

**Tools for Telecom, Fiber Optics, CATV,
Wireless and Electronics Industries**

Installation • Maintenance • Repair

OVER 50 YEARS OF MANUFACTURING EXCELLENCE





Established 1958



OK Industries
Div. of Jonard Industries

Established 1946

DESIGN TECHNOLOGY PRECISION QUALITY

Established in 1958; Jonard Industries Corp is a prime manufacturer of Tools for the Telecom, Fiber Optic, CATV and Electronic Industries with designs for installation, maintenance and repair. 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, IBM, Hewlett Packard, Boeing, United Technologies, Comcast, Time Warner 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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TABLE OF CONTENTS

OK INDUSTRIES

| | PAGES |
|-----------------------------------|--------|
| Power Series Wrap/Unwrap Tools | 5-6 |
| DFB Wrap/Unwrap Bit & Sleeve Sets | 7 |
| Manual Wire Wrap/Unwrap Tools | 8,9,13 |
| Wire Wrapping Bits & Sleeves | 10-12 |
| Hand Wrapping & Unwrapping Tools | 14-16 |
| Socket Wrap ID Tags | 16 |
| Wire | 17 |
| Copper Wire Cut & Strip Tools | 18-19 |
| Desolder Pumps | 20 |
| Fume Absorbers | 21 |
| Insertion/Extraction Tools | 22 |
| Punchdown Tools | 23 |

JONARD INDUSTRIES

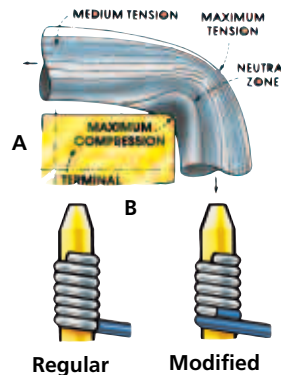
| | |
|--|-------|
| Pliers | 24-30 |
| CATV & Fiber Optic Tools | 31-39 |
| Nut Drivers, BNC, F | 36 |
| Torque, Speed, Combination Wrenches | 37 |
| Can, Booth, Lineman's Wrenches | 38 |
| Insulated Tools | 39 |
| Pay Telephone Tools, screwdrivers, spudger | 40 |
| Telecommunication Tools | 40-41 |
| Wire Wrapping Tools | 42-45 |
| Connector Tools | 46 |
| Spring Hooks | 47 |
| Alignment Tools | 48 |
| Burnishers | 49 |
| Force Gauges | 50 |
| Knockout Kit | 51 |

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 *

| 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 |

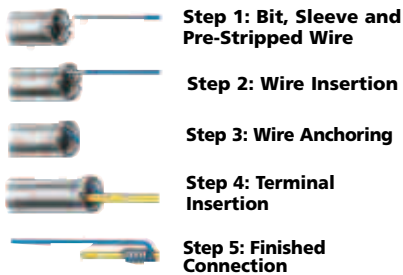
*Conforms to MIL-STD-1130B

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



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.

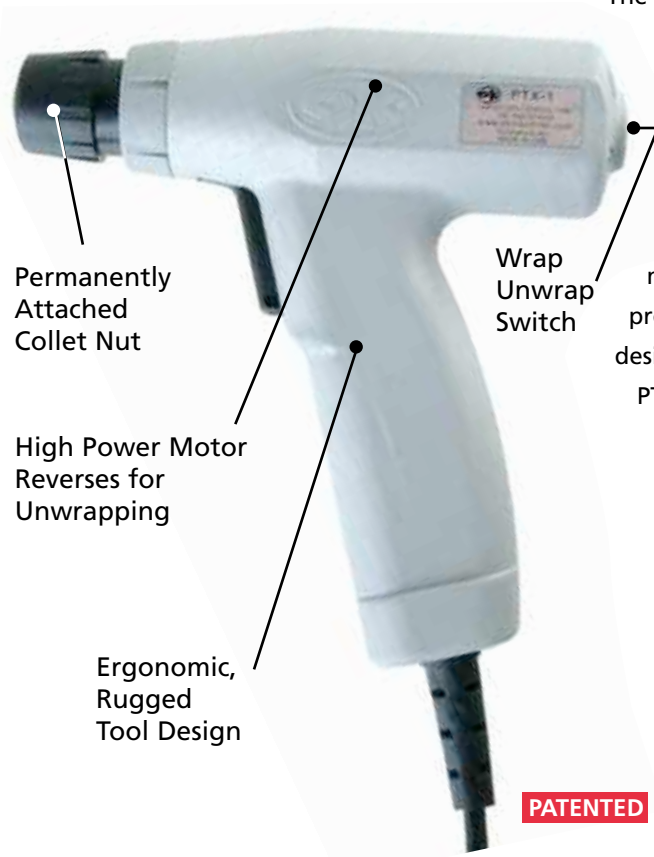
TERMINAL DIAGONAL CHART

DIMENSION B

| 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 |
| .010 | .014 | .018 | .022 | .027 | .032 | .036 | .041 | .046 | .051 | .056 | .061 | .066 | .071 | .076 | .081 | .086 | .091 | .096 | .101 |
| | 0.25 | 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 |
| .015 | .018 | .021 | .025 | .029 | .033 | .038 | .043 | .047 | .052 | .057 | .062 | .067 | .072 | .077 | .082 | .087 | .092 | .097 | .102 |
| | 0.38 | 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 |
| .020 | .022 | .025 | .028 | .032 | .036 | .040 | .045 | .049 | .053 | .058 | .063 | .068 | .073 | .078 | .083 | .088 | .093 | .098 | .103 |
| | 0.51 | 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 |
| .025 | .027 | .029 | .032 | .035 | .039 | .043 | .047 | .050 | .056 | .060 | .065 | .069 | .074 | .079 | .084 | .089 | .094 | .099 | .104 |
| | 0.64 | 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 |
| .030 | .032 | .033 | .036 | .039 | .042 | .046 | .050 | .054 | .058 | .062 | .067 | .071 | .076 | .080 | .085 | .090 | .095 | .100 | .105 |
| | 0.76 | 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 |
| .035 | .036 | .038 | .040 | .043 | .046 | .049 | .052 | .056 | .060 | .064 | .069 | .073 | .078 | .082 | .087 | .091 | .096 | .101 | .106 |
| | 0.89 | 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 |
| .040 | .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 |
| .045 | .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 |
| .050 | .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 |

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

PTX SERIES ELECTRIC WIRE WRAPPING & UNWRAPPING TOOLS



Permanently Attached Collet Nut

High Power Motor Reverses for Unwrapping

Ergonomic, Rugged Tool Design

Wrap Unwrap Switch

PATENTED

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
- A 20' Long Power cord
- Rugged Construction
- 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-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-48 | Electric Wrap/Unwrap Tool - 48V | 2.0 lb. | 48V | 3700 |

ACCESSORIES

- **DFB224** Wrap/Unwrap Bit & Sleeve Set
- **DFB2426** Wrap/Unwrap Bit & Sleeve Set
- **H-1000** Cordura Tool Pouch



DFB224



H-1000

PTX SERIES BATTERY WIRE WRAPPING & UNWRAPPING TOOLS

BATTERY POWERED LONG-LIFE NIMH BATTERY

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.



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- Ergonomic Design — Minimizes Repetitive Stress
- Rugged Construction
- 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-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
- **DFB2426** Wrap/Unwrap Bit & Sleeve Set



H-1000



PTX-BC1



PTX-B



DFB224

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

DUAL FUNCTION WRAP/UNWRAP BIT & SLEEVE SETS



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.

Note: The DFB set can only be used with the PTX or other powered wire wrapping tools with a reverse mode.

| 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 | 12.70 | .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 | 12.70 | .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 TOOLS

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 18 AWG (1.00mm) thru 32 AWG (0.20mm).



G200/R3278 Lexan™



G100/R3278 Aluminum



G100/R3278INS Insulated

MANUAL WIRE WRAPPING & UNWRAPPING TOOLS

INSULATED MANUAL WIRE WRAPPING TOOL WITH LED FLASHLIGHT



G100/R3278FL

This tool combines the rugged durability of all metal construction with an insulative material that provides 1000V dielectric strength across most of the housing, and an LED flashlight for task lighting...No more working in the dark! The flashlight uses a standard AAA battery, which can be easily changed. Flashlight is positioned for both 3" and 5" bits and sleeves so no adjustments are necessary.

The G100/R3278FL provides up to ten revolutions per squeeze of the trigger, and can accommodate wire sizes from 18-32 AWG. This hand operated wire-wrapping tool uses interchangeable bits and sleeves. And when you use our insulated sleeves, shorting between the pins of the main frame and other equipment is minimized.



WIRE WRAPPING FLASHLIGHT KIT



G100-FL



G100-FLA

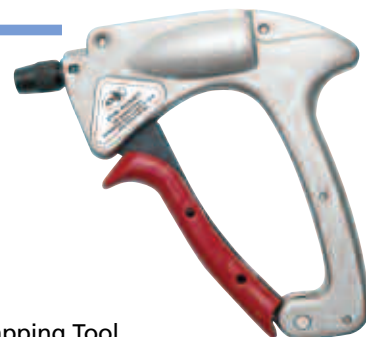
Add the convenience of task lighting to your wire wrapping gun with this Wire Wrapping Flashlight Kit. Compatible with all wire wrapping tools.

This LED Flashlight Kit uses a standard AAA battery (included). Mounted on a bracket, this attachment installs in minutes and provides task lighting for those poorly lit areas. Flashlight is positioned for both 3" and 5" bits & sleeves so No Adjustments are necessary.

| Part No. | Construction | For Use With |
|----------|--------------|---|
| G100-FL | Metal | G100/R3278, G100/R3278INS, WG-350, WG-350INS |
| G100-FLA | Plastic | Universal-for use with most manual wire wrapping guns |

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).



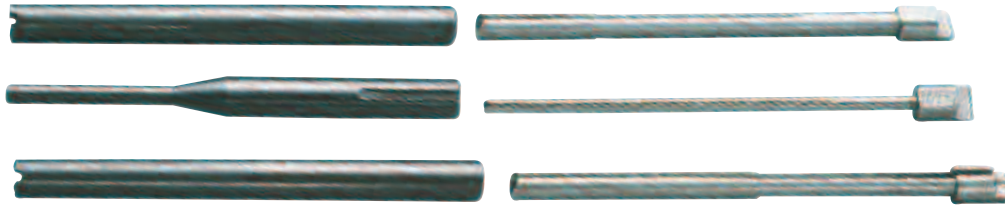
G100/R3394CT



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

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

BITS & SLEEVES WIRE WRAPPING



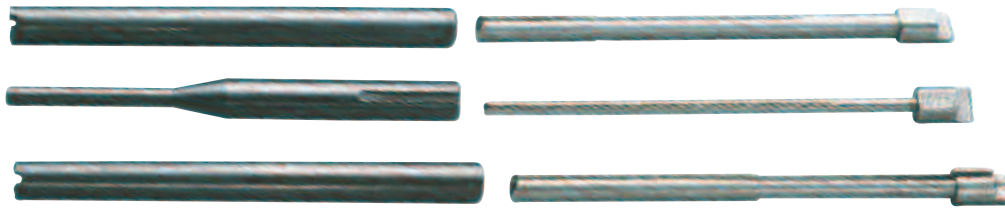
Fully compatible with any make or model wire wrapping tool. Modified bits provide 1 1/2–2 turns of insulation.

