IDEAL®

FULL-LINE CATALOG

VISION. PERFORMANCE. SERVICE.

SINCE 1916

FUTURE OUTLOOK

Growth Through Acquisitions

IDEAL has taken an aggressive growth position by the acquisition of three US companies. **Western Forge**, based in Colorado Springs, Colorado, is considered the American standard in premier metal craftsmanship. The acquisition strengthens the IDEAL hand tool presence and increases overall manufacturing strength in pliers, wrenches, and related hand tools. The 345,000 square foot structure employs over 350 Americans. In addition to the consumer and professional hand tools, Western Forge provides casting, annealing, cold forming, plating, heat treating imprinting and a wide range of other metal services. Western Forge was originally founded in Ohio in 1965.

Pratt-Read Tools, LLC includes three divisions. Pratt-Read, which manufactures screwdrivers, and American Industrials Manufacturers (AIM), which produces nutdrivers and bits, have relocated to Sycamore and the new Colorado Springs facility. The third division, A & L Handles will remain in Pottstown, Pennsylvania. The new acquisitions position IDEAL as one of the largest tool manufacturers in the US. Pratt-Read has been an American manufacturer since 1789.

PRATT-READ® Tools, LLC
A Subsidiary of IDEAL INDUSTRIES, INC.

S•K Hand Tools, LLC, a premier manufacturer of wrenches, ratchets, sockets, and various other tools that serve the automotive and industrial markets.

S•K is one of the most recognizable tool companies in the US, specifically in the automotive market.

Organic Growth Initiatives

Product innovation, performance, ease-of-use and safety have been at the heart of IDEAL since 1916. As we approach our 100th anniversary, we are focused on continuing our success through several initiatives. First, expansion into alternative energy markets; second, developing a presence in the automotive aftermarket leveraging existing relationships formed by S•K Hand Tools, LLC; third, increased support of electrical apprentices through our apprentice partnership program, training seminars and real-time mobile field support. These are just a few of many initiatives IDEAL has planned for completion by 2016.

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Connectors designed for every application

Wire-Nut® Wire Connectors

The original twist-on wire connector features a positive-grip design for easy installation. Five color-coded models cover hundreds of wire combinations from 22 through 8 AWG. The fixed square-wire spring provides a secure connection that won't relax over time.

Wing-Nut® Wire Connectors

The next step in IDEAL wire connector innovation. Three models accommodate a wide range of circuit and fixture wiring combinations from 18 through 6 AWG. Built-in, contoured wings provide extra leverage on maximum wire combinations. And the live-action spring expands to accept a broader range of wire shapes and sizes.

Twister® Wire Connectors

The industry's premier wire connector. Just two models accommodate the majority of common wiring configurations from 22 through 6 AWG. The ribbed cap provides a secure grip and swept wings offer extra leverage. A patented square-wire spring provides safe, secure connections.

Twister® Al/Cu Wire Connectors

The only aluminum-to-copper twist-on wire connector. Specially formulated compound reduces corrosion build-up on aluminum conductors for better conductivity and cooler connections. UL Listed and CSA Certified for aluminum-to-copper connections.

Twister® DB Plus™ Wire Connectors

The smallest wet location/direct burial wire connector. Offers the widest range of wire combinations from 20 through 12 AWG. Features non-hardening sealant to ensure safe and moisture-free connections. UL Listed and CSA Certified for underground and wet locations.

B-CAP® Wire Connectors

Contoured Classic Fins™ provide a secure grip for extra torque. Three models cover a full range of wire sizes from 22 through 6 AWG. The square-wire spring locks onto conductor for fast, secure connections. Compact size allows easy handling and installation.

WIRE TERMINATION

A
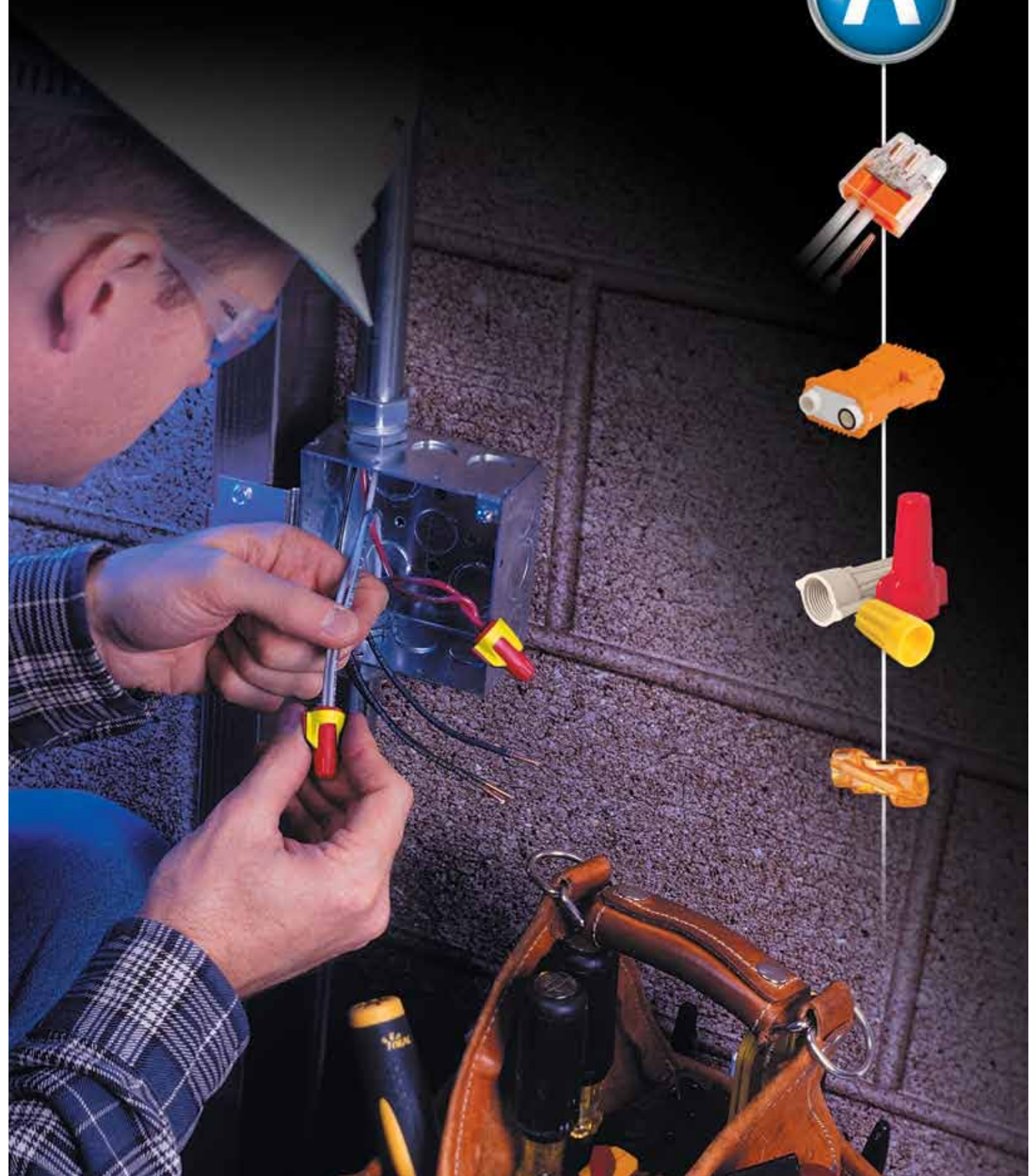
Wire-Nut® Wire Connectors

- Five color-coded models cover wire sizes from 22 to 6 AWG
- Fixed, square-wire spring creates its own threads — maintains a secure positive grip that will not relax over time
- No pre-twisting required — positive grip design provides fast, easy installation
- Deep skirt helps protect against flash-over
- Reusable for easy circuit changes and additions
- Tough, UL94V-2 flame-retardant shell rated at 105°C (221°F)
- UL Listed to 486C and CSA certified to C22.2 #188; comply with Federal Specification W-S-610E

Model	Color	Wire Combination Range	Wire Combination Range (mm)	Quantity	Cat. No.
71B®	Gray	300V 22 to 16 AWG Min. 2 #22 – Max. 2 #16	300V ,34mm² to 1,5mm² Min. 2-,34mm² Max. 3-1,5mm²	Box of 100	30-071
				Carton of 1,000	30-171
				Keg of 25,000 (loose pack)	30-271
				Barrel of 150,000	30-871
72B®	Blue	300V 22 to 14 AWG Min. 2 #22 – Max. 3 #16	300V ,34mm² to 2,5mm² Min. 2-,34mm² Max. 3-1,5mm²	Box of 100	30-072
				Carton of 1,000	30-172
				Keg of 10,000 (loose pack)	30-272
				Barrel of 85,000	30-872
73B®	Orange	600V* 22 to 14 AWG Min. 1 #18 & 2 #20 Max. 2 #14	600V* ,34mm² to 2,5mm² Min. 1-,75mm² w/1-,50mm² Max. 4-1,5mm² w/1-,50mm²	Box of 100	30-073
				Jar of 300	30-073J
				Carton of 1,000	30-173
				Keg of 5,000 (10 bags, 500 ea.)	30-273
				Keg of 10,000 (loose pack)	30-673
				Barrel of 50,000	30-873
74B®	Yellow	600V* 18 to 12 AWG Min. 2 #18 Max. 4 #14 & 1 #18	600V* ,75mm² to 4,0mm² Min. 2-,75mm² Max. 4-2,5mm² w/1-,75mm²	Box of 100	30-074
				Jar of 175	30-074J
				Carton of 1,000	30-174
				Keg of 5,000 (10 bags, 500 ea.)	30-274
				Keg of 10,000 (loose pack)	30-674
				Barrel of 35,000	30-874
76B®	Red	600V* 18 to 6 AWG Min. 2 #14 Max. 4 #12	600V* ,75mm² to 16,0mm² Min. 2-2,5mm² Max. 2-4,0mm²	Box of 100	30-076
				Jar of 150	30-076J
				Carton of 1,000	30-176
				Keg of 2,500 (10 bags, 250 ea.)	30-276
				Barrel of 15,000	30-876

*1,000V maximum in fixtures and signs

UL LISTED Wire Connector 774A   Cu/Cu Only   CSR®   CE

High Temperature Wire-Nut® Wire Connectors

All of the Wire-Nut® Wire Connector features plus:

- Black, thermoplastic shell designed to withstand extreme heat build-up found in high-wattage light fixtures and signs. UL Listed to 150°C (302°F)
- Four models to cover wire ranges from 22 to 12 AWG

Model	Color	Wire Combination Range	Wire Combination Range (mm)	Quantity	Cat. No.
71B®	Black	300V 22 to 16 AWG Min. 2 #22 Str Max. 2 #16	300V ,34mm² to 1,5mm² Min. 2-,34mm² Max. 2-1,5mm²	Box of 100	30-3627
				Carton of 1,000	30-151
				Keg of 25,000 (loose pack)	30-251
				Barrel of 150,000	30-801
72B®	Black	300V 22 to 14 AWG Min. 2 #22 Max. 3 #16	300V ,34mm² to 2,5mm² Min. 2-,34mm² Max. 3-1,5mm²	Box of 100	30-3628
				Carton of 1,000	30-152
				Keg of 10,000 (loose pack)	30-252
				Barrel of 85,000	30-802
73B®	Black	600V* 22 to 14 AWG Min. 1 #18 w/1 #20 Max. 4 #16 & 1 #20	600V* ,34mm² to 2,5mm² Min. 1-,75mm² w/1-,50mm² Max. 4-1,5mm² w/1-,50mm²	Box of 100	30-3629
				Carton of 1,000	30-153
				Keg of 10,000 (loose pack)	30-253
				Barrel of 50,000	30-803
59B®	Black	600V* 22 to 12 AWG Min. 2 #20 Max. 3 #14	600V* ,34mm² to 4,0mm² Min. 2-,5mm² Max. 3-2,5mm²	Box of 100	30-059
				Carton of 1,000	30-159
				Keg of 5,000 (loose pack)	30-259
				Barrel of 35,000	30-809

*1,000V maximum in fixtures and signs

Wing–Nut® Wire Connectors

- Three color-coded models cover a full range of wire sizes from 18 to 6 AWG

- Specially designed contoured wings provide a secure grip for extra leverage on maximum wire combinations

- Live-action spring expands to accept wire shape and size with no pre-twisting required

- Square-wire spring threads directly onto conductors for fast, secure connections

- Deep skirt helps protect against flash-over and turned-back strands for maximum dielectric protection

- Tough, UL 94V-2 flame-retardant shell rated at 105°C (221°F)

- UL Listed to 486C and CSA Certified to C22.2 #188; comply with Federal Specification W-S-610E
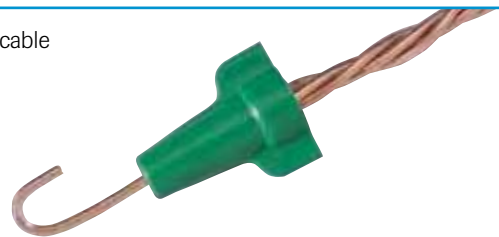
Model	Color	Wire Combination Range	Wire Combination Range (mm)	Quantity	Cat. No.
451®	Yellow	600V* 18 to 10 AWG Min. 2 #18 Max. 3 #12	600V* ,75mm² to 6,0mm² Min. 2-,75mm² Max. 3-4,0mm²	Box of 100	**30-451**
				Jar of 225	**30-451J**
				Jar of 500	**30-651J**
				Carton of 1,000	**30-551**
				Keg of 5,000 (10 bags, 500 ea.)	**30-651**
				Barrel of 35,000	**30-851**
452®	MAX 4 #10s	600V* 18 to 8 AWG **Min. 2 #18** **Max. 4 #10**	600V* ,75mm² to 10,0mm² Min. 2-,75mm² Max. 4-6,0mm²	Box of 100	**30-452**
				Jar of 300	**30-452J**
				Jar of 500	**30-652J**
				Carton of 1,000	**30-552**
				Keg of 5,000 (10 bags, 500 ea.)	**30-652**
				Barrel of 25,000	**30-852**
454®	Blue	600V* 14 to 6 AWG Min. 3 #12 Max. 1 #6 & 2 #8	600V* 2,5mm² to 16,0mm² Min. 3-4,0mm² Max. 2-16,0mm² w/1-4,0mm²	Box of 25	**30-454**
				Carton of 250	**30-554**
				Keg of 1,000 (10 bags, 100 ea.)	**30-654**
				Barrel of 10,000	**30-854**

*1,000V maximum in fixtures and signs

UL Wire Connector 774A LISTED   Cu/Cu Only   **CSA**   CE

Greenie® Grounding Wire Connectors

- Designed for making ground connections and bonding non-metallic sheathed cable

- Contoured wings for maximum leverage

- Live-action, square-wire spring provides superior grounding connections

- Tough, UL 94V-2 flame-retardant shell

- UL Listed to 467 and CSA Certified to C22.2 #188; comply with Federal Specification W-S-610E

Model	Color	Wire Combination Range	Wire Combination Range (mm)	Quantity	Cat. No.
92®	Green	14 to 10 Min. 2 #14 Max. 4 #12	2,5mm² to 6,0mm² Min. 2-2,5mm² Max. 2-4,0mm² w/1-2,5mm²	Box of 100	**30-092**
				Jar of 150	**30-092J**
				Carton of 1,000	**30-192**
				Keg of 5,000 (10 bags, 500 ea.)	**30-292**
				Barrel of 25,000	**30-992**

Greenie® Grounding Connector fully meets the intent of the N.E.C. and specifically aids in compliance with the following:

UL Ground Connector 951L LISTED   Cu/Cu Only   **CSA**

ARTICLE 250: GROUNDING

250-146   Connecting Receptacle Grounding Terminal to Box

250-148   Continuity and Attachment of Equipment Grounding Conductors to Boxes
          (B) Grounding continuity
          (D) Nonmetallic boxes

Twister® Wire Connectors

- Exceptional wire-range capacity — three models handle wire combinations from as small as 22 AWG to as large as 6 AWG

- Ribbed cap provides a secure grip and fast fingertip starts

- Swept wings offer extra leverage and less effort for large wire combinations

- Hexagonal shape accommodates standard nutdriver for tool installation

- Live-action, square-wire spring locks onto wire for safe, secure connections

- Deep skirt helps protect against flash-over and turned-back strands for maximum dielectric protection

- Tough, UL 94V-2 flame-retardant shell rated at 105°C (221°F)

- UL Listed to 486C and CSA Certified to C22.2 #188; comply with Federal Specification W-S-610E

Model	Color	Wire Combination Range	Wire Combination Range (mm)	Quantity	Cat. No.
340®	Lt. Blue	600V* 22 to 10 AWG Min. 2 #22 Max. 3 #12	600V* ,34mm² to 4,0mm² Min. 2-,34mm² Max. 3-4,0mm²	Box of 100	30-340
				Jar of 500	30-640J
				Barrel of 35,000	30-840
341®	Tan	600V* 22 to 8 AWG Min. 3 #22 Max. 3 #10	600V* ,34mm² to 10,0mm² Min. 3-,34mm² Max. 3-6,0mm²	Box of 100	30-341
				Jar of 400	30-441J
				Jar of 750	30-341J
				Carton of 1,000	30-541
				Keg of 5,000 (10 bags, 500 ea.)	30-641
				Barrel of 25,000	30-841
342®	Gray	600V* 18 to 6 AWG Min. 3 #14 Max. 2 #8 w/2 #12	600V* ,75mm² to 10,0mm² Min. 3-2,5mm² Max. 2-10,0mm² w/2-4,0mm²	Box of 50	30-342
				Keg of 2,500 (10 bags, 250 ea.)	30-642
				Barrel of 15,000	30-842

*1,000V maximum in fixtures and signs

UL® Wire Connector 774A Cu/Cu Only CSA® CE

Twi$ter® PRO Wire Connectors

- The **widest red/yellow wire range** in the industry; min. 2 #18 to max. 4 #10

- SureGrip™ overmolding provides better grip for improved leverage, more torque and faster connections

- Comfortable swept wings designed to help reduce hand fatigue

- Expanding square-wire spring provides a secure connection every time

- Tough, UL 94V-2 flame-retardant shell rated at 105°C (221°F)

- UL Listed to 486C and CSA Certified to C22.2 #188; comply with Federal Specification W-S-610E

Model	Color	Wire Combination Range	Wire Combination Range (mm)	Quantity	Cat. No.
344®	Red/Yellow MAX 4#10s	600V* 22 to 8 AWG **Min. 2 #18** **Max. 4 #10**	600V* ,34mm² to 10,0mm² Min. 2-,75mm² Max. 4,0-6,0mm²	Box od 50	30-144
				Jar of 250	30-244J
				Jar of 500	30-644J
				Barrel of 20,000	30-944

*1,000V maximum in fixtures and signs
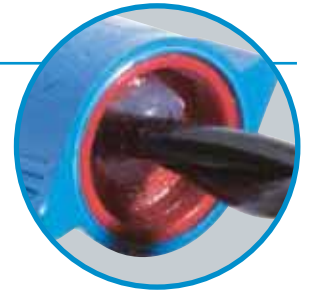
UL® Wire Connector 774A Cu/Cu Only CSA®

Wire Connectors

WeatherProof™ and UnderGround™ Wire Connectors

- ■ Silicone-based sealant protects against moisture and corrosion
- ■ UL Listed to 486D for use in damp/wet locations or direct burial
- ■ Easy to apply, pre-filled twist-on wire connectors
- ■ Handles wire sizes from #22 to #6 copper conductors
- ■ Tough, UL 94V-2 flame-retardant shell rated at 105°C (221°F)
- ■ UL Listed to 486C and CSA Certified to C22.2 #188; comply with Federal Specification W-S-610E

The silicone-based sealant protects electrical connections against harsh conditions, eliminating the need for heat-shrink or excessive taping.

WeatherProof™ — suitable for interior and exterior electrical connections exposed to rain or damp conditions.

