Part No.	Wire Size		Adjustable Strip-Off Length		Replacement Blade
	AWG	mm	Inches	mm	
OK-3907	22-24	0.65	1-1/2" to 1-3/4"	38.10 to 44.45	OK-3907B
OK-3907-26	26	0.40	1-1/2" to 1-3/4"	38.10 to 44.45	OK-3907-26B
OK-3907-30	30	0.25	7/8" to 1 1/8"	22.22 to 28.57	OK-3907-30B

## ADJUSTABLE PRECISION WIRE STRIPPERS ST-500 & ST-550

The ST-500 and ST-550 Adjustable Precision Wire Strippers feature an adjustment dial that allows the operator to select one of six different settings. A calibrated wire stop can then be adjusted for the desired insulation strip length. In a single motion, the operator squeezes and pulls the tool. This action engages four specially hardened blades to cleanly cut the wire insulation while the pulling motion breaks the insulation / conductor bond.

- Adjustable to six wire gauges:
  - ST-500 20 to 30 AWG
  - ST-550 18 to 28 AWG
- Calibrated Wire Stop
- Single action squeeze-pull motion
- Clean, precise strip of any insulation type
- Shirt-pocket size and light-weight (<1oz.)

Part No.	ST-500	ST-550
Wire Gauge	20-30 AWG	18-28 AWG
Calibrated Strip Length	Adjustable to 2" (50.8mm)	Adjustable to 2" (50.8mm)
Insulation Type	Any	Any
Dimensions (L x H x Thickness)	3.9" x 1.6" x 0.6" (99mm x 42mm x 14mm)	3.9" x 1.6" x 0.6" (99mm x 42mm x 14mm)
Housing Material	ABS	ABS
Blade	Hardened Steel (RC 58)	Hardened Steel (RC 58)



ST-500 & ST-550

# WIRE WRAPPING ACCESSORIES



UL Listed

## KYNAR™ Insulated, Silver Plated Copper Conductor

Ideally suited for wire wrapping and many other applications. OFHC (oxygen free high conductivity) provides a flexible yet abrasion resistant wire

Wire Size		Insulation Dia.		Roll Size		Blue	Yellow	White	Black	Red
AWG	mm	In.	mm	Feet	Meters					
24	0.50	.030	0.76	100	30.4	R24B-0100	R24Y-0100	R24W-0100	R24BLK-0100	R24R-0100
26	0.40	.027	0.69	100	30.4	R26B-0100	R26Y-0100	R26W-0100	R26BLK-0100	R26R-0100
28	0.32	.024	0.60	100	30.4	R28B-0100	R28Y-0100	R28W-0100	R28BLK-0100	R28R-0100
30	0.25	.0195	0.50	100	30.4	R30B-0100	R30Y-0100	R30W-0100	R30BLK-0100	R30R-0100
				1000	304.4	R30B-1000	R30Y-1000	R30W-1000	R30BLK-1000	R30R-1000

## KSW Wire Wrapping Wire Rolls for Cut/Strip/Wrap Applications

Low strip force Kynar™ insulated wire is further processed to provide a low strip force for use with CSW bits and sleeves

Wire Size		Insulation Dia.		Roll Size		Blue	Yellow	White	Black	Red
AWG	mm	In.	mm	Feet	Meters					
24	0.50	.030	0.76	100	30.4	KSW 24B-0100	KSW 24Y-0100	KSW 24W-0100	KSW 24BLK-0100	KSW 24R-0100
26	0.40	.027	0.69	100	30.4	KSW 26B-0100	KSW 26Y-0100	KSW 26W-0100	KSW 26BLK-0100	KSW 26R-0100
28	0.32	.0235	0.58	100	30.4	KSW 28B-0100	KSW 28Y-0100	KSW 28W-0100	KSW 28BLK-0100	KSW 28R-0100
30	0.25	.0195	0.50	100	30.4	KSW 30B-0100	KSW 30Y-0100	KSW 30W-0100	KSW 30BLK-0100	KSW 30R-0100
				1000	304.0	KSW 30B-1000	KSW 30Y-1000	KSW 30W-1000	KSW 30BLK-1000	KSW 30R-1000

Kynar™ Pennwalt

## Wire Dispenser - WD-30 Series

- With 50ft. (15.2m) Roll of 30 AWG (0.25mm) Kynar™ wire-wrapping wire
- Built-in Plunger cuts wire to desired length
- Built-in Stripper strips 1" (25.4mm) of insulation
- Refillable



WD-30-B

Part No.	Description
WD-30-B	Dispenser with 50' of Blue wire
WD-30-Y	Dispenser with 50' of Yellow wire
WD-30-W	Dispenser with 50' of White wire
WD-30-R	Dispenser with 50' of Red wire
WD-30-TRI	Dispenser with 50' each Blue, White and Red wire

## Replacement Rolls of Wire For WD-30 Series

Wire for wire-wrapping. 30 AWG (0.25mm) Kynar™ wire, 50ft. (15.2m) roll, silver plated, solid conductor easy stripping.



R-30R-0050

Part No.	Description
R-30B-0050	30 AWG (0.25mm) Blue 50ft. for WD-30-B
R-30Y-0050	30 AWG (0.25mm) Yellow 50ft. for WD-30-Y
R-30W-0050	30 AWG (0.25mm) White 50ft. for WD-30-W
R-30R-0050	30 AWG (0.25mm) Red 50ft. for WD-30-R
R-30-TRI	30 AWG (0.25mm) Red, White, Blue 50ft (15.2m) roll, each color for WD-30-TRI

## Pre-Cut and Pre-Stripped Wire Wrapping Wire

- 50 pieces per package
- Kynar™ insulated
- Silver plated copper conductor
- UL listed
- 1" of stripped wire on either end



30 AWG (0.25mm) Pre-Cut/Pre-Stripped Wire 50 Pieces/Pkg.

Insulation Length		White	Yellow	Blue	Red
In. mm					
1 25		30-W-50-010	30-Y-50-010	30-B-50-010	30-R-50-010
2 51		30-W-50-020	30-Y-50-020	30-B-50-020	30-R-50-020
3 76		30-W-50-030	30-Y-50-030	30-B-50-030	30-R-50-030
5 127		30-W-50-050	30-Y-50-050	30-B-50-050	30-R-50-050

# THE WORLD'S FIRST BATTERY PUNCHDOWN TOOL

A REVOLUTIONARY ERGONOMIC DESIGN GUARANTEEING OPERATOR SAFETY & EFFICIENCY

Quick, easy blade lock & release  
 Ability to rotate blade in 90° increments  
 Hi/Low impact settings

**PATENTED**

## EPB - 1000 Battery Punchdown Tool

- Ergonomically designed for worker safety
- Over 1,000 impacts between charges
- Hi/Low impact settings
- Durable Lexan® housing
- 90° Blade orientation adjustment
- Quick-easy blade lock and release
- Lightweight- weighs only 1.3 lbs.
- Measures 7.50"L x 6.75"H x 1.37"W
- Patented

Short-throw trigger

Ergonomically designed handle

Rugged construction

### EPB-1000 TOOLS AND KITS

ITEM	DESCRIPTION
EPB-1000	Battery Punchdown Tool (Battery Not Included)
EPB-1000KIT1	Battery Punchdown Tool Kit with 115V Charger & Battery
EPB-1000KIT2	Battery Punchdown Tool Kit with 230V Charger & Battery



### EPB-1000 STANDARD DOUBLE-ENDED BLADES

PART NUMBER	DESCRIPTION
EPB-66	66 Block with & without cutter
EPB-110	110 Block with & without cutter
EPB-KR	Krone Block with & without cutter

### EPB-1000 ACCESSORIES

PART NUMBER	DESCRIPTION
PTX-B	EPB-1000 Battery 3.6V
PTX-BC1	EPB-1000 115V Battery Charger
PTX-BC2	EPB-1000 230V Battery Charger
H-1000	Cordura Tool Pouch



PTX-B  
BATTERY 3.6V



PTX-BC1  
PTX-BC2  
BATTERY CHARGER



H-1000  
CORDURA POUCH

# MANUAL PUNCHDOWN TOOL

This revolutionary family of punchdown tools has been developed to satisfy the ergonomic requirements of the technician while providing the convenience of a battery tool. We consulted with certified ergonomists and created an ergonomic tool, which is lightweight, well-balanced and designed with a long handle to mitigate pressure on the palm (alleviating the risk of carpal tunnel syndrome and other related injuries.)

## EPXI Manual Punchdown Tool

Weight 7.10 oz  
Length 7.25"

### EPXI TOOLS AND KITS

ITEM	DESCRIPTION
EPXI	Ergonomic Punchdown Tool
EPXI-KIT66	Ergonomic Punchdown Tool Plus 2 Blades (EP-66, EP-66C)
EPXI-KIT110	Ergonomic Punchdown Tool Plus 2 Blades (EP-110, EP-110C)
EPXI-KIT66110	Ergonomic Punchdown Tool Plus 4 Blades (EP-66, EP-66C, EP-110, EP-110C)



NOTE: THE EPXI TOOLS ONLY OPERATE WITH BLADES PRODUCED BY OK INDUSTRIES.