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 | P194LN | | .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 |
| 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 | | ● | WB3032MIL† | 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" center to center of the pins † Provides 2.5 turns of insulation

BITS & SLEEVES WIRE WRAPPING



Fully compatible with any make or model wire wrapping tool. Modified bits provide 1 1/2–2 turns of insulation.

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 | P194LN | | 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 | ● | | 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 |
| 30-32 | | ● | WB3032MIL [†] | 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" center to center of the pins † Provides 2.5 turns of insulation

SPECIALIZED BITS & SLEEVES

3" 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 | 0.86 | .038 | 0.96 | 0.750 | 19.05 | .064 | 1.62 | .040 | 1.02 |

5" Bits and Sleeves (Extended Length) Insulated and Non Insulated 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

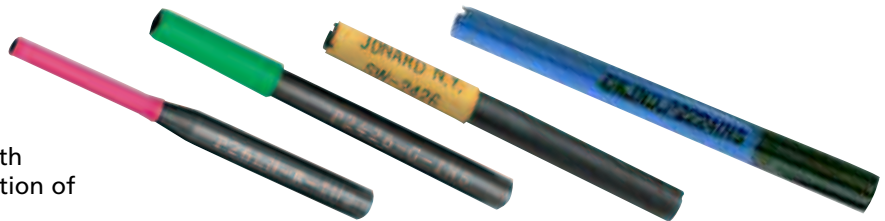


KB24-5

| 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 | 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 | In. | mm |
| KT22B | KB22 | P2224INS Blue | 22 | 0.65 | ● | | - | - | .054 | 1.37 | .073 | 1.85 | .750 | 19.05 | .117 | 2.97 | .075 | 1.90 |
| KT224B | KB224 | P2224INS Blue | 22-24 | 0.65-0.50 | ● | | - | - | .054 | 1.37 | .073 | 1.85 | .807 | 20.05 | .111 | 2.82 | .075 | 1.90 |
| KT24Y | KB24 | SW-2426 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 |

MANUAL WIRE WRAPPING TOOL KITS

TELECOM WIRE WRAPPING 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 CENTRAL OFFICE**

Kit Contains:

- G100/R3278INS Insulated Wire Wrapping Tool
- KB224 bit 22-24 AWG
- P2224INS Insulated 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 Wire Wrapping Tool
KB224 bit 22-24 AWG
P2224 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

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

Kit Contains:

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



WWK-1INS

UW4

ST-100

KB224

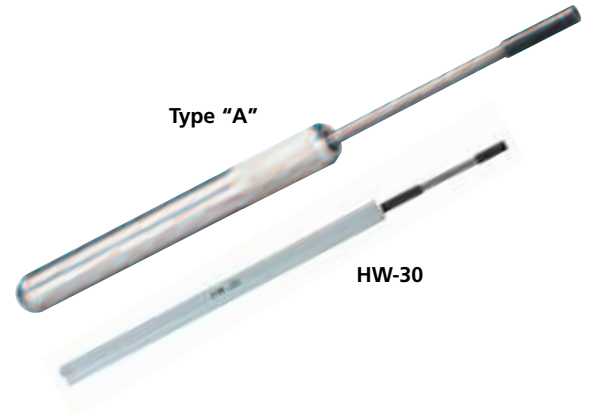
P2224INS

G100/R3278INS

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 made with 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 AND UNWRAPPING TOOLS

These Hand Wrapping and Unwrapping 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 | 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-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. A modified wrap provides 1.5 – 2 turns of insulation.

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)



PATENTED

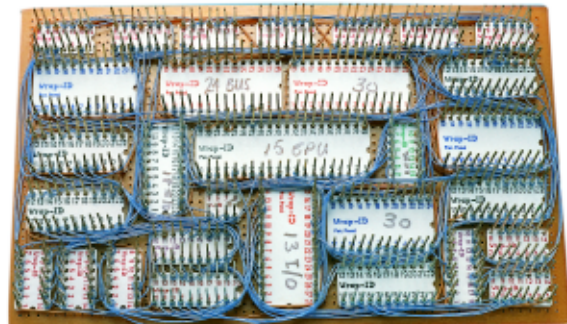
| Part No. | Reg | | Wire Size | | Max. Insulation Diameter | | Terminal Hole Diameter | | Terminal Hole Depth | | Outside Diameter | | Square Post | |
|----------|-----|-----|-----------|-----------|--------------------------|------|------------------------|------|---------------------|------|------------------|-----|-------------|------|
| | 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 | .036 | 0.92 | .075 | 1.90 | 1.50 | 38.1 | .213 | 5.4 | .045 | 1.14 |
| WSU-26M | | ● | 26 | 0.40 | .034 | 0.86 | .075 | 1.90 | 1.50 | 38.1 | .213 | 5.4 | .045 | 1.14 |
| WSU-30 | ● | | 30 | 0.25 | | | .036 | 0.91 | 1.50 | 38.1 | .125 | 3.2 | .025 | 0.63 |
| WSU-30M | | ● | 30 | 0.25 | .021 | 0.53 | .036 | 0.91 | 1.50 | 38.1 | .125 | 3.2 | .025 | 0.63 |

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

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-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 |

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 | .020 | 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 |

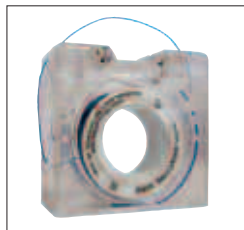
KSW Wire Wrapping Wire Rolls for Cut/Strip/Wrap Applications

Low strip force Kynar® insulated silver plated copper conductor wire is further processed to provide a low strip force for use with CSW bits and sleeves. 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 | 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 | .024 | 0.60 | 100 | 30.4 | KSW 28B-0100 | KSW 28Y-0100 | KSW 28W-0100 | KSW 28BLK-0100 | KSW 28R-0100 |
| 30 | 0.25 | .020 | 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 |

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

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.



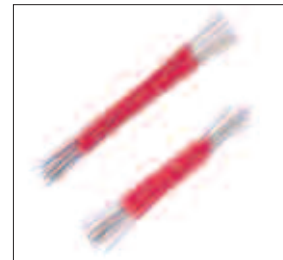
R-30R-0050

| 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 |

| 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 |

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
- Add 2" to the insulation length (see chart below) for total length of wire



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 |

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.



| 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 | SB-2224 |
| ST-100-2426 | 24-26 | 0.50-0.40 | 1 15/16" to 1 11/16" | 39.68 to 42.86 | SB-2426 |
| ST-100-2830 | 28-30 | 0.32-0.25 | 7/8" to 1 1/8" | 22.22 to 28.57 | SB-2830 |

WIRE STRIPPER AND CUTTER



The JIC-1022 Wire Stripper and Cutter is designed to strip and cut the most commonly used stranded and solid wire gauges 10 to 22 AWG and 1.6-3 mm fiber jackets. The JIC-1626 Wire Stripper and Cutter is designed for 16 to 26 AWG wire. The JIC-2030 Wire Stripper and Cutter is designed for 20-30 AWG wire.

Other features include a coil spring opening to reduce fatigue, wire looping, bending holes conveniently located, black oxide finish, locking mechanism, and cutting surfaces that are hardened, tempered and ground for superior performance. 6 3/4" long and weighing just 4.5 ounces.

| Part No. | Description |
|----------|------------------------------------|
| JIC-1022 | Wire Stripper and Cutter 10-22 AWG |
| JIC-1626 | Wire Stripper and Cutter 16-26 AWG |
| JIC-2030 | Wire Stripper and Cutter 20-30 AWG |

COPPER WIRE CUT & STRIP TOOLS

ADJUSTABLE PRECISION WIRE STRIPPERS OK-3907 SERIES



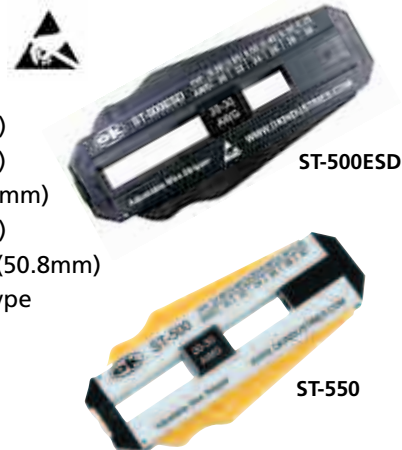
The OK-3907 Series from OK Industries is the industry's leading cut-and-strip tool for copper interconnect applications. Installers and telecom technicians enjoy its rugged construction, ergonomic plastic grips, and high-leverage handle design, which allows time savings through the simultaneous cutting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

| Part No. | Wire Size | | Adjustable Strip-Off Length | | Replacement Blade |
|--------------|-----------|-----------|-----------------------------|----------------|-------------------|
| | AWG | mm | Inchs | mm | |
| OK-3907-2224 | 22-24 | 0.65-0.50 | 1-1/2" to 1-3/4" | 38.10 to 44.45 | SB-2224 |
| OK-3907-2426 | 24-26 | 0.50-0.40 | 1-1/2" to 1-3/4" | 38.10 to 44.45 | SB-2426 |
| OK-3907-2830 | 28-30 | 0.32-0.25 | 7/8" to 1 1/8" | 22.22 to 28.57 | SB-2830 |

ADJUSTABLE PRECISION WIRE STRIPPERS

These 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-450 26 to 36 AWG (0.40 to 0.12mm)
 - ST-500 20 to 30 AWG (0.80 to 0.25mm)
 - ST-500ESD 20 to 30 AWG (0.80 to 0.25mm)
 - ST-550 18 to 28 AWG (1.00 to 0.30mm)
- Calibrated Wire Stop adjustable to 2" (50.8mm)
- Clean, precise strip of any insulation type
- Lightweight-weighs 1 oz.
- Blade is hardened steel (RC58)
- Dimensions 3.9" x 1.6" x 0.6"
(99 mm x 42 mm x 14 mm)



| Part No. | ST-450 | ST-500 | ST-500ESD For ESD Use | ST-550 |
|------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Wire Gauge | 26-36 AWG 0.40 to 0.12mm | 20-30 AWG 0.80 to 0.25mm | 20-30 AWG 0.80 to 0.25mm | 18-28 AWG 1.00 to 0.30mm |
| Housing Material | ABS | ABS | ESD Safe Polycarbonate | ABS |

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 |

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/ 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.