UnderGround™ — suitable for use in a wide variety of direct burial and wet location electrical connections.
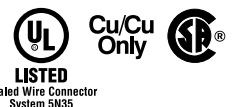
WeatherProof™ Wire Connectors

Model	Color	Wire Combination Range	Wire Combination Range (mm)	Quantity	Cat. No.
61	Blue/Orange	600V* 22 to 14 AWG Min. 2 #20 Max. 2 #14	600V* ,34mm² to 4,0mm² Min. 2-,5mm² Max. 2-2,5mm²	Card of 6	30-061
				Card of 25	30-161
				Box of 100	30-261
				Box of 1,000	30-361
62	Blue/Red	600V* 18 to 8 AWG Min. 2 #18 Max. 3 #10	600V* ,75mm² to 10,0mm² Min. 2-,75mm² Max. 3-6,0mm²	Card of 5	30-062
				Card of 20	30-162
				Box of 100	30-262
				Box of 1,000	30-362
63	Blue/Dr. Blue	600V* 16 to 6 AWG Min. 2 #14 Max. 2 #8 & 1 #10	600V* 1,5mm² to 16,0mm² Min. 2-2,5mm² Max. 2-10,0mm² w/1-6,0mm²	Card of 3	30-063
				Card of 15	30-163
				Box of 100	30-263
				Box of 1,000	30-363

UL LISTED — Sealed Wire Connector System 5N35 Cu/Cu Only CSA C E

UnderGround™ Wire Connectors

Model	Color	Wire Combination Range	Wire Combination Range (mm)	Quantity	Cat. No.
60	Blue/Blue	600V* 20 to 10 AWG Min. 1 #20 w/1 #18 Max. 1 #10 & 2 #12	600V* ,5mm² to 6,0mm² Min. 1-,5mm² w/1,75mm² Max. 1-6,0mm² w/2-4,0mm²	Card of 2	30-060
				Card of 10	30-760
				Box of 25	30-160
				Box of 100	30-260
				Box of 1,000	30-360
64	Blue/Dk. Blue	600V* 18 to 8 AWG Min. 2 #18 Max. 3 #10	600V* ,75mm² to 10,0mm² Min. 2-,75mm² Max. 3-6,0mm²	Card of 2	30-064
				Card of 10	30-764
				Box of 50	30-264
				Box of 1,000	30-364
66	Blue/Dk. Blue	600V* 14 to 6 AWG Min. 3 #12 Max. 2 #6 w/1 #10	600V* 2,5mm² to 16,0mm² Min. 3 - 4,0mm² Max. 2 - 16,0mm² w/1-6,0mm²	Card of 2	30-066
				Card of 6	30-766
				Box of 50	30-266

UL LISTED — Sealed Wire Connector System 5N35 Cu/Cu Only CSA

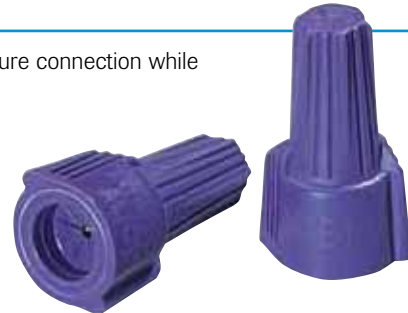## mud bug® Utility Wire Connectors

UTILITY WIRE CONNECTORS

■ Connects underground gas tracer lines providing superior protection

■ Moisture and corrosion resistant, pre-filled with non-hardening, 100% silicone

■ #20 - 8 AWG wire range capacity

■ UL Listed to direct burial test standard 486D up to 600V maximum voltage

Model	Color	Wire Combination Range	Wire Combination Range (mm)	Quantity	Cat. No.
60	Yellow	600V* 20 to 10 AWG Min. 1 #20 w/1 #18 Max. 1 #10 & 2 #12	600V* ,5mm² to 6,0mm² Min. 1-,5mm² w/1 ,75mm² Max. 1-6,0mm² w/2-4,0mm²	Box of 25	**30-160Y**
				Box of 1,000	**30-360Y**
64	Yellow	600V* 18 to 8 AWG Min. 2 #18 Max. 3 #10	600V* ,75mm² to 10,0mm² Min. 2-,75mm² Max. 3-6,0mm²	Box of 25	**30-164Y**
				Box of 1,000	**30-364Y**

UL LISTED
Sealed Wire Connector System 5N35

Cu/Cu Only

CSA®

Twister® Al/Cu Wire Connectors

■ Only aluminum-to-copper twist-on connector specifically designed to guarantee a secure connection while preventing aluminum corrosion

■ Specially formulated corrosion-resistant compound penetrates corrosion build-up on aluminum conductors for increased conductivity and cooler connections

■ Compact, one-piece design features ribbed cap, swept wings and hexagonal head for easy installation by hand or with standard nutdriver

■ Live-action, square-wire spring expands and contracts with aluminum wire

■ Deep skirt provides maximum dielectric strength

■ Tough, UL 94V-2 flame-retardant shell rated at 105°C (221°F)

■ Comply with N.E.C. Section #110-14(b) for aluminum-to-copper connections; UL Listed to 486C and CSA Certified to C22.2 #188; complies with Federal Specification W-S-610E

■ UL Listed to 467 for grounding and bonding

Model	Color	Wire Combination Ranges		Quantity	Cat. No.
65	Purple	1 #10 Al solid w/1 or 2 #10 Cu solid 1 #10 Al w/1 or 2 #12 Cu 2 #10 Al solid w/1 #12 Cu 1 #10 Al w/1 or 2 #14 Cu 2 #10 Al solid w/1 #14 Cu 2 #12 Al solid w/1 #10 Cu 1 #12 Al solid w/1 or 2 #10 Cu 1 #12 Al stranded w/1 or 2 #10 Cu solid 1 #12 Al w/1 or 2 #12 Cu 2 #12 Al solid w/1 #12 Cu	1 #12 Al w/1 or 2 #14 Cu 2 #12 Al solid w/1 #14 Cu 1 #10 Al w/1 or 2 #18 Cu 2 #10 Al solid w/1 #18 Cu 1 #12 Al w/1 or 2 #16 Cu 2 #12 Al solid w/1 #16 Cu 1 #10 Al w/1 or 2 #16 Cu 2 #10 Al solid w/1 #16 Cu 1 #12 Al w/1 or 2 #18 Cu 2 #12 Al solid w/1 #18 Cu	Card of 2	**30-065**
				Card of 10	**30-765**
				Card of 25	**30-165**
				Box of 100	**30-265**
				Carton of 1,000	**30-365**

600V maximum building wire; 1,000V signs or light fixtures

WARNING:
1. **One time use only. Do not reuse connector.**
2. **Do not use on aluminum to aluminum wire combinations.**
3. **Wiring must comply with all applicable electrical codes.**
4. **Contact IDEAL or visit IDEAL website for a complete list of UL Listed wire combinations.**

UL LISTED Wire Connector 774A

Wire Connector also listed as grounding equipment **CSA**®

Wire-Nut® Wire Connector Sockets

- Speeds installation of Wire-Nut® Wire Connectors
- Fit any pneumatic or electric tool with a 1/4 in. chuck or drive socket

For Connector Models	Cat. No.
71B®, 71B® Black, 72B® & 72B® Black	30-903
73B® & 73B® Black	30-904
59B®	30-905
74B®, 76B® & 59B®	30-906

Wire-Nut® Wire Connector Wrench

- Speeds installation of Wire-Nut® Wire Connectors
- Excellent leverage helps reduce fatigue

For Connector Models	Cat. No.
73B®, 74B® & 76B®	H-632

Spin-Twist® Wire Connector Socket

- Speeds installation of IDEAL and BUCHANAN Wire Connectors
- For use with electric corded or cordless drill drivers
- 1/4 in. chuck fits most drills or drive sockets

For Connector Models	Cat. No.
Wire-Nut®, Wing-Nut®, Twister®, B-CAP® & WingTwist™	30-902

7-in-1 Twist-a-Nut™ Screwdriver

- Facilitates installation of connectors
- Universal Wire-Nut® Wire Connector Wrench in handle
- Accepts most twist-on connectors

Description	Cat. No.
7-in-1 Twist-a-Nut™ Screwdriver	35-908

9-in-1 Ratch-a-Nut™ Screwdriver

- Ratcheting wire connector wrench speeds installation of wire connectors
- Premium screwdriver ratchet mechanism can handle high torque without fatigue

Description	Cat. No.
9-in-1 Ratch-a-Nut™ Screwdriver	35-988

Ratch Wrench

- Speeds installation of B-CAP® Wire Connectors
- Either end accepts 1/4-in. drive for tight-spot wire splicing

For Connector Models	Cat. No.
B1, B2 & B4	BR-5

High-Speed Wire Connector Chuck

- Cordless screwdriver adapter for installing B-CAP® Wire Connectors

For Connector Models	Cat. No.
B1, B2 & B4	HSC-1

Nutmaster® Nutdrivers

- Speeds installation of Twister® Wire Connectors
- Nickel/chrome plated to resist rust and corrosion
- Cushioned rubber grip
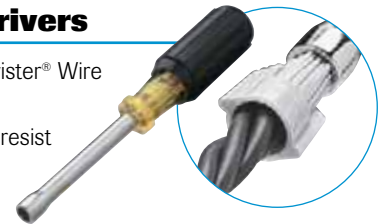
For Connector Models	Cat. No.
341®, 5/16 in. Driver	35-292
342®, 7/16 in. Driver	35-295

Twist-a-Nut™ Pro Electrician's Screwdrivers

- Convenient Wire-Nut® Wrench in end of handle
- Wire-looping hole in handle
- Vapor-blasted tip prevents plate chipping
- Tough, chrome vanadium steel shank
- Precision ground tip provides secure fit in screw slot

LIFETIME IDEAL GUARANTEE
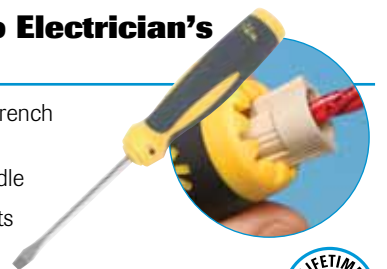
For Connector Models	Cat. No.
#2 x 6 Robertson	30-330
1/4 in. x 4 in. Slotted	30-331
#2 x 4 in. Phillips	30-332
1/4 in. x 6 in. Slotted Cabinet Tip	30-333

powerplug® Luminaire Disconnect

- Meets new NEC and CEC code changes for non-residential fluorescent luminaires
- Perfect for OEM new lighting installation or retrofit lighting applications
- Meets UL and CSA finger-probe safety requirements
- Allows safe disconnect of hot and neutral ballast wiring

103 3-Pole
6 Amp/600V

102 2-Pole
6 Amp/600V

183 3-Pole
3 Amp/120V

182 2-Pole
3 Amp/120V

PowerPlug® Selection Chart

Application	New Installations	Retrofits
For 1-ballast fixtures	102	102, 182
For 2-ballast, dimming and switching fixtures	103	103, 183
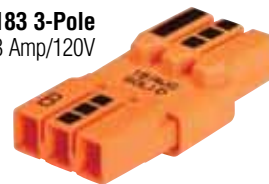
Color-coded ends:
White = Ballast Side
Orange = Line Side

3/8" strip length indicator

All models fit through 1/2" knockout

Disconnects safely, "touch-safe" per UL 2459

Patented IDEAL push-in technology quickly locks wires in place

Model	Color	Electrical Rating	Wire Range	Line Side	Ballast Side	Quantity	Cat. No.
102 2-wire	Orange	6 Amps/600 Volts Max.	Solid	#12 – #18		Card of 25	**30-372**
			Stranded	#12 – #14 (≤19 str.)		Jar of 75	**30-382J**
			Stranded Tin-Bonded	#12 – #14 (≤19 str.) #16 (≤26 str.) #18 (≤16 str.)		Jar of 150	**30-352J**
						Box of 1,000	**30-102**
103 3-Wire	Orange	6 Amps/600 Volts Max.	Solid	#12 – #18	#18	Card of 20	**30-383X**
			Stranded	#12 – #14 (≤19 str.)	None	Jar of 50	**30-383XJ**
			Stranded Tin-Bonded	#12 – #14 (≤19 str.) #16 (≤26 str.) #18 (≤16 str.)	#18 (≤16 str.)	Jar of 100	**30-353XJ**
						Box of 1,000	**30-103X**
182 2-wire	Orange	3 Amps 120V 1.3 Amps 277V 1 Amps 347V 0.75 Amps 480V 0.60 Amps 600V	Solid	#18		Box of 100	**30-082**
						Box of 2,500	**30-682**
						Box of 1,000 w/6" leads	**30-682L**
183 3-Wire						Box of 100	**30-083**
						Box of 2,500	**30-683**

1,000V maximum fixtures and signs.

UL LISTED Luminaire Disconnect 3HME

CSA

SpliceLine™ In-Line Wire Connectors

The SpliceLine™ is a crimp-free, push-in wire connector that installs in half the time of a traditional butt splice. Perfect for lengthening a short wire in a box, for pre-fab operation, or for surface raceway wiring. SpliceLine™ accepts solid and stranded wire, is UL Listed and is made in the U.S.A.

- Crimp-free, push-in butt splice
- Easily passes through 1/2 in. knockouts
- End-to-end connection ideal for pre-fab operations
- Transparent polycarbonate window for visual inspection of connection
- Wide wire range of:
  12 – 20 AWG solid
  12 – 16 AWG stranded

Transparent polycarbonate shell allows for visual inspection of connection

Check port for continuity testing

Accepts solid or stranded wire

Slim design fits through 1/2" knockout

2X FASTER THAN BUTT SPLICES NO MORE CRIMPING!

A GREAT PRE-FAB SOLUTION

Model	Color	Rating	Wire Range		Line Side	Ballast Side	Quantity	Cat. No.
42	Orange	600V/20A 105°C	Solid		#12 – #20		Card of 10	**30-1742**
			Stranded		#12 – #16 (≤19 str.)		Box of 100	**30-1042**
			Stranded Tin-Bonded		#14 – #18 (≤19 str.)		Jar of 300	**30-1042J**
							Box of 2,500	**30-1642**

UL LISTED — Wire Connector 774A   Cu/Cu Only   CSA®

In-Sure™ Push-In Wire Connectors

- No-twist connection reduces repetitive motion fatigue
- Low insertion force for fast and easy connections
- Compact size makes installation easy
- Clear shell gives visual verification of connection

- UL Listed to 486C and CSA Certified to C22.2 #188
- UL 467 Listed for grounding and bonding applications
- Tough, UL 94V-2 flame-retardant shell rated at 105°C (221°F)

Specifications

Wire Combination Range		Model 32 Red 2-Port	Model 33 Orange 3-Port	Model 34 Yellow 4-Port	Model 87 Gray 5-Port	Model 88 Blue 6-Port Stacked	Model 90 Black 8-Port	Model 39 Blue 3-Port	
	Solid	#20 - #12		Solid	#20 - #12		Solid	#14 - #10	
	Stranded	#16 - #12 (≤ 19 Strand) #18 (7 Strand)		Stranded	#16 - #14 (≤ 19 Strand) #18 (≤ 7 Strand)		Stranded	#12 - #10 (≤ 19 Strand)	
	Stranded (Tin Bonded)	#18 - #14 (≤ 19 Strand)		Stranded (Tin Bonded)	#14 - #12 (≤ 19 Strand) #16 (≤ 26 Strand) #18 (≤ 16 Strand)		Stranded (Tin Bonded)	#14 - #10 (≤ 19 Strand)	

Ordering Information

Model	Color	Ports	Length In.	Length mm	Width In.	Width mm	Height in.	Height mm	Quantity	Cat. No.
32	Red	2	0.78	19.81	0.52	13.21	0.38	9.65	Box of 100	30-1032
									Jar of 300	30-1032J
									Box of 5,000	30-1632
33	Orange	3	0.78	19.81	0.69	17.53	0.38	9.65	Box of 100	30-1033
									Jar of 250	30-1033J
									Box of 5,000	30-1633
34	Yellow	4	0.78	19.81	0.82	20.83	0.38	9.65	Box of 100	30-1034
									Jar of 200	30-1034J
									Box of 5,000	30-1634
87	Gray	5	.355	9.02	.907	23.03	.729	18.52	Box of 50	30-087
									Jar of 150	30-087J
									Box of 1,000	30-187
									Box of 5,000	30-687
88	Blue	6 Stacked	.607	15.42	.603	15.32	.729	18.52	Box of 50	30-088
									Jar of 100	30-088J
									Box of 1,000	30-188
									Box of 5,000	30-688
90	Black	8	.355	9.02	1.38	35.03	.717	18.21	Box of 50	30-090
									Jar of 100	30-090J
									Box of 1,000	30-190
									Box of 2,000	30-690
39	Blue	3	0.78	19.81	.086	21.84	0.45	11.43	Box of 50	30-1039
									Jar of 150	30-1039J
									Box of 2,500	30-1639

COPPER TO COPPER ONLY. Do not use on aluminum.
Temperature rating: 105°C (221°F) maximum
600V maximum building wire, 1000V maximum signs or lighting fixtures

Wire Connector 774A UL LISTED   Cu/Cu Only   CSA®

Grounding Accessories

- Solid and stranded pigtail lead wires are convenient for device grounding applications
- Grounding screws offer a unique thread-forming, hole-finding feature plus combination hex, Phillips, slotted and Robertson head

Grounding Tails – Stranded Wire

Ultra-flexible lead wire | Heavy-duty brass terminal

Description	Quantity	Cat. No.
14 AWG stranded 7-3/4 in. tail w/#10 fork & 10 ring and ground screw	Bag of 25	30-3183
12 AWG stranded, 7-3/4 in. tail w/#10 fork & 10 ring and ground screw	Bag of 25	30-3184
12 AWG stranded, 7-3/4 in. tail w/#10 fork and #10 ring and ground screw	Plastic Box of 50	30-3385
12 AWG stranded, 7-3/4 in. tail w/#10 fork & 10 ring and ground screw	Box of 1,000 (bundle of 100)	30-3284
12 AWG solid tail, one stripped end, one end w/ground screw, joined to 12 AWG stranded tail at a ring terminal, w/fork terminal on second end	Box of 500 (Bundle of 25)	30-3286
12 AWG stranded, 2-wire tail joined w/#10 ring and ground screw, one stripped-end tail and one 10 fork tail	Bag of 25	30-3287
12 AWG stranded, 2-wire tail joined w/#10 ring and ground screw and two #10 fork tails	Bag of 25	30-3288
12 AWG stranded, 3-wire tail joined w/#10 ring and ground screw, one stripped-end tail and two 10 fork tails	Bag of 25	30-3289

Grounding Tails – Solid Wire

Description	Quantity	Cat. No.
14 AWG solid, 8 in. tail w/loop & ground screw and stripped end	Box of 50	30-3390
12 AWG solid, 8 in. tail w/loop & ground screw and stripped end	Box of 50	30-3392
12 AWG solid, 10 in. tail w/loop & ground screw and stripped end	Box of 500 (Bundles of 50)	30-3394
12 AWG solid, 8 in. tail w/loop & ground screw and stripped end	Plastic box of 100	30-3399
12 AWG solid, 7 in. tail w/loop & ground screw and stripped end	Bag of 50	30-3407
12 AWG solid, 10 in. tail w/loop & ground screw and stripped end	Bag of 50	30-3410
12 AWG solid, 8 in. tail w/loop & ground screw and stripped end	Box of 1,000 (Bundles of 50)	30-3496

Pigtail Wire Connectors

- Ultra-flexible 8-in. lead allows for easy positioning in outlet box — reduces stress on device, wires and connection
- Brass-alloy terminals with locking tabs for fast, efficient device connection

Description	Wire Color	Quantity	Cat. No.
12 AWG stranded 8 in. w/#10 fork & stripped end	Black	Bag of 25	30-3471
12 AWG stranded 8 in. w/#10 fork & stripped end	White	Bag of 25	30-3470
12 AWG stranded 8 in. w/#10 fork & stripped end	Green	Bag of 25	30-3480

Grounding Accessories

Grounding Screw — Combo hex head — Thread-forming, hole-finding grounding screw | Grounding Clip

Description	Qty.	Cat. No.
Ground Screw, thread-forming, hole-finding tip combination hex, Phillips, slotted & Robertson head	Pack of 50	30-3194
Ground Screw, thread-forming, hole-finding tip combination hex, Phillips, slotted & Robertson head	Bag of 100	30-3294
Grounding clip – accepts 10, 12 or 14 AWG Wire	Pack of 100	30-3395
Ground Screw, thread-forming, hole-finding tip combination hex, Phillips, slotted & Robertson head	Jar of 400	30-3494

Crimp Terminals-Rings, Forks, Disconnects and Splices

- Butted seam-construction prevents splitting under maximum pressure
- Internal barrel serrations grip wires tightly to resist pull-out and reduce electrical resistance
- Tin-plated brass construction for corrosion resistance
- Shouldered barrel insulation quickly positions terminal for proper crimping

- Expanded insulation entry accomodates a wide variety of insulation diameters and provides additional insulation support
- Color-coded insulation and wire range stamped on terminal for easy identification
- See product packaging for recommended crimp tools
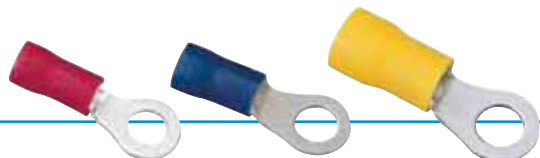
Vinyl Insulated Ring Terminals

Wire Range Combination	Stud Size In. (mm)	Max. Wire Ins. Dia. In. (mm)	Quantity	Cat. No.	Quantity	Cat. No.
22 – 18 AWG (0,5–1,0mm²)	6 (3.7mm)	0.157 (4.0mm)	25	**83-2121**	—	—
	8 (4.3mm)		25	**83-2131**	—	—
	10 (5.3mm)		25	**83-2141**	—	—
	1/4 (6.4mm)		25	**83-2151**	—	—
16 – 14 AWG (1,5–2,5mm²)	6 (3.7mm)	0.177 (4.5mm)	25	**83-2221**	—	—
	8 (4.3mm)		25	**83-2231**	—	—
	10 (5.3mm)		25	**83-2241**	1,000	**84-2241**
	1/4 (6.4mm)		25	**83-2251**	—	—
12 – 10 AWG (4,0–6,0mm²)	8 (4.3mm)	0.248 (6.3mm)	25	**83-2331**	—	—
	10 (5.3mm)		25	**83-2341**	1,000	**84-2341**
	1/4 (6.4mm)		25	**83-2351**	—	—
	5/16 (8.4mm)		25	**83-2361**	—	—
	3/8 (10.5mm)		25	**83-2371**	—	—

75° C/600 Volts max.

UL LISTED Wire Connector 774A Cu only c UL

Non-Insulated Ring Terminals

Wire Range	Stud Size In.* (mm**)	Quantity	Cat. No.	Quantity	Cat. No.
22 – 18 AWG (0,5-1,0mm²)	8 (4.3)	25	**83-0131**	—	—
	10 (5.3)	25	**83-0141**	—	—
16 – 14 AWG (1,5-2,5mm²)	6 (3.7)	25	**83-0221**	—	—
	8 (4.3)	25	**83-0231**	—	—
	10 (5.3)	25	**83-0241**	1,000	**84-0241**
12 – 10 AWG (4,0-6,0mm²)	8 (4.3)	25	**83-0331**	—	—
	10 (5.3)	25	**83-0341**	1,000	**84-0341**
	1/4 (6.4)	25	**83-0351**	—	—
8 AWG (8,0mm²)	10 (5.3)	25	**83-0421**	—	—
	1/4 (6.4)	25	**83-0431**	—	—
	5/16 (8.4)	25	**83-0441**	—	—
	3/8 (10.5)	25	**83-0451**	—	—
6 AWG (14,0mm²)	10 (5.3)	20	**83-0511**	—	—
	1/4 (6.4)	20	**83-0521**	—	—
	5/16 (8.4)	20	**83-0531**	—	—
	3/8 (10.5)	20	**83-0541**	—	—
4 AWG (22,0mm²)	1/4 (6.4)	20	**83-0611**	—	—
	5/16 (8.4)	20	**83-0621**	—	—
	3/8 (10.5)	20	**83-0631**	—	—

105°C/600 Volts max.
*Plus or minus .020 in.
**Plus or minus .51mm

UL LISTED Wire Connector 774A Cu only c UL

1-800-435-0705 for Customer Service

Crimp Terminals

Vinyl Insulated Spade Terminals

Wire Range	Stud Size In. (mm)	Max. Wire Ins. Dia. In. (mm)	Quantity	Cat. No.	Quantity	Cat. No.
22 – 18 AWG (0,5-1,0mm²)	6 (3.7mm)	0.157 (4.0mm)	25	**83-7111**	1,000	**84-7111**
	8 (4.3mm)		25	**83-7121**	—	—
	10 (5.3mm)		25	**83-7131**	—	—
16 – 14 AWG (1,5-2,5mm²)	6 (3.7mm)	0.177 (4.5mm)	25	**83-7151**	—	—
	8 (4.3mm)		25	**83-7161**	1,000	**84-7161**
	10 (5.3mm)		25	**83-7171**	1,000	**84-7171**
12 – 10 AWG (4,0-6,0mm²)	6 (3.7mm)	0.248 (6.3mm)	25	**83-7201**	—	—
	8 (4.3mm)		25	**83-7211**	—	—
	10 (5.3mm)		25	**83-7221**	500	**84-7221**
	1/4 (6.4mm)		25	**83-7231**	—	—

75° C/600 Volts max.

Ⓤ LISTED Wire Connector 774A Cu only C Ⓤ

Vinyl Insulated Snap Spade Terminals

Wire Range	Stud Size In. (mm)	Max. Wire Ins. Dia. In. (mm)	Quantity	Cat. No.	Quantity	Cat. No.
22 – 18 AWG (0,5-1,0mm²)	6 (3.7mm)	0.134 (4.0mm)	25	**83-7011**	—	—
	8 (4.3mm)		25	**83-7021**	—	—
	10 (5.3mm)		25	**83-7031**	—	—
16 – 14 AWG (1,5-2,5mm²)	6 (3.7mm)	0.161 (4.5mm)	25	**83-7051**	—	—
	8 (4.3mm)		25	**83-7061**	—	—
	10 (5.3mm)		25	**83-7071**	—	—
12 – 10 AWG (4,0-6,0mm²)	8 (4.3mm)	0.248 (6.3mm)	25	**83-7081**	1,000	**84-2241**
	10 (5.3mm)		25	**83-7091**	—	—
	1/4 (6.4mm)		25	**83-7101**	—	—

75° C/600 Volts max.