### EPXI BLADE SPECIFICATIONS

ITEM	DESCRIPTION	WEIGHT (OUNCES)	LENGTH (INCHES)	WIDTH (INCHES)	THICKNESS (INCHES)
EP-66	Punchdown Blade 66 Block	0.25	1.25"	.35"	.18"
EP-66C	Punchdown Blade 66 Block with Cutter	0.25	1.30"	.35"	.18"
EP-110	Punchdown Blade 110 Block	0.25	1.30"	.35"	.15"
EP-110C	Punchdown Blade 110 Block with Cutter	0.25	1.30"	.35"	.15"
EP-7889112	Punchdown Blade Central Office Block	0.33	1.40"	.35"	.25"
EP-BX	Punchdown Blade Bix Block	1.00	2.20"	.40"	.48"
EP-KR	Punchdown Blade Krone Block	1.00	2.40"	.40"	.60"



# DESOLDERING PUMPS

## HIGH-VACUUM DESOLDERING PUMPS

A specially engineered desolder pump made to exacting specifications and providing precise repeatable operation. Fitted with a Teflon Tip. 13" long including tip

### Features

- Durable corrosion resistant plastic construction.
- Precision metal plunger.
- Corrosion treated springs.
- Insulated vacuum pulse.
- Regulated return (1 millisecond  $\pm 30\%$ ).
- Uniform reset pressure (11in. lbs.  $\pm 20\%$ ).
- Cushioned shock reduction (pulse release to minimize board damage).



Part No.	Description
DP-100	High Vacuum Desoldering Pump
DP-200	High Vacuum Desoldering Pump, ESD Safe
DPT-100	1 Replacement Tip, DP-100/DP-140
DPT-200	1 Replacement Tip, DP-200

### Features

- Precision regulated return.
- Replaceable tip.
- Compact, anti-corrosive plastic housing.
- Precision metal plunger.
- Sealed vacuum chamber.
- Easy cleaning.
- 8" Long including tip



Part No.	Description
DP-140	Desoldering Pump
DPT-100	1 Replacement Tip, DP-100/DP-140

# BENCHTOP FUME ABSORBERS

## SA-9-115/ SA-9-E-115

- Aerodynamic hood design effectively draws irritating soldering fumes away from the work area.
- Carbon-impregnated filters trap a limited portion of the flux fumes.
- Compact size, low profile and adjustable stand allows convenient placement 6" to 8" (152 to 203mm) from work area.
- SA-9-E-115 feature static-dissipative housings.



SA-9-115



SA-9-E-115

### Benchtop

Part No.	Description
SA-9-115	Benchtop fume absorber, 115V AC with 3 filters
SA-9-E-115	ESD-Safe benchtop fume absorber, 115V AC with 3 filters

## SA-91/ SA-91-E

- Articulating arm allows optimized positioning and saves bench space.
- Bench mounting clamp and 3 filters come complete with unit.
- SA-91-E features a static-dissipative housing.

### Articulating Arm

Part No.	Description
SA-91	SA-9-115 with Articulating Arm, & Bracket
SA-91-E	SA-9-E-115 with Articulating Arm, & Bracket
SAK-90	Arm Assembly Kit Retro-fits SA-9/9-E to SA-91/SA-91-E
SAF-1	Replacement Filter Set, 3pcs.



SA-91

Part No.	Specifications	
	SA-9-115 SA-9-E-115	SA-91 SA-91-E
Input Voltage	115V 60Hz	115V 60Hz
Maximum Air Volume	105 to 126 CFM	105 to 126 CFM
Activated Carbon Wt.	12g	12g
Unit Weight	2.2 lbs. (1 kg)	4 lbs. (1.8 kg)
Arm Length	-	24" (607mm)



SAF-1

# PROTOTYPING AND REPAIR

## UNIVERSAL PLCC EXTRACTION TOOL EX-5/EX-6

### Features

- Extracts a range of PLCC sizes from 20 pins through 84 pins from any socket without damage to the chip.
- Spring loaded one-hand design requires no pulling, just squeeze handles and chip is lifted from the socket.
- ESD safe handles for use on all static safe components (EX-5).
- Machined stainless steel for long-life (EX-5).
- EX-6 - ABS handles and stamped steel.



EX-6



EX-5

Part No.	Description
EX-5	ESD safe PLCC extraction tool
EX-6	Low cost PLCC extraction tool

## INSERTION/EXTRACTION KIT WK-7

WK-7 kit includes DIP IC extractors and inserters to accommodate all IC's from 8 to 40 pins. All tools that engage conductive surfaces are CMOS safe and include grounding lugs where appropriate. The kit consists of extractors EX-1 for 14-16 pin devices, and EX-2 for 24-40 pin chips, plus inserters MOS-1416, MOS-2428, and MOS-40 for 14-16, 24-28 and 36-40 pin IC's respectively.



INS-1416

### Kit Includes

- MOS-1416 Insertion Tool (14-16 Pins).
- MOS-2428 Insertion Tool (24-28 Pins).
- MOS-40 Insertion Tool (36-40 Pins).
- EX-2 Extraction Tool (24-40 Pins).
- EX-1 Extraction Tool (8-24 Pins).



Part No.	Description
WK-7	5 piece insertion/extraction kit
INS-1416	14-16 pin IC insertion tool (.3" pitch) with lead straightener

Note: WK-7 items may be purchased individually.

# IMPORTANT ANNOUNCEMENT!

Jonard Industries is pleased to announce that it has purchased the Cooper Hand Tools Telecom Plier Line. As such Cooper Hand Tools has designated Jonard Industries Corp. as the sole source for Cooper Brand Telecom Pliers. Jonard Industries will continue to sell Cooper Branded Telecom Pliers until the Cooper Branded inventory is depleted. Subsequently Jonard Industries will supply these Bell Company designed pliers under the Jonard brand name.

## JONARD INDUSTRIES PLIERS LINE - *NEWLY EXPANDED*



# PLIERS- LONG & SHORT NOSE

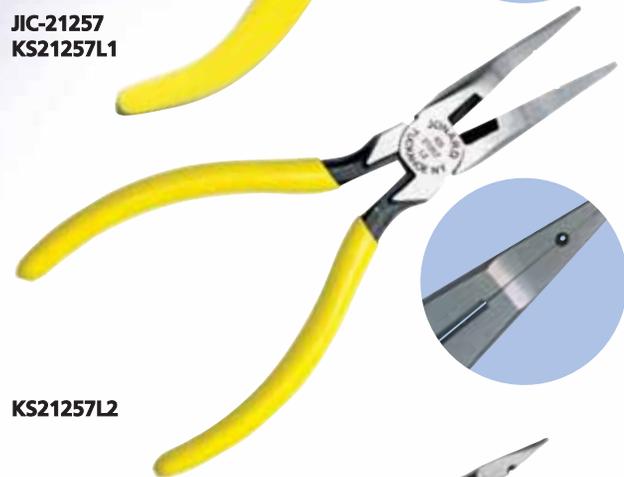


JIC-21257  
KS21257L1

## TELECOM LONG NOSE PLIERS

Long nose have side cutting blades, a crushing slot, one .030" stripping hole, and a thin knurled nose to facilitate handling of the wire at the terminals. The comfortable handles are yellow plastic dipped. 6 7/8" long. Also known as KS21257L1.

JONARD P/N	DESCRIPTION
JIC-21257	Telecom Long Nose Pliers



KS21257L2

## LONG NOSE CUT CRUSH STRIP L2 PLIERS

Side cut pliers with crushing slot, one .030" stripping hole and a thin knurled nose to facilitate handling wire at the terminals. Aluminum oxide insulation coating on the outside nose surface. Yellow plastic handle, 6 7/8" long.

JONARD P/N	DESCRIPTION
KS21257L2	LONG NOSE Cut Crush Strip L2 Pliers



KS21257L3

## LONG NOSE CUT CRUSH STRIP L3 PLIERS

Long nose with side cutter, crushing slot, one .030" stripping hole and a thin knurled nose to facilitate handling wire at the terminals. Yellow plastic handle. 6 3/16" long. Ask for the KS21257L4 which is identical to the L3 but has an aluminum oxide insulating coating on the outside nose surface.

JONARD P/N	DESCRIPTION
KS21257L3	LONG NOSE L3 Cut Crush Strip Pliers



BSHORTNOSE

## SHORTNOSE PLIERS

Intended for use in skinning 22-24 AWG wire and crushing insulation in nose slot. The front portion of the jaws is narrowed, and a portion of the inner face of one jaw is relieved to skin insulation from wire. The inner surface of the jaws are serrated to facilitate gripping wire. Orange color handle 6 3/16" long. Ask for the CSHORTNOSE which is identical to the BSHORTNOSE but has an aluminum oxide insulating coating on the outside nose surface.