SA-91

| Specifications | | |
|----------------------|------------------------|------------------|
| Part No. | 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) |



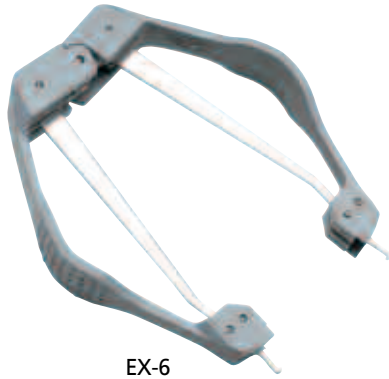
SAF-1

IC INSERTION EXTRACTION TOOLS

UNIVERSAL PLCC EXTRACTION TOOL EX-5/EX-6

Features

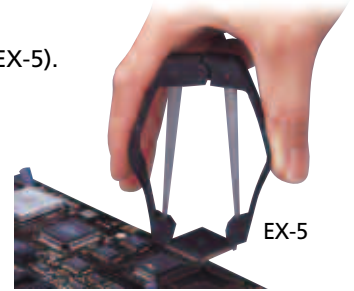
- Extracts a range of PLCC sizes from 20 pins through 128 pins from any socket without damage to the chip.
- Spring loaded one-hand design requires no pulling, just squeeze handles and chip is lifted from the socket.
- ESD safe handles for use on all static safe components (EX-5).
- Machined stainless steel for long-life (EX-5).
- EX-6 - ABS handles and stamped steel.



EX-6



STATIC SAFE



EX-5

| Part No. | Description |
|----------|-------------------------------|
| EX-5 | ESD safe PLCC extraction tool |
| EX-6 | 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 are CMOS safe and include grounding lugs where appropriate except EX-1. The kit consists of extractors EX-1 for 8-24 pin devices, and EX-2 for 24-40 pin ICs, plus inserters MOS-1416, MOS-2428, and MOS-40 for 14-16, 24-28 and 36-40 pin IC's respectively.

EX-1

EX-2

MOS-1416
(.3" Pitch)

MOS-40
(.6" Pitch)

MOS-2428
(.6" Pitch)



Kit Includes

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



S-340

DIP/IC EXTRACTOR

This is a one-piece insulated spring steel extractor used 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.

| Part No. | Description |
|----------|------------------|
| S-340 | DIP/IC Extractor |

| Part No. | Description |
|----------|----------------------------------|
| WK-7 | 5 piece insertion/extraction kit |

Note: WK-7 items may be purchased individually.

PUNCHDOWN TOOLS

Insulation displacement connections to properly seat and trim wires used with connectors. Make effortless and uniform connections.

A REVOLUTIONARY ERGONOMIC DESIGN GUARANTEEING OPERATOR SAFETY & EFFICIENCY

EPB - 1000 Battery Punchdown Tool

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

EPB-1000 TOOLS AND KITS

| ITEM | DESCRIPTION |
|----------|--|
| EPB-1000 | Battery Punchdown Tool (Battery Not Included) |
| EPB-KIT1 | Battery Punchdown Tool 115V Charger, Battery, plus 66 & 110 Blades |
| EPB-KIT2 | Battery Punchdown Tool 230V Charger, Battery, plus 66 & 110 Blades |



EPB - 500 Manual Punchdown Tool



EPB-500 TOOLS AND KITS

| ITEM | DESCRIPTION |
|--------------|--|
| EPB-500 | Punchdown Tool |
| EPB-KIT66 | Punchdown Tool Plus 1 Blade (EPB-66) |
| EPB-KIT110 | Punchdown Tool Plus 1 Blade (EPB-110) |
| EPB-KIT66110 | Punchdown Tool Plus 2 Blades (EPB-66, EPB-110) |

EPB-1000 ACCESSORIES

| PART NUMBER | DESCRIPTION |
|-------------|-------------------------------|
| EPB-B | EPB-1000 NiMH Battery 3.6V |
| EPB-BC1 | EPB-1000 115V Battery Charger |
| EPB-BC2 | EPB-1000 230V Battery Charger |



EPB-66 EPB-110 EPB-KR

EPB STANDARD DOUBLE-ENDED BLADES

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

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

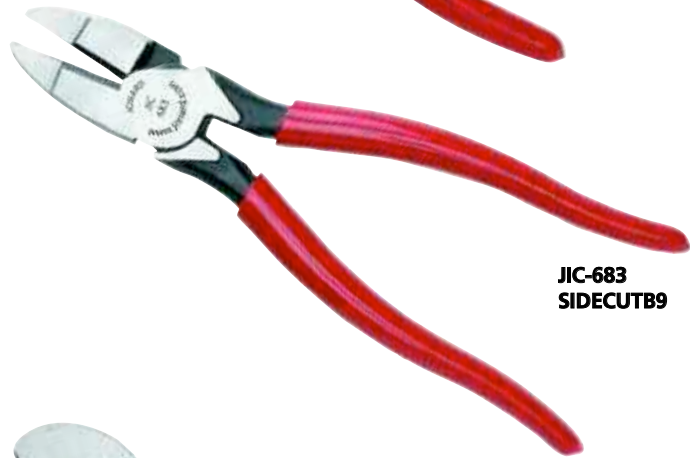


JIC-2288

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

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 to approximately .007". 9 3/8" long. Also known as SIDECUTB9



JIC-683
SIDECUTB9

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

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 plastic handle 9 1/2" long

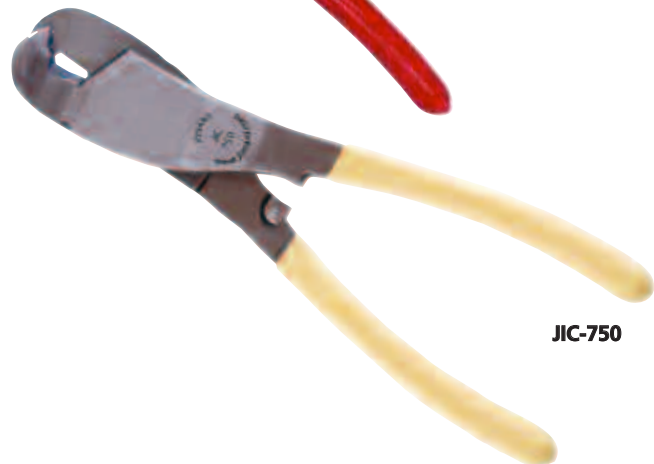


JIC-63050

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

3/4" COAX CABLE CUTTER

Also known as a Banana Cutter, this cutter is designed to cut 3/4" coaxial cable. Tool cuts cleanly without compressed or frayed ends. Functions like a tube cutter – eliminates cable distortion during cable prep. NOT designed to cut steel cable. Yellow plastic handles. 8" long



JIC-750

| JONARD P/N | DESCRIPTION |
|------------|------------------------|
| JIC-750 | 3/4" Coax Cable Cutter |

CRIMPING PLIERS



JIC-891
PRESSINGC

CONNECTOR-CRIMPING PLIERS WITH SIDE CUTTERS

Connector-Crimping Pliers with Side Cutters designed to press UG, UR, UY, 709 series connectors, crimping "B" type connectors, and AMP tel splice 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 plastic handle 6" long. Also known as PRESSINGC.

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



JIC-22148

COMBO CRIMPER LONG NOSE PLIERS

Five tools in one, combines crimper for UR/UY/UG, AMP tel splice connectors, 709 series connectors, crimping "B" type connectors and a long nose pliers. With a crusher, cutter, .030" stripping hole, and yellow plastic handle 6 7/8" long.

| JONARD P/N | DESCRIPTION |
|------------|--------------------------------|
| JIC-22148 | Combo Crimper Long Nose 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 plastic handle 6 5/8" long. Also known as LONGNOSEG.

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

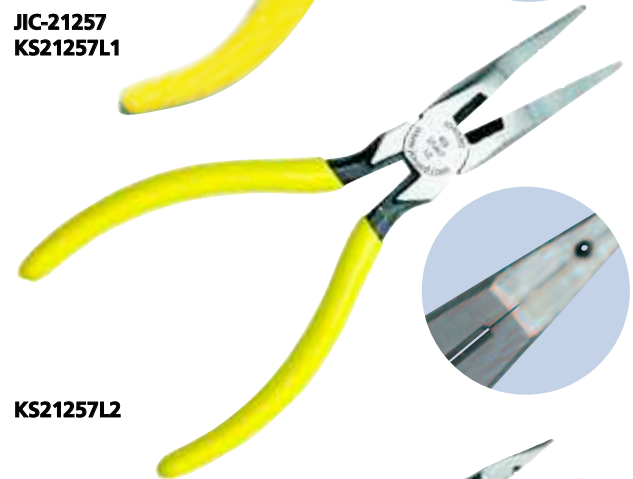
LONG NOSE PLIERS



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. 6 7/8" long. Also known as KS21257L1.

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



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 L2 Cut Crush Strip Pliers |



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.

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



LONG NOSE CUT CRUSH STRIP L4 PLIERS

Long nose with side cutter, crushing slot, one .030" stripping hole and a thin knurled nose to facilitate handling wire at the terminals. Aluminum oxide insulating coating on the outside nose surface. Yellow plastic handle. 6 3/16" long.

| JONARD P/N | DESCRIPTION |
|------------|-------------------------------------|
| KS21257L4 | LONG NOSE L4 Cut Crush Strip Pliers |

LONG & SHORT NOSE PLIERS



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 |

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.

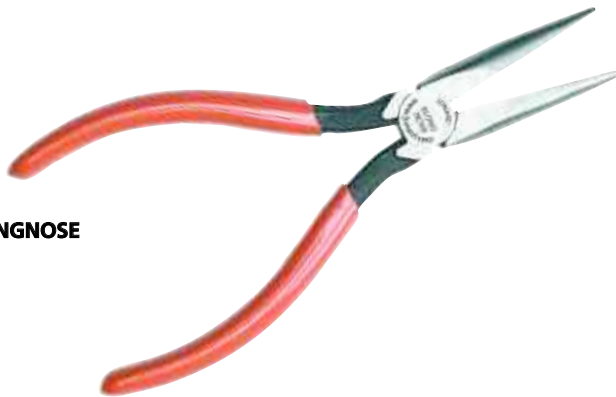


BLONGNOSE

| JONARD P/N | DESCRIPTION |
|------------|------------------------------|
| BLONGNOSE | Long Nose General Use Pliers |

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.