Ⓤ LISTED Wire Connector 774A Cu only C Ⓤ

Non–Insulated Spade Terminals

Wire Range	Stud Size In. (mm)	Quantity	Cat. No.	Quantity	Cat. No.
22 – 18 AWG (0,5-1,0mm²)	6 (3.7mm)	25	**83-6111**		
	8 (4.3mm)	25	**83-6121**	—	—
	10 (5.3mm)	25	**83-6131**	—	—
16 – 14 AWG (1,5-2,5mm²)	8 (4.3mm)	25	**83-6161**	—	—
	10 (5.3mm)	25	**83-6171**	1,000	**84-6171**
12 – 10 AWG (4,0-6,0mm²)	8 (4.3mm)	25	**83-6211**	—	—
	10 (5.3mm)	25	**83-6221**	—	—
	1/4 (6.4mm)	25	**83-6231**	—	—

105° C/600 Volts max.

Ⓤ LISTED Wire Connector 774A Cu only C Ⓤ

Vinyl Insulated Multi-Stack Disconnects

Wire Range	Tab Size In. (mm)	Max. Wire Ins. Dia. In. (mm)	Quantity	Cat. No.
22 – 18 AWG (0,5-1,0mm²)	.250 x .032 (6.35mm x 0.8mm)	0.15 (3.8mm)	25	**83-9611**
16 – 14 AWG (1,5-2,5mm²)	.250 x .032 (6.35mm x 0.8mm)	0.185 (4.7mm)	25	**83-9621**
12 – 10 AWG (4,0-6,0mm²)	.250 x .032 (6.35mm x 0.8mm)	0.244 (6.2mm)	25	**83-9631**

75° C/300 Volts max.

Vinyl Insulated Female Disconnects

Wire Range	Tab Size In. (mm)	Max. Wire Ins. Dia. In. (mm)	Quantity	Cat. No.	Quantity	Cat. No.
22 – 18 AWG (0,5-1,0mm²)	.110 x .020 (2.8mm x 0.5mm)	0.150 (3.8)	25	**83-9511**	—	—
16 – 14 AWG (1,5-2,5mm²)	.110 x .020 (2.8mm x 0.5mm)	0.185 (4.7)	25	**83-9521**	—	—
22 – 18 AWG (0,5-1,0mm²)	.187 x .020 (4.75mm x 0.5mm)	0.150 (3.8)	25	**83-9541**	—	—
16 – 14 AWG (1,5-2,5mm²)	.187 x .020 (4.75mm x 0.5mm)	0.185 (4.7)	25	**83-9551**	—	—
22 – 18 AWG (0,5-1,0mm²)	.250 x .032 (6.35mm x 0.8mm)	0.150 (3.8)	25	**83-9571**	—	—
16 – 14 AWG (1,5-2,5mm²)	.250 x .032 (6.35mm x 0.8mm)	0.185 (4.7)	25	**83-9581**	500	**84-9581**
14 – 12 AWG (2,5-4,0mm²)	.250 x .032 (6.35mm x 0.8mm)	0.244 (6.2)	25	**83-9591**	—	—
12 – 10 AWG (4,0-6,0mm²)	.250 x .032 (6.35mm x 0.8mm)	0.244 (6.2)	25	**83-9601**	—	—

75° C/300 Volts max.

Vinyl Insulated Male Disconnects

Wire Range (AWG)	Tab Size In. (mm)	Max. Wire Ins. Dia. In. (mm)	Quantity	Cat. No.
22 – 18 AWG (0,5-1,0mm²)	.250 x .032 (6.35mm x 0.8mm)	0.150 (3.8)	25	**83-9971**
16 – 14 AWG (1,5-2,5mm²)	.250 x .032 (6.35mm x 0.8mm)	0.185 (4.7)	25	**83-9981**
12 – 10 AWG (4,0-6,0mm²)	.250 x .032 (6.35mm x 0.8mm)	0.244 (6.2)	25	**83-9991**

75° C/300 Volts max.

Non–Insulated Female Disconnects

Wire Range (AWG)	Stud Size (In.)	Quantity	Cat. No.
22 – 18 AWG (0,5-1,0mm²)	.110 x .020 (2.8mm x 0.5mm)	25	**83-9411**
16 – 14 AWG (1,5-2,5mm²)	.110 x .020 (2.8mm x 0.5mm)	25	**83-9421**
22 – 18 AWG (0,5-1,0mm²)	.187 x .020 (4.75mm x 0.5mm)	25	**83-9441**
22 – 18 AWG (0,5-1,0mm²)	.187 x .020 (4.75mm x 0.5mm)	25	**83-9451**
22 – 18 AWG (0,5-1,0mm²)	.250 x .032 (6.35mm x 0.8mm)	25	**83-9471**
16 – 14 AWG (1,5-2,5mm²)	.250 x .032 (6.35mm x 0.8mm)	25	**83-9481**
12 – 10 AWG (4,0-6,0mm²)	.250 x .032 (6.35mm x 0.8mm)	25	**83-9501**

105° C/300 Volts max.

Nylon Fully-Insulated Female Disconnects
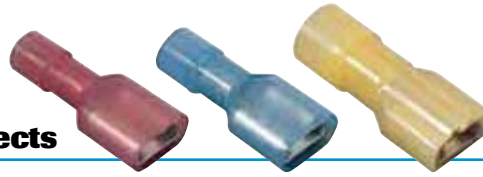
Wire Range	Tab Size In. (mm)	Max. Wire Ins. Dia. In. (mm)	Quantity	Cat. No.	Quantity	Cat. No.
22 – 18 AWG (0,5-1,0mm²)	.250 x .032 (6.35mm x 0.8mm)	0.15 (3.8mm)	25	**83-9771**	1,000	**84-9771**
16 – 14 AWG (1,5-2,5mm²)	.250 x .032 (6.35mm x 0.8mm)	0.185 (4.7mm)	25	**83-9781**	1,000	**84-9781**
12 – 10 AWG (4,0-6,0mm²)	.250 x .032 (6.35mm x 0.8mm)	0.244 (6.2mm)	25	**83-9791**	500	**84-9791**

105° C/300 Volts max.

Nylon Fully-Insulated Male Disconnects
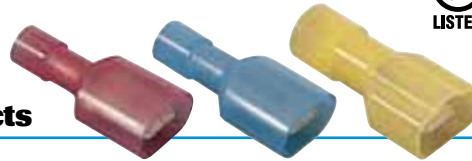
Wire Range	Tab Size In. (mm)	Max. Wire Ins. Dia. In. (mm)	Quantity	Cat. No.
22 – 18 AWG (0,5-1,0mm²)	.250 x .032 (6.35mm x 0.8mm)	0.150 (3.8mm)	25	**83-9911**
16 – 14 AWG (1,5-2,5mm²)	.250 x .032 (6.35mm x 0.8mm)	0.185 (4.7mm)	25	**83-9921**
12 – 10 AWG (4,0-6,0mm²)	.250 x .032 (6.35mm x 0.8mm)	0.244 (6.2mm)	25	**83-9931**

105° C/300 Volts max.

Vinyl Insulated Bullet Disconnects

Wire Range	Max. Wire Ins. Dia. In. (mm)	Quantity	Cat. No.
22 – 18 AWG (0,5-1,0mm²)	0.150 (3.8mm)	25	**83-8001**
16 – 14 AWG (1,5-2,5mm²)	0.185 (4.7mm)	25	**83-8011**

75° C/300 Volts max.

Vinyl Fully-Insulated Receptacle Disconnects

Wire Range	Max. Wire Ins. Dia. In. (mm)	Quantity	Cat. No.
22 – 18 AWG (0,5-1,0mm²)	0.150 (3.8mm)	25	**83-8101**
16 – 14 AWG (1,5-2,5mm²)	0.185 (4.7mm)	25	**83-8111**

75° C/300 Volts max.

Non-Insulated Flag Female Disconnect

Wire Range	Tab Size In. (mm)	Quantity	Cat. No.
16 – 14 AWG (1,5-2,5mm²)	.250 x .032 (6.35 x 0.8mm)	25	**83-9401**

105° C/300 Volts max.

Disconnect Adapter – Male to Female (2-1)
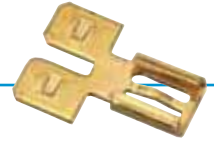
Tab Size In. (mm)	Quantity	Cat. No.
.250 x .032 (6.35mm x 0.8mm)	25	**83-9801**

105° C/300 Volts max.

Non–Insulated Butt Splices

Wire Range	Quantity	Cat. No.	Quantity	Cat. No.
22 – 18 AWG (0,5-1,0mm²)	25	**83-9001**	—	—
16 – 14 AWG (1,5-2,5mm²)	25	**83-9011**	1,000	**84-9011**
12 – 10 (4,0-6,0mm²)	25	**83-9021**	500	**84-9021**
8 (8,0mm²)	25	**83-9031**	250	**84-9031**
6 (14,0mm²)	20	**83-9041**	—	—
4 (22,0mm²)	20	**83-9051**	—	—

105° C/600 Volts max.

Non–Insulated Parallel Splices

Wire Range	Quantity	Cat. No.	Quantity	Cat. No.
22 – 18 AWG (0,5-1,0mm²)	25	**83-9071**	—	—
16 – 14 AWG (1,5-2,5mm²)	25	**83-9081**	1,000	**84-9081**
12 – 10 (4,0-6,0mm²)	25	**83-9091**	1,000	**84-9091**

105° C/600 Volts max.

Vinyl Insulated Butt Splices
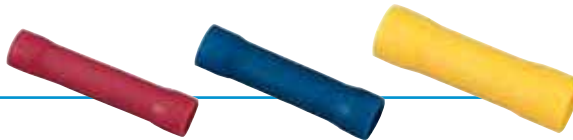
Wire Range	Max. Wire Ins. Dia. In. (mm)	Quantity	Cat. No.	Quantity	Cat. No.
22 – 18 AWG (0,5-1,0mm²)	.157 (4.0mm)	25	**83-9281**	1,000	**84-9281**
16 – 14 AWG (1,5-2,5mm²)	.177 (4.5mm)	25	**83-9291**	1,000	**84-9291**
12 – 10 (4,0-6,0mm²)	.248 (6.3mm)	25	**83-9301**	500	**84-9301**

75° C/600 Volts max.

UL 774A LISTED   Wire Connector Cu only C UL

Vinyl Insulated Parallel Splices

Wire Range	Max. Wire Ins. Dia. In. (mm)	Quantity	Cat. No.
22 – 18 AWG (0,5-1,0mm²)	.157 (4.0mm)	1,000	**83-9351**
16 – 14 AWG (1,5-2,5mm²)	.177 (4.5mm)	1,000	**83-9361**
12 – 10 (4,0-6,0mm²)	.248 (6.3mm)	500	**83-9371**

75° C/600 Volts max.

Tap Splice Connectors

Wire Range	Color	Quantity	Cat. No.
22 – 18 AWG (0,5-1,0mm²)	Red	25	**83-3261**
16 – 14 AWG (1,5-2,5mm²)	Blue	25	**83-3271**
12 – 10 (4,0-6,0mm²)	Yellow	25	**83-3281**

75° C/600 Volts max.
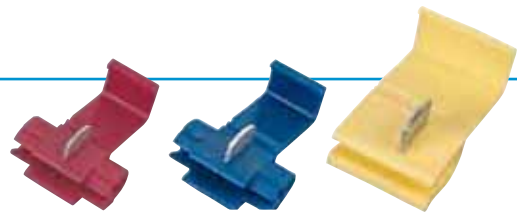
Terminal Strips

■ Heavy-duty, corrosion-resistant screws, surface plates and optional hardware

■ Accessory hardware provides a variety of termination options

■ Available cover helps prevent contact with live terminals

■ Rugged polyester thermoplastic base (UL Rated 94V-0)

■ Operating temperature rated from 130°C (260°F) to -40°C (-40°F)

■ UL Recognized (E62622) and CSA Certified (LR15364)
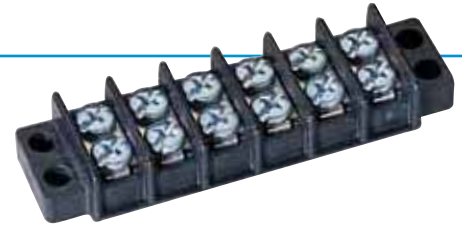
No. of Poles	Center Spacing	Wire Range (AWG Cu)	Recommended Torque	Terminal Screw Size	Cat. No.
89-200 Series, 30A/600V UL/CSA (Max. electrical rating 30A/250V when used with optional quick connects)					
2					89-202
3					89-203
4					89-204
6	.562 in. (14.28mm)	22 – 10	16 in. - lb.	#8-32 Philslot Zinc-Plated Steel	89-206
8					89-208
10					89-210
12					89-212
89-300 Series, 300V/30A UL/CSA (Max. electrical rating 15A/125V when used with optional quick connects)					
2					89-302
4					89-304
6	.375 in. (9.52mm)	22 – 14	9 in. - lb.	#6-32 Philslot Zinc-Plated Steel	89-306
8					89-308
10					89-310
12					89-312
89-400 Series, 30A/300V UL/CSA					
2					89-402
4					89-404
6	.437 in. (11.10mm)	22 – 12	9 in. - lb.	#6-32 Philslot Zinc-Plated Steel	89-406
8					89-408
10					89-410
12					89-412

No. of Poles	Center Spacing	Wire Range (AWG Cu)	Recommended Torque	Terminal Screw Size	Standard Black Cat. No.	Shorting Block Cat. No.
89-500 Series, 60A/600V UL/CSA (Max. electrical rating 60A/600V achieved only when used with #6 AWG copper wire crimped to ring terminal)						
4					89-504	89-505
6	.625 in. (15.88mm)	22 – 6	20 in. - lb.	#10-32 Slotted Nickle-Plated Brass	89-506	89-507
8					89-508	89-509
12					89-512	89-513

Covers

■ Helps prevent contact with live terminals

No. of Circuits	For Use with 89-200 Clear Cat. No.	For Use with 89-300 Clear Cat. No.	89-400 Clear Cat. No.	89-500 Clear Cat. No.
2	**89-233**	**89-334**	**89-434**	—
3	**89-234**	—	—	—
4	**89-235**	**89-335**	**89-435**	**89-514**
6	**89-236**	**89-336**	**89-436**	**89-516**
8	**89-237**	**89-337**	**89-437**	**89-518**
10	**89-238**	**89-338**	**89-438**	—
12	**89-239**	**89-339**	**89-439**	**89-520**

Quick Connects

■ Allows fast, flexible circuit changes

Flat - None

Flat - Flat

For Use with Terminal Strip Series	Tab Size (Inches)	Quantity	Flat -None Cat. No.	Flat - Flat Cat. No.
89-300	.187 x .020	10	**89-314**	**89-317**
89-200 & 89-400	.250 x .031	10	**89-414**	**89-417**

Jumpers

■ Provides easy connection of multiple circuits

Flat 12-Circuit

Flat Slip-on

Over Barrier Slip-on
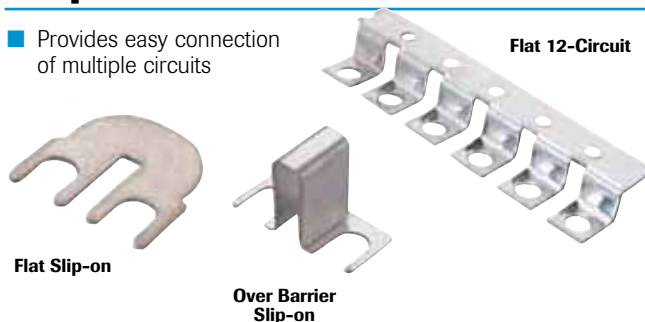
For Use with Terminal Strip Series	Center Spacing (Inches)	Quantity	Flat Slip-on Cat. No.	Over Barrier Slip-on Cat. No.	Flat 12-Circuit Cat. No.
89-200	.562	10	**89-229**	**89-224**	—
		100	**89-230**	—	—
89-300	.375	10	**89-323**	**89-324**	—
		100	**89-330**	—	—
89-400	.437	10	**89-423**	**89-424**	—
		100	**89-430**	—	—
89-500	.625	2	—	—	**89-525**

Barrier Strips

■ Recessed screws and tubular contacts provide added safety and help prevent short circuits

■ Tubular contacts connect stripped, un-terminated solid or stranded wire directly to each contact

■ Integrated wire protectors prevent twisting and breakage of stranded wire during connection

■ Modular 12-circuit design can be cut into smaller sections, or stacked end-to-end

■ Rugged nylon construction, UL 94V2

■ Operating temperature rated to 105°C (221°F)

Electrical Ratings	Wire Range (AWG)	No. of Circuits	Torque in.- lb.	Model No.	Cat. No.
20A/300V UL	22 - 12	12	3.5	PA8DS	**89-608**
10A/400V CSA	20 - 18				
30A/300V UL	22 - 10	12	4.4	PA10DS	**89-610**
20A/400V CSA	18 - 14				
35A/300V UL/CUL	22 - 10	12	7.0	PA12DS	**89-612**
50A/300V UL/CUL	20 - 8	12	12.0	PA14DS	**89-614**

Crimp Connectors

- Designed for making fast, permanent, pressure-type connections
- Long, zinc-plated steel sleeves maximize contact area with conductors
- Will not vibrate loose when securely crimped
- UL Listed to 486C and CSA Certified to C22.2 #188; comply with Federal Specification W-S-610E.

Steel Crimp Connectors

Model	Wire Combination Range	Quantity	Cat. No.
410	600V 18 thru 10 AWG Min. 1 #14 & 1 #18 Max. 2 #10 & 2 #14	Box of 100	30-410
		Carton of 1,000	30-510
		Keg of 10,000	30-610
411	600V 18 thru 8 AWG Min. 3 #12 Max. 4 #10	Box of 40	30-401
		Box of 50	30-411
		Carton of 1,000	30-511
412	600V 18 thru 4 AWG Min. 1 #14 & 1 #16 Max. 2 #8 & 1 #6	Box of 20	30-402
		Box of 50	30-412
		Carton of 1,000	30-512

Cu/Cu Only
LISTED
Wire Connector

IDEAL hand tools U.L. listed for Model 410, 411, 412. Crimps: 30-425, 30-429, 30-430.

Wrap-Cap® Insulators

- Provide high dielectric and physical protection for UL Listed, non-insulated pressure-type wire connectors
- Cap and loop design eliminates need for tape
- Unique design completely covers splice — insulates both around and between wires
- Reusable and easy to install
- UL Listed to 486C and CSA Certified for 600V maximum building wiring (1,000V maximum for fixtures and signs); temperature rated at 75°C (167°F) maximum

Model	Description	Quantity	Cat. No.
415	Insulator Model 410 Connectors can also be used on Buchanan 2006S & 2011S Copper Crimps	Box of 100	30-415
		Carton of 1,000	30-515
		Keg of 10,000	30-615
417	Insulator for Model 411 & 412 Connectors can also be used on Buchanan 2011S Copper Crimps	Box of 50	30-417
		Carton of 1,000	30-517

LISTED
Wire Connector

Pre-Insulated Crimp Connectors

- Three models cover a wide range of wire combinations from 22 AWG stranded through 8 AWG stranded
- Compact design fits easily into tight locations
- Flared skirt protects against turned–back strands
- Beveled opening eases wire entry
- Tough, UL 94V-2 flame-retardant shell rated at 105°C (221°F)
- UL Listed to 486C and CSA Certified for 600V maximum building wiring (1,000V maximum for fixtures and signs); temperature rated at 105°C (221°F) maximum

Model	Wire Combination Range	Quantity	Cat. No.
48	600V* Min. 2 #22 Max. 1 #14 w/2 #18	1,000	30-245
		10,000	30-645
49	600V* Min. 1 #22 w/1 #18 Max. 1 #12 w/1 #16	1,000	30-249
		10,000	30-649
NC-8	600V* Min. 4 w/#16 Max. 1 #12 w/4 #14	1,000	30-148
		5,000	30-648

*1,000V maximum in fixtures and signs.

Cu/Cu Only
LISTED
Wire Connector

Crimp Connectors

Set–Screw Wire Connectors

- Eliminates need for restripping wire each time connection is disturbed
- Solid brass sleeves in three sizes handle 22 through 10 AWG wires
- Set-screw easily and securely applies maximum compression to conductors to ensure a vibration-resistant splice
- Permits fast visual inspection of splice
- Tough, flame-retardant shell rated at 150°C (302°F)
- UL Listed to 486C and CSA Certified to C22.2 #188 ; comply with Federal Specification W-S-610E

Model	Wire Combination Range	Quantity	Cat. No.
10	300V 22 thru 10 AWG Min. 1 #20 w/1 #22 Max. 2 #14 w/1 #16	Box of 100	30-210
		Carton of 1,000	30-310
11	600V 22 thru 10 AWG Min. 1 #14 w/1 #20 Max. 3 #14 w/2 #18	Box of 100	30-211
		Carton of 1,000	30-311
22	600V 20 thru 10 AWG Min. 1 #16 w/3 #18 Max. 2 #10 w/1 #12	Box of 100	30-222
		Carton of 1,000	30-322

UL LISTED Cu/Cu Only CSA
Wire Connector

Set–Screw Holder

- Convenient tool for holding and tightening set-screw connectors
- Accepts IDEAL Models 11 and 22 set-screw connectors
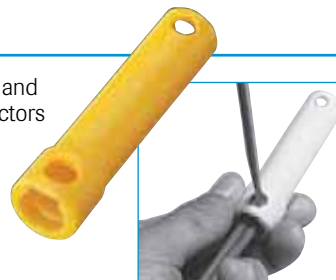
For Connector Models	Cat. No.
11 & 22	K-2422

Noalox® Anti–Oxidant

- Anti-oxidant and anti-seizing compound improves efficiency and service life of aluminum electrical applications
- Suspended zinc particles penetrate and cut aluminum oxide
- Provides additional inner-strand and inner-conductor current paths for improved conductivity and cooler connections
- Carrier material excludes air to prevent further oxidation
- For use with all types of pressure-type wire connectors including screw-on, tap, service entrance and split-bolt
- Reduces galling and seizing on aluminum conduit joints — promotes good ground continuity

For Connector Models	Cat. No.
1/2-oz. Tube	30-024
4-oz. Squeeze bottle	30-026
8-oz. Squeeze bottle	30-030
8-oz. Brush cap	30-031
1-gal. Bucket	30-032
5-gal. Bucket	30-040

UL LISTED

The **Buchanan C-24** Crimp Tool has an iron-clad reputation that's up to every job, every time. A patented four-way crimp ensures reliable connections, while the spring-loaded, cam-actuated design fits a wide range of connectors.
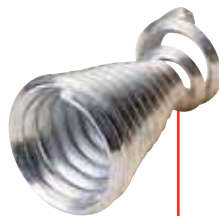
Our **wedge-edge** expanding spring is specially designed for faster pull-up and quick connections. It also accommodates a wide range of wire gauges.