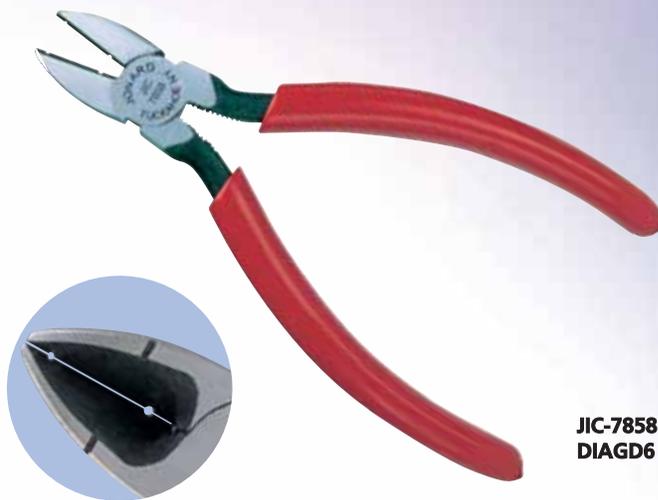
JONARD P/N	DESCRIPTION
BSHORTNOSE	Shortnose pliers

# PLIERS- DIAGONAL

## TELECOM DIAGONAL CUTTER PLIERS

Tapered nose diagonal cutting pliers with standard-bevel knives with .030" and .045" skinning holes, with crusher used for multi-purpose wire work, with two V-shaped stripping notches. The comfortable handles are red plastic dipped. 6 1/2" long. Also known as DIAGD6 or ask for the DIAGE6 which is identical to DIAGD6 but has an aluminum oxide insulating coating on the outside nose surface.

JONARD P/N	DESCRIPTION
JIC-7858	Telecom Diagonal Cutter Pliers

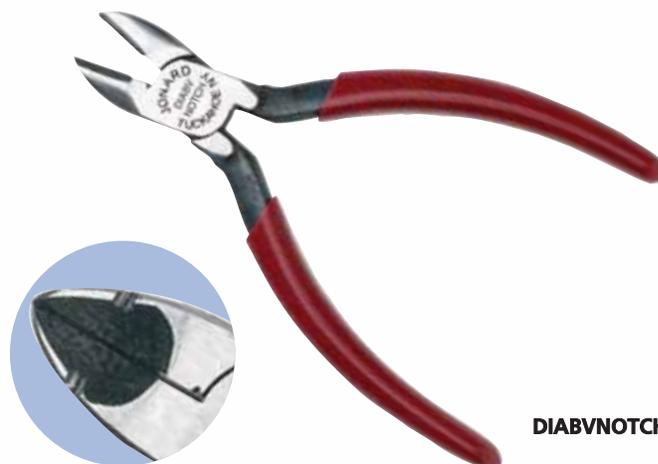


JIC-7858  
DIAGD6

## DIAGONAL PLIERS – CRUSHING & SLITTING

Used for cutting soft copper conductors. Has a "V" shaped notch between jaws, near the joint, for crushing the flameproof type of insulation on distributing frame wire. Also provides a "W" shaped notch on the plier jaws for slitting textile insulation. Red color handle 5" long.

JONARD P/N	DESCRIPTION
DIABVNOTCH	Diagonal Pliers –Crushing & Slitting



DIABVNOTCH

## DIAGONAL PLIERS – SKINNING & STRIPPING

Tapered nose diagonal cutting pliers with standard-bevel knives with one .045" skinning hole, crusher used for multipurpose wire work, and two V shaped stripping notches. Red plastic handle 6 1/16" long

JONARD P/N	DESCRIPTION
DIAGB6	Diagonal Pliers –Skinning & Stripping



DIAGB6



# PLIERS-SPECIALTY



JIC-891  
PRESSINGC

## CONNECTOR-CRIMPING PLIERS WITH SIDE CUTTERS

Connector-Crimping Pliers with Side Cutters designed to press UG, UR and UY connectors. A special stop behind cut out prevents damage to connectors. Utilized on combinations of plastic and pulp insulated 19, 22, 24 and 26 gauge copper conductors as well as 20 gauge plastic insulated copper steel wire. Comes with side cutter and yellow handle 5 13/16" long. Also known as PRESSINGC.

JONARD P/N	DESCRIPTION
JIC-891	Connector-Crimping Pliers with Side Cutters



JIC-22148

## COMBO CRIMPER LONG NOSE PLIERS

Two tools in one, combines crimper for UR/UY/UG connectors, crimping "B" type connectors and a long nose pliers. With a crusher, .030" stripping hole, and yellow plastic handle 6 7/8" long.

JONARD P/N	DESCRIPTION
JIC-22148	Combo Crimper Long Nose Pliers



PLS-5

## HEAT COIL PLIERS

Designed for installing and extracting heat coils, fuses and other cylindrical shaped components. The thin nosed jaw allows easy access to tight restricted areas. Yellow plastic handle, 5 1/8" long.

JONARD P/N	DESCRIPTION
PLS-5	Heat Coil Pliers



S-42

## PLIER, LAMP CAP EXTRACTOR

For use in inserting and extracting switchboard lamp caps. The comfortable handles are yellow plastic dipped. 5" long.

JONARD P/N	DESCRIPTION
S-42	Plier, Lamp Cap Extractor

# PLIERS-SPECIALTY

## SLIP JOINT SIDE CUT PLIERS

For heavy-duty use. Polished head, black handles and flush bolt. Machined gripping teeth and 3/8" hardened wire cutter. 7 3/8" long.

JONARD P/N	DESCRIPTION
BCOMB	Slip Joint Side Cut Pliers

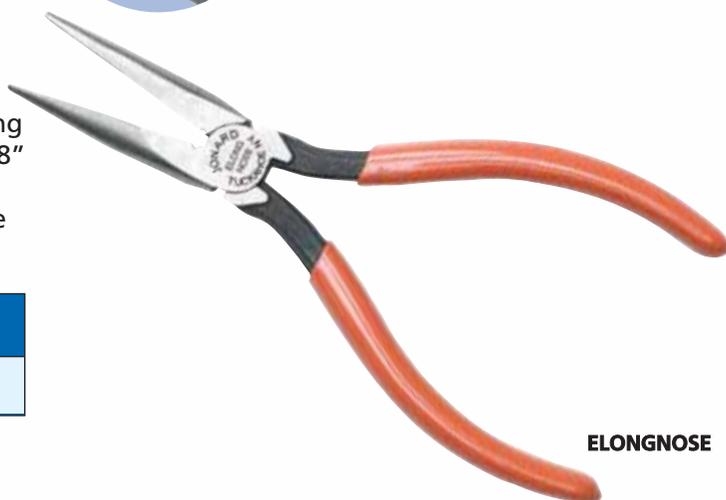


BCOMB

## LONG NOSE GRIPPING PRESSING PLIERS

Long nose pliers for gripping and pressing. Inner surface of the jaws are knurled near the end to facilitate gripping wire, binding post nuts etc. Aluminum oxide insulation coating on the outside nose surface. The inside gripping jaws are provided with mated grooves near the joint for use in pressing .032/.035" brass sleeves. Orange plastic handle, 6 5/8" long. Ask for CLONGNOSE which is identical to the ELONGNOSE but does not have the aluminum oxide insulating coating on the outside surface.

JONARD P/N	DESCRIPTION
ELONGNOSE	Long Nose Gripping Pressing Pliers



ELONGNOSE

## DIAGONAL GENERAL USE PLIERS

These are plain diagonal pliers for general use, including cutting soft copper conductors. Red plastic handle, 5 1/16" long.

JONARD P/N	DESCRIPTION
DIAGB5	Diagonal General Use Pliers



DIAGB5

# PLIERS-LONG NOSE



JIC-842

## TELECOM LONG NOSE D PLIERS

Pliers are for general use looping, bending and cutting. Grips small wires and parts and reaches into tight spaces. Jaws are knurled, serrated and have side cutting blades. Cushion gripped yellow plastic handle 6 7/8" long.

JONARD P/N	DESCRIPTION
JIC-842	Telecom Long Nose D Pliers



BLONGNOSE

## LONG NOSE GENERAL USE PLIERS

Chain nose pliers for general use. Inner surface of the jaws are knurled near the end to facilitate gripping wire, binding post nuts etc. Orange plastic handle, 6 5/8" long. Ask for the DLONGNOSE which is identical to the BLONGNOSE but has an aluminum oxide insulating coating on the outside nose surface.

JONARD P/N	DESCRIPTION
BLONGNOSE	Long Nose General Use Pliers



JIC-056  
LONGNOSEG

## LONG NOSE G PLIERS

This plier is designed with a long nose to close 700, 701 & 702 style connectors. Knurled jaws to facilitate gripping wire, red plastisol handle 6 5/8" long. Also known as LONGNOSEG.

JONARD P/N	DESCRIPTION
JIC-056	Long Nose G Pliers

# PLIERS-HEAVY DUTY

## HIGH LEVERAGE DIAGONAL CUTTER

Crafted for heavy-duty wire cutting and made of specially forged alloy steel designed for strength and cutting ability. Red plastic handle 8" long

JONARD P/N	DESCRIPTION
JIC-2288	High Leverage Diagonal Cutter



JIC-2288

## LINEMAN'S B SIDE CUT PLIERS

Designed for heavy duty use in construction and maintenance work. These pliers are high leverage for cutting bolts, nails, and many gauges of wire including high-strength wire. Cutting edges cut clean and remain sharp. The cushioned-grip, comfortable handles are red plastic dipped to approximately .007". 9 3/8" long. Also known as SIDECUTB9

JONARD P/N	DESCRIPTION
JIC-683	Lineman's B Side Cut Pliers



JIC-683  
SIDECUTB9

## HIGH LEVERAGE CABLE CUTTERS

High leverage design for superior cutting ability. Designed with a shear-type jaw for cutting aluminum and soft copper. Not for use on steel or ACSR type cables. Cuts up to 100-pair cables. Red handle 9 1/2" long

JONARD P/N	DESCRIPTION
JIC-63050	High Leverage Cable Cutters



JIC-63050

# CAN, BOOTH, LINESMAN WRENCHES



M-216C/EX



M-216C/REX



M-216C/RX



BW-532

## LINEMAN'S B WRENCH

Forged and heat treated, this wrench is used on pole line hardware. It is open-end double-end type with two sizes of openings at each end and an oval hole for turning pole steps. The end openings accommodate nuts for 3/8", 1/2", 5/8" and 3/4" bolts and the head of the 1/2" drive screw. The faces of the wrench openings are offset to provide handle clearance. 13" Long.