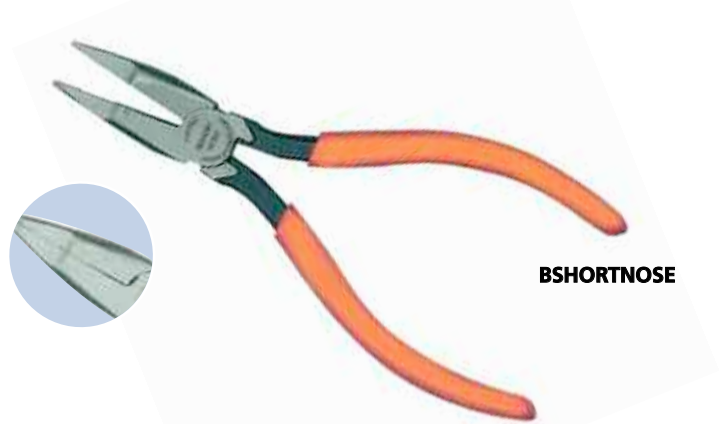


ELONGNOSE

| JONARD P/N | DESCRIPTION |
|------------|------------------------------------|
| ELONGNOSE | Long Nose Gripping Pressing Pliers |

SHORTNOSE PLIERS

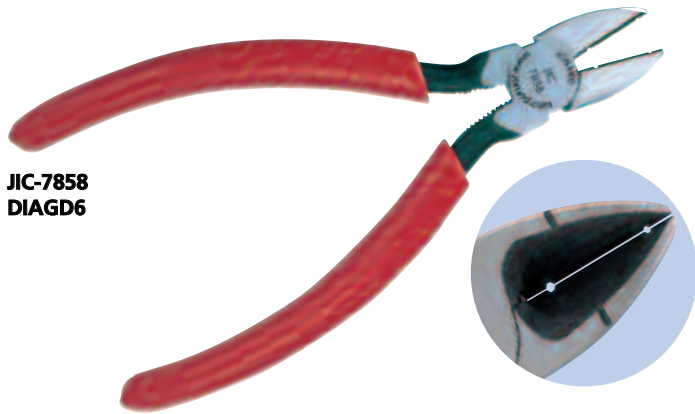
Intended for use in skinning 22-24 AWG wire and crushing insulation in nose slot. The front portion of the jaws is narrowed, and a portion of the inner face of one jaw is relieved to skin insulation from wire. The inner surface of the jaws are serrated to facilitate gripping wire. Orange plastic handle 6 3/16" long.



BSHORTNOSE

| JONARD P/N | DESCRIPTION |
|------------|------------------|
| BSHORTNOSE | Shortnose pliers |

DIAGONAL PLIERS



**JIC-7858
DIAGD6**

TELECOM DIAGONAL CUTTER PLIERS

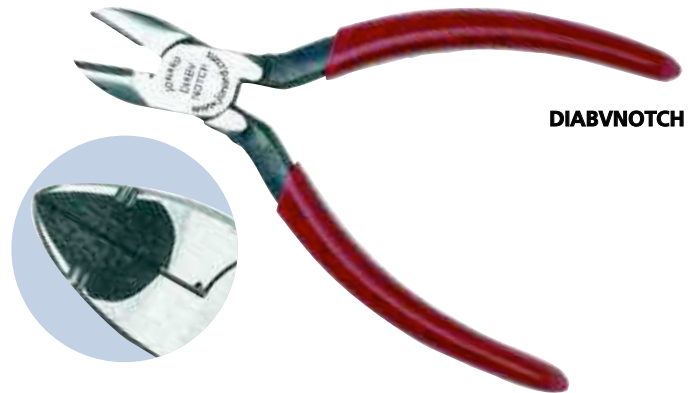
Tapered nose diagonal cutting pliers with standard-bevel knives with .030" and .045" skinning holes, with crusher used for multi-purpose wire work, with two V-shaped stripping notches. The comfortable handles are red plastic. 6 1/2" long. Also known as DIAGD6.

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

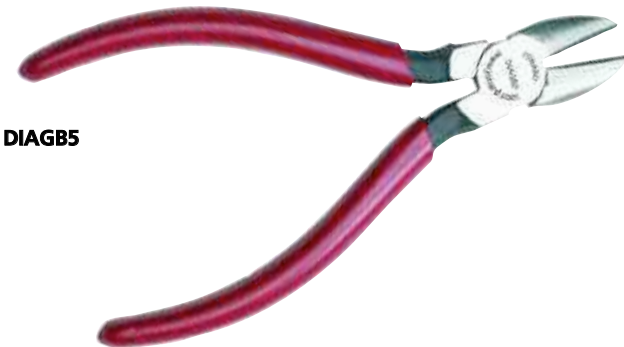
DIAGONAL PLIERS – CRUSHING & SLITTING

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 plastic handle 5" long.

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



DIABVNOTCH



DIAGB5

DIAGONAL GENERAL USE PLIERS

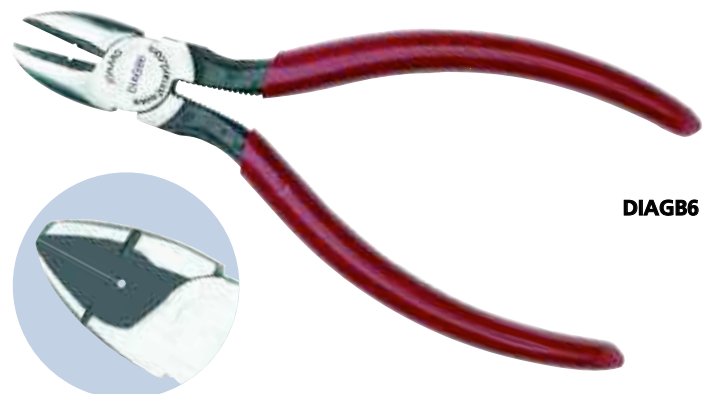
These are plain diagonal pliers for general use, for cutting soft copper conductors. Red plastic handle, 5 1/16" long.

| JONARD P/N | DESCRIPTION |
|------------|-----------------------------|
| DIAGB5 | Diagonal General Use Pliers |

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

SPECIALTY PLIERS



FLUSH CUT PLIERS - JIC-453

A close cutting plier used to trim conductors from the 710 connector modules without leaving exposed conductors. Ideal for close trimming of gates and sprue on injection molded plastic parts. Jaw design aids in use in confined areas.

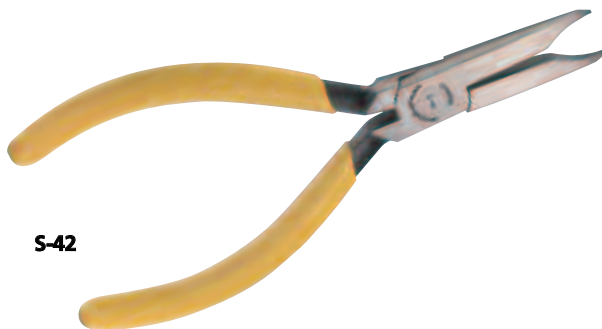
Turquoise color handle, plier is 4 1/2" long

| JONARD P/N | DESCRIPTION |
|------------|------------------|
| JIC-453 | Flush Cut Pliers |

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 |



LAMP CAP EXTRACTOR PLIER

For use in inserting and extracting switchboard lamp caps. Yellow plastic coated comfort design handles. Plier is 5" long.

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

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 |



CURVED NOSE & PUMP PLIERS



JIC-3026

CURVED LONG NOSE PLIER

Nose is bent 70° for maximum visibility. Used in confined areas. Design includes knurled jaws for sure wrapping and looping. Comfortable ergonomic handles. Length 6 3/8" with yellow plastic handle.

| JONARD P/N | DESCRIPTION |
|------------|------------------------|
| JIC-3026 | Curved Long Nose Plier |



JIC-3385

CURVED NEEDLE NOSE PLIER

Nose is bent 60° for maximum visibility. Used in confined areas for bending and forming fine wire. Inside jaws and jaw edges are polished to prevent nicking the wire. Plier has a spring loaded ergonomic design. Length 5 1/2" with a dark blue plastic handle.

| JONARD P/N | DESCRIPTION |
|------------|--------------------------|
| JIC-3385 | Curved Needle Nose Plier |



JIC-5026

PUMP PLIERS

Manufactured with a secure tongue and groove design for a non-slip grip (even under heavy pressure).

The jaws provide a wide range of openings with a smooth, positive interlock between halves. Handles are plastic coated, but are not insulated and do not protect against electric shock.

| JONARD P/N | DESCRIPTION |
|------------|----------------------|
| JIC-5026 | Pump Pliers 6" long |
| JIC-50210 | Pump Pliers 10" long |
| JIC-50212 | Pump Pliers 12" long |



JIC-50210

CATV & FIBER OPTIC TOOLS

FIBER OPTIC STRIPPER THREE HOLE

Three hole Fiber Optic Stripper performs all common fiber stripping functions.

Strips the 1.6-3 mm fiber jacket down to the 900 micron buffer coating. The second hole strips the 600-900 micron buffer coating down to the 250 micron coating and the third hole is used to strip the 250 micron cable down to the 125 micron glass fiber. JIC-375 is 6" long.



JIC-375

| JONARD | |
|---------|------------------------------|
| P/N | DESCRIPTION |
| JIC-375 | Fiber Optic Stripper- 3 Hole |



JIC-175

ERGONOMIC FIBER OPTIC STRIPPER

Used for stripping the 250 micron coating from the 125 micron optical fiber.

Preset at the factory so no adjustments are necessary.

Yellow plastic formed handles, tool is 6" long.

| JONARD | |
|---------|--------------------------------|
| P/N | DESCRIPTION |
| JIC-175 | Fiber Optic Stripper Ergonomic |



JIC-125

FIBER OPTIC STRIPPER

For stripping 250 micron buffer coating from 125 micron optical fiber. Preset at the factory so no adjustments are necessary. Yellow plastic dipped handles 5 3/16" long

| JONARD | |
|---------|----------------------|
| P/N | DESCRIPTION |
| JIC-125 | Fiber Optic Stripper |

CATV & FIBER OPTIC TOOLS



THREE PIECE FIBER OPTIC KIT TK-375

Kit includes the JIC-375 Fiber Optic Stripper three hole, ES-1964 Electrician's Scissor, and convenient molded plastic pouch made of durable PVC material and will accommodate belts up to 2" in width.

| JONARD P/N | DESCRIPTION |
|------------|------------------------------|
| TK-375 | 3 Piece Fiber Optic Kit |
| H-35 | Plastic Molded Pouch |
| JIC-375 | Fiber Optic Stripper- 3 Hole |
| ES-1964 | Electrician Scissor |

SPLICER'S KIT TK-400

This compact kit contains an ergonomic splicers knife, scissor and leather pouch. The knife features a 1 3/4" tough, cutlery-steel blade and a non-slip handle. The scissors are made of high carbon steel with scraper and file on one side and 2 stripping notches on the other. Both items fit securely in the leather pouch which can be mounted on belts up to 2" wide.

| JONARD P/N | DESCRIPTION |
|------------|--------------------------------|
| TK-400 | 3 Piece Splicer's Kit |
| H-40 | Leather Pouch |
| KN-7 | Ergonomic Cable Splicing Knife |
| ES-1964 | Electrician Scissor |



CATV & FIBER OPTIC TOOLS

TELEPHONE INSTALLER SPLICER KIT TK-22148

Designed for stripping, splicing and crimping. The perfect kit for telephone installers. Kit contains the ES-1964 Electrician's Scissors, JIC-22148 Combo Crimper Long Nose Plier and the H-35 Pouch made of durable PVC material and will accommodate belts up to 2" in width.

| JONARD P/N | DESCRIPTION |
|------------|---------------------------------|
| TK-22148 | Telephone Installer Splicer Kit |
| H-35 | Plastic Molded Pouch |
| JIC-22148 | Combo Crimper Long Nose Plier |
| ES-1964 | Electrician Scissor |



FIVE PIECE TELECOM INSTALLERS KIT TK-50

The perfect kit for simple installations—includes the basic necessities.