The comprehensive line of **Buchanan** sectional terminal blocks offers a wide range of block configurations, mounting options and contact styles accommodating wire sizes from 30 AWG to 250 MCM.

The **B2 B-CAP**® Wire Connector is the universal connector that accepts the widest range of wire combinations. Plus, the Classic Fin™ ergonomic design fits easily in tight electrical boxes.

(2) #18 stranded

(1) #14 solid

(1) #18 stranded
(2) #14 solid

(1) #14 solid
(2) #12 stranded
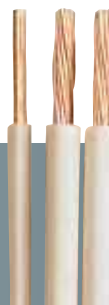
(2) #10 stranded

(3) #12 solid
(2) #14 solid

(5) #12 solid

B–CAP® Wire Connectors

- Three color-coded models cover a full range of wire sizes from 22 AWG to 6 AWG

- Classic Fin™ design provides secure grip for extra leverage on maximum wire combinations

- Live-action spring expands to accept wire shape and size – no pre-twisting required

- Square-wire spring threads directly onto conductors for fast, secure connections

- Deep skirt protects against flash-over and turned-back strands for maximum dielectric protection

- Easily removed for repeat usage on same size or larger wire combinations

- Tough, UL 94V-2 flame-retardant shell rated at 105°C (221°F)

- Green-B® designed for making ground connections and bonding non-metallic sheathed cable

- UL 486C Listed (Green-B® UL 467 Listed) and CSA 22.2 #188 Certified; comply with Federal Specification -S-610E

Model	Color	Wire Combination Range (Inches)	Wire Combination Range (mm)	Quantity/Package	Cat. No.
B1	Yellow	600V* 22 to 10 AWG Min. 3 #20 Max. 3 #12	600V* ,34mm² to 6,0mm² Min. 3-,5mm² Max. 3-4,0mm²	Box of 100	**B1-1**
				Jar of 250	**B1-250JR**
				Jar of 500	**B1-500JR**
				Keg of 10,000 (20 bags, 500 ea.)	**B1-B**
				Barrel of 25,000	**B1-SK**
B2	Red	600V* 22 to 8 AWG Min. 2 #18 Max. 5 #12	600V* ,34mm² to 10,0mm² Min. 2-,75mm² Max. 5-4,0mm²	Box of 100	**B2-1**
				Jar of 350	**B2-350JR**
				Jar of 500	**B2-500JR**
				Keg of 10,000 (20 bags, 500 ea.)	**B2-B**
				Barrel of 25,000	**B2-SK**
B4	Blue-Gray	600V* 14 to 6 AWG Min. 2 #12 Max. 2 #6	600V* 2,5mm² to 16,0mm² Min. 2-4,0mm² Max. 2-16,0mm²	Box of 25	**B4-1**
				Keg of 2,500 (10 bags, 250 ea.)	**B4-B**
BGR	Green	14 to 10 AWG Min. 2 #14 Max. 5 #12	2,5mm² to 6,0mm² Min. 2-2,5mm² Max. 5-4,0mm²	Box of 50	**BGR-1**
				Keg of 5,000 (20 bags, 250 ea.)	**BGR-B**

*1,000V maximum in fixtures and signs

UL Wire Connector 774A LISTED   Cu/Cu Only   CSA®   CE

B-TWIST Wire Connectors

- Wide red/yellow wire range; min. 2 #18 to max. 2 #8

- Rounded dial-top provides fast fingertip starts

- Square-wire spring provides quick, secure connections

- Comfortable swept-wing design with deep skirt to help protect over-stripped wires

- Tough, UL 94V-2 flame-retardant shell rated at 105°C (221°F)

- UL Listed to 486C and CSA Certified to C22.2 #188; comply with Federal Specification W-S-610E

Model	Color	Wire Combination Range (Inches)	Wire Combination Range (mm)	Quantity/Package	Cat. No.
BT2™	Red	600V* 18 to 8 AWG Min. 2 #18 Max. 2 #8	600V*	Box of 100	**BT2-1**
				Jar of 500	**BT2-500JR**
				Barrel of 25,000	**BT2-SK**

*1,000V maximum in fixtures and signs

UL Wire Connector 774A LISTED   Cu/Cu Only   CSA® LR9706

WireTwist™ Wire Connectors

- Five color-coded models cover common wire ranges
- Ribbed cap provides positive grip for fast, easy installation
- Expanding, square-wire spring creates secure connections
- Deep skirt protects against flash-over
- Tough, UL 94V-2 flame-retardant shell (105°C/221°F)
- UL 486C Listed and CSA 22.2 #188 Certified

WingTwist™ Wire Connectors

- Five color-coded models cover common construction wire ranges and combinations, including grounding
- Contoured wing design provides maximum torque
- Expanding, square-wire spring creates secure connections
- Deep skirt protects against flash-over
- Tough, UL 94V-2 flame retardant shell (105°C/221°F)
- UL 486C Listed (WGR UL 467 Listed) and CSA C22.2 #188 Certified

WireTwist™ Wire Connectors

Model	Color	Wire Combination Range (Inches)	Wire Combination Range (mm)	Quantity / Package	Cat. No.
WT1	Gray	300V 22 to 14 AWG Min. 3 #22 Max. 2 #16	300V ,34mm² to 2,5mm² Min. 3-,34mm² Max. 2-1,5mm²	Box of 100	WT1-1
				Bag of 500	WT1-B
				Barrel of 50,000	WT1-SK
WT2	Blue	300V 22 to 14 AWG Min. 3 #20 Max. 3 #16	300V ,34mm² to 2,5mm² Min. 3-,50mm² Max. 3-1,5mm²	Box of 100	WT2-1
				Bag of 500	WT2-B
				Barrel of 50,000	WT2-SK
WT3	Orange	600V* 22 to 14 AWG Min. 2 #18 Max. 2 #14	600V* ,34mm² to 2,5mm² Min. 2-,75mm² Max. 2-2,5mm²	Box of 100	WT3-1
				Bag of 500	WT3-B
				Barrel of 50,000	WT3-SK
WT4	Yellow	600V* 22 to 10 AWG Min. 3 #20 Max. 2 #12	600V* ,75mm² to 6,0mm² Min. 3-,50mm² Max. 2-4,0mm²	Box of 100	WT4-1
				Bag of 500	WT4-B
				Barrel of 25,000	WT4-SK
WT6	Red	600V* 20 to 8 AWG Min. 2 #14 Max. 4 #12	600V* ,50mm² to 10,0mm² Min. 2-2,5mm² Max. 4-4,0mm²	Box of 100	WT6-1
				Bag of 250	WT6-B
				Barrel of 25,000	WT6-SK

WingTwist™ Wire Connectors

Model	Color	Wire Combination Range (Inches)	Wire Combination Range (mm)	Quantity / Package	Cat. No.
WT51	Yellow	600V* 18 to 10 AWG Min. 2 #18 Max. 3 #12	600V* ,75mm² to 6,0mm² Min. 2-,75mm² Max. 3-4,0mm²	Box of 100	WT51-1
				Bag of 500	WT51-B
				Jar of 500	WT51-500JR
				Barrel of 25,000	WT51-SK
WT41	Tan	600V* 22 to 10 AWG Min. 2 #20 Max. 3 #10 Solid	600V* ,34mm² to 6,0mm² Min. 2-0,5mm² Max. 3-6,0mm²	Box of 100	WT41-1
				Bag of 500	WT41-B
				Jar of 500	WT41-500JR
				Barrel of 25,000	WT41-SK
WT52	Red	600V* 18 to 10 AWG Min. 2 #14 Max. 5 #12	600V* ,75mm² to 6,0mm² Min. 2-2,5mm² Max. 5-4,0mm²	Box of 100	WT52-1
				Bag of 500	WT52-B
				Jar of 500	WT52-500JR
				Barrel of 25,000	WT52-SK
WT54	Blue	600V* 14 to 6 AWG Min. 3 #12 Max. 2 #6	600V* 2,5mm² to 16,0mm² Min. 3-4,0mm² Max. 2-16,0mm²	Box of 50	WT54-1
				Bag of 100	WT54-B
WGR	Green	14 to 10 AWG Min. 2 #14 Max. 5 #12	2,5mm² to 6,0mm² Min. 2-2,5mm² Max. 5-4,0mm²	Box of 50	WGR-1
				Bag of 250	WGR-B
				Jar of 500	WGR-500JR
				Barrel of 25,000	WGR-SK

*1,000V maximum in fixtures and signs

UL Wire Connector 774A LISTED   Cu/Cu Only   CSA®

Splice Cap Crimp Connectors

- Designed for making fast, permanent, pressure-type connections
- Solid copper sleeves require less crimping pressure
- Resist corrosion in harsh environments
- Tin-plated steel sleeves also available (pg. A-19)
- UL 486C Listed and CSA C22.2 #188 Certified; comply with Federal Specification W-S-61D

Description	Wire Combination Range (Inches)	Quantity	Cat. No.
Copper Crimp Connector	600V* 18 to 10 AWG Min. 2 #18 Max. 4 #12	Box of 100	2006S
		Bag of 1,000	2006SB
Copper Crimp Connector	600V* 14 to 4 AWG Min. 2 #10 Max. 2 #6	Box of 50	2011S
		Bag of 500	2011SB

*1,000V maximum in fixtures and signs

UL® LISTED Wire Connector Cu/Cu Only CSA®

Splice Cap Insulators

- Convenient, safe and fast installation
- Snap-on nylon construction
- Rated at 105°C (221°F) – 600V (1,000V maximum in fixtures and signs)

For Connector Model	Quantity	Cat. No.
2006S	Box of 100	2007
	Bag of 1,000	2007B
2011S	Box of 50	2014
	Bag of 500	2014B

Four–Way Crimp Tool

- Patented design ensures even compression and reliable connectors
- Spring-loaded, cam-actuated plungers
- Fingertip adjustment for different connector sizes

Description	Cat. No.
Four-Way Crimp Tool	C-24

Waterproof Breakaway Steetlight Connector & Splice Insulating Kits

- Safe and easy installation in five minutes or less

- No special equipment necessary – requires only a knife, wire stripper and crimp tool

- Unique wire entry port, cut-off design accommodates industry's widest range of insulation diameters

- Fewer parts than competitive brands for better waterproof protection

- Built-in break-away design eliminates de-energization of complete circuits

- Safely separates upon impact without breaking wires – eliminates potential danger and electrical shock (breakaway models)

- Unique 2-in-1 one-piece crimp barrel accommodates industry's widest range of conductors (breakaway models)

- Spring-loaded contacts compensate for thermal expansion to maintain integrity of waterproof connection (breakaway models)

Application Guide
Examples of Several Kit Configurations

For Poles with Transformer Bases, Standard Bases and Junction Boxes
Underground Feed Phase to Phase

Configurations	Comments
• D65 dual in-line for phases and two 84 or 84S kits for taps	Recommended
• Two 82 or 82S Y-Tap Kits for phases and taps	Cost-effective
• Two BTS4 B-CAP® Twist & Seal Wire Connectors	Non-breakaway, small gauge (8 AWG and above). See Wire Connector section.

Underground Feed Phase to Neutral

Configurations	Comments
• D65PN dual in-line for phase and neutral and Two 84 or 84S kits for tap	Recommended configuration
• One 82 or 82S Y-Tap Kit for phase and tap and one 83 or 83S Y-Tap Kit for neutral and tap	Cost-effective
• Two BTS4 B-CAP® Twist and Seal Wire Connectors	Non-breakaway, small gauge (8 AWG and above). See Wire Connector section.

For Lights Mounted to Utility Poles, etc…
Overhead Feed

• Two B-Tap® Insulation Piercing Connectors for phase and/or tap (for insulated conductors only)	Recommended configuration, see B-Tap® Insulation Piercing Connectors in this catalog.

Transformer → Phase to Phase

Two 65 or one D65 to Fuse (Phases) 84 or 84S for Taps

End of Run

Transformer → Phase to Neutral

Two 65 or one D65 to fuse Tap unnecessary

Two 82 or 82S for Phase (fuse) or D65 for Phases (fuse) and two 84 or 84S for Taps

D65PN for Phase and Neutral 84 or 84S for Tap

Transformer → Phase to Phase

Transformer → Phase to Neutral

End of run

82 or 82S for Phase (fuse) and 83 or 83S for Neutral (common)

65 Kit for Phase (fuse) and 20 Kit for Neutral (common) or D65PN Kit

Ordering Information

Use the following chart and table to determine the correct part number by choosing model, line side, and load side ordering codes from the shaded columns. See example below, right (Page A-45).

Breakaway In-Line Kits

20™ Kit
White Band
Line side Double Ridge
Pin Contact
Load side Single Ridge
White Band

65™ Kit
Line side Double Ridge
Fuse (not included)
Load side Single Ridge

D65™ Kit
Line side Double Ridge
Load side Single Ridge
Fuse (not included)

D65PN™ Kit
Line side Double Ridge
Fuse (not included)
Load side Single Ridge
White Band (Neutral Side)
Metal Pin Contact
White Band (Neutral Side)
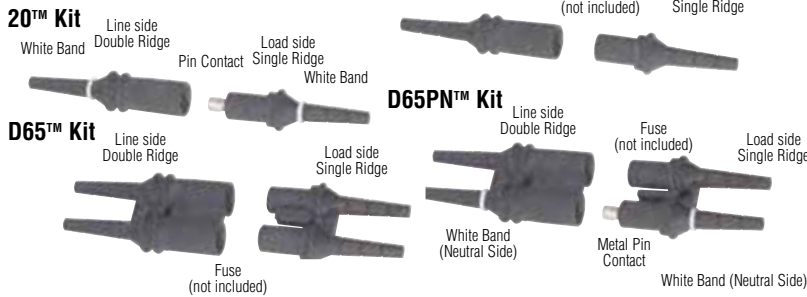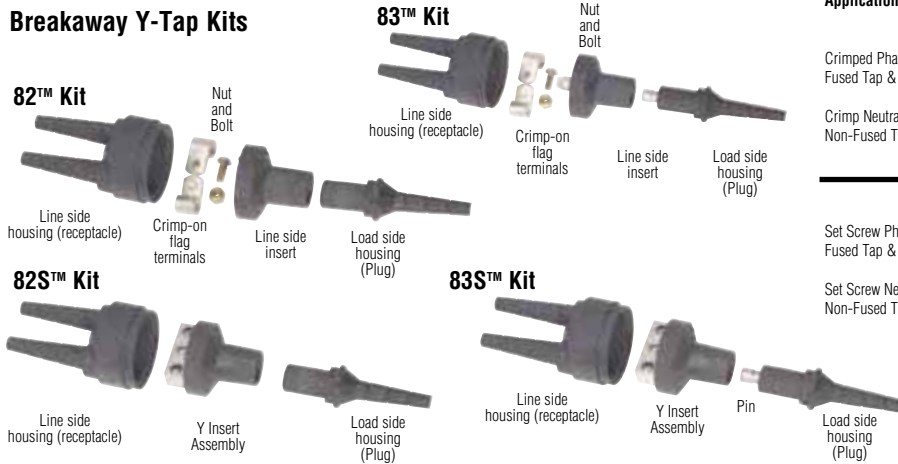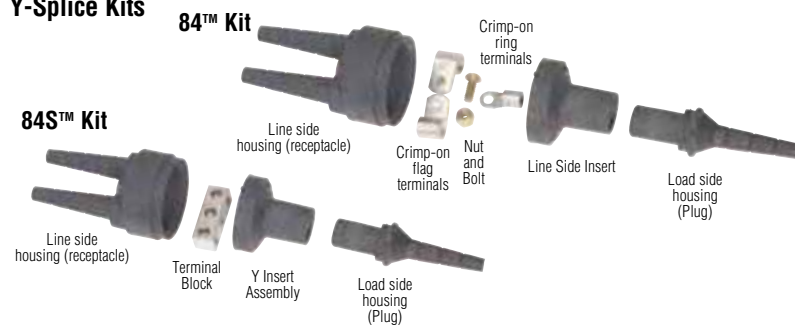
M O D E L		
Application	**Electrical Rating**	**Ordering Code**
In-Line Neutral Non-Fused Breakaway	30 Amp 600 Volt	20 –
In-Line Phase Fused Breakaway	1/10-30 Amp 600 Volt	65 –
Dual In-Line Phase Fused Breakaway	1/10-30 Amp 600 Volt	D65 –
Dual In-Line Phase & Neutral Fused Breakaway	1/10-30 Amp Phase 30 Amp Neutral 600 Volt	D65PN –

Breakaway Y-Tap Kits

82™ Kit
Nut and Bolt
Line side housing (receptacle)
Crimp-on flag terminals
Line side insert
Load side housing (Plug)

83™ Kit
Nut and Bolt
Line side housing (receptacle)
Crimp-on flag terminals
Line side insert
Load side housing (Plug)

82S™ Kit
Line side housing (receptacle)
Y Insert Assembly
Load side housing (Plug)

83S™ Kit
Line side housing (receptacle)
Y Insert Assembly
Pin
Load side housing (Plug)

Application	**Electrical Rating**	**Ordering Code**
Crimped Phase Fused Tap & Run	1/10-30 Amp 600 Volt	82 –
Crimp Neutral Non-Fused Tap & Run	125 Amp Line 30 Amp Load 600 Volt	83 –
Set Screw Phase Fused Tap & Run	1/10-30 Amp 600 Volt	82S –
Set Screw Neutral Non-Fused Tap & Run	70 Amp Line 30 Amp Load 600 Volt	83S –

Y-Splice Kits

84™ Kit
Crimp-on ring terminals
Line side housing (receptacle)
Crimp-on flag terminals
Nut and Bolt
Line Side Insert
Load side housing (Plug)

84S™ Kit
Line side housing (receptacle)
Terminal Block
Y Insert Assembly
Load side housing (Plug)

Application	**Electrical Rating**	**Ordering Code**
Crimp Splice Tap & Run	150 Amp 600 Volt	84 –
Set Screw Splice Tap & Run	70 Amp 600 Volt	84S –

Excerpts of the 1996 NEC Tables 5 & 5A
Dimensions of Insulated Conductors and Fixture Wires

Size	Approx. Diameter in Inches for Insulation Types:						Approx. Diameter in Inches for Compact AL with Insulation Types:		
(AWG)	RH	RHH, RHW-2,RHW	TW	THHW THW,THW-2	THHN THWN,THWN-2	XHH XHHW,XHHW-2	THW,THHW	THHN	
14	0.163	0.193	0.133	0.163	0.111	0.133	–	–	–
12	0.182	0.212	0.152	0.182	0.130	0.152	–	–	–
10	0.236	0.236	0.176	0.206	0.164	0.176	–	–	–
8	0.326	0.326	0.236	0.266	0.216	0.236	0.255	–	0.224
6	0.364	0.364	0.304	0.304	0.254	0.274	0.290	0.240	0.260
4	0.412	0.412	0.352	0.352	0.324	0.322	0.335	0.305	0.305
3	0.440	0.440	0.380	0.380	0.352	0.350	–	–	–
2	0.472	0.472	0.412	0.412	0.384	0.382	0.390	0.360	0.360
1	0.582	0.582	0.492	0.492	0.446	0.442	0.465	0.415	0.415
1/0	0.622	0.622	0.532	0.532	0.486	0.482	0.500	0.450	0.450

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LINE SIDE

Insulation Diameter Range (Inches)	Stranded* Conductor Size (AWG)	Type	Ordering Code (CHOOSE 1)
	12-6	Copper Crimp	U –
	12-6	Aluminum Crimp	UA –
.120-.430	4 or 2	Copper Crimp	LC –
	4 or 2	Aluminum Crimp	LA –

LOAD SIDE

Insulation Diameter Range (Inches)	Equivalent Conductor (See Table)	Stranded* Conductor Size (AWG)	Type	Ordering Code (CHOOSE 1)
		12-6	Copper Crimp	U
.120-.430	1	12-6	Aluminum Crimp	UA
		4 or 2	Copper Crimp	LC
		4 or 2	Aluminum Crimp	LA

NOTE: It is not necessary to use the load side ordering code if it is the same as the line side code, i.e., a 65U-U is ordered as a 65U.

Insulation Diameter Range (Inches)	Ordering Code (CHOOSE 1)	Stranded* Conductor Size (AWG)	Type	Ordering Code (CHOOSE 1)
.155-.430	ADB	10	Copper Crimp	6 –
		8	Copper Crimp	4 –
		6	Copper Crimp	3 –
		4	Copper Crimp	2 –
.420-.785	EAFB	2	Copper Crimp	1 –
		1	Copper Crimp	0 –
		1/0	Copper Crimp	10 –

Insulation Diameter Range (Inches)	Equivalent Conductor (See Table)	Stranded* Conductor Size (AWG)	Type	Ordering Code (CHOOSE 1)
.120 -.430	1	12-6	Copper Crimp	C
		12-6	Aluminum Crimp	A
		4 or 2	Copper Crimp	LC

Insulation Diameter Range (Inches)	Ordering Code (CHOOSE 1)	Stranded* Conductor Size (AWG)	Type	Ordering Code (CHOOSE)
.155-.430	ADB	10		1 –
		8		1 –
		6	Terminal Block with Set Screws	1 –
		4	Copper or Alum.	1 –
		2	Conductors	1 –
.420-.785	EAFB	1		10 –
		1/0		10 –

Insulation Diameter Range (Inches)	Equivalent Conductor (See Table)	Stranded* Conductor Size (AWG)	Type	Ordering Code (CHOOSE 1)
		12-6	Copper Crimp	C
.120 -.430	1	12-6	Aluminum Crimp	A
		4 or 2	Copper Crimp	LC
		4 or 2	Aluminum Crimp	LA

Insulation Diameter Range (Inches)	Ordering Code (CHOOSE 1)	Stranded* Conductor Size (AWG)	Type	Ordering Code (CHOOSE 1)
.155-.430	ADB	10	Copper Crimp	6 –
		8	Copper Crimp	4 –
		6	Copper Crimp	3 –
		4	Copper Crimp	2 –
.420-.785	EAFB	2	Copper Crimp	1 –
		1	Copper Crimp	0 –
		1/0	Copper Crimp	10 –

Insulation Diameter Range (Inches)	Equivalent Conductor (See Table)	Conductor Size Size (AWG)	Type	Ordering Code (CHOOSE 1)
		10	Copper Crimp	6
		8	Copper Crimp	4
.120 -.430	1	6	Copper Crimp	3
		4	Copper Crimp	2
		2	Copper Crimp	1
		1	Copper Crimp	0

Insulation Diameter Range (Inches)	Ordering Code (CHOOSE 1)	Stranded* Conductor Size (AWG)	Type	Ordering Code (CHOOSE 1)
.155-.430	ADB	10		1 –
		8		1 –
1 –		6	Terminal Block	
		4	with Set Screws	1 –
		2	Copper or Alum.	1 –
.420-.785	EAFB	1	Conductors	10 –
		1/0		10 –

Insulation Diameter Range (Inches)	Equivalent Conductor (See Table)		Type	Ordering Code (CHOOSE 1)
.120 -.430	1	10-2	Terminal Block Copper or Aluminum Conductors	N/A

75°C / 600 Volts Max.