JONARD P/N	DESCRIPTION
JIC-650	Lineman's B Wrench

## CAN SOCKET WRENCH

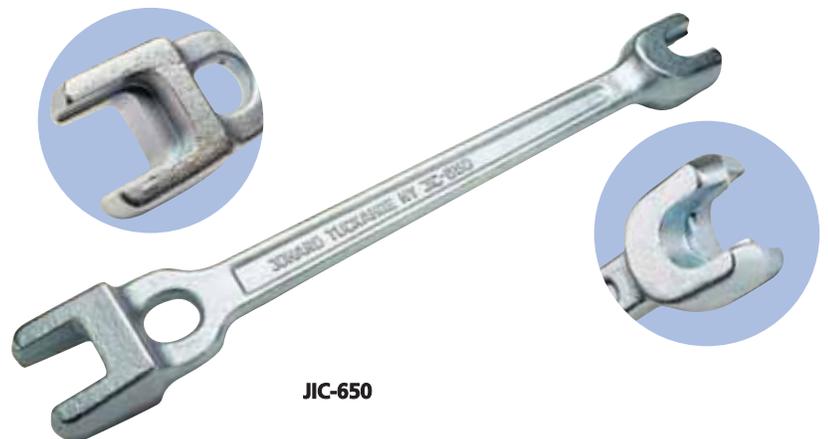
Double end can socket wrench, 3/8" and 7/16" hex, orange plastic handle in either our standard or ergonomic design. Used in placing fuses in cable terminals and connecting wires to fuses and binding posts. The walls on both sockets are thin enough so they can be used to work locking devices on most terminals and cabinets. 7" long.

JONARD P/N	DESCRIPTION
M-216C/EX	Ergonomic 1" Dia. Handle, Hex Outer Socket
M-216C/REX	Ergonomic 1" Dia. Handle, Round Outer Socket
M-216C/RX	Standard Handle, Round Outer Socket

## BOOTH WRENCH – *New Ergonomic Design*

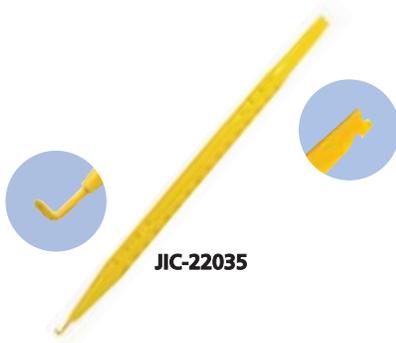
Tamperproof hex screwdriver, also known as a booth wrench. It features a 1" diameter handle, 5/32" hex shaft with a hole drilled in the tip for use with security tamperproof screws used for telephone and CATV applications. 9" long.

JONARD P/N	DESCRIPTION
BW-532	Booth Wrench -Ergonomic design



JIC-650

# TELECOMMUNICATION TOOLS



JIC-22035

## PROBE PICK

Tough resilient yellow nylon insulating probe "spudger". One end is tapered to a 1/16" diameter point having an insulated "L" shaped wire hook extension. The other end tapers to a flat, 3/16" wide and 1/16" thick, with 2 small notches. Used in electrical contacts. 7" long.

JONARD P/N	DESCRIPTION
JIC-22035	Probe Pick



SD-63

## SCREWDRIVER, JEWELER'S TYPE

Precision screwdriver with swivel knobs concaved to fit the finger and hexagonal to prevent rolling, knurled body for ease of use. Solid blade made of high quality hardened tool steel and are non-brittle. .100" blade width. 4" long.

JONARD P/N	DESCRIPTION
SD-63	Jeweler's Screwdriver



JIC-719A

## T KEY TOOL

*Pay telephone Tool*

Ergonomic design hand grip tool made from a formed metal rod with a smooth tapered end which allows easier access. The solid pin at the end of the tool is a heat treated alloy. The key is used to release the housing and door locking mechanism of the no. 1A type coin telephone sets 2 1/2" long.

JONARD P/N	DESCRIPTION
JIC-719A	T Key Tool



JIC-139B

## COIN LEVELING TOOL

*Pay telephone Tool*

Tool used for leveling coins in coin collectors when the coin receptacle becomes so full as to interfere with operation of the collector. May also be used to measure the degree of fullness by means of a calibrated scale and metal slider. 7" long.

JONARD P/N	DESCRIPTION
JIC-139B	Coin Leveling Tool



JIC-528A

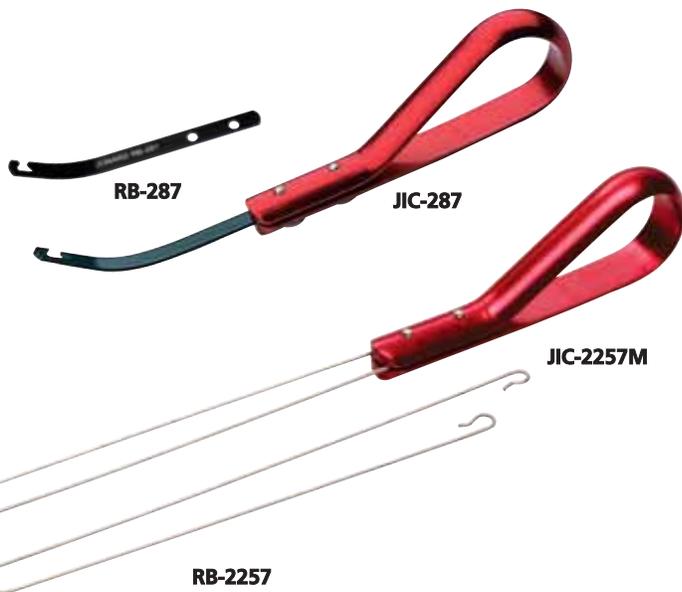
## KEY SLOT CLEANER

*Pay telephone Tool*

Interchangeable two tools in one. One formed rod produced from music wire is held in place by a chuck, while the other rod is stored in the pen barrel. Diameters of the rods are .024" and .035" thick. Used for cleaning and maintaining various mechanical devices. A popular use is cleaning out the key slots of the locks on coin telephone sets. 5" long.

JONARD P/N	DESCRIPTION
JIC-528A	Key Slot Cleaner

# CABLE TOOLS



## CABLE SEWING NEEDLE-METAL

Durable red anodized aluminum handle with curved notched sewing needle. Designed to harness or lace multiple lead bundles. 5 3/4" long. Replacement needles are also available.

JONARD P/N	DESCRIPTION
JIC-287	Cable Sewing Needle
RB-287/6	Pkg. of 6 Replacement Needles

## WIRE LOOP PULLER-METAL

Durable red anodized aluminum handle facilitates pulling wire through terminal blocks, rings on main frame or fanning strip holes. 8 1/2" long. Replacement wire loops are also available.

JONARD P/N	DESCRIPTION
JIC-2257M	Wire Loop Puller
RB-2257/6	Pkg. of 6 Replacement Loops

## CABLE SEWING NEEDLE-INSULATED

Xylan insulated cable sewing needle has a yellow lightweight molded grip handle that will harness or lace multiple lead bundles. 5 1/2" long.

JONARD P/N	DESCRIPTION
JIC-3209	Cable Sewing Needle

## WIRE LOOP PULLER- INSULATED

Xylan insulated wire loop puller facilitates pulling wire through terminal blocks, rings on main frame, or fanning strip holes. The yellow plastic lightweight handle fits snugly and is easy to hold in your hand. 8" long.

JONARD P/N	DESCRIPTION
JIC-2257	Wire Loop Puller

## STRAIGHT METAL NEEDLE

This "Chicago type" straight metal needle is designed for cable sewing. This tool, made of the finest steel is for anyone in the cable industry. Needle is .016" thick and 12" long.

JONARD P/N	DESCRIPTION
JIC-284	Straight Metal Needle



# CABLE TOOLS

## CABLE SHEATH STRIPPER & RING TOOL

Good for copper cables as well as tight buffer optical fiber cables. Used for butting and stripping cables too large for hand held pliers. Use 1 blade to butt PVC sheathing and use the second blade to strip the sheathing. Adjustable for .018" or .031" thick plastic, rubber or fabric insulation. One spare blade of each style is included with the tool. Also known as CT2860

JONARD P/N	DESCRIPTION
JIC-4366	Cable Sheath Stripper & Ring Tool
RB-2878/6	Pkg. 6 replacement blades for stripper feature of tool
RB-2060/6	Pkg. 6 replacement blades for ring feature of tool



JIC-4366  
CT2860

## CABLE SHEATH STRIPPER

Strip the jacket from all sizes of plastic and fabric covered cables without damaging the wire or insulation. Tough ergonomically designed handle protects the hand from being skinned or cut. Blade can be reversed for new cutting edge, and spare blade included with tool.