Kit includes the M-216C/EX Can Wrench, KN-7 Ergonomic Cable Splicing Knife, ES-1964 Electrician's Scissors and the H-50 Pouch made of durable PVC material and will accommodate belts up to 2" in width.

| JONARD P/N | DESCRIPTION |
|------------|-----------------------------------|
| TK-50 | Five Piece Telecom Installers Kit |
| H-50 | Plastic Molded Pouch |
| KN-7 | Ergonomic Cable splicing Knife |
| M-216C/EX | Can Wrench |
| JIC-22035 | Probe Pick Spudger |
| ES-1964 | Electrician Scissor |

CATV/TELECOM INSTALLERS KIT - TK-450

Assembled in a convenient, easy to carry Cordura case, this kit contains the basic service tools essential for equipment installation, repairs and cable preparations.



TK-450

Whether it's Fiber Optic, Coax, or Copper this versatile kit contains the perfect tools for today's demanding technician. The TK-450 Kit is perfect for the VOIP installer, Fiber Technician or Communications Specialist and comes with Jonard's lifetime warranty.

Each Kit contains: Cable Splicers Knife, Electrician's Scissors, Diagonal Plier, Crimper/Long Nose Plier, Lineman's Plier, Can Wrench, Booth Wrench, Speed Wrench, Probe Pick, Wire Stripper, Curved Needle Nose Plier, Coax Cable Cutter, Torque Wrench, Fiber Optic Stripper Three Hole. & Combination Wrench secured in a convenient easy to carry Cordura case.

| JONARD P/N | DESCRIPTION |
|------------|-----------------------------|
| TK-450 | CATV/Telecom Installers Kit |

CATV & FIBER OPTIC TOOLS



JIC-186

ERGONOMIC FIBER OPTIC KEVLAR® CUTTER

High carbon stainless steel blades designed to cut Kevlar®, cabling insulation, tape, cable ties and other material.

Ergonomic handles for user comfort and durability. Adjustable joint screw under protective cap, serrated blades grip material, sharp and durable 6" long.

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



ES-1964

ELECTRICIAN SCISSORS

The Electrician Scissors are designed for heavy duty use.

Made of high carbon steel with a special hardening process for greater durability and nickel plated for that professional look. Notched to strip 19 and 23 AWG wire and one blade is serrated. A scraper and file are on the back of the blade.

| JONARD P/N | DESCRIPTION |
|------------|----------------------|
| ES-1964 | Electrician Scissors |



UC-8000

UNIVERSAL CRIMPER

This fully ratcheted crimper offers exceptional performance. Designed for minimal closing force (higher crimp force produced with lower hand force), plus there is no break-over hand force making the last click easily achievable. The head is angled to lessen the need to bend the wrist awkwardly, die changes are made quickly and easily, ergonomic handles are dual component with a soft rubber insert plus the tool includes a built in safety release mechanism. Very durable steel housing accommodates both Fiber Optic and Coax dies.

| JONARD P/N | DESCRIPTION |
|------------|--|
| UC-8000 | Universal Crimper |
| UC-8012 | Universal Crimper with COAX Die |
| UC-8039 | Universal Crimper with Fiber Optic Die |
| UCD-2045 | Coax Crimping Die |
| UCD-2685 | Fiber Optic Crimping Die |

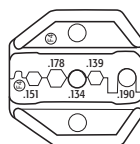


KN-7

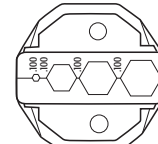
CABLE SPLICING KNIFE

The tough cutlery steel blade is extremely sharp and cuts easily through many types of insulation. It hold its edge with repeated use and features a non-slip easy grip handle for better control and reduced hand fatigue. Blade length is 1 3/4" and overall length is 6 1/4"

| JONARD P/N | DESCRIPTION |
|------------|----------------------|
| KN-7 | Cable Splicing Knife |



UCD-2685



UCD-2045

| JONARD P/N | | SPECIFICATIONS | CABLE SIZE |
|------------|-------------|--|-----------------------------------|
| UCD-2685 | Fiber Optic | .151"/.178"/.134"/.139"/.190" 3.84mm/4.52mm/3.40mm/3.53mm 4.83mm | Fiber Optic ST, SC, LC Connectors |
| UCD-2045 | COAX | .068"/.262"/.324"/.360" 1.73mm/6.65mm/8.23mm/9.14mm | CATV "F" Connectors RG59/RG6 |

CATV & FIBER OPTIC TOOLS

THERMAL FIBER OPTIC STRIPPER FIXED BLADE

Thermo-mechanically remove coatings from optical fibers. High strength thermal stripper supports standard 125µm optical fibers, including 250 µm, 400 µm, and 900 µm coated fibers. The heater is adjustable to 200°C and facilitates stripping difficult and baked-on coatings. Adjustable temperature and time settings to adapt to a variety of different coatings. Compact design, weighs less than a pound. Includes A/C power supply, cord and cleaning brush. Platforms supplied separately.

THERMAL FIBER OPTIC STRIPPER ADJUSTABLE BLADE

Thermo-mechanically remove coatings from optical fibers. High strength thermal stripper with adjustable stripping blade, which supports cladding diameters 40µm to 600 µm acrylate coated fibers with buffer diameters up to 1200 µm. The heater is adjustable to 200°C and facilitates stripping difficult and baked-on coatings. Adjustable temperature and time settings to adapt to a variety of different coatings. Compact design, weighs less than a pound. Includes A/C power supply, cord and cleaning brush. Platforms supplied separately.



TSAB-40



TSPE-125



TSPF-125

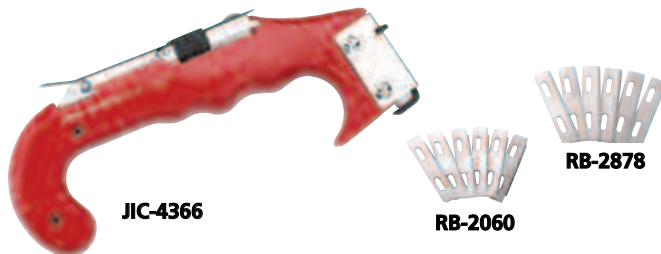


TSUC-40

For Fitel, Fujikura and Ericsson fiber holders use the corresponding platforms, for LDF and all others without fiber holders use the Jonard Universal Clamp.

| JONARD P/N | DESCRIPTION |
|------------|-----------------------------------|
| TSFB-125 | Thermal Stripper Fixed Blade |
| TSAB-40 | Thermal Stripper Adjustable Blade |

| JONARD P/N | DESCRIPTION |
|------------|-------------------------------|
| TSPE-125 | Ericsson Style Platform |
| TSPF-125 | Fitel/Fujikura Style Platform |
| TSUC-40 | Universal Clamp |



JIC-4366

RB-2060

RB-2878

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. 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 of tool |
| RB-2878/6 | Pkg. 6 replacement blades for stripper feature of tool |



JIC-1022

FIBER JACKET STRIPPER

The Wire Stripper and Cutter is designed to strip and cut the most commonly used stranded and solid wire gauges 10 to 22 AWG and 1.6-3 mm fiber jackets.

| JONARD P/N | DESCRIPTION |
|------------|-----------------------|
| JIC-1022 | Fiber Jacket Stripper |

CATV TOOLS

HOLLOW SHAFT NUT DRIVERS

These are full length hollow shaft nut drivers intended for working with long bolts. They are designed with cushion gripped ergonomic color coded handles. Handles provide greater torque and user comfort. Overall length 7"



ND-631



| JONARD P/N | DESCRIPTION |
|------------|---|
| ND-631 | Nut Driver Set – 7 Piece 3/16", 1/4", 5/16", 11/32", 3/8", 7/16" & 1/2" |
| ND-630316 | Nut Driver 3/16" (Black) |
| ND-63014 | Nut Driver 1/4" (Red) |
| ND-630516 | Nut Driver 5/16" (Yellow) |
| ND-6301132 | Nut Driver 11/32" (Green) |
| ND-63038 | Nut Driver 3/8" (Blue) |
| ND-630716 | Nut Driver 7/16" (Brown) |
| ND-63012 | Nut Driver 1/2" (Red) |



CCS-1



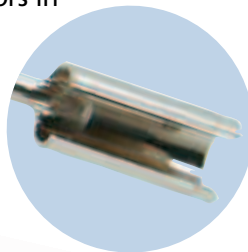
COAXIAL CABLE STRIPPER

The CCS-1 strips coaxial cables for video installations. The black cartridge is used to strip RG59, RG6 & RG Quad coaxial cables. The gray cartridge strips RG7 & RG11 coaxial cables. The stop provides a pre-measured device for stripping the exact length you need, and the stripper has a convenient holder for the second cartridge giving you maximum flexibility. Both cartridges perform a 2-level strip for "F" Connector termination.

| JONARD P/N | DESCRIPTION |
|------------|------------------------|
| CCS-1 | Coaxial Cable Stripper |

BNC CONNECTOR TOOL

Designed to provide easy access to connectors in high density locations. The head is formed specifically for BNC connectors. The socket extends 8" from the handle and the overall length is 12".



RBNC-12

| JONARD P/N | DESCRIPTION |
|------------|--------------------|
| RBNC-12 | BNC Connector tool |



RF-12

F CONNECTOR TOOL

Designed to provide easy access to connectors in high-density locations. The head measures 7/16" and is used specifically for "F" connectors. The socket extends 8" from the handle, the overall length is 12" and the back of the handle has an insertion device to aid in making connections.

| JONARD P/N | DESCRIPTION |
|------------|------------------|
| RF-12 | F Connector Tool |

CATV WRENCHES

TORQUE WRENCH

Designed for "F" Connectors, these wrenches help prevent over tightening. An audible click tells you the connection has been properly achieved. These wrenches all have angle heads, sized for 7/16" F connectors and are designed with an ergonomic cushioned handle for user comfort and protection. The last two digits of the part number indicate the inch pounds of torque (either 20 or 30 inch pounds) and the first four letters indicate whether the head is a speed head or a full head (TWAF is full and TWAS is speed). Note that these wrenches work in tightening mode only. Torque wrenches are 6 1/2" long.



TWAF-71620



TWAS-71620



ASW-716



CW-716

| JONARD P/N | DESCRIPTION |
|------------|---|
| TWAF-71620 | Torque Wrench Full Head 20 Inch Pounds |
| TWAS-71620 | Torque Wrench Speed Head 20 Inch Pounds |
| TWAF-71630 | Torque Wrench Full Head 30 Inch Pounds |
| TWAS-71630 | Torque Wrench Speed Head 30 Inch Pounds |

SPEED WRENCH DOUBLE ENDED

ASW-716 measures 7/16" at both ends. ASW-12 measures 1/2" at both ends and ASW-916 measures 9/16" at both ends. Speed head makes tightening and loosening quick and easy, plus head is angled (15°) to ease access. Speed wrenches are 6 1/2" long.