LR32565

NOTE:
Fused kits require a 13/32" x 1 1/2" fuse. **DO NOT USE GLASS OR INDICATING TYPES.**
Waterproof or direct burial wire is recommended. **THHN is NOT recommended.**

* For solid wire: 14-4 AWG, use codes U, UA, C, or A. 2 AWG, use codes LC or LA.

Example:
A Y-Tap Kit with set screws for a 2 AWG phase line side conductor with a diameter of .472" and a 10 AWG copper load side conductor is ordered as an 82S-EAFB1-C.

Tap Connectors

B-TAP® Insulation–Piercing Tap Connectors

- Eliminates split bolts and tape
- Easy two-minute installation requires only box/socket wrench
- Installs on energized systems eliminating costly power shutdowns
- Self-sealing, grease-filled end-cap ensures safe, weather-tight connection
- Unique turbo spacer keeps connector wide open for quick and easy installation
- Torque-regulating nut breaks off when proper tension is reached
- Full-line is 600V dual-rated,194˚F (90˚C)

B-Tap® Wire Range Chart

Wire Size

Cat. No.		14	12	10	8	6	4	3	2	1	1/0	2/0	3/0	4/0	250	300	350	400	500	750
BTC1/0-10	Main: 1/0 - 8				████	████	████													
	Tap: 2 - 10			████	████															
BTC2/0-14	Main: 2/0 - 4						████	████	████											
	Tap: 10 - 14	████																		
BTC4/0-4	Main: 4/0 - 2								████	████	████	████	████							
	Tap: 4/0 - 4					████	████	████	████	████	████	████	████							
BTC4/0-10	Main: 4/0 - 3						████	████	████	████	████	████	████							
	Tap: 2 - 10			████	████	████														
BTC4/0-6	Main: 4/0 - 2								████	████	████	████	████							
	Tap: 2/0 - 6					████	████	████	████	████										
BTC250-4	Main: 250 - 1									████	████	████	████	████						
	Tap: 4/0 - 4					████	████	████	████	████	████	████								
BTC350-1/0	Main: 350 - 1/0										████	████	████	████	████	████				
	Tap: 350 - 1/0										████	████	████	████	████	████				
BTC500-4	Main: 500 - 2/0											████	████	████	████	████	████	████		
	Tap: 4/0 - 4					████	████	████	████	████	████	████								
BTC500-1/0	Main: 500 - 4/0													████	████	████	████	████	████	
	Tap: 350 - 1/0										████	████	████	████	████	████				
BTC500-14	Main: 750 - 3/0												████	████	████	████	████	████	████	████
	Tap: 10 - 14		████																	
BTC750-250	Main: 750 - 250													████	████	████	████	████	████	████
	Tap: 500 - 250													████	████	████	████	████		
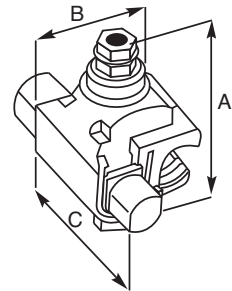
Conductor Range		Voltage Rating	Dimensions (Inches)			Socket Size (Inches)	Torque (In. Lbs.)	No. of Bolts	Cat. No.
Run	Tap		A	B	C				
1/0-8	2-10[1]	600V	3.1	1.8	2.2	1/2	80	1	**BTC1/0-10**
2/0-4	10-14[2]	600V	3.1	1.8	2.2	1/2	80	1	**BTC2/0-14**
4/0-2	4/0-4	600V	4.4	2.4	3.2	1/2	160	1	**BTC4/0-2**
4/0-3	2-10[3]	600V	3.1	1.8	2.2	1/2	125	1	**BTC4/0-10**
4/0-2	2/0-6	600V	3.5	2.2	2.5	1/2	160	1	**BTC4/0-6**
250-1	4/0-4	600V	3.5	2.2	2.5	1/2	160	1	**BTC250-4**
350-1/0	350-1/0	600V	4.5	3	3.9	5/8	330	2	**BTC350-1/0**
500-2/0	4/0-4	600V	4.5	3	3.9	5/8	330	2	**BTC500-4**
500-4/0	350-1/0	600V	4.5	3	3.9	5/8	330	2	**BTC500-1/0**
750-3/0	10-14[4]	600V	3.7	2.5	2.2	1/2	80	1	**BTC500-14**
750-250	500-250	600V	4.7	3.4	4.75	5/8	330	2	**BTC750-250**

* Includes BTC 1/0-10, BTC 2/0-14, BTC 4/0-2, BTC 4/0-10, BTC 4/0-6, BTC 250-4, BTC 350-1/0, BTC 500-4 & BTC 500-1/0
[1] Tap #2 - #10 Cu solid/stranded; #2 - #10 Al stranded
[2] Tap #10 - #14 Cu solid/stranded; #10 - #14 Al stranded
[3] Tap #2 - #10 Cu solid/stranded; #2 - #8 Al stranded
[4] Tap #10 - #14 Cu solid/stranded; #10 - #12 Al stranded

100 Series Terminal Blocks – Miniature (High Density)

These miniature terminal blocks fit on a much smaller channel to save valuable panel space or can be surface mounted directly to the panel. Miniature blocks accept wire as large as 12 AWG.

- No wire crimping required – clamp contacts hold wire from 30 AWG to 12 AWG better than crimp-on terminals
- Saves installation time and cost – tubular clamp contacts supplied with captive screws backed out
- Nylon housing for rugged applications
- Positive stop prevents wire from being inserted too far and prevents screw from being tightened on insulation; easy access contact provides safe, reliable and cost-effective connection
- Quick installation and change – additional sections may be added or removed without removing channel mounting screw
- Matte-finish area for marking directly on block

Catalog Number - 100 Series	125	115	End Section	
			130	120
Mounting Style	Direct Mount (Flat Base)	Channel Mount (Dovetail Base)	Direct Mount (Flat Base)	Channel Mount (Dovetail Base)

WIRE RANGE: Solid or Stranded
Tubular Clamp
1 #12 AWG, 1 #14 AWG, 1 to 3 #16 AWG, 1 to 5 #18 AWG, 1 to 6 #20 AWG, 1 to 7 #22 AWG

Housing Material	Nylon
Maximum Service Temperature	125°C (257°F)
Flammability	UL94V2
Wire Strip Length (in.)	5/16
Torque (in-lbs.)	6-9
UL Rating	28A @ 300V
Wire Range (AWG) Solid & Stranded	30-12
Pitch (in.)	0.25
Terminals per foot	48

900 Series Terminal Blocks – MEDIUM DUTY

This family of polyester blocks is ideal for high temperature applications. The rugged material withstands temperatures up to 302°F (150°C)

- Three contact styles cover broad wire range — accept single wire or combinations from 22 AWG to 8 AWG solid or stranded
- Rated at 15A to 50A per circuit
- Flat base models mount directly to surfaces; dovetail base models mount on standard channel
- Only one end section needed per block assembly
- Readily identifiable circuits - write directly on matte surface of block
- Sections snap-fit with Heavy Duty, Intermediate Heavy Duty and Fuse blocks

Catalog Number	921	0921	924	0924	925	0925	930	0930
Mounting Style	Direct Mount (Flat Base)	Channel Mount (Dovetail Base)	Direct Mount (Flat Base)	Channel Mount (Dovetail Base)	Direct Mount (Flat Base)	Channel Mount (Dovetail Base)	End Section (Direct Mount)	End Section (Channel Mount)
Ampacity	15A		50A		30A		—	—
Contact Type	Strap Screw		Tubular Screw		Tubular Clamp		—	—
Screw Type	6-32 Combo Head		10-32 Combo Head		10-32 Combo Head		—	—
Screw Torque	12 in-lbs.		8 in-lbs.		8 in-lbs.		—	—
Wire Range (AWG)	#14 to #22		#8 to #22		#10 to #22		—	—

Specifications

Center-to-Center Spacing: .375 in.

Voltage Rating: 600 Volt max., Current: 50 Amp max.

Ampacity: #8 - #22 AWG

WIRE RANGE: Solid or Stranded
Strap Screw – 1 #22 to 1 #14 AWG
Tubular Screw – 1 #8 AWG, 1 #10 AWG, 1 to 3 #12 AWG, 1 to 4 #14 AWG, 1 to 4 #16 AWG, 1 to 5 #18 AWG, 1 to 10 #22 AWG
Tubular Clamp – 1 #10 AWG, 1 or 2 #12 AWG, 1 to 3 #14 AWG, 1 to 4 #16 AWG, 1 to 5 #18 AWG, 1 to 10 #22 AWG

Housing Material	Polyester (gray)
Contact Material	Copper Alloy, Zinc Plated
Screw Material	Steel, Zinc Plated
Maximum Service Temperature	150°C (302°F)
Flammability	UL94V-0 Rated

CSA
LR25557

UL
E63810

Terminal Blocks

200 Series Terminal Blocks – Nylon HEAVY DUTY

This compact design, heavy-duty line accepts single wire or combinations up to 4 AWG, solid or stranded,; 600V UL and NEMA rating.

- 138 circuits per 6 foot length
- Three contact styles conservatively rated from 35A to 85A per circuit
- Two-way flat-base models surface mount directly to the panel or snap-on miniature channel; dovetail base models mount on standard channel
- Only one end section needed per block assembly
- Readily identifiable circuits – mark directly on painted surface of block sections or use removable marking tape
- Nylon housing for more rugged applications
- Sections snap-fit with Phenolic Heavy Duty, Intermediate Heavy Duty and Fuse blocks
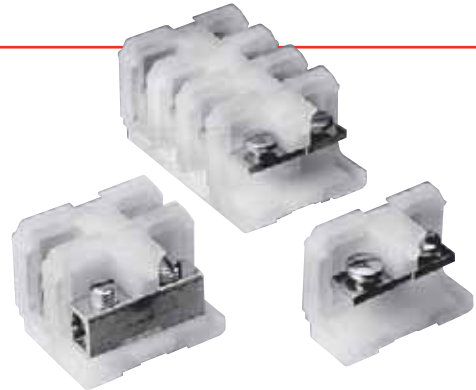
Catalog Number	241 Unpainted	0241 Painted	242 Unpainted	0242 Painted	243 Unpainted	0243 Painted	250	0250
Mounting Style	Direct Mount (Flat Base)	Channel Mount (Dovetail Base)	Direct Mount (Flat Base)	Channel Mount (Dovetail Base)	Direct Mount (Flat Base)	Channel Mount (Dovetail Base)	End-Section (Direct Mount)	End-Section (Channel Mount)
Ampacity	35A		85A		65A		—	—
Contact Type	Strap Screw		Tubular Screw		Tubular Clamp		—	—
Screw Type	10-32 Slotted Binding Head		1/4-28 Slotted Headless		1/4-28 Slotted Headless		—	—
Wire Range (AWG)	#22 to #10		#18 to #4		#18 to #6		—	—
Wire Strip Length	—		1/2 in.		1/2 in.		—	—

Specifications

Center-to-Center Spacing: .50 in. CL: 24 circuits per foot.

Voltage Rating: Blocks meet 600V creepage and clearance requirements of NEMA, UL and CSA for general industrial control equipment and panelboards. Withstands voltages greatly in excess of IEEE switchgear standards for 750V.

Ampacity: For a single 4 AWG wire, the maximum amperage recommended is 85A.

WIRE RANGE: Solid or Stranded
Strap Screw – 1 #22 to 1 #10 AWG
Tubular Screw – 1 #4 AWG, 1 #6 AWG, 1 or 2 #8 AWG, 1 to 4 #10 AWG, 1 to 5 #12 AWG, 1 to 6 #14 AWG, 1 to 6 #16 AWG, 1 to 8 #18 AWG
Tubular Clamp – 1 #6 AWG, 1 or 2 #8 AWG, 1 to 3 #10 AWG, 1 to 4 #12 AWG, 1 to 4 #14 AWG, 1 to 6 #16 AWG, 1 to 8 #18 AWG

Housing Material	Nylon, Type 6/6 unfilled
Contact Material	Copper / Copper Alloy
Screw Material	Steel Plated
Maximum Service Temperature	125°C (257°F)
Breakdown Voltage AC, 60 Hz	7000V
Dielectric Strength (RH40% at sea level)	470-385 V/mil thickness (per ASTM D149)
UL High Voltage Arc Testing (in./min.)	0.1 - .35
Water Absorption (24 hrs. % weight gain)	1.5%
Flammability	94V-2 (per UL94)
Chemical Resistance	Resistant to aromatic hydrocarbons, strong alkalies
Radiation Resistance (ergs g[1] C)	8 X 10^{7}

CSA
LR25557

UL
E63810

200 Series Terminal Blocks – Phenolic HEAVY DUTY

The family of phenolic heavy duty blocks is ideal for high temperature, high current applications. The rugged material withstands temperatures up to 302°F (150°C).

- ■ Sturdy block accepts single wire or combinations up to 4 AWG solid or stranded
- ■ 122 circuits per 6 foot length
- ■ Three contact styles conservatively rated to 35A to 85A
- ■ Only one end section needed per block assembly
- ■ Readily identifiable circuits – mark directly on painted marking surface or use removable marking strip
- ■ Sections snap-fit with Nylon Heavy Duty, Intermediate Heavy Duty and Fuse Blocks

Catalog Number	221	0221	222	0222	223	0223	230	0230
Marking Area	Painted	Painted	Painted	Painted	Painted	Painted	—	—
Mounting Style	Direct Mount (Flat Base)	Channel Mount (Dovetail Base)	Direct Mount (Flat Base)	Channel Mount (Dovetail Base)	Direct Mount (Flat Base)	Channel Mount (Dovetail Base)	End-Section (Direct Mount)	End-Section (Channel Mount)
Ampacity	35A		85A		65A		—	—
Contact Type	Strap Screw		Tubular Screw		Tubular Clamp		—	—
Screw Type	10-32 Slotted Binding Head		1/4-28 Slotted Headless		1/4-28 Slotted Headless		—	—
Wire Range (AWG)	#22 to #10		#18 to #4		#18 to #6		—	—
Wire Strip Length	—		1/2 in.		1/2 in.		—	—

Specifications

Center-to-Center Spacing: .56 in. CL: 20 circuits per foot.

Voltage Rating: Blocks meet 600V creepage and clearance requirements of NEMA, UL and CSA for general industrial control equipment and panelboards. Withstands voltages greatly in excess of IEEE switchgear standards for 750V.

Ampacity: For a single 4 AWG wire, the maximum amperage recommended is 85A.

WIRE RANGE: Solid or Stranded
Strap Screw – 1 #18 to 1 #8 AWG
Tubular Screw – 1 #4 AWG, 1 #6 AWG, 1 or 2 #8 AWG, 1 to 4 #10 AWG, 1 to 5 #12 AWG, 1 to 6 #14 AWG, 1 or 6 #16 AWG, 1 to 8 #18 AWG
Tubular Clamp – 1 #6 AWG, 1 or 2 #8 AWG, 1 to 3 #10 AWG, 1 to 4 #12 AWG, 1 to 4 #14 AWG, 1 to 6 #16 AWG, 1 to 8 #18 AWG

Housing Material	Phenolic, Filled, Flame retardant
Contact Material	Copper / Copper Alloy
Screw Material	Steel Plated
Maximum Service Temperature	150°C (302°F)
Breakdown Voltage AC, 60 Hz	7000V
Dielectric Strength (RH40% at sea level)	300V/mil thickness (per ASTM D149)
UL High Voltage Arc Testing (in./min.)	.49 - .59
Water Absorption (24 hrs. % weight gain)	45% (per ASTM D570)
Flammability	94V-1 (per UL94)
Chemical Resistance	Resistant to acids, alkalies, aliphatic hydrocarbons and ketones (per ASTM D5343)
Radiation Resistance (ergs g^1 C)	2 X 10^8 min.

CSA ®
LR25557

UL ®
E63810

Terminal Blocks

Nylon INTERMEDIATE HEAVY DUTY Terminal Blocks

The 800 Series line of 600V blocks is conservatively rated up to 150A for a single 1/0 AWG copper wire.

■ Exceptionally compact block accepts single wire or combinations up to 1/0 AWG

■ 92 circuits per 6 foot length

■ Tubular screw contact style accepts AWG sizes from 12 to 1/0, solid or stranded

■ Two-way mounting base fits standard channel or mounts directly to flat surfaces

■ Only one end section needed per block assembly

■ Readily identifiable circuits – write directly on painted marking surface or use removable vinyl marking strip

■ Nylon housing for rugged applications, 7/16 -20 slotted headless screws

■ Snap-fit with Heavy-Duty Nylon and Phenolic and Fuse Blocks

Catalog Number	824	830
Marking Area	Painted	—
Mounting Style	Two-Way Mounting Base	End-Section
Ampacity	150A	—
Contact Type	Tubular Screw	—
Screw Type	7/16-20 Slotted Headless	—
Wire Range (AWG)	12 to 1/0	—
Wire Strip Length	11/16 in.	—

Specifications

Center-to-Center Spacing: .75 in. CL: 16 circuits per foot.

Voltage Rating: Blocks meet 600V creepage and clearance requirements of NEMA, UL and CSA standards for general industrial control equipment and panelboards. Withstands voltages greatly in excess of IEEE switchgear standards for 750V.

Ampacity: For a single 1/0 AWG copper wire, the maximum amperage recommended is 150A.

WIRE RANGE: Solid or Stranded
Tubular Screw – 1 #1/0 AWG, 1 #1 AWG, 1 #2 AWG, 1 or 2 #4 AWG, 1 to 3 #6 AWG, 2, 3 or 5 #8 AWG, 1 to 6 #10 AWG, 1 to 7 #12 AWG

Housing Material	Nylon, Type 6/6 Unfilled
Contact Material	Copper
Screw Material	Steel, Zinc-Plated
Maximum Service Temperature	125°C (257°F)
Breakdown Voltage AC, 60 Hz	8800V
Dielectric Strength (RH40% at sea level)	470-385V/mil thickness (per ASTM D149)
UL High Voltage Arc Testing (in./min.)	.01 - .35
Water Absorption (24 hrs. % weight gain)	1.5%
Flammability	94V-2
Chemical Resistance	Resistant aromatic hydrocarbons, strong alkalies
Radiation Resistance (ergs g^1 C)	8 X 10^7 min.

CSA
LR25557

UL
E63810

Phenolic ULTRA HEAVY DUTY – 250 KCMIL (MCM) Terminal Blocks

This Ultra Heavy Duty line is rated up to 255 amps with a single 250 MCM conductor.

■ Compact block accepts wire sizes up to 2/0 or 250 KCMIL (MCM)

■ 57 circuits per 6 foot length

■ Tubular screw contact style for maximum electrical rating

■ Block mounts directly on flat surface or standard channel

■ Only one end section needed per block assembly

■ Readily identifiable circuits – write directly on painted marking area or use removable vinyl marking strip

■ Hex socket screws allow maximum torque when using large wire sizes

■ High current capacity snap-fit sectional blocks do not snap-fit with other block styles

Catalog Number	426	427	430
Marking Area	Painted	Painted	—
Mounting Style	Two-Way Mounting Base	Two-Way Mounting Base	End-Section
Ampacity	175A	255A	—
Contact Type	Tubular Screw	Tubular Screw	—
Screw Type	1/2-30 Hex Socket	3/4-16 Hex Socket	—
Wire Range (AWG)	#12-2//0	#6-250 KCMIL/MCM	—
Wire Strip Length	1 in.	1 in.	—

Specifications

Center-to-Center Spacing: 1.19 in. CL: 9 circuits per foot.

Voltage Rating: Blocks meet 600V creepage and clearance requirements of NEMA, UL and CSA for general industrial control equipment and panelboards. Withstand voltages greatly in excess of IEEE switchgear standards for 750V.

Ampacity: For a single 250 KCMIL wire, the maximum amperage recommended is 255A.

WIRE RANGE: Solid or Stranded
Tubular Screw – 1 #2/0 AWG, 1 #1/0 AWG, 1 #1 AWG, 1 or 2 #2 AWG, 1 to 3 #4 AWG, 1 to 3 #6 AWG, 1 to 4 #8 AWG, 1 to 6 #10 AWG, 2 to 8 #12 AWG
Tubular Screw – 1 #250 KCMIL, 1 $4/0 AWG, 1 #3/0 AWG, 1 or 2 #2/0 AWG, 1 or 2 #1/0 AWG, 1 or 2 #1 AWG, 1 to 3 #2 AWG, 1 to 4 #4 AWG, 1 to 5 #6 AWG

Housing Material	Phenolic, Filled, Flame retardant
Contact Material	Copper
Screw Material	Steel Plated
Maximum Service Temperature	150°C (302°F)
Breakdown Voltage AC, 60 Hz	1000V
Dielectric Strength (RH40% at sea level)	300V/mil thickness (per ASTM D149)
UL High Voltage Arc Testing (in./min.)	.49 - .58
Water Absorption (24 hrs. % weight gain)	0.45% (per ASTM D570)
Flammability	94V-1 (per UL94)
Chemical Resistance	Resistant to acids, alkalies, aliphatic hydrocarbons and ketones (per ASTM D5343)
Radiation Resistance (ergs g^1 C)	2.7 X 10^8 min.

CSA® LR25557   UL® E63810

CONSTRUCTION PRODUCTS

BUCHANAN

Phenolic Fuse Blocks

■ Provide in-line circuit protection for any circuit or group of circuits

■ Three contact styles for terminated or unterminated wire are conservatively rated to 30A

■ Remove, check and replace fuses safely and quickly – switch-action fuse blocks open circuits before fuse can be removed or installed

■ Good circuit density when mounted adjacently – 91 circuits per 6 foot length

■ Use in high temperature applications – phenolic housing withstands temperatures up to 302°F (150°C)

■ Flat base models for surface mounting, dovetail base models for standard channel

■ Only one end section needed per block assembly

■ Open or close several circuits simultaneously – holes in puller handles allow use of nylon "ganging" rods

■ Readily identifiable circuits – mark directly on white, matte-surface puller assembly, marking tab on block or use removable marking tape

■ Sections snap-fit with Heavy Duty and Intermediate Heavy Duty Blocks
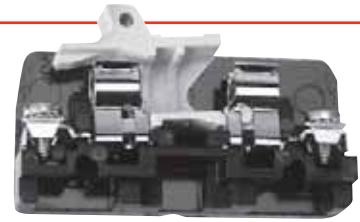
Catalog Number	351	0351	358	0358	352	0352	330	0330
Mounting Style	Direct Mount (Flat Base)	Channel Mount (Dovetail Base)	Direct Mount (Flat Base)	Channel Mount (Dovetail Base)	Direct Mount (Flat Base)	Channel Mount (Dovetail Base)	End-Section (Direct Mount)	End-Section (Channel Mount)
Ampacity	30A		30A		30A		—	—
Contact Type	Strap Screw		Strap Clamp		Tubular Screw		—	—
Screw Type	10-32 Binding Head		8-32 Pan Head w/Clamp		1/4-28 Set Screw		—	—
Wire Range (AWG)	#22 to #8		#18 to #8		#18 - #8		—	—
Wire Strip Length	—		1/2 in.		1/2 in.		—	—

Specifications

Center-to-Center Spacing: .75 in. CL: 16 circuits per foot.