JONARD P/N	DESCRIPTION
JIC-2878	Cable Sheath Stripper
RB-2878/6	Pkg. 6 replacement Blades



RB-2060

RB-2878



JIC-2878

## CABLE RING TOOL

This cable ring tool is designed for cutting the sheathing of inside type plastic, fabric or rubber covered cable 3/16", 1/4", 3/8", & 1/2". Durable metal handle. Tool is supplied with 1 replacement blade. 5 1/2" long.

JONARD P/N	DESCRIPTION
JIC-2060	Cable Ring Tool
RB-2060/6	Pkg. of 6 Replacement Blades



JIC-2060

RB-2060

# TELECOMMUNICATION TOOLS



## WIRE STRIPPER & CUTTER

The latest development in wire stripping & cutting. Simply place the wire in the stripping slot. Squeeze and pull. The wire is stripped and cut to the exact length required. Comes with cushioned ergonomic grips, interchangeable blades 22-24 AWG and 24-26 AWG. Features include a larger "V" opening on the pliers and no tools required for adjustments. Supplied assembled.

JONARD P/N	DESCRIPTION
JIC-4473	Wire Stripper & Cutter
WSB-2224	Replacement Blade 22-24 AWG
WSB-2426	Replacement Blade 24-26 AWG



## DIP/IC EXTRACTOR

This is a one-piece insulated spring steel extractor to extract LSI, MSI and SSI devices from 8 to 24 pins. Will remove all types of DIP/IC's without bending pins. 4" long.

JONARD P/N	DESCRIPTION
S-340	DIP/IC Extractor



## WIRE EXTRACTOR

Metal tool with insulated handle to remove wire from quick-connect clips and 66 & 110 terminal blocks. 3/16" diameter with a .052" slot width. 5 1/2" long.

JONARD P/N	DESCRIPTION
M-724A	Wire Extractor



## LAMP EXTRACTOR

Mechanical type extractor used to remove or insert miniature lamps with bayonet type bases in panels and switchboards by firmly and gently grasping lamps. Grasp lever includes a return spring for fast lamp insertion and removal. Lamp grasp is limited to 5/16" to prevent shorts. Handle diameter 1/2". 4" long.

JONARD P/N	DESCRIPTION
S-339	Lamp Extractor

# FIBER OPTIC TOOLS

## FIBER OPTIC STRIPPER

For stripping 250 micron buffer coating from 125 micron optical fiber. Preset at the factory so no adjustments are necessary. Unique design prevents nicks or scratches on the optical fiber plus blades are ground and hardened for long life. Yellow plastic dipped handles 5 3/16" long.

JONARD P/N	DESCRIPTION
JIC-125	Fiber Optic Stripper



JIC-125

## WIRE & KEVLAR CUTTING SHEARS

This high leverage shears is designed to cut through Kevlar® fibers and other tough industrial materials. Strong enough to cut copper wire and thin steel material. Durable and reliable with one serrated and one straight edge. Red plastic dipped handles 6 1/2" long.

JONARD P/N	DESCRIPTION
JIC-186	Wire & Kevlar Cutting Shears



JIC-186

## OPTICAL FIBER CABLE SHEATH STRIPPER & RING TOOL

Used for stripping and butting tight buffer optical fiber cables. Use one blade to butt PVC sheathing and use the second blade to strip the sheathing. Adjustable for .018" or .031" thick plastic, rubber or fabric insulation. One spare blade of each style is included with the tool. Also known as CT2860.

JONARD P/N	DESCRIPTION
JIC-4366	Optical Fiber Sheath Stripper & Ring Tool
RB-2060/6	Pkg. of 6 Replacement Blades for ring feature tool
RB-2878/6	Pkg. 6 replacement blades for stripper feature of tool



JIC-4366  
CT2860

# WIRE WRAPPING TOOLS

The solderless connection by wire wrapping technique is now a standard method of making connections to terminals in high density electronic equipment. A wire wrapped connection is made by coiling the wire around the sharp corners of a terminal under mechanical tension. A distinct advantage of wire wrapping is the ease with which a wire may be removed from a terminal to correct errors or modify wiring. An unwrap tool is slipped over the terminal, engaging the first turn of the connection. Rotating the tool, the connection is removed in seconds, without damage to the terminal.



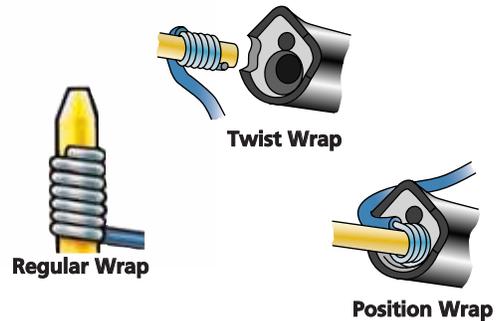
**WG-350L**  
Lexan®



**WG-350**  
Aluminum



**WG-350INS**  
Insulated



## MANUAL QUIK-WRAP GUNS ERGONOMICALLY IMPROVED

Hand operated wrapping guns use interchangeable bits and sleeves. Tools can provide up to 10 revolutions per squeeze of the trigger, and accommodate wire sizes from 22-32 AWG. All three guns are used for production line and field service use in the electronics and telecommunications industries.

The plastic gun (WG-350L) offers the advantage of light weight.

The metal gun (WG-350) provides greater durability.

The insulated metal gun (WG-350INS) has the added features of 1000 volt dielectric strength protection.

JONARD P/N	DESCRIPTION
<b>WG-350L</b>	Wire Wrapping Gun, Plastic
<b>WG-350</b>	Wire Wrapping Gun, Metal
<b>WG-350INS</b>	Wire Wrapping Gun, Insulated Metal

See page 37 for complete listing of bits and sleeves.

# WIRE WRAPPING TOOLS

## QUIK-WRAP BITS AND SLEEVES STANDARD 3" LONG

Bits conform to terminal height, width and wire size combinations. Sleeves are insulated to prevent shorting of adjacent connections.

### QUIK-WRAP 3" LONG BIT & SLEEVE

JONARD BIT P/N	SLEEVE P/N	WIRE GAUGE	HOLE DIA.	HOLE DEPTH
BW-2224	SW-2224	22-24	.075	.807
BW-2600	SW-2426	26	.075	1.000
BW-3032	SW-3032	30-32	.040	.750



### QUIK-WRAP BITS AND SLEEVES 5" LONG

These 5" bits and sleeves are designed for wire wrapping in tight and confined areas requiring deep penetration. Their 5" length ensures proper connections in hard to reach locations.

### QUIK-WRAP BITS 5" LONG

JONARD BIT P/N	SLEEVE P/N	WIRE GAUGE	HOLE DIA.	HOLE DEPTH
BW-22005	SW-22245	22	.075	.750
BW-24005	SW-24265	24	.075	.750
BW-26005	SW-24265	26	.075	.750



## TK-WW5 5-PIECE WIRE WRAPPING TOOL KIT

This is a complete field service telecom installation kit and is also used by technicians working at a main distributing frame.

### WIRE WRAP KIT

JONARD P/N	DESCRIPTION
TK-WW5	Wire Wrapping Kit
TKC-WW5	Leather Holster for TK-WW5



SW-2224 BW-2224 WDUD-2224

JIC-4473

WG-350INS



**TK-WW5**  
(complete kit)

# WIRE WRAPPING TOOLS



## HAND WRAP & UNWRAP TOOLS

These wire wrap tools do the job of two. These two sided tools allow for quick change of wrapping to unwrapping and back, while the unused side serves as a handle. 6" long.



JONARD P/N	WIRE GAUGE	WRAPPING TERMINAL HOLE DIA.	WRAPPING TERMINAL HOLE DEPTH	UNWRAPPING TERMINAL HOLE DIA.	UNWRAPPING HOLE DEPTH
WDUD-2000	20	.075"	1.000"	.070"	1"
WDUD-2224	22-24	.075"	.807"	.070"	1"
WDUD-2600	26	.040"	.750"	.038"	1"
WDUD-3000	30	.036"	.750"	.038"	1"



## DSL INSULATED WRAP & UNWRAP TOOL

Specifically designed for DSL (Digital Subscriber Line) connections. The wrapping side is designed for 24-26 AWG wire, and the unwrap side is designed for 20-26 AWG wire. Comes with an insulated handle for dielectric protection.

JONARD P/N	WIRE GAUGE	WRAPPING TERMINAL HOLE DIA.	WRAPPING TERMINAL HOLE DEPTH	UNWRAPPING TERMINAL HOLE DIA.	UNWRAPPING HOLE DEPTH
WDUD-26DS	24-26	.075"	.750"	.070"	1"



## HAND WRAPPING TOOLS

These tools with a metal handle are for left and right hand use and are compact and versatile. 6" long.

JONARD P/N	DESCRIPTION
WD-2224	Hand Wrapping tool for 22-24 gauge wire with a .075" diameter hole
WD-2600	Hand Wrapping tool for 26 gauge wire with a .040" diameter hole

# WIRE WRAP/UNWRAP TOOLS

## HAND WRAPPING TOOLS

Wire wrapping tool has a handle and shell, covered with a sleeve of insulating material. With a .073" diameter x .750" deep hole to accommodate a terminal. 5" long.