High gloss chrome finish, and made of high carbon alloy steel.

| JONARD P/N | DESCRIPTION |
|------------|---------------------------------|
| ASW-12 | Speed Wrench double Ended 1/2" |
| ASW-716 | Speed Wrench double Ended 7/16" |
| ASW-916 | Speed Wrench double Ended 9/16" |

COMBINATION WRENCH

Wrench measures 7/16" at both the open end and box end. Both ends have an angle offset (15°) to ease access in confined areas. The box end offers 12 points of contact. High gloss chrome finish and made of chrome vanadium steel. Tool is 6 5/8" long.

| JONARD P/N | DESCRIPTION |
|------------|--------------------|
| CW-716 | Combination Wrench |

CAN, BOOTH, LINESMAN WRENCHES



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 |
| M-216CS22 | Ergonomic 1" Dia. Handle, Hex Outer Socket with 22 AWG Stripper Blade |

BOOTH WRENCH

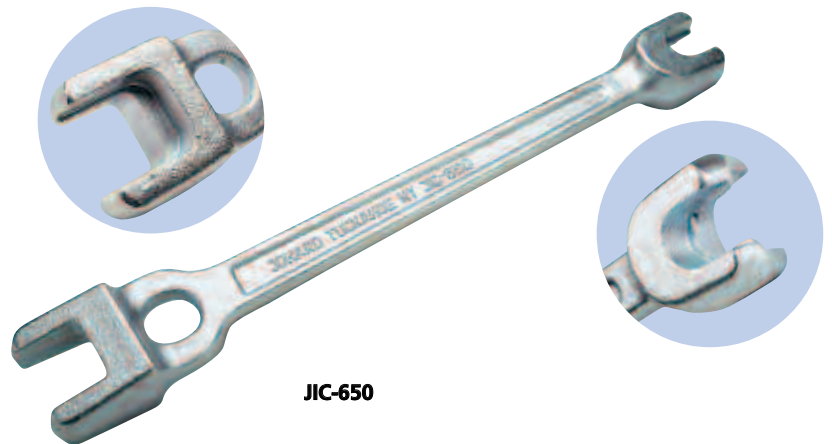
Tamperproof hex screwdriver, also known as a booth wrench or security wrench. It features a 1" diameter screwdriver handle, 5/32" hex shaft with a hole drilled in the tip for use with security tamperproof screws used for telephone and CATV applications. BW-532 Booth Wrench is 9" long and the BW-532-3 Booth Wrench is 6" long.

| JONARD P/N | DESCRIPTION |
|------------|-----------------------------------|
| BW-532 | Booth Wrench -Ergonomic design 9" |
| BW-532-3 | Booth Wrench -Ergonomic design 6" |

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 |



JIC-650

INSULATED TOOLS

Jonard Insulated Tools are manufactured to IEC 60900 Standards for hazardous work environments. Our tools are tested to 10,000 VAC and rated for 1,000 VAC live use.



1000V
IEC 60900



TK-110INS



TK-70INS

| JONARD P/N | DESCRIPTION |
|------------|---|
| TK-110INS | 11 Piece Insulated Tool Kit Kit contains: 7 Screwdrivers as shown plus INP-1072, INP-2065, INP-3062 & INP-4065 |

| JONARD P/N | DESCRIPTION |
|------------|--|
| TK-70INS | 7 Piece Insulated Screwdriver Set Screwdriver Set contains: 3 Phillips, 4 Slotted as shown below |

INSULATED SCREWDRIVERS- SLOTTED HEAD



| JONARD P/N | DESCRIPTION |
|------------|------------------------------|
| INS-475 | 3/32 X 3 Slotted Screwdriver |
| INS-4100 | 1/8 X 4 Slotted Screwdriver |
| INS-6150 | 1/4 X 6 Slotted Screwdriver |
| INS-8175 | 5/16 X 7 Slotted Screwdriver |

INSULATED SCREWDRIVERS- PHILLIPS HEAD



| JONARD P/N | DESCRIPTION |
|------------|-----------------------------|
| INS-180 | #1 X 3 Phillips Screwdriver |
| INS-2100 | #2 X 4 Phillips Screwdriver |
| INS-3150 | #3 X 6 Phillips Screwdriver |

INSULATED WIRE STRIPPER



| JONARD P/N | DESCRIPTION |
|------------|---------------------------|
| INP-4065 | Wire Stripper 6 1/2" Long |

INSULATED PLIERS



| JONARD P/N | DESCRIPTION |
|------------|-----------------------------|
| INP-2082 | Long Nose Plier 8 1/4" Long |
| INP-2065 | Long Nose Plier 6 1/2" Long |



| JONARD P/N | DESCRIPTION |
|------------|----------------------------|
| INP-3062 | Diagonal Plier 6 1/4" Long |
| INP-3072 | Diagonal Plier 7 1/4" Long |

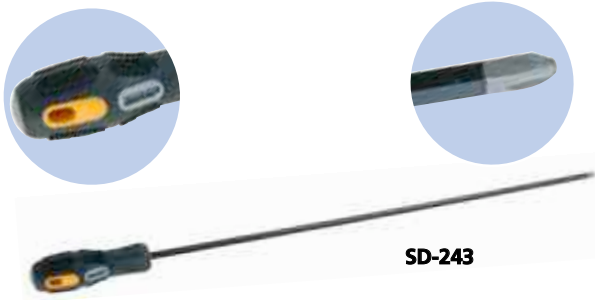


| JONARD P/N | DESCRIPTION |
|------------|-----------------------------------|
| INP-1080 | Lineman's Combo Plier 8" Long |
| INP-1072 | Lineman's Combo Plier 7 1/4" Long |
| INP-1065 | Lineman's Combo Plier 6 1/2" Long |

Care and Use Guide for Insulated Tool

Tools are not recommended for use on energized circuits. Work should only be performed by qualified professionals. Do not use this tool if the insulation becomes damaged in any way. Tools must be kept clean and dry. Always inspect before use. Do not touch the uninsulated portion of the tool or any conductive object when either might make contact with an energized source. Always wear approved eye & clothing protection. Only use tools for their designed purpose and always follow OSHA 1910.333 (c)(2) and NFPA 70E 2004 when doing electrical work. Failure to observe proper safety precautions may result in serious injury or death.

TELECOMMUNICATION TOOLS



SD-243

24 INCH LONG #3 PHILLIPS HEAD SCREWDRIVER

This 24" long #3 Phillips Head Screwdriver is designed for use when you need an extra long screwdriver to reach the diodes in back of the various rectifiers. Made of chrome vanadium steel with a matte finish and a custom ergonomic tri-color handle.

| JONARD P/N | DESCRIPTION |
|------------|--------------------------------------|
| SD-243 | #3 Philips Head Screwdriver 24" long |



JIC-4473

SB-2426

SB-2224

SB-2830

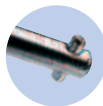
WIRE STRIPPER & CUTTER

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. Supplied assembled.

| JONARD P/N | DESCRIPTION |
|------------|-----------------------------|
| JIC-4473 | Wire Stripper & Cutter |
| SB-2224 | Replacement Blade 22-24 AWG |
| SB-2426 | Replacement Blade 24-26 AWG |
| SB-2426 | Replacement Blade 24-26 AWG |
| SB-2830 | Replacement Blade 28-30 AWG |



JIC-719A



T KEY TOOL

Pay telephone Tool

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 |



SD-63

SCREWDRIVER, JEWELER'S TYPE

Used to terminate the battery back up in the fiber ONT. Screwdriver has concave swivel knob to fit the finger and hexagonal shape to prevent rolling. Solid blade made of high quality hardened tool steel. .100" blade width. 4" long.

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

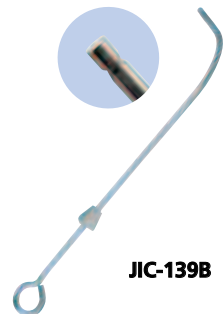


M-724A

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 |



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 |



S-339

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 |

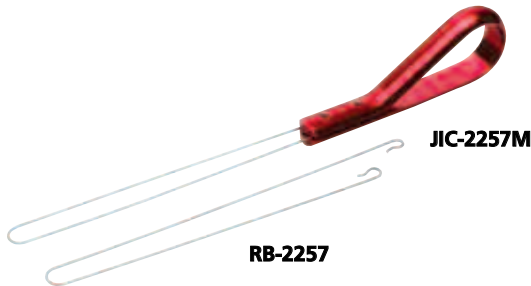
TELECOMMUNICATION TOOLS



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

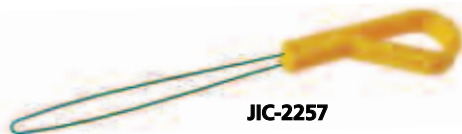
Durable red anodized aluminum handle facilitates pulling wire through terminal blocks, rings on main frame or fanning strip holes. JIC-2257M overall length is 8 1/2" and JIC-2257M-12 overall length is 15"

| JONARD P/N | DESCRIPTION |
|--------------|--|
| JIC-2257M | Wire Loop Puller Overall Length 8 1/2" |
| JIC-2257M-12 | 12" Wire Loop Puller Overall Length 15" |
| RB-2257/6 | Pkg. of 6 Replacement Loops for JIC-2257M only |

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 |



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 |



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 |



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 |

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.



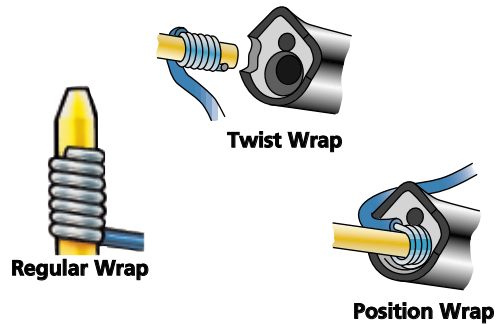
**WG-350L
Lexan®**



**WG-350
Aluminum**



**WG-350INS
Insulated**



MANUAL WIRE WRAPPING 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 |
|------------------|------------------------------------|
| WG-350L | Wire Wrapping Gun, Plastic |
| WG-350 | Wire Wrapping Gun, Metal |
| WG-350INS | Wire Wrapping Gun, Insulated Metal |

See page 43 for complete listing of bits and sleeves.

WIRE WRAPPING TOOLS

WIRE WRAPPING BITS AND SLEEVES STANDARD 3" LONG

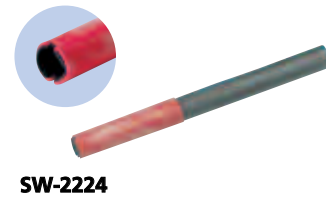
Bits conform to terminal height, width and wire size combinations. Sleeves are insulated to prevent shorting of adjacent connections.

WIRE WRAPPING 3" LONG BITS & SLEEVES

| 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 |



BW-2224



SW-2224

WIRE WRAPPING 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.