Voltage Rating: Blocks meet 600V creepage and clearance requirements of NEMA, UL and CSA for general industrial control equipment and panelboards. Withstands voltages greatly in excess of IEEE switchgear standards for 750V.

Ampacity: Fuse blocks, 30A

Fuse Size: Any 13/32 in. x 1-1/2 in. ferrule-type cartridge fuse up to 30A, indicating or non-indicating, which meets MIL. Spec. F-15160 is recommended.

WIRE RANGE: Solid or Stranded
Tubular Screw, Cat. No. 362 and 0362 – 1 #4 AWG, 1 #6 AWG, 1 or 2 #8 AWG, 1 to 4 #10 AWG, 1 to 5 #12 AWG, 1 to 6 #14 AWG, 1 to 6 #16 AWG, 1 to 8 #18 AWG

Housing Material	Phenolic, Filled, Flame retardant
Contact Material	Copper Alloy
Screw Material	Steel Plated
Maximum Service Temperature	150°C (302°F)
Breakdown Voltage AC, 60 Hz	8400V
Dielectric Strength (RH40% at sea level)	300V/mil thickness (per ASTM D149)
UL High Voltage Arc Testing (in./min.)	.49 - .58
Water Absorption (24 hrs. % weight gain)	0.45% (per ASTM D570)
Flammability	94V-1 (per UL94)
Chemical Resistance	Resistant to acids, alkalies, aliphatic hydrocarbons and ketones (per ASTM D5343)
Radiation Resistance (ergs g[1] C)	2.7 X 10^{7} min.

CSA
LR25557

UL
E63810

Phenolic One Piece Terminal Blocks

Traditional standard in the heavy industrial, rail transport, utility and traffic control industries. The rugged, one-piece construction finds wide application in dirty and vibration-prone environments.

- ■ Two, four, six, eight and twelve circuit models
- ■ Strap screw contacts accept wire 8 AWG and smaller and are rated to 50 Amps
- ■ Pilot point screws with strap screw contacts speed installation time
- ■ Easily identifiable circuits with use of plain white marking strip
- ■ No assembly required - each block is a single, easily installed unit
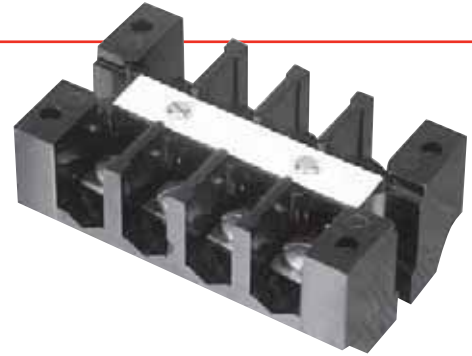
Catalog Number	B102	B104	B106	B108	B112
Number of Circuits	2	4	6	8	12
Ampacity	50A				
Contact Type	Strap Screw (Steel)				
Screw Type	10-32 Slotted Binding Head				
Wire Range (AWG)	#18 to #F8				

Specifications

Center-to-Center Spacing: .63 in. CL

Voltage Rating: Blocks meet 600V creepage and clearance requirements of NEMA, UL and CSA for general industrial control equipment and panelboards. Withstands voltages greatly in excess of IEEE switchgear standards for 750V.

Ampacity: For a single 8 AWG wire, the maximum amperage recommended is 50A.

WIRE RANGE: Solid or Stranded
Strap Screw – 1 #18 AWG through 1 #8 AWG

Housing Material	Phenolic, Filled, Flame retardant
Contact Material	Copper / Copper Alloy
Screw Material	Steel Plated
Maximum Service Temperature	150°C (302°F)
Dielectric Strength (RH40% at sea level)	300V/mil thickness (per ASTM D149)
UL High Voltage Arc Testing (in./min.)	.49 - .58
Water Absorption (24 hrs. % weight gain)	0.45% (per ASTM D570)
Flammability	94V-1 (per UL94)
Chemical Resistance	Resistant to acids, alkalies, aliphatic hydrocarbons and ketones (per ASTM D5343)
Radiation Resistance (ergs g¹ C)	2.7×10^7 min.

CSA® LR25557   UL® E63810

Terminal Blocks

Mounting Channels

| Miniature Channel | Steel Channel | Aluminum Channel (Pre-punched) |

Mounting Channels	Length	Cat. No.	For use with:
Miniature Channel	3 ft.	12	Heavy-Duty (200 Series)
Steel Channel	6 ft. 3 ft.	60 63	Medium Duty (900 Series) Heavy Duty (200 Series) Intermediate Heavy Duty (800 Series) Ultra Heavy Duty (400 Series) Fuse Blocks (300 Series)
Aluminum Channel (Pre-punched)	6 ft. 3 ft.	64 67	Medium Duty (900 Series) Heavy Duty (200 Series) Intermediate Heavy Duty (800 Series) Ultra Heavy Duty (400 Series) Fuse Blocks (300 Series)

Jumpers

| Jumper for Tubular Contacts | Jumper for Strap Screw |

| #41, 42, 70 | #43 |

Description	Cat. No.	Available for:
Jumpers for Tubular Contacts	41	Heavy-Duty Phenolic (200 Series)
	42	Heavy Duty (200 Series)
	43	Heavy-Duty Phenolic (200 Series)
	70	Medium Duty (900 Series)

Channel Clamps

| Miniature Clamp | Universal Clamp | Screw Clamp |

Mounting Channels	Cat. No.	For use with:
Miniature Clamp	11	High Density Miniature (100 Series) Heavy-Duty (200 Series)
Universal Clamp	68	High Density Miniature (100 Series) Medium Duty (900 Series) Heavy Duty (200 Series) Intermediate Heavy Duty (800 Series) Ultra Heavy Duty (400 Series) Fuse Blocks (300 Series)
Screw Clamp	61	High Density Miniature (100 Series) Medium Duty (900 Series) Heavy Duty (200 Series) Intermediate Heavy Duty (800 Series) Ultra Heavy Duty (400 Series) Fuse Blocks (300 Series)

TOOLS & SUPPLIES

B

Tuff-Grip™ Pro...
Industry's Leading Fish Tape!

Etched in 12" increments to provide instant conduit length.

Tuff-Cuff™ tape retaining feature keeps tape properly positioned in the opening.

Full-perimeter handle band helps keep dirt and moisture out, prolonging life.

Tuff-Grip™ Handle
Large, comfortable ergonomically-designed, grasp from the top or side. Allows for use with gloves.

Available in:
   Blued Steel™
   Stainless Steel
   Zoom™ Jacketed Stainless Steel
   Gold-Fish® Brass Plated Steel Coil
   S-Class® Nylon Jacketed Fiberglass
   Volt-Guard™ 1000V Non-Conductive Fiberglass

Exceptionally Durable Case

Length marked! Now laser etched in 12" increments to provide instant conduit length.

Fish Tape Cases and Handles

Tuff-Grip™ Pro
- Tuff-Cuff™ tape retaining feature keeps tape properly positioned in the opening
- Full-perimeter handle band helps keep dirt and moisture out.
- Superior pull-out and rewind characteristics.
- Exceptionally durable case and handle

Rapid-Pak®
- Inner rotating reel with winding knob retrieves tape faster than traditional fish tapes for increased labor savings
- Funneled tape opening reduces kinking and tape breakage
- Reversible, hinged knob for right or left handed rewinds
- Stationary handle for extra durability
- Impact-resistant plastic case

SPEED-GRIP™ Pro Handle
- New vertical grip allows for faster payout and rewind
- Ergonomically designed handle puts less strain on your wrist
- Large hand opening allows for use with gloves
- Attached to the exceptionally durable Tuff-Grip™ Pro Case*

*On select S-Class® and Zoom™ Fish Tape Models.

Thumb Winder™
- Convenient 7 in. size can be stored in tool bag
- Durable, impact resistant ABS case
- Easy-to-use thumb-operated rewind
- Great for datacomm and small-sized conduit applications

Fish Tape Materials

Blued Steel™
- Laser etched in 12" increments to provide instant conduit length
- Unique finish is non-oily and resists rust
- Multiple options in width, length and eyelet for ease of use
- Industry's straightest wire
- Stiffer for long runs
- Highest grade carbon steel
- Tensile strength 1,600 lbs.

Gold–Fish®
- Brass-plated coiled steel resists rust
- No "memory" – hangs straight after being coiled for long periods
- Kink proof
- Excellent for multiple bends

Stainless Steel
- Laser etched in 12" increments to provide instant conduit length
- Won't rust or corrode in damp locations or humid environments
- Super clean finish prevents marks on walls or carpets
- Great for wet or corrosive work environment
- Smoother pay-out
- Tensile strength 1,600 lbs.

S-Class®
- Non-conductive tape designed for use around live circuits
- Strong S-Class® core for longer life and greater pushing power
- Smooth nylon jacket provides great handling around bends
- Omni-directional pushing
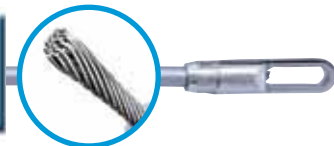
Zoom™
- 19 strands of stainless steel
- Ultra hard nylon jacket adds slipperiness, protects cables and user's hands
- Excellent for corrugated plastic conduit
- Excellent for multiple bends or wet/corrosive work environment
- The only one in the industry

19 strand twisted radial steel core encased in high molecular density outer jacket.

Volt-Guard™
- Non-conductive to 1000V
- Rectilinear profile for superior pushing power
- Designed for use around live circuits

![IDEAL logo]

Fish Tapes

Blued–Steel™ Fish Tapes

- Laser etched in 12" increments to provide instant conduit length
- High column strength for longer runs
- Non-oily finish resists rust

Length (ft.)	Width & Thickness	Case Diameter	End Type	Tuff-Grip™ Pro	Thumb-Winder™	Replacement Tapes
Blued Steel™						
25	1/8 in. x .045 in.	7 in.	Formed hook	–	31-012	–
50	1/8 in. x .045 in.	7 in.	Formed hook	–	31-010	–
50	1/8 in. x .060 in.	9 in.	Formed hook	31-033	–	–
60	1/8 in. x .060 in.	12 in.	Formed hook	31-055	–	31-035
120	1/8 in. x .060 in.	12 in.	Formed hook	–	–	31-036
120	1/8 in. x .060 in.	12 in.	Formed hook	31-056	–	31-036
240	1/8 in. x .060 in.	12 in.	Formed hook	–	–	31-038
240	1/8 in. x .060 in.	12 in.	Formed hook	31-057	–	31-038
50	1/4 in. x .060 in.	12 in.	Formed hook	31-059	–	31-051
100	1/4 in. x .060 in.	12 in.	Formed hook	31-058	–	31-050
200	1/4 in. x .060 in.	None	Formed hook	–	–	31-052
400	1/4 in. x .060 in.	None	Formed hook	–	–	31-2128
15,000	1/4 in. x .060 in.	None	Formed hook	–	–	31-2982

Stainless Steel Fish Tapes

- Laser etched in 12" increments to provide instant conduit length
- Won't rust or corrode in humid environments
- Stainless steel design provides a smooth pay-out

Length (ft.)	Width & Thickness	Case Diameter	End Type	Tuff-Grip™ Pro	Replacement Tapes
Stainless Steel					
120	1/8 in. x .060 in.	12 in.	Formed hook	31-066	31-073
240	1/8 in. x .060 in.	12 in.	Formed hook	31-067	31-074

S-Class® Fish Tape

- Non-conductive tape for use around live circuits
- Structural glass core gives you a more durable fiberglass tape
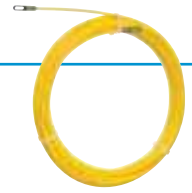
Length (ft.)	Width & Thickness	Case Diameter	End Type	Tuff-Grip™ Pro	Rapid-Pak®	Replacement Tapes
S-Class® Nylon Jacketed Fiberglass						
50	3/16 in. diameter	12 in.	Leader	31-060	31-187	31-150
50	3/16 in. diameter	12 in.	Eyelet	31-062	31-190	31-160
100	3/16 in. diameter	12 in.	Leader	31-061	31-186	31-152
100	3/16 in. diameter	12 in.	Eyelet	31-063	31-189	31-162
200	3/16 in. diameter	16 in.	Leader	31-064	31-207	31-155
200	3/16 in. diameter	16 in.	Eyelet	31-065	31-208	31-165

Zoom™ Fish Tapes

- Great for hard to navigate conduit with multiple bends
- Nylon jacket protects the steel core while adding to the slipperiness of Zoom™
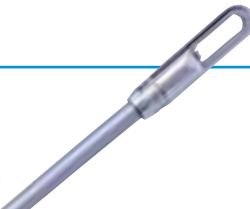
Length (ft.)	Width & Thickness	Case Diameter	End Type	Tuff-Grip™ Pro	Replacement Tapes
Zoom™ Nylon Jacketed Fiberglass					
50	3/16 in. diameter	12 in.	Eyelet	31-090	31-091
100	3/16 in. diameter	12 in.	Eyelet	31-092	31-093
200	3/16 in. diameter	16 in.	Eyelet	31-096	31-097

Volt-Guard™ Fish Tapes

- Non-conductive up to 1000V
- Elliptical design gives the Volt-Guard™ greater pushing power
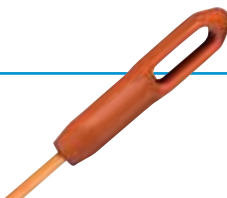
Length (ft.)	Width & Thickness	Case Diameter	End Type	Tuff-Grip™ Pro	Replacement Tapes
Fiberglass					
60	.1875 in. x .094 in.	12 in.	Eyelet	31-542	31-552
120	.1875 in. x .094 in.	12 in.	Eyelet	31-544	31-554

Gold-Fish® Fish Tape

- Ultra-flexible tape for hard-to-navigate areas
- Brass-plated coils resist rust
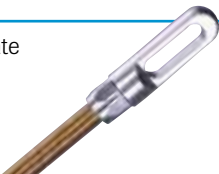
Length (ft.)	Width & Thickness	Case Diameter	End Type	Tuff-Grip™ Pro	Replacement Tapes
Gold-Fish® Brass Plated Steel Coil					
50	3/16 in. diameter	12 in.	Eyelet	31-144	31-141

IDEAL®

S-Class® Fiberglass and Zoom™ Fish Tape Field Application Kits

- Crimps on new eyelet or leader in minutes
- Dies can be used with Crimpmaster™ Crimp Tool
- Connection guaranteed to withstand 500 lbs.

Description	Cat. No.
Field Application Kit includes: Crimpmaster™ Crimp Tool frame, die set, S-Class® eyelets (2), S-Class® leaders (2), Zoom™ eyelets (2) & instant adhesive	31-156
Die Set Kit* includes: eyelets (2), leaders (2) & instant adhesive	31-164
Replacement eyelets (4) for S-Class® Fish Tapes	31-158
Replacement eyelets (2) for Zoom™ Fish Tapes	31-094
Replacement leaders (4) for S-Class® Fish Tapes	31-159
Die Set Only	31-166

*For those who already have a Crimpmaster™ Crimp Tool.

Volt-Guard™ Repair Kit

- Includes two eyelets and adhesive
- Easy to apply

Description	Cat. No.
Volt-Guard™ Repair Kit	31-541

Fish Tape Leaders

- Guides fish tape around bends in conduit
- Handles up to six 10 AWG bare wires
- Pulls up to 500 lbs.

Description	Cat. No.
Fish Tape Leader for steel or stainless steel tapes	31-148
Fish Tape Leader for S-Class® Fiberglass Fish Tape	31-159

Fish Tape Swivel Ball

- Swivels to prevent wires from twisting during pull
- Designed for use on 1/8 in. steel or stainless steel tapes
- Eyelet holds up to four 10 AWG bare wires
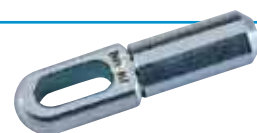
Description	Cat. No.
Fish Tape Swivel Ball	31-085

Multi-Wire Pulling Leaders

- Pulls multiple wires at one time
- Staggered connection points prevent bunching or hang-ups in tight bends
- 500 lb. working strength at main eyelet and up to 150 lbs. with each individual eyelet
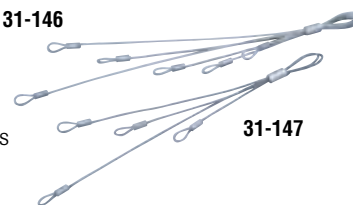
31-146

31-147

Description	Cat. No.
Multi-Wire Pulling Leader – 6-loop	31-146
Multi-Wire Pulling Leader – 4-loop	31-147

> ⚠ **WARNING**
>
> Always use approved safety glasses when using this product.
> Do not use near energized equipment. Electrical shock may occur. Make sure all power is off.
> Do not use pliers or other tools that may kink, damage, or weaken any round fish tapes such as S-Class®, Nylon or Zoom™. Use only a fish tape puller designed for this purpose.
> While fish tapes made of fiberglass, nylon or other composite materials are non-conductive, they may have a metal eyelet that is conductive and could be grounded against conduit. Do not use on live electrical circuits.
> Do not attempt to use fish tape that is fractured or has multiple ends.
> Keep the fish tape wound in the reel to prevent damage to the tape.
> Use this product in a safe work position to prevent loss of balance.
> Never remove the screws from case while fish tape is coiled inside the reel.
> Failure to follow instructions may result in severe bodily harm or damage to property.

Tuff-Rod™ Fishing Poles

■ Strong, lightweight, flexible extendable fiberglass rod kits

■ Use to reach and pull wires over suspended ceilings, in cable trays or through interior walls

■ Packaged in clear tubes for protection and long-term storage

White

Glow
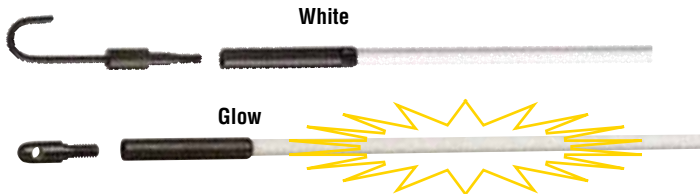
Tuff-Rod™ Regular Flex

■ 1/4 in. white fiberglass

■ Extra stiffness for added control when maneuvering wires

Description	Cat. No.
12 ft. kit with fixed bullet nose and threaded J hook (3 ea. 4 ft. sections)	**31-611**
24 ft. kit with fixed bullet nose and threaded bullet nose (4 ea. 6 ft. sections)	**31-612**
12 pack of 1/4 in. x 4 ft. Regular Flex Replacement Rods	**31-643**
12 pack of 1/4 in. x 6 ft. Regular Flex Replacement Rods	**31-644**

Tuff-Rod™ Extra Flex Glow

■ 3/16 in. pale green luminescent fiberglass

■ Glow-in-the-dark material for easy use in attics, basements and other dim lit areas

Description	Cat. No.
12 ft. kit with fixed bullet nose and threaded J hook (3 ea. 4 ft. sections)	**31-631**
30 ft. kit with fixed bullet nose and threaded bullet nose (5 ea. 6 ft. sections)	**31-633**
12 pack of 3/16 in. x 4 ft. Extra Flex Glow Replacement Rods	**31-647**
12 pack of 3/16 in. x 6 ft. Extra Flex Glow Replacement Rods	**31-648**

Accessory Kits

■ Includes replacement heads, one threaded bullet nose, one threaded J hook and one threaded wisk

Description	Cat. No.
3/16 in. Accessory kit	**31-651**
1/4 in. Accessory kit	**31-652**

Ultra smooth gel coat helps protect hands from fiberglass.

Fiber reinforced composite pultrusion for consistent high quality.

New crimped edge provides Tuff-Rod™ with exceptional "pull-off" strength for a durable, long-lasting fish pole.

700 lbs. "Pull-off" strength
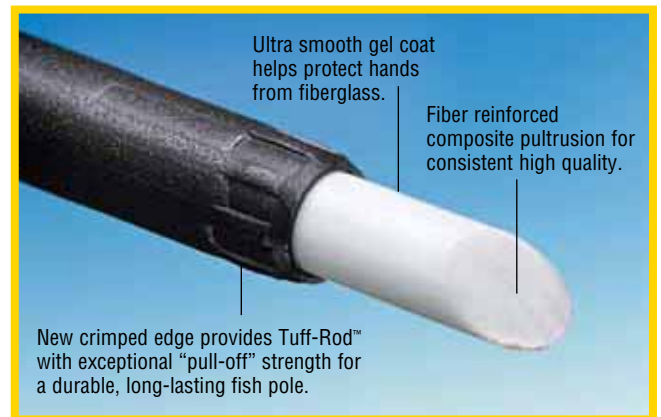
Select-a-Lubricant

What Are Your Needs?

Commercial Wire Pulling	Utility Cable Pulling

Finished Construction	New Construction	New Construction				
Indoors or Outdoors	Indoors or Outdoors	Indoors or Outdoors	Indoors or Outdoors	Outdoors ONLY	Outdoors	Indoors or Outdoors
40°F – 120°F 4°C – 49°C	40°F – 120°F 4°C – 49°C	40°F – 120°F 4°C – 49°C	40°F – 120°F 4°C – 49°C	-28°F – 40°F -33°C – 4°C	40°F – 120°F 4°C - 38°C	40°F – 140°F 4°C - 82°C
Up to 75 ft. Up to 8 hrs.	Up to 1,200 ft. Up to 24 hrs.	Up to 1,200 ft. Up to 24 hrs.	Up to 250 ft. Up to 24 hrs.	Up to 250 ft. Up to 72 hrs.	Up to 250 ft. Up to 24 hrs.	Up to 250 ft. Up to 24 hrs.
ClearGlide™	Yellow 77®	Yellow 77® Plus	Aqua-Gel® II	Aqua-Gel® CW	Aqua-Gel® IIP	Velocity™

Wire Pulling Lubricant Selection Guide

	ClearGlide™ Wire Pulling Lubricant	Yellow 77® Wire Pulling Lubricant	Yellow 77® Plus Wire Pulling Lubricant	Aqua-Gel® II Wire Pulling Lubricant	Aqua-Gel® CW Wire Pulling Lubricant	Aqua-Gel® IIP Wire Pulling Lubricant	Velocity™ Wire Pulling Lubricant
Color	Clear	Yellow	Yellow	Blue	Pink	Blue	Cream
Base	Polymer	Wax	Wax	Polymer	Polymer	Polymer	Polymer
Average Coefficient of Friction*	.23	.17	.16	.19	.19	.19	.16
Safe Storage	32°F – 180°F (0°C – 82°C)	32°F – 130°F (0°C – 54°C)	32°F – 190°F (0°C – 88°C)	32°F – 180°F (0°C – 82°C)	-28°F – 190°F (-33°C – 82°C)	32°F – 180°F (0°C – 82°C)	40°F – 140°F (4°C – 82°C)
Application Temperature Range	40°F – 100°F (4°C – 38°C)	40°F – 100°F (4°C – 38°C)	40°F – 100°F (4°C – 38°C)	40°F – 100°F (4°C – 38°C)	-28°F – 40°F (-33°C – 4°C)	40°F – 100°F (4°C – 38°C)	25°F – 140°F (-3.9°C – 60°C)
COMPATIBILITY (Cable Types):							
Rubber	•	•	•	•	•	•	•
Neoprene	•	•	•	•	•	•	•
Nylon	•	•	•	•	•	•	•
PVC	•	•	•	•	•	•	•
High-density or cross-linked polyethylene	•	•	•	•	•	•	•
Low-density polyethylene	•		•	•	•	•	•
Semiconducting jacket	•		•	•	•	•	•
Hypalon	•	•	•	•	•	•	•

*Results from NEETRAC, an independent testing laboratory affiliated with The Georgia Institute of Technology.