JONARD P/N	DESCRIPTION
WDI-2426	Hand Wrapping Tools 24-26 gauge



WDI-2426

## HAND WRAP TOOL

This manual wire wrapping tool allows you to make uniform, gas-tight solderless wrapped connections with 22 and 24 gauge wire. Red handle. 5" long.

JONARD P/N	DESCRIPTION
JIC-22681	Hand Wrap Tool



JIC-22681

## HAND UNWRAPPING TOOL

This manual wire unwrapping tool consists of a threaded steel bit and blue plastic handle. A terminal hole is provided to accommodate terminals with cross-section dimensions up to .032 x .062 inches. 5" long.

JONARD P/N	DESCRIPTION
JIC-20551	Manual Wire Unwrapping Tool



JIC-20551

## SLEEVED UNWRAPPING TOOL

This versatile unwrapping tool with a funnel-shaped spring loaded sleeve. This is a single ended insulated tool with a yellow plastic handle used for 20-26 gauge wire. 5 1/2" long.

JONARD P/N	DESCRIPTION
UD-2224	Sleeved unwrapping tool



UD-2224

## HAND UNWRAPPING TOOLS

These double ended tools with a metal handle are for left and right hand use. 6" long.

JONARD P/N	DESCRIPTION
UDLR-2026	Hand unwrapping tool for 20-26 wire with a .070" diameter hole
UDLR-2432	Hand unwrapping tool for 24-32 wire with a .040" diameter hole



UDLR-2026  
UDLR-2432



# CONNECTOR TOOLS



JONARD P/N	MILITARY STANDARD (MS)	COLOR CODE	CONTACT SIZE
A-4598	MS24256-A20	RED	20
A-4599	MS24256-A16	BLUE	16
A-4600	MS24256-A12	YELLOW	12
KA-260 Insertion Tool Kit (contains above 3 tools) in leather case			

## CONNECTOR INSERTION AND EXTRACTION TOOLS

These tools service virtually all connectors conforming to Mil-C-26482, Mil-C-26500 with front release contacts made by such manufacturers as Amp, Amphenol, Bendix, Burndy, Cannon, Cinch, Continental, Elco, Flight, Pyle National and Deutsch. These tools contain strong, durable, stainless steel probes & color coded handles.



JONARD P/N	MILITARY STANDARD (MS)	COLOR CODE	CONTACT SIZE
R-4601	MS24256-R20	RED	20
R-4602	MS24256-R16	BLUE	16
R-9461	MS24256-R12	YELLOW	12
KR-260 Removal Tool Kit (contains above 3 tools) in leather case			

## PIN EXTRACTOR

A plunger style pin extractor for pushing pins out from behind the connector blocks for contact sizes 16-20. 3" long.



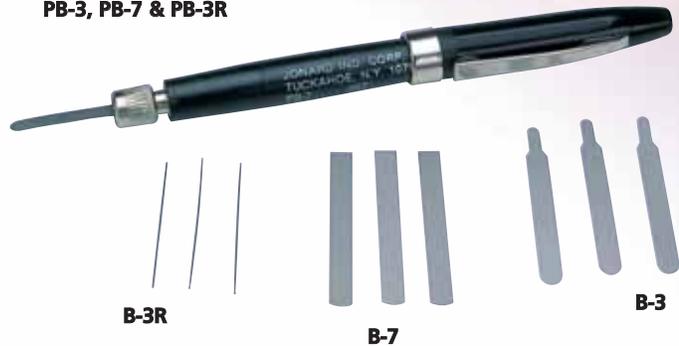
JONARD P/N	DESCRIPTION
R-5926	Pin Extractor

# BURNISHERS

## POCKET TYPE BURNISHERS

Adjustment of flexible blade-length and rigidity - is possible by varying depth in chuck. Supplied with replaceable blades stored in pen barrel at other end. Plastic barrel and cap made of sturdy plastic for dielectric work. Length 4 1/2", diameter 3/8". Blades are 3/16" Wide x 1 1/2" long. Rods are .020" diameter x 1 1/4" long.

PB-3, PB-7 & PB-3R



JONARD P/N	DESCRIPTION
PB-3	Pen With 6 Blades .0035" Thick
PB-3R	PB-3 plus 6 abrasive rods
PB-7	Pen With 6 Blades, .007" thick
B-3/25	Pkg. 25 Replacement Blades for PB-3 (.0035")
B-3R/25	Pkg. 25 Replacement Rods for PB-3R
B-7/25	Pkg. 25 Replacement Blades for PB-7 (.007")

**D-200 Coarse (grit for rapid cleaning)**, .019" Thick, two diamond faces, green shaft.

**D-300 Medium (grit for intermediate size contacts)**, .017" Thick, two diamond faces, red shaft.

**D-400 Fine (grit for small sensitive contacts)**, .011" Thick, single diamond face, blue shaft.

**K-234**, Three assorted spatulas in a leather case.

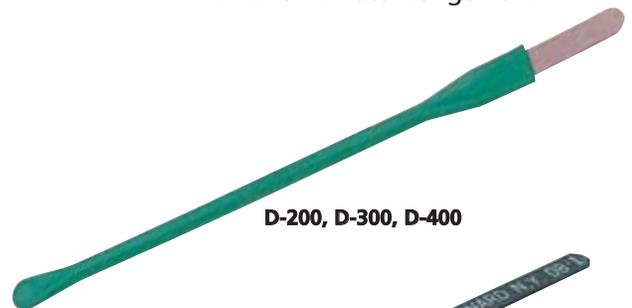
## DIAMOND BURNISHERS

K-234



These diamond contact burnishing spatulas consist of uniform abrasive diamond particles, set in a special metal for precise effective cleaning, polishing and burnishing with minimum pressure, so very little metal is removed. Diamond face 1" x 1/4". Total length 6".

JONARD P/N	DESCRIPTION
D-200	Coarse
D-300	Medium
D-400	Fine
K-234	Assortment

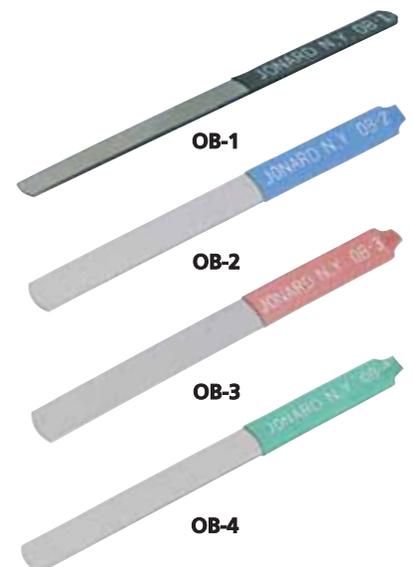


D-200, D-300, D-400

## CONTACT BURNISHERS

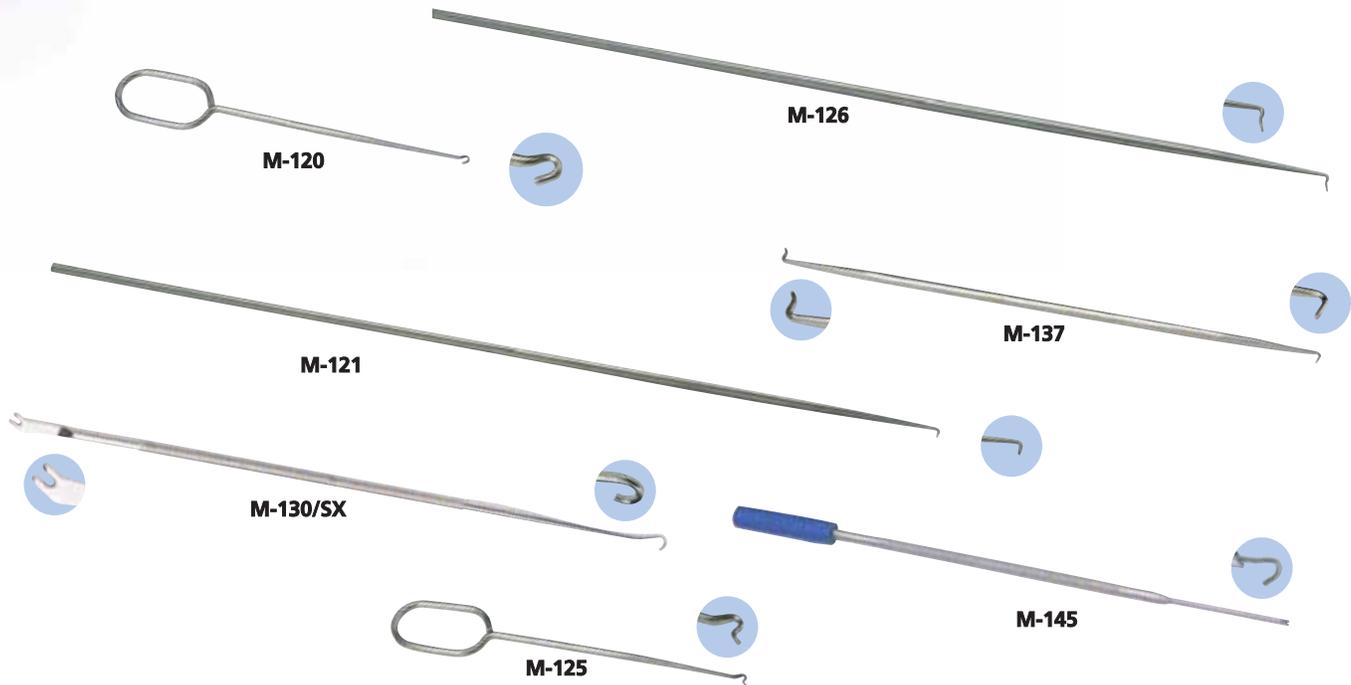
Plastic insulated handles for working on live contacts. Tools are packaged in a clear plastic vial for protection from grease and moisture.