WIRE WRAPPING 5" LONG BITS & SLEEVES

| 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 |



BW-24005

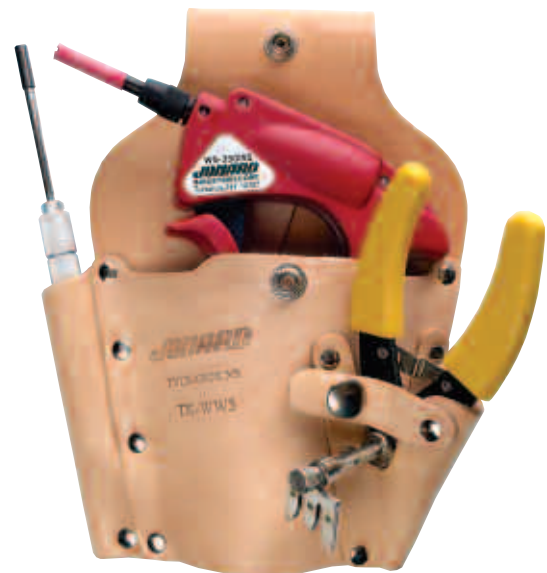
SW-22245

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 WRAPPING KIT

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



TK-WW5
(complete kit)

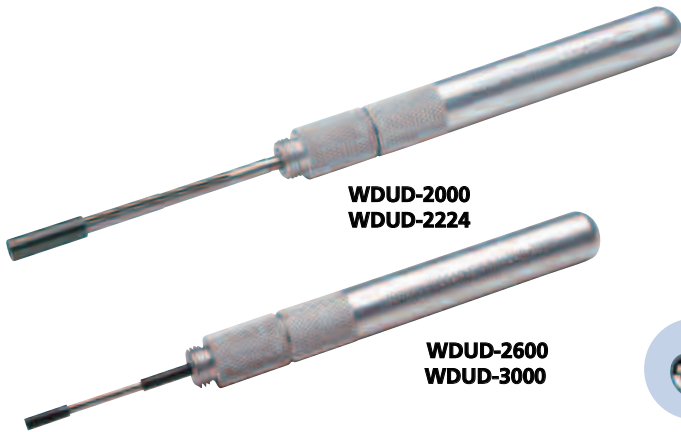


SW-2224 BW-2224 WDUD-2224

JIC-4473

WG-350INS

WIRE WRAPPING TOOLS

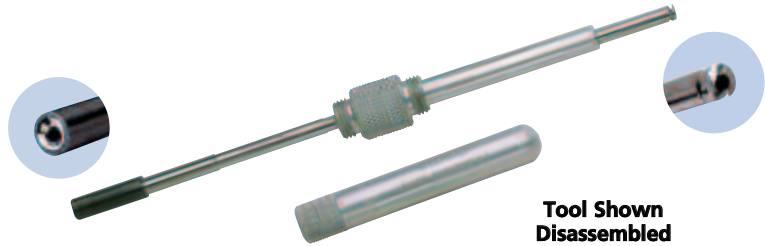


WDUD-2000
WDUD-2224

WDUD-2600
WDUD-3000

HAND WRAP & UNWRAP TOOLS

These wire wrapping 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.



Tool Shown
Disassembled

| 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" |



WD-2224

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 |

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 Tool 24-26 gauge |

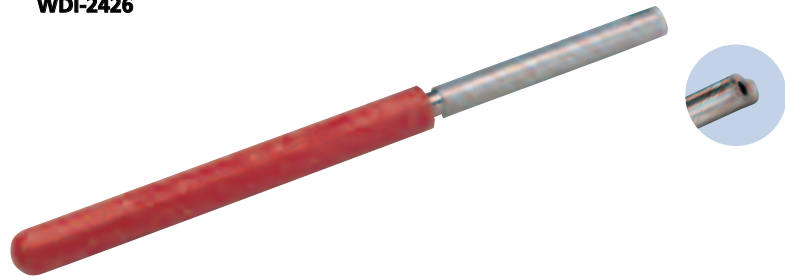


WDI-2426

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 |

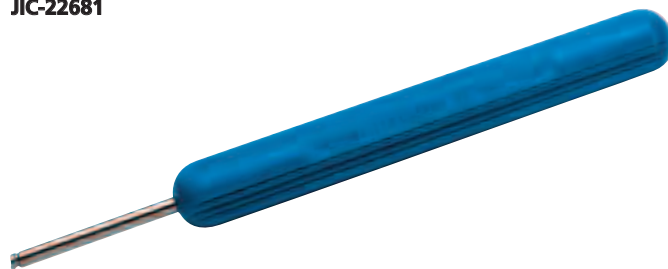


JIC-22681

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 |

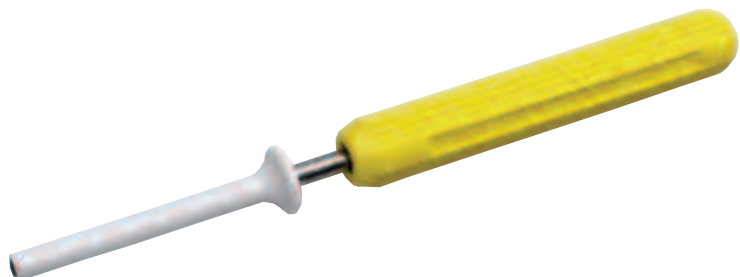


JIC-20551

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 |

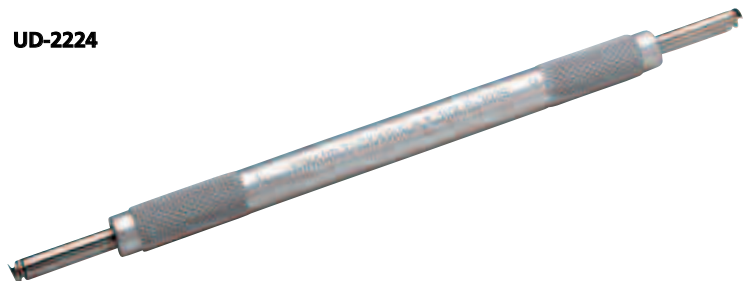


UD-2224

HAND UNWRAPPING TOOLS

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

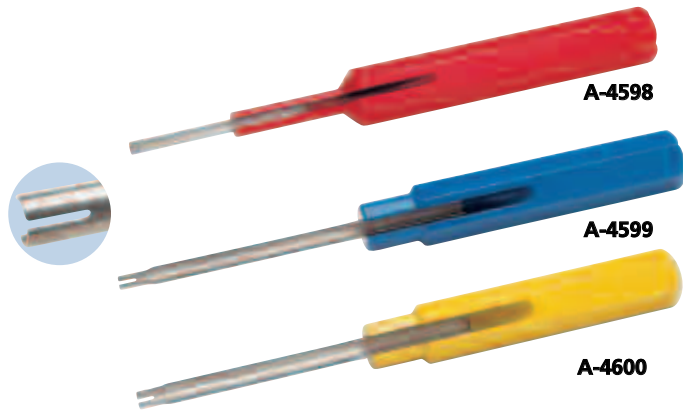
| JONARD P/N | DESCRIPTION |
|------------|--|
| UDLR-2026 | Hand unwrapping tool for 20-26 wire with a .070" diameter hole |
| UDLR-2432 | Hand unwrapping tool for 24-32 wire with a .040" diameter hole |



UDLR-2026

UDLR-2432

CONNECTOR TOOLS



| JONARD P/N | MILITARY STANDARD (MS) | COLOR CODE | CONTACT SIZE | INCHES |
|---|------------------------|------------|--------------|--------|
| A-4598 | MS24256-A20 | RED | 20 | 0.040" |
| A-4599 | MS24256-A16 | BLUE | 16 | 0.063" |
| A-4600 | MS24256-A12 | YELLOW | 12 | 0.093" |
| 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 | INCHES |
|---|------------------------|------------|--------------|--------|
| R-4601 | MS24256-R20 | RED | 20 | 0.040" |
| R-4602 | MS24256-R16 | BLUE | 16 | 0.063" |
| R-9461 | MS24256-R12 | YELLOW | 12 | 0.093" |
| KR-260 Removal Tool Kit (contains above 3 tools) in leather case | | | | |

PIN EXTRACTOR

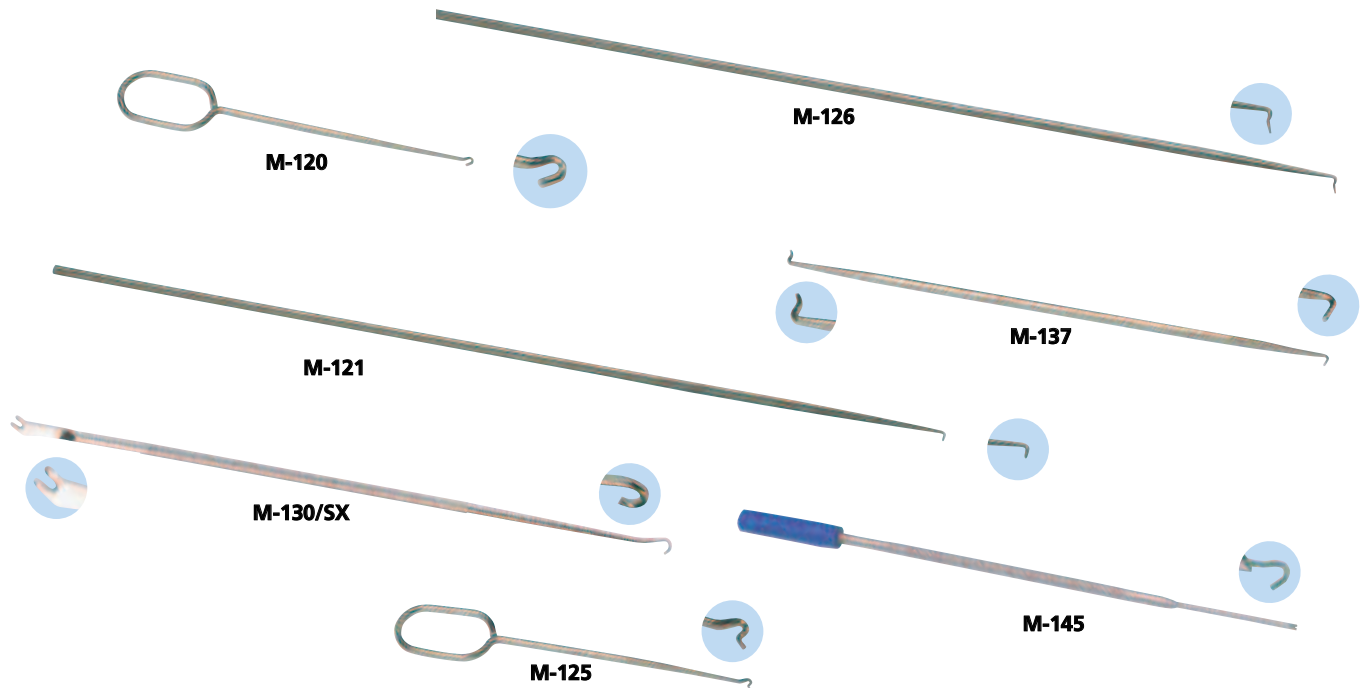
A plunger style pin extractor for pushing pins out from behind the connector blocks for contact sizes 16-20. 3" long.

| JONARD P/N | DESCRIPTION |
|------------|---------------|
| R-5926 | Pin Extractor |