Yellow 77® Plus Wire Pulling Lubricant

- Rapid Glide™ polytetrafluoroethylene additive provides greater lubricity than other wax-based lubricants — great for tough pulls
- Safe to use with all cable types
- Clings to cable throughout long runs, even where moisture is present
- Remains stable in high temperatures — usable from 30°F to 190°F (-1°C to 88°C)
- Dries slowly to a thin, non-conductive film that won't harden in conduit
- Easy to apply by hand or by brush
- Creamy texture applies easily and uniformly
- Homogeneous blend requires no mixing
- Won't dry out – surface coat forms to control evaporation
- Environmentally safe – non-toxic, non-flammable and non-corrosive

UL LISTED

Description	Cat. No.
1-qt. Squeeze bottle	31-398
1-gal. Bucket	31-391
5-gal. Bucket	31-395
5-gal. Bucket – 36 Buckets/Pallet	31-395BP

ClearGlide™ Wire Pulling Lubricant

- Clear and colorless for quick and easy clean-up — great for indoor and retrofit pulls
- Exceptional lubricity for super-fast pulls
- Polymer-based formula is perfect for all electrical and datacomm applications
- Safe to use with all cable types
- Controlled evaporation rate is ideal for shorter runs
- Remains stable over wide temperature ranges — usable from 30°F to 180°F (-1°C to 82°C)
- Dries to a semi-fluid film that won't clog conduit
- Easy to apply by hand, brush or pump
- Environmentally safe — non-toxic, non-flammable and non-corrosive

UL LISTED

Description	Cat. No.
1-qt. Squeeze bottle	31-388
1-gal. Bucket	31-381
5-gal. Bucket	31-385
5-gal. Bucket – 36 Buckets/Pallet	31-385BP
55-gal. Drum	31-2143

Yellow 77® Wire Pulling Lubricant

- The #1 brand of wire pulling lubricant since 1959 — the perfect general purpose lube
- Wax-based formula provides superior lubricity
- Safe to use with most cable types except low-density polyethylene and semi-conducting jackets
- Clings to cable throughout long pulls, even where moisture is present
- Won't break down or separate after repeated exposure to freezing temperatures
- Dries to a thin, non-conductive film
- Easy to apply by hand or by brush
- Creamy texture applies easily and uniformly
- Homogeneous blend requires no mixing
- Won't dry out — surface coat forms to control evaporation
- Environmentally safe — non-toxic, non-flammable and non-corrosive

UL LISTED

Description	Cat. No.
1-qt. Squeeze bottle	31-358
1-gal. Bucket	31-351
5-gal. Bucket	31-355
55-gal. Drum	31-365
5-gal. Bucket – 36 Buckets/Pallet	31-355BP

Velocity™ Wire Pulling Lubricant

- High cling factor
- Maximum friction reduction
- Specification grade
- Compatible with all popular cable types
- Temperature stable
- Non-combustible residue
- Environmentally safe — non-toxic, non-flammable and non-corrosive

UL LISTED

Description	Cat. No.
1-qt. Squeeze bottle	31-276
1-gal. Bucket	31-277
5-gal. Bucket	31-278
1-qt. Bag (12 bags/bucket)	31-282

![IDEAL logo]

Lubricants

Aqua-Gel® II Cable Pulling Lubricant

- Polymer-based formula provides maximum tension reduction in high-stress electrical and communication cable-pulling operations
- Compatible with all cable types except composite rubber
- Cleans up easily with soap and water
- Clings to cable throughout long pulls
- Remains stable over wide temperature range — usable from 28°F to 180°F (-2°C to 88°C)
- Dries to a semi-fluid film that won't clog conduit
- Easy to apply by hand, brush or pump
- Environmentally safe – non-toxic, non-flammable and non-corrosive
- For outdoor use only

[UL LISTED]

Description	Cat. No.
1-qt. Squeeze bottle	**31-378**
1-gal. Bucket	**31-371**
1-qt. Bag (12 bags/bucket)	**31-376**
1/2-gal. Bag (6 bags/bucket)	**31-377**
5-gal. Bucket	**31-375**
5-gal. Bucket – 36 Buckets/Pallet	**31-375BP**
55-gal. Drum	**31-3855**

Aqua-Gel® IIP Cable Pulling Lubricant

- Features the same excellent qualities as Aqua-Gel® II Cable Pulling Lubricant with a lower viscosity for easy pouring and pumping
- Pourable formula clings to cable – eliminates hand application for a cleaner and safer job
- Compatible with all cable types
- Cleans up easily with soap and water
- Environmentally safe – non-toxic, non-flammable and non-corrosive

[UL LISTED]

Description	Cat. No.
1-gal. Jug	**31-421**
5-gal. Bucket	**31-425**
55-gal. Drum	**31-435**

Aqua-Gel® CW Cable Pulling Lubricant

- Features the same excellent qualities as Aqua-Gel® II Cable Pulling Lubricant with a lower temperature range for use outdoors in cold weather
- Polymer-based, cold-weather formula remains stable in storage from -28°F to 190°F (-33°C to 82°C)
- Formulated for exterior use in cold weather conditions
- Cleans up easily with soap and water
- Clings to cable throughout long pulls
- Well-suited for hand or poured applications
- Environmentally safe — non-toxic, non-flammable and non-corrosive

Description	Cat. No.
1-qt. Squeeze bottle	**31-298**
1-gal. Jug	**31-291**
5-gal. Bucket	**31-295**
55-gal. Drum	**31-3373**

Recommended Qty. of Lubricant Formula

$$Q = .0015 \times L \times D$$

Q = Quantity of recommended lube in gallons
L = Length of pull in feet
D = Nominal ID of conduit in inches

The formula listed above is used as a guideline on estimating the quantity of lube needed for various jobs. Many factors go into a cable pull, however this formula is just based on length of the pull and diameter of the conduit.

Increase quantities for the following troubles:
- Stiff, heavy cable
- Rough, old or dirty conduits
- High percent conduit fill
- Pulls with several bends
- High temperatures

Selection & Application Guides

Description	Cat. No.
Lubricant Selection Slide Rule	**P-2710**

Web Based Selection & Application Guide:
http:ideal.sdafiles.com
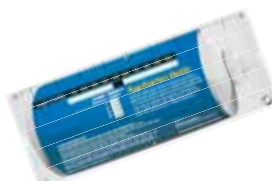
Duct Seal

- Seals around junction boxes, flashings and service entrances
- Permanently soft, non-toxic compound can be painted immediately after application
- Won't adversely affect other plastic materials or corrode metals

UL LISTED

Description	Cat. No.
1 lb. Block (10/carton)	31-601
5 lb. Block (10/carton)	31-605

Noalox® Anti-Oxidant

- Anti-oxidant and anti-seizing compound improves efficiency and service life of aluminum-to-aluminum and aluminum-to-copper electrical connections
- Suspended zinc particles penetrate and cut aluminum oxide
- Provides additional inter-strand and inter-conductor current paths for improved conductivity and cooler connections
- Carrier material excludes air to prevent further oxidation
- For use with all types of pressure-type wire connectors including screw-on, tap, service entrance and split-bolt
- Reduces galling and seizing and promotes good ground continuity on aluminum conduit joints

UL LISTED

Description	Cat. No.
1/2-oz. Tube	30-024
4-oz. Squeeze bottle	30-026
8-oz. Squeeze bottle	30-030
8-oz. Brush cap	30-031
1-gal. Bucket	30-032
5-gal. Bucket	30-040

Conduit Benders

- Exceptional, durable, materials for extra strength
- Reinforced at stress points for longer life
- Markings are raised and cast into the bender body on both sides for easy visibility
- Deeply serrated step helps prevent slippage when applying force
- Grooved internal hook surface helps prevent conduit from slipping
- Flat hook surface provides stable starting point
- Desirable Benfield bending system

1/2" EMT

3/4" EMT
1/2" Rigid
1/2" IMC

1" EMT
3/4" Rigid
3/4" IMC

1-1/4" EMT
1" Rigid
1" IMC
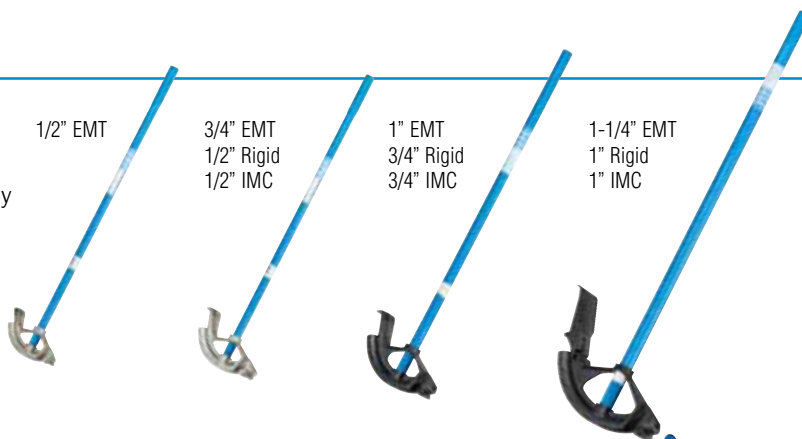
Ductile Iron

- Withstands a lifetime of heavy use
- Ductile iron material is stronger than malleable iron or aluminum

Aluminum

- Lightweight aluminum for easy handling
- Strong enough for every day use

Ductile Iron Head & Handle Complete

Conduit Type and Size	Cat. No.
1/2 in. EMT	74-026
3/4 in. EMT, 1/2 in. Rigid & 1/2 in. IMC	74-027
1 in. EMT, 3/4 in. Rigid & 3/4 in. IMC	74-028
1-1/4 in. EMT, 1 in. Rigid & 1 in. IMC	74-034

Aluminum Head & Handle Complete

Conduit Type and Size	Cat. No.
1/2 in. EMT	74-046
3/4 in. EMT, 1/2 in. Rigid & 1/2 in. IMC	74-047

Ductile Iron Head Only

Conduit Type and Size	Cat. No.
1/2 in. EMT	74-001
3/4 in. EMT, 1/2 in. Rigid & 1/2 in. IMC	74-002
1 in. EMT, 3/4 in. Rigid & 3/4 in. IMC	74-003
1-1/4 in. EMT, 1 in. Rigid & 1 in. IMC	74-006

Aluminum Head Only

Conduit Type and Size	Cat. No.
1/2 in. EMT	74-031
3/4 in. EMT, 1/2 in. Rigid & 1/2 in. IMC	74-032

Handles for Benders

- Rugged, steel construction for long-term durability
- Baked-on blue enamel finish resists corrosion and enhances visibility
- Convenient bending guide for offset bends

Handles for Ductile Iron

Conduit Type and Size	Cat. No.
1/2 in. EMT	74-019
3/4 in. EMT, 1/2 in. Rigid & 1/2 in. IMC	74-019
1 in. EMT, 3/4 in. Rigid & 3/4 in. IMC	74-020
1-1/4 in. EMT, 1 in. Rigid & 1 in. IMC	74-021

Handles for Aluminum

Conduit Type and Size	Cat. No.
1/2 in. EMT	74-019
3/4 in. EMT, 1/2 in. Rigid & 1/2 in. IMC	74-019
1 in. EMT, 3/4 in. Rigid & 3/4 in. IMC	74-020
1-1/4 in. EMT, 1 in. Rigid & 1 in. IMC	74-021

LIFETIME IDEAL GUARANTEE

Conduit Benders

1-800-435-0705 for Customer Service
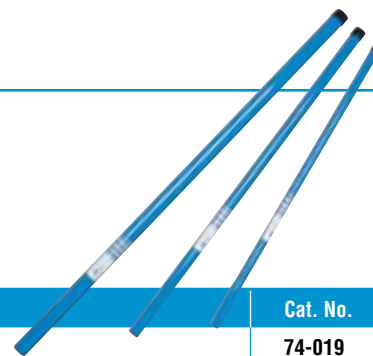
Hickeys

- Exceptional, durable, heat treated materials for extra strength
- Reinforced at stress points for longer life
- Grooved internal hook surface helps prevent conduit from slipping

Ductile Iron Hickeys

- High-strength ductile iron construction
- Grooved internal hook helps prevent conduit from slipping
- Lifetime replacement guarantee

Conduit Type and Size	Hickey Only Cat. No.
1/2 in. EMT	74-010
3/4 in. EMT, 1/2 in. Rigid & 1/2 in. IMC	74-011
1 in. EMT, 3/4 in. Rigid & 3/4 in. IMC	74-012
1-1/4 in. EMT, 1 in. Rigid & 1 in. IMC	74-013

Handles for Hickeys

- Rugged, steel construction for long-term durability
- Baked-on blue enamel finish resists corrosion and enhances visibility
- Convenient bending guide for offset bends
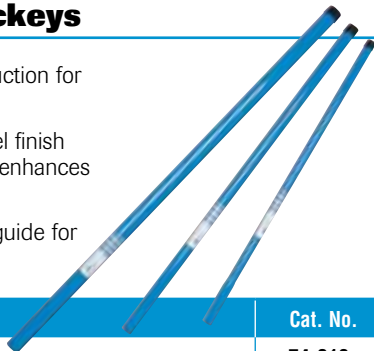
Conduit Type and Size	Cat. No.
1/2 in. EMT	74-019
3/4 in. EMT, 1/2 in. Rigid & 1/2 in. IMC	74-019
1 in. EMT, 3/4 in. Rigid & 3/4 in. IMC	74-020
1-1/4 in. EMT, 1 in. Rigid & 1 in. IMC	74-021

Pocket Bender Guide

- Convenient pocket-sized reference guide
- Includes simple, concise bending techniques for precision stubs, back-to-back, offset and saddle bends
- Request free booklet #P-100

BenderBoot™

- Santoprene® tread and hand grip provides support for saddle and offset bends
- Easy push-on assembly to any IDEAL Bender
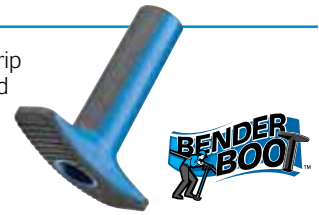
Description	Cat. No.
BenderBoot™	74-037

Heavy-Duty Hacksaw

- Use as conventional hacksaw or as jab saw to enlarge holes
- Rugged frame provides lightweight rigidity and exceptional control
- Stores up to nine extra blades
- Blades can be adjusted to 55° angle for flush cutting and tensioned to 25,000 psi
- Includes 12 in. x 24T bi-metal blade
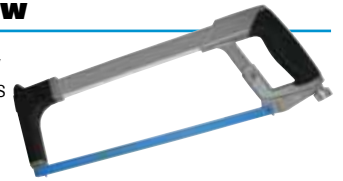
Description	Cat. No.
Heavy-Duty Hacksaw	35-260

Ergonomic Hacksaw

- Angled handle for easier cutting
- Blade can easily be adjusted for flush cutting
- Easy tensioning wing-nut keeps blades tight for straighter cuts
- Cushioned ergonomic grip for performance and comfort
- Includes 12 in. x 24T bi-metal blade

Description	Cat. No.
Ergonomic Hacksaw	35-261

Hacksaw Blades

- Bi-metal blades provide strength, flexibility and longer life
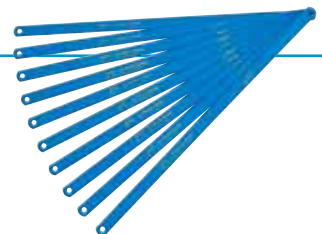
Description	Qty./Pack	Cat. No.
12 in. x 18T Blades	10	35-271
12 in. x 24T Blades	10	35-272
12 in. x 32T Blades	10	35-273
12 in. x 18T Blades	100	35-262
12 in. x 24T Blades	100	35-263
12 in. x 32T Blades	100	35-264

![IDEAL logo]

Valu-Line™ Pull-Line

- White with gray tracer for easy identification
- Continuous-fiber polyline great for blowing directly into conduit
- Will not rot or mildew
- Can be left in conduit for future use

Standard Duty

Description	Tensile Strength	Cat. No.
Valu-Line™ Pull-Line – 6,500 ft. (bucket)	190 lbs.	**31-338**

Powr-Fish® Pull-Line

- White with blue tracer for easy identification
- Continuous-fiber polyline great for blowing directly into conduit
- Will not rot or mildew
- Can be left in conduit for future use

Heavy Duty

Description	Tensile Strength	Cat. No.
Powr-Fish® Pull-Line – 6,500 ft. (bucket)	210 lbs.	**31-340**
Powr-Fish® Pull-Line – 6,500 ft. (box)	210 lbs.	**31-343**
Powr-Fish® Pull-Line – 6,500 ft. (36 buckets/pallet)	210 lbs.	**31-340BP**
Powr-Fish® Pull-Line – 500 ft. (canister)	210 lbs.	**31-348**

Powr-Fish® Pull-Line

- White with red tracer for easy identification
- 500 lb. tensile, our highest tensile-rated pull-line
- Continuous-fiber polyline great for blowing directly into conduit
- Will not rot or mildew
- Can be left in conduit for future use

Extra-Heavy Duty 500#

Description	Tensile Strength	Cat. No.
Powr-Fish® Pull-Line – 2,200 ft. (bucket)	500 lbs.	**31-344**

3-in-1 Premise MULETAPE®

THREE functions in ONE
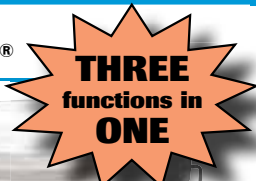
- Reduces installation time and saves money on premise jobs
- Thread, measure and pull with single product
- Imprinted with sequential footage or meter markings
- Fewer installation steps, significant material and labor savings

Description	Pulling Strength	Length	Cat. No.
3-in-1 Premise MULETAPE®	400 lb.	4,500 ft./bucket	**31-314**
3-in-1 Premise MULETAPE®	1,800 lb.	1,300 ft./bucket	**31-315**

MULETAPE® is a registered trademark of NEPTCO.

Pro-Pull™ Rope

- Low-friction polypropylene rope slides easily through conduit
- Non-sliver surface can be handled without gloves
- Will not rot or mildew
- Rugged, lightweight construction

Description	Qty./Pack	Cat. No.
1/4 in. x 250 ft. Reel	1,125 lbs.	**31-839**
1/4 in. x 600 ft. Reel	1,125 lbs.	**31-840**
1/4 in. x 1,000 ft. Reel	1,125 lbs.	**31-841**
3/8 in. x 250 ft. Reel†	2,430 lbs.	**31-844**
3/8 in. x 600 ft. Reel†	2,430 lbs.	**31-845**
3/8 in. x 1,200 ft. Reel†	2,430 lbs.	**31-846**
1/2 in. x 250 ft. Reel†	3,780 lbs.	**31-849**
1/2 in. x 600 ft. Reel†	3,780 lbs.	**31-850**
1/2 in. x 1,200 ft. Reel†	3,780 lbs.	**31-851**
5/8 in. x 600 ft. Reel†	5,580 lbs.	**31-853**
5/8 in. x 1,200 ft. Reel†	5,580 lbs.	**31-854**
3/4 in. x 300 ft. Reel†	7,650 lbs.	**31-855**
3/4 in. x 600 ft. Reel†	7,650 lbs.	**31-856**
3/4 in. x 1,200 ft. Reel†	7,650 lbs.	**31-857**

† Eye splice on working end.

Conduit Measuring Tape

- Provides quick and accurate measurement of conduit runs
- Easy-to-read markings in sequential one-foot increments
- 160 lb. tensile strength
- Pulls rope through raceways without stretching
- Dispenser features built-in cutter, handle, non-skid base and adjustable reel tension
- Will not rot or mildew

Description	Cat. No.
Conduit Measuring Tape – 3,000 ft.	**31-347**

Foam Carriers

- Attach to a suitable line to serve as a piston – clears out water or debris as they travel through conduit
- Durable foam construction for repeated use and long life
- For use with any type of blower or vacuum system

Description	Qty.	Cat. No.
1/2 in. Foam Carrier	5/bag	**31-466**
3/4 in. Foam Carrier	5/bag	**31-467**
1 in. Foam Carrier	5/bag	**31-468**
1-1/4 in. Foam Carrier	3/bag	**31-469**
1-1/2 in. Foam Carrier	2/bag	**31-470**
2 in. Foam Carrier	1/bag	**31-471**
2-1/2 in. Foam Carrier	1/bag	**31-322**
3 in. Foam Carrier	1/bag	**31-323**
3-1/2 in. Foam Carrier	1/bag	**31-324**
4 in. Foam Carrier	1/bag	**31-325**
5 in. Foam Carrier	1/bag	**31-326**
6 in. Foam Carrier	1/bag	**31-327**

Line Packages

- One-piece pull line and foam tip unwind as they move through conduit
- One-piece construction for faster, easier use with no knots or foam carriers to retrieve
- Line tensile strength of 17 lbs.
- For use with any type of blower or vacuum system

Description	Color	Qty.	Cat. No.
Line Package, 1/2 in. x 75 ft.	Red	10/bag	**31-472**
Line Package, 1/2 in. x 150 ft.	Red	10/bag	**31-473**
Line Package, 3/4 in. x 200 ft.	Yellow	5/bag	**31-475**
Line Package, 3/4 in. x 300 ft.	Yellow	5/bag	**31-476**
Line Package, 3/4 in. x 450 ft.	Yellow	5/bag	**31-477**
Line Package, 1 in. x 200 ft.	White	5/bag	**31-479**
Line Package, 1 in. x 300 ft.	White	5/bag	**31-480**
Line Package, 1 in. x 450 ft.	White	5/bag	**31-481**

Engineered to strip every wire right

Kinetic™ Reflex™ T®-Stripper Wire Stripper

Ergonomic handles with Santoprene™ grip and Thumb Valley™ make this the premier wire stripper in the market.