JONARD P/N	DESCRIPTION
OB-1/3	<b>For Fine Contacts.</b> Ideal for Tool Kits. 3/16" wide, .007" thick. 3" long. Package of 3
OB-1/12	<b>For Fine Contacts.</b> 3/16" wide, .007" thick. 3" long. Package of 12
OB-2/12	<b>For Extra Sensitive Points.</b> Blue handle. 1/4" wide, .007" thick. 3" long. Package of 12
OB-3/12	<b>For General Purpose Contacts.</b> Red handle. 1/4" wide, .010" thick. 3" long. Package of 12
OB-4/12	<b>For Industrial Use.</b> Green handle. 3" long, 1/4" wide. .020" thick Package of 12



# ALIGNMENT TOOLS SPRING HOOKS/CLIP SETTER

Used for inserting, removing and adjusting fine springs and other small parts in tight areas. Indispensable for precision work in production and maintenance of precision production, electronics, electromechanics and even maintenance jobs. All spring hooks are tapered to a fine point. Produced of the finest quality high carbon steel with a nickel-plated finish. We will custom design Spring Hooks to meet your specific requirements.



**M-120** Pull Hook with looped handle for maximum control 6" long.

**M-121** Pull Hook for difficult to reach areas, 11" long.

**M-125** Push Hook with looped handle for maximum control 6" long.

**M-126** Push Hook for difficult to reach areas, 11" long.

**M-130/IX** Pull Hook and lifter. With an insulated grip. 8" long.

**M-130/SX** Pull Hook and lifter. With a knurled grip. 8" long.

**M-137** Push & Pull 2 sided Hook, 7" long.

**M-145** Captive Spring Hook. Spring loaded hook is exposed by depressing plunger on top of tool. Internal spring retracts hook automatically. This hook is ideal for capturing small wires, springs or parts and holding them. 7" long.

JONARD P/N	DESCRIPTION
M-120	Push Hook
M-121	Push Hook
M-125	Push Hook

JONARD P/N	DESCRIPTION
M-126	Pull Hook
M-130/SX	Pull Hook

JONARD P/N	DESCRIPTION
M-137	Push & Spring Hook
M-145	Captive Spring Hook



JONARD P/N	DESCRIPTION
CS-1022	Clip Setter

## CLIP SETTER

Clip Setter used for setting and withdrawing 1.5mm and up E & C Clips. One end of this tool has a hook with leaf spring tension for removing the clip. Other end of tool has leaf spring for holding clip in position to insert. Narrow shape allows access to confined places. This tool is 6 3/4" long .275" wide and 1/16" thick.

# ALIGNMENT TOOLS



## SPUDGER

Plastic pencil type tool tapered to a point on one end and screwdriver tip on other end. Used to form, shape, guide, spudge and separate fine computer wire terminals, telephone wires and cables. Also used for breaking solder bridges, probing or positioning loose components. Made of a high impact non-conductive thermoplastic material. 6" double ended 5/16" diameter long.

JONARD P/N	DESCRIPTION
AT-3112	Spudger

## ALIGNMENT TOOL

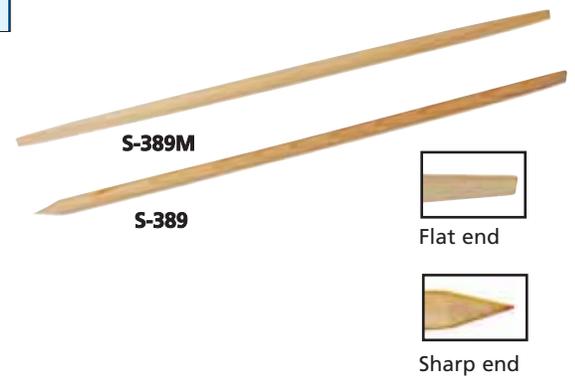
2-in1 nonconductive Alignment Tool 1/4" in diameter, stepped down to 5/32" in diameter. Ideal for most variable capacitors, coils and resistors. Also used to harness and separate fine wire terminals in computers, telephones and cables. Made of non-conductive thermoplastic material. 7" long.

JONARD P/N	DESCRIPTION
AT-6241	Alignment Tool

## TRIMPOT

Double ended Trimpot with a hex (allen) steel .050" and 3/32" long steel screwdriver tip. Ideal for aligning, adjusting, calibrating and fine tuning of electronic circuitry, potentiometers, oscilloscopes and electronic equipment. Made of a high impact non-conductive thermoplastic material. 5" long.

JONARD P/N	DESCRIPTION
AT-3767	Trimpot



## ORANGE STICKS

Static free double ended economical tool made of birch wood. Used for cleaning electrical components and separating contact points, fine wires and other delicate components. 3/16" diameter x 7" long. The S-389 has one end tapered to a point and the other end to a flat screwdriver type tip. The S-389M has both ends tapered with a flat screwdriver type tip.

## ALIGNMENT TOOL KIT

This 5 piece pocket kit contains a selection of the most popular non-conductive tools for aligning and adjusting components.

### Kit contains:

AT-3767 Trimpot, AT-6241 Alignment Tool, AT-3112 Spudger, S-389 Orange Stick, JIC-22035 Probe Pick

JONARD P/N	DESCRIPTION
TK-AT5	Alignment Tool Kit

JONARD P/N	DESCRIPTION
S-389/10	Orange Sticks Point & Flat end Pk. of 10
S-389/100	Orange Sticks Point & Flat end Pk. of 100
S-389M/10	Orange Sticks 2 Flat ends Pk. of 10
S-389M/100	Orange Sticks 2 Flat ends Pk. of 100



# FORCE GAUGES DYNAMOMETER TENSION GAUGES

Jonard force gauges are all ergonomically designed and have become the industry standard for measuring force. Our 3 different lines of force gauges are used by a multitude of industries including the electronics, telecommunications, business equipment, medical, metrology, automotive, chemical plastics, machinery, manufacturing and others. These gauges are being used in over 1000 different applications for measuring, calibrating, standardizing, testing and evaluating.

Tension Gauges are produced in two sizes and a total of 11 different ranges. Measurement is extremely simple. Just place point of gauge arm perpendicular to the force to be measured. Reading can be taken in both directions - clockwise and counter-clockwise. All gauges come equipped with maximum reading pointer. Maximum reading pointer moves with indicator when testing. It will remain at maximum force measured, enabling user to take reading afterward. No need to look at dial hand while measuring, thus avoiding reading errors. Gauges offer extreme precision and durability. The measuring springs are made of hard tempered annealed beryllium copper. This alloy provides outstanding flexibility with minimum effort. Dial is protected by unbreakable glass. Packaged in rigid, fitted plastic case to protect instrument. All gauges equipped with maximum reading pointer. Tolerance  $\pm .01$  (Reading + Maximum Scale Reading.)



**GD-30**

**Small Gauges**  
(Flat Tip, Dial Diameter 1 1/2")

JONARD PART NO.	RANGE IN GRAMS	GRADUATION IN GRAMS
GD-1	0-10	.25
GD-3	4-35	1.00
GD-5	5-50	1.00
GD-10	10-100	2.00
GD-15	15-150	5.00
GD-25	30-250	10.00
GD-30	40-350	10.00