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 | Pull Hook |
| M-121 | Push Hook |
| M-125 | Push Hook |

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

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

CLIP SETTER

Clip Setter used for setting and withdrawing E and C clips with a inside diameter of .156" min. and thickness of .025" min. Max inside diameter of 3" and thickness of .093" 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.



| JONARD P/N | DESCRIPTION |
|------------|-------------|
| CS-1022 | Clip Setter |

ALIGNMENT TOOLS



AT-3112



AT-6241

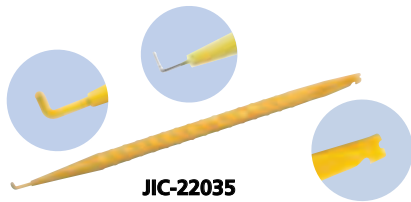


AT-3767

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 |



JIC-22035

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 |



AT-6241

JIC-22035

AT-3112

S-389

PROBE PICK

Tough resilient yellow nylon 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 | Insulated Probe Pick |
| JIC-22035NT | Uninsulated Probe Pick |

ALIGNMENT TOOL KIT

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

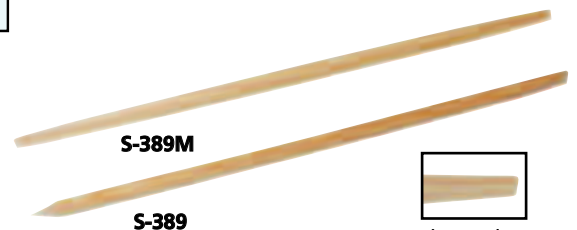
AT-3767 Trimpot, AT-6241 Alignment Tool, AT-3112 Spudger, S-389 Orange Stick, JIC-22035 Probe Pick

| JONARD P/N | DESCRIPTION |
|------------|--------------------|
| TK-AT5 | Alignment Tool Kit |

TRIMPOT

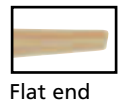
Double ended Trimpot with a hex (allen) steel .050" and 3/32" long steel screwdriver tip. Ideal for aligning, adjusting, calibrating and fine tuning of electronic circuitry, potentiometers, oscilloscopes and electronic equipment. Made of a high impact non-conductive thermoplastic material. 5" long.

| JONARD P/N | DESCRIPTION |
|------------|-------------|
| AT-3767 | Trimpot |



S-389M

S-389



Flat end



Sharp end

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.

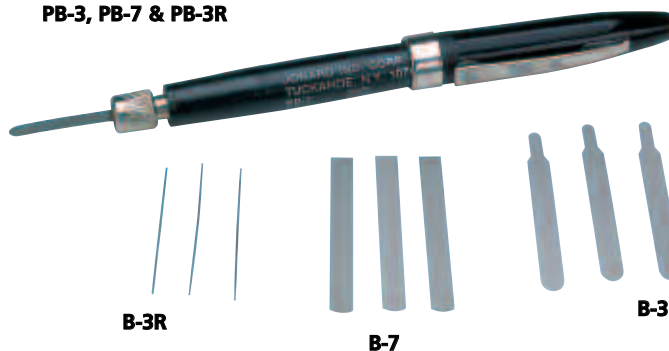
| JONARD P/N | DESCRIPTION |
|------------|---|
| S-389/10 | Orange Sticks Point & Flat end Pk. of 10 |
| S-389/100 | Orange Sticks Point & Flat end Pk. of 100 |
| S-389M/10 | Orange Sticks 2 Flat ends Pk. of 10 |
| S-389M/100 | Orange Sticks 2 Flat ends Pk. of 100 |

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 .020" |
| 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 (.020") |
| 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.

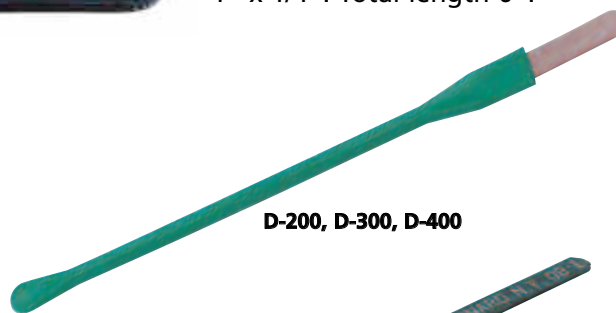
DIAMOND BURNISHERS

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 | Diamond Burnisher | Coarse |
| D-300 | Diamond Burnisher | Medium |
| D-400 | Diamond Burnisher | Fine |
| K-234 | Diamond Burnisher | Assortment Kit |

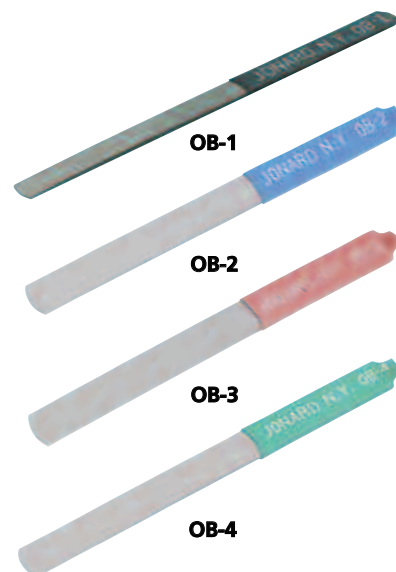


D-200, D-300, D-400

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 | For Fine Contacts. Black handle 3/16" wide, .007" thick. 3" long, Package of 3 |
| OB-1/12 | For Fine Contacts. Black handle 3/16" wide, .007" thick. 3" long, Package of 12 |
| OB-2/12 | For Extra Sensitive Points. Blue handle. 1/4" wide, .007" thick. 3" long, Package of 12 |
| OB-3/12 | For General Purpose Contacts. Red handle. 1/4" wide, .010" thick. 3" long, Package of 12 |
| OB-4/12 | For Industrial Use. Green handle. 1/4" wide. .020" thick 3" long, Package of 12 |



OB-1

OB-2

OB-3

OB-4

FORCE GAUGES TENSION PUSH-PULL 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 and these gauges are being used in over 1000 different applications for measuring, calibrating, standardizing, testing and evaluating.

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. Gauges offer extreme precision and durability. The measuring springs are made of hard tempered annealed beryllium copper. All gauges equipped with maximum reading pointer. Tolerance $\pm .01$ (Reading + Maximum Scale Reading.)



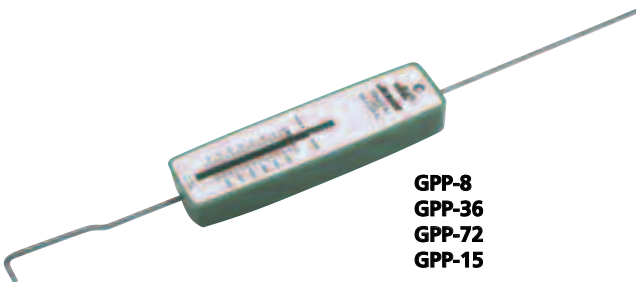
Small Gauges
(Flat Tip, Dial Diameter 1 1/2")

| 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 |

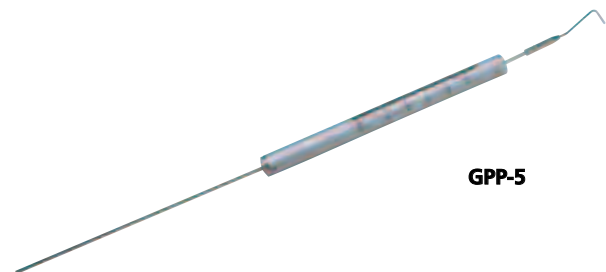


Large Gauges
(Round Tip, Dial Diameter 2 1/2")

| 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 |



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



GPP-5

ECONOMY PUSH-PULL TENSION GAUGES

These high impact polystyrene cased instruments accurately measure push pull forces. Gauge is graduated in two scales: grams and ounces. Precision springs. Full scale accuracy is held to ± 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 slender shape permits its use in confined areas. Gauge is graduated in two scales: grams and ounces. Precision springs individually are calibrated. Full scale accuracy and permanent calibration is held to ± 1 graduation. Construction is brass with satin chrome finish. 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 |

KNOCKOUT KIT

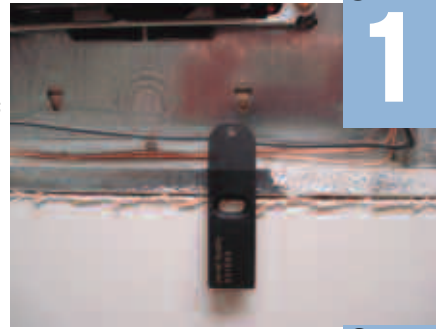
REMOVE PANEL KNOCKOUTS WITHOUT CUTTING HOLES IN THE DRYWALL
(For use on electrical, security, alarm, and datacom panels)



**PATENT
PENDING**

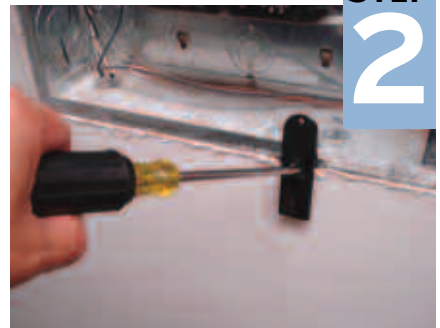
| JONARD P/N | Description |
|---------------|--------------|
| WBK-100 | Knockout Kit |

After removing the panel cover place the panel buddy on the edge of the panel in front of knockout to be removed.



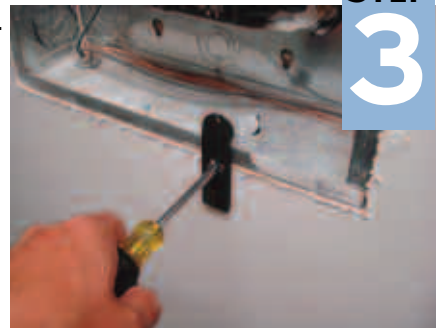
**STEP
1**

Next insert the modified screwdriver through the hole and between the drywall under the knockout.



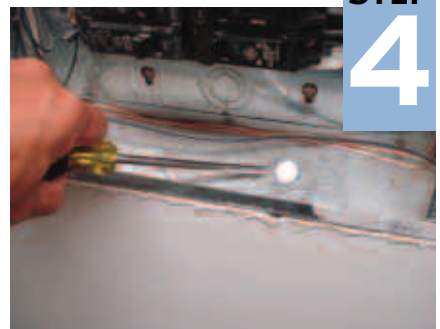
**STEP
2**

Push to loosen the knockout.



**STEP
3**

Using the screwdriver, remove the panel knockout.



**STEP
4**

WARNING: Do not use near live circuits. Intended for use by licensed professionals.

LIFETIME WARRANTY

This product is warranted to be free from defects in materials and workmanship for the normal life of the product. For complete details visit: www.jonard.com

Tools for Telecom, Fiber Optics, CATV, Wireless and Electronics Industries

Installation • Maintenance • Repair



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