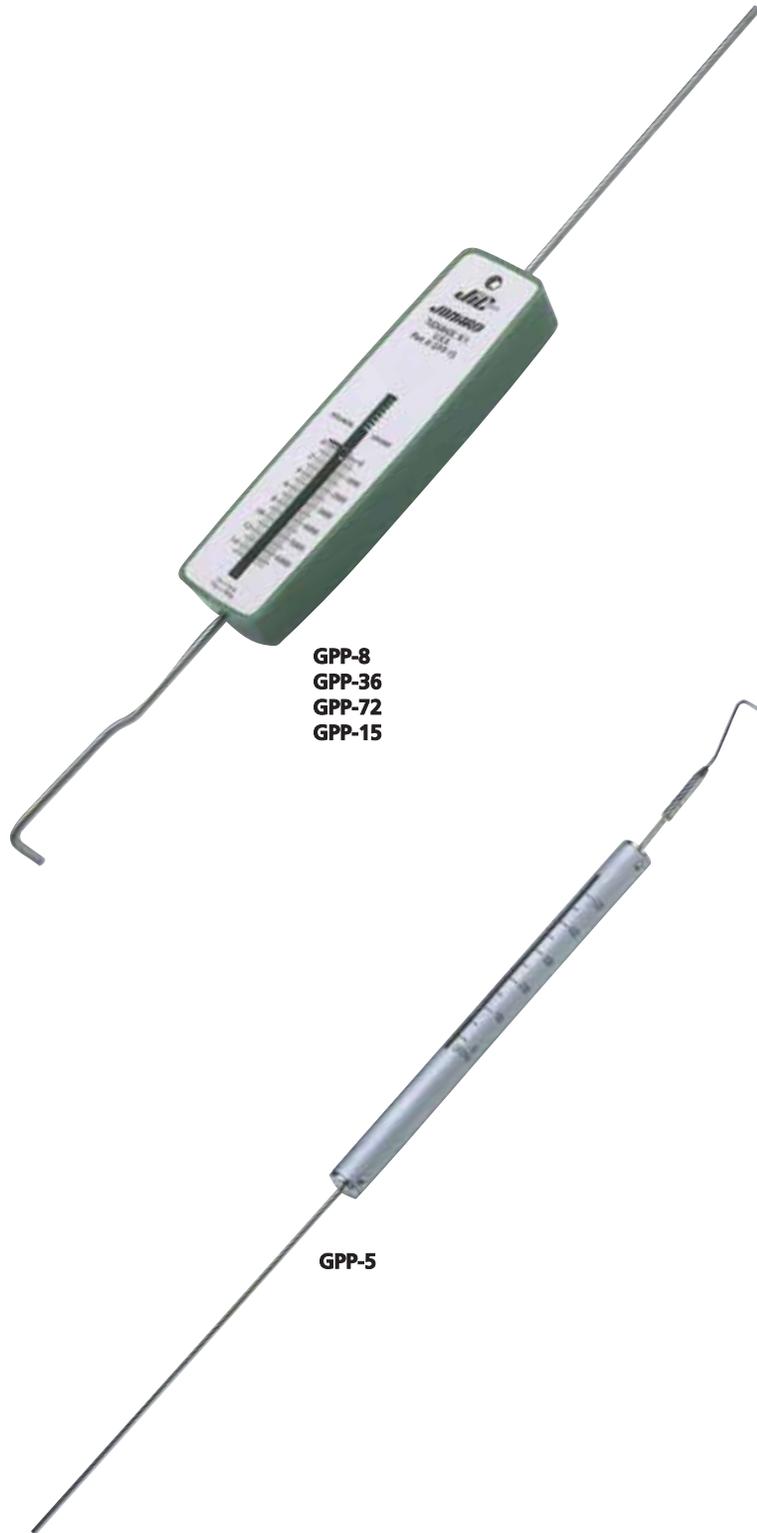


**GD-200**

**Large Gauges**  
(Round Tip, Dial Diameter 2 1/2")

JONARD PART NO.	RANGE IN GRAMS	GRADUATION IN GRAMS
GD-50	60-500	20.00
GD-100	100-1000	25.00
GD-200	200-2000	50.00
GD-400	400-4000	100.00

# FORCE GAUGES PUSH-PULL



GPP-8  
GPP-36  
GPP-72  
GPP-15

GPP-5

## ECONOMY PUSH-PULL TENSION GAUGES

These high impact polystyrene cased instruments are low priced and simplified in construction yet accurately measure push pull forces. Gauge is graduated in two scales: grams and ounces. Ideal for field service use and applications requiring gauges with maintenance free operation. Precision springs individually are calibrated and checked with dead weights. Full scale accuracy and permanent calibration is held to  $\pm 1$  graduation.

Size: 1 1/2" wide x 1" deep x 14" long.

JONARD P/N	AVOIRDUPOIS CAPACITY	METRIC CAPACITY
GPP-8	8 oz. x 0.25 oz.	220 g x 5 g
GPP-36	36 oz. x 0.5 oz.	1,020 g x 20 g
GPP-72	72 oz. x 1 oz.	2,025 g x 25 g
GPP-15	15 lb. x 4 oz.	6,804 x 100 g

## PUSH-PULL PRECISION TENSION GAUGE

Precision, compact tubular-type mechanical force gauge whose slender shape permits its use in confined areas to measure push-pull forces. Gauge is graduated in two scales: grams and ounces. Precision springs individually are calibrated and checked with dead weights. Full scale accuracy and permanent calibration is held to  $\pm 1$  graduation. Construction is brass with satin chrome finish, threaded tips for adjustment of position and length of shafts. Size: 1/2" diameter x 15" long.

JONARD P/N	AVOIRDUPOIS CAPACITY	METRIC CAPACITY
GPP-5	1 lb X 1 oz.	500 g X 50 g

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# NOW ENJOY THE PRODUCTS OF TWO GREAT COMPANIES IN ONE **UNIQUE KIT**:

- Pliers and Specialty Tools from Jonard Industries
- Wire Wrapping Tools from OK Industries

**WWK-CO Kit** Insulated Wire Wrapping Kit- designed specifically for the Central Office. This kit contains all of the tools you need for wire wrapping in the central office (See details below).

#### WWK-CO Kit

Kit Contains:

<b>H-1000</b>	Cordura Pouch
<b>G100/R3278INS</b>	Insulated Wire-Wrapping Gun
<b>P2224INS</b>	Insulated Wrapping Sleeve
<b>KB224</b>	Wrapping Bit
<b>JIC-21257</b>	Telecom Long Nose Pliers
<b>JIC-22035</b>	Probe Pick
<b>JIC-2257</b>	Insulated Wire Loop Puller
<b>UW4</b>	Sleeved Unwrapping Tool



JIC-2257

JIC-22035

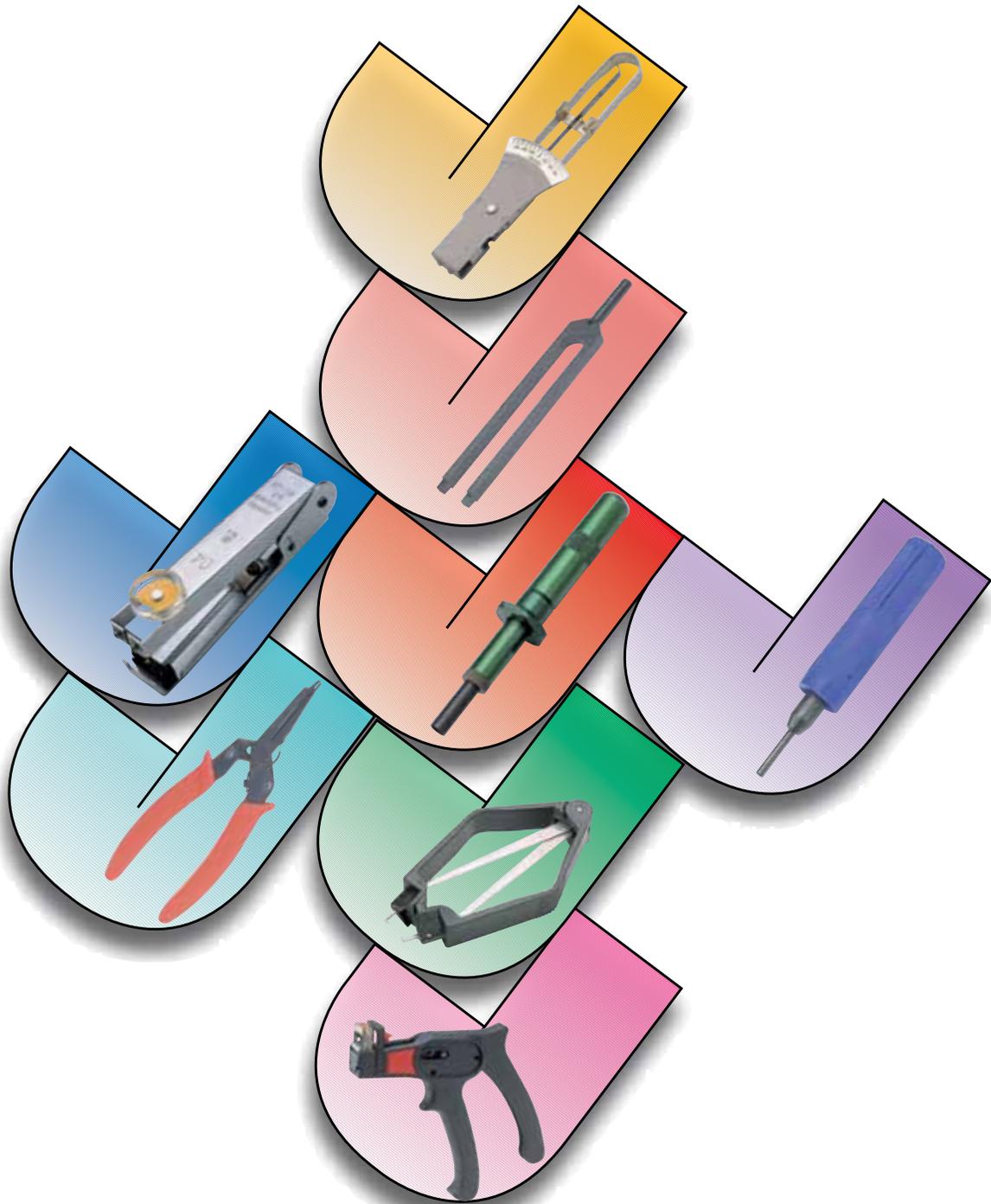
JIC-21257

UW4

KB224

P2224INS

G100/R3278INS



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