- **Thumb Valley™ Protection**
- **Pocket Locket Locking Hasp**
- **Shear Cut Bolt Cutters**
- **Santoprene™**
- **Ergo Handles**

Kinetic™ Super Wire Stripper

The ergonomic design and patented Santoprene™ grip wicks away perspiration and reduces muscle fatigue. The Thumb Valley™ guide and precision stripping holes promote the highest accuracy in the industry.

- **Thumb Valley™ Protection**
- **Pocket Locket Locking Hasp**
- **Shear Cut Bolt Cutters**
- **Santoprene™**
- **Curved Handles**

Reflex™ Super T®-Stripper Wire Stripper

The ergonomic design with curved handles reduces wrist fatigue. Features 6/32 and 8/32 self-chasing, bolt cutting holes and a locking pawl for safe storage.

- **Locking Pawl**
- **Bolt Cutting**
- **Extended Textured Comfort**
- **Ergo Handles**

Reflex™ Premium T®-Stripper Wire Stripper

Designed for total-comfort and wire stripping. Ergonomic handles fit an electrician's natural grip and reduces hand fatigue. Textured, slip-resistant sleeves cushion thumb and fingers.

- **Extended Textured**
- **Ergo Handles**

Super T®-Stripper Wire Stripper

Traditional T®-Stripper Wire Stripper features with the added convenience of bolt-cutting holes and locking pawl. Curved comfort-grip handles accommodate high-volume wire stripping.

- **Locking Pawl**
- **Bolt Cutting**
- **Comfort**
- **Curved Handles**

T®-Stripper Wire Stripper

The industry standard for almost 50 years. Compact, lightweight and easy to use. Features precision-ground, knife-type blades, built-in looping holes, wire cutters and a convenient plier nose.

- **Straight Handles**

T®-Stripper Wire Stripper Selection Guide

| 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | Hole Size | | #45-100's | #45-300's | #45-400's | #45-600's | #45-700's | #45-900's |
8	10	12	14	16	18	20	22	24	26	28	30	32								
								22	24	26	28	30	Solid		45-125	—	45-417	—	—	—
									24	26	28	30	32	Stranded						
				14	16	18	20	22	24				Solid		45-121	—	45-416	—	45-716	—
					16	18	20	22	24	26			Stranded						
		10	12	14	16	18							Solid		45-120	—	45-415	—	45-715	45-915
			12	14	16	18	20						Stranded						
	8	10	12	14	16								Solid		—	45-315	—	45-615	—	—
		10	12	14	16	18							Stranded						
6	8	10	12	14									Solid		45-124	45-318	45-418	45-618	45-718	45-918
	8	10	12	14	16								Stranded						
													T®-Cutter		45-123	—	45-423	—	—	—

Kinetic™ Super Wire Strippers

- Non-slip Santoprene™ textured grips
- Plier nose for holding and twisting wires
- Slide lock for safety and storage
- Thumb and finger valley makes stripping easier and more accurate
- Shear-Cut™ bolt cutters

Description	Solid	Stranded	Cat. No.
Kinetic Super™ Wire Stripper	10-18	12-20	**45-715**
Kinetic Super™ Wire Stripper	14-24	16-26	**45-716**
Kinetic Super™ Wire Stripper	6-14	8-16	**45-718**

Kinetic™ Reflex™ T®-Stripper Wire Strippers

- Non-slip Santoprene™ textured grips and thumb rest
- Plier nose for holding and twisting wires
- Slide lock for safety and storage
- Thumb and finger valley makes stripping easier and more accurate
- Shear-Cut™ bolt cutters

Description	Solid	Stranded	Cat. No.
Kinetic™ Reflex™ T®-Stripper Wire Stripper	10-18	12-20	**45-915**
Kinetic™ Reflex™ T®-Stripper Wire Stripper	6-14	8-16	**45-918**

Reflex™ Premium T®-Stripper Wire Strippers

- Ergonomic design for maximum comfort
- Curved handles reduce wrist fatigue
- Sleeves extend to stripping head to cushion thumb and fingers
- Textured, no-slip sleeves provide a sure, easy grip

Description	Solid	Stranded	Cat. No.
Reflex™ Premium T®-Stripper Wire Stripper	10-18	12-20	**45-415**
Reflex™ Premium T®-Stripper Wire Stripper	14-24	16-26	**45-416**
Reflex™ Premium T®-Stripper Wire Stripper	22-30	24-32	**45-417**
Reflex™ Premium T®-Stripper Wire Stripper	6-14	8-16	**45-418**
Reflex™ Premium T®-Stripper – Metric	0.5mm²-4.0mm²		**45-425-341**

Reflex™ Super T®-Stripper Wire Strippers

- 6/32 and 8/32 self-chasing screw-cutting holes
- Locking pawl for safe storage
- Ergonomic design for maximum comfort
- Curved handles reduce wrist fatigue
- Sleeves extend to stripping head to cushion thumb and fingers
- Textured sleeves with extra cushioning for added comfort

Description	Solid	Stranded	Cat. No.
Reflex™ Super T®-Stripper Wire Stripper	8-16	10-18	**45-615**
Reflex™ Super T®-Stripper Wire Stripper	8-14	8-16	**45-618**
Reflex™ Super 12/2 & 14/2 NM Cable T®-Stripper Wire Stripper	12-2 and 14-2	—	**45-621**

T®-Stripper Wire Strippers

- Form-ground, knife-type blades for accurate, easy stripping without nicking insulation
- Built-in wire cutter and looping holes
- Convenient plier nose for extra gripping strength
- Laser-etched wire gauge for easy-to-read visibility
- Spring-loaded automatic opening
- Corrosion-resistant, black oxide finish
- Tough steel construction

Description	Solid	Stranded	Cat. No.
T®-5 T®-Stripper Wire Stripper	10-18	12-20	**45-120**
T®-6 T®-Stripper Wire Stripper	14-24	16-26	**45-121**
T®-7 T®-Stripper Wire Stripper	22-30	24-32	**45-125**
T®-8 T®-Stripper Wire Stripper	6-14	8-16	**45-124**
T®-Stripper Wire Stripper – Metric	0.75-6mm²		**45-120-341**
T®-Stripper Wire Stripper – Metric	0.5-4mm²		**45-125-341**

Romex® Cable T®-Stripper Wire Strippers

- Easy, one-step stripping of outer jacket of NM cable — no slitting required
- Versatility to strip, cut and loop conductor wires with precision and ease
- Stripping holes for 12 or 14 AWG solid wire
- Locking pawl for safe storage

Description	Cat. No.
14/2 NM Cable T®-Stripper Wire Stripper	**45-248**
12/2 NM Cable T®-Stripper Wire Stripper	**45-249**
Reflex™ Super 12/2 & 14/2 NM Cable T®-Stripper Wire Stripper	**45-621**

NM Cable Dual-Hole T®-Stripper Wire Stripper

- Stripping holes for stripping two 12 AWG or two 14 AWG wires simultaneously
- Ability to strip both conductor wires of NM cable at one time

Description	Wire Range	Cat. No.
Premium T®-14 T®-Stripper Wire Stripper	12 or 14 AWG solid	**45-247**

Romex® is a registered trademark of Southwire.

Super T®-Stripper Wire Strippers

- 6-32 and 8-32 self-chasing screw-cutting holes
- Curved, cushion-grip handles for ergonomic comfort
- Locking pawl to keep stripper in closed position
- Built-in wire cutter and looping holes
- Convenient plier nose for extra gripping strength
- Laser-etched wire gauge for easy-to-read visibility
- Spring-loaded automatic opening
- Tough steel construction, corrosion-resistant, black oxide finish
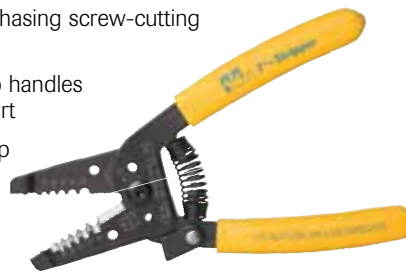
Description	Solid	Stranded	Cat. No.
Super T®-5 T®-Stripper Wire Stripper	8-16	10-18	**45-315**
Super T®-8 T®-Stripper Wire Stripper	6-14	8-16	**45-318**

Lil' Ripper Stripper™

- Rips Romex® outer jacket cleanly and quickly
- Clips outer sheathing to remove excess Romex® jacket
- Strips inner conduit wires
- Looping holes loop wire for screw-on connections
- Twist-Assist™ tightens most popular sizes of winged twist-on connectors
- Injection molded elastomer grip provides a comfortable, slip resistant grip
- Strip length measuring scale allows for quick and easy measurements
- Conveniently fits in your pocket

Description	Cat. No.
Lil' Ripper Stripper™	**45-025**

Reflex™ Super T®-Stripper Wire Strippers – Romex®

- 6/32 and 8/32 self-chasing screw-cutting holes
- Locking pawl for safe storage
- Ergonomic design for maximum comfort
- Curved handles reduce wrist fatigue
- Sleeves extend to stripping head to cushion thumb and fingers
- Textured sleeves with extra cushioning for added comfort

Description	Solid	Stranded	Cat. No.
Reflex™ Super 12/2 & 14/2 NM Cable T®-Stripper Wire Stripper	12-2 and 14-2	—	**45-621**

V–Notch Stripper

- Cuts copper or aluminum wire, solid or stranded
- Rotating cam wheel adjusts to strip 10-24 AWG wire
- Looping holes for solid wire
- Locking hasp

Description	Cat. No.
V-Notch Stripper	**45-101**

7-in-1 Stripper
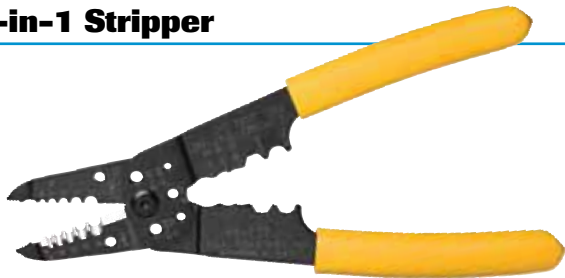
- Versatile, seven-function tool features precision-ground stripping blades, cushioned grips and plier nose
- Strips 8–16 AWG solid and 10–18 AWG stranded wire
- Crimps bare and insulated terminals for 10–22 AWG wire, RG-59 coax connectors and 7 to 8mm auto ignition connectors
- Cuts unhardened wire, bolts and screws (4-40, 6-32, 8-32, 10-24 and 10-32) and reforms threads
- Cuts stranded, solid, Romex® and U.F. wire to 8 AWG
- Reams and de-burrs conduit
- Gauges and loops wire

Description	Cat. No.
7-in-1 Stripper	**45-777**

Romex® is a registered trademark of Southwire.

Ringer™ Shielded Cable Stripper

- Precision stripping for most non-round cable, including extruded Teflon®, Kapton®, Tefzel®, Kynar® and high-temperature insulations
- Spring-loaded head provides even tension
- Heat-treated, stainless-steel blades resist wear
- Fixed blades are sized to insulation thickness, for accurate stripping
- V-notch jaw automatically positions and holds cable
- Wire guide roller maintains stripping head alignment for square, clean cuts

Description	Blade	Color	Cat. No.
Cable Stripper, 5 Mil insulation, includes blade	**K-6492**	Orange	**45-401**
Cable Stripper, 8-10 Mil insulation, includes blade includes blade	**K-6493**	Yellow	**45-402**
Cable Stripper, Cable diameters up to 0.12 in.	sold separately	Blue	**45-400**
Cable Stripper, Cable diameters from 0.12 in. to 0.22 in.	sold separately	Red	**45-403**
Cable Stripper, w/"deep V" for cable diameters up to 0.30 in.	sold separately	Green	**45-404**

Teflon® and Kapton® are registered trademarks of E.I. duPont de Nemours and Company. Kynar® is a registered trademark of Penwall.

Replacement Blades

Cutting Depth	Cat. No.	Cutting Depth	Cat. No.	Cutting Depth	Cat. No.
.0030 In.	**K-6491**	.0100 in.	**K-6497**	.0180 in.	**K-6503**
.0044 in.	**K-6492**	.0110 in.	**K-6498**	.0200 in.	**K-6504**
.0060 in.	**K-6493**	.0120 in.	**K-6499**	.0220 in.	**K-6505**
.0070 in.	**K-6494**	.0130 in.	**K-6500**	.0250 in.	**45-2108-1**
.0080 in.	**K-6495**	.0140 in.	**K-6501**		
.0090 in.	**K-6496**	.0160 in.	**K-6502**		

Wire Stops

Description	Cat. No.
Up to 2-1/2 in.	**LB-825**
2-1/2 in. to 5 in.	**LB-840**

IDEAL Gripper™

Description	Cat. No.
Slug Remover	**45-333**

Wire Cutters

Data T®-Cutter Wire Cutters

- Cuts round communication cable and maintains cable geometry for better cable performance
- Cuts multi-pair cable up to .500 in. (12.7mm) and coaxial cable up to RG-9/U
- Suitable for soft cables (not ACSR)
- Steel reinforced center conductors can be trimmed with bolt cutting holes
- Cushioned comfort grip handles
- Locking latch keeps tool closed in pouch

Description	Cat. No.
Data T®-Cutter	**45-074**

Combo Tool

- Convenient, four-function tool features precision-ground stripping holes and knife-to-anvil cutting blades
- Crimps bare and insulated terminals
- Strips 8–20 AWG solid and 10–22 AWG stranded wire
- Cuts unhardened bolts (4-40, 6-32, 8-32, 10-24 and 10-32) and reforms threads

Description	Cat. No.
Combo Tool	**30-428**

Multi-Crimp Strip Tool

- Cuts wire
- Crimps insulated and non-insulated wires
- Cuts bolts
- Strips 10-22 AWG wire
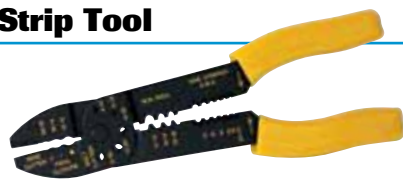
Description	Cat. No.
Multi-Crimp Strip Tool	**45-778**

T®-Cutter Wire Cutters

- Hardened steel, sheer-type blades
- Spring-loaded automatic opening
- Convenient plier nose for extra gripping strength
- Corrosion-resistant, black oxide finish
- Tough steel construction
- Locking tab keeps spring in place

Description	Wire Range	Cat. No.
T®-Cutter Wire Cutter	Up to 1/2 in. O.D. fine-stranded wire and 10 AWG solid wire	**45-123**
Reflex™ Premium T®-Cutter Wire Cutter	Up to 1/2 in. O.D. fine-stranded wire and 10 AWG solid wire	**45-423**

T®-Cutter Lite Wire Cutter

In today's cutting-edge electronic production and assembly operations, the T®-Cutter Lite is a "must-have." Stranded or solid, copper or aluminum, this wire cutter cuts cleanly and accurately.

- Knife-type blade provides a shear-type cut
- Lightweight, compact design
- Perfect for copper and aluminum wire

Description	Cat. No.
T®-Cutter Lite Wire Cutter	**45-260**

Coax Strip and Crimp Tool

- Precision, form-ground stripping holes remove outer jacket and insulation from RG-59 and RG-6 coaxial cable
- Durable blades cut copper-coated steel conductors
- Three crimping nests for crimping F-connectors and ring terminals

Description	Cat. No.
Coax Strip & Crimp Tool	**30-433**
Coax Strip & Crimp Tool w/ten RG-6 F-Connectors	**30-433F**

Cable Ripper

- Slits cable sheathing before stripping wires
- Quick, clean and easy end or mid-run removal of jacket
- Convenient built-in wire gauge

Description	Cat. No.
Side Entry Cable Ripper	45-118

Underground Feeder (UF) Cable Stripper

- Self-adjusting stripping blades automatically select proper position
- Strips 12 AWG solid to 14 AWG Underground Feeder (UF) Cable
- Strips Twin and Earth cable
- Open-throat construction allows unlimited strip length
- Neatly removes outer cable sheath and inner wire sheathing to desired lengths
- Lightweight, ergonomic design reduces user fatigue

Description	Cat. No.
Underground Feeder Cable Stripper	45-235

Grip-N-Strip™ End Stripper

- Self-adjusting stripping blades automatically select proper position
- Strips 12 AWG solid to 20 AWG stranded PVC insulated wire
- Strip-length gauge
- Cuts up to 12 AWG solid wire
- Lightweight, ergonomic design reduces user fatigue
- Reinforced fiberglass construction
- Hardened steel blades for extra strength and longer life

Description	Cat. No.
Grip-N-Strip™ End Stripper	45-227

Sir Nickless™ Cutter
TO SEVER AND PROTECT ARMORED CABLE

- Handles all common BX, MCAP, MC and Flex cables
- Blade cuts armor without damage to internal conductors
- Splices cleanly through casings with only a few turns
- Handle knob stores up to six replacement blades

Description	Cat. No.
Rotary Armored Cable Cutter	35-782
Replacement blades (5/pack)	35-781
Replacement blades (1/pack)	35-781-1

Round Cable Slitting and Ringing Tools

- Cuts around cable jacket as well as slits the length of jacket for easy removal
- Use with single or multiple conductor cable up to 1.75 in. O.D.
- Blade adjusts for jacket thicknesses up to .125 in.
- Spare blade in handle base
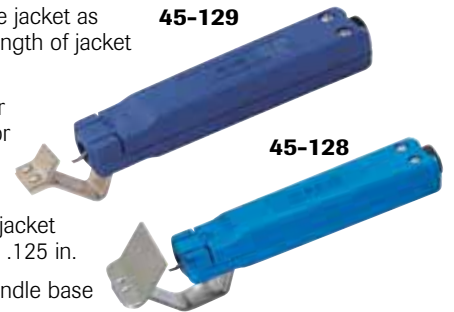
45-129

45-128

Description	Cat. No.
Cable Stripper for 1/4 in. to 3/4 in. O.D.	45-128
Cable Stripper for 3/4 in. to 1-1/2 in. O.D.	45-129
Replacement Blades for 45-128 and 45-129 (2/pkg.)	L-7486

Stripmaster® Wire Strippers

- One-step stripping enhances productivity
- Spring-action motion increases leverage and reduces operator fatigue
- Precision-ground, knife-type blades provide clean, accurate stripping

Description	Cat. No.
Stripmaster® Wire Stripper, 10-22 AWG (Boxed)	45-092
Stripmaster® Wire Stripper, 10-22 AWG (Clamshell)	45-292
Stripmaster® Wire Stripper, Coax RG-6	45-262

See Section C for complete Stripmaster® Wire Stripper line.

LASERedge™

Hand Tools

LASERedge™ pliers use high carbon, 1080 steel, which provides extra strength and hardness without sacrificing flexibility. It is one of the reasons our tools outperform the competition in performance and durability. All of our LASERedge tools have laser-hardened blades and teeth, which are more precise and provide better durability for strenuous applications like cutting steel or ACSR.

Laser-hardened blades and teeth last four times longer

Full polish for maximum corrosion resistance

Custom hardened tool steel for durability

Cross-hatched jaws so wires won't slip when pulling

Textured Santoprene™ slip resistant grip

FastFinder™ letter identification on the inside of our handles provides quick identification, even by touch

LIFETIME IDEAL GUARANTEE
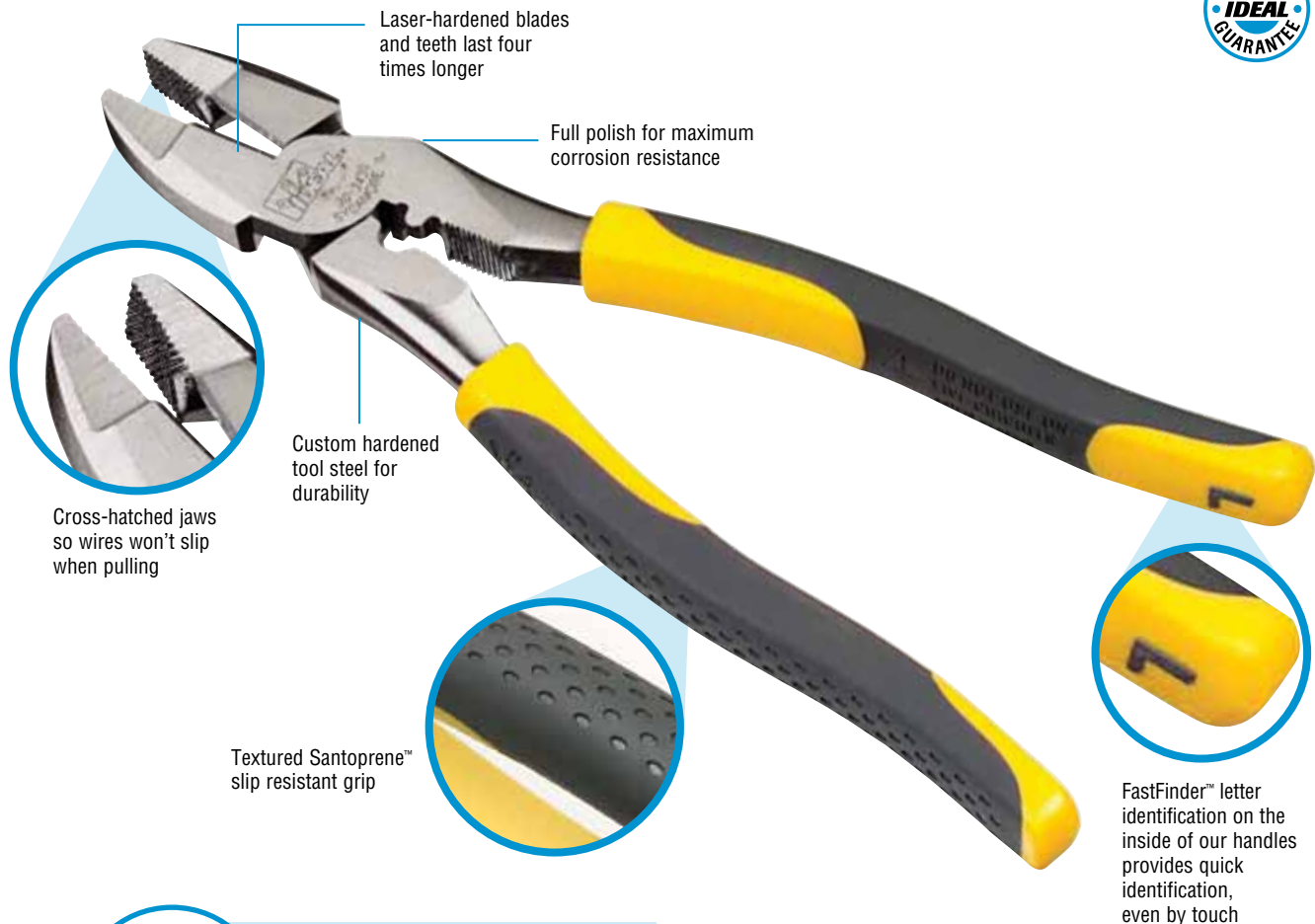
Blade Design

LASERedge pliers feature "knife-to-anvil" cutting blades for long life.
(Ideal for cutting screws, nails, hardened wire and ACSR)

Diagonal   **Long Nose**   **Tongue & Groove**   **Cable Cutter**   **Crimper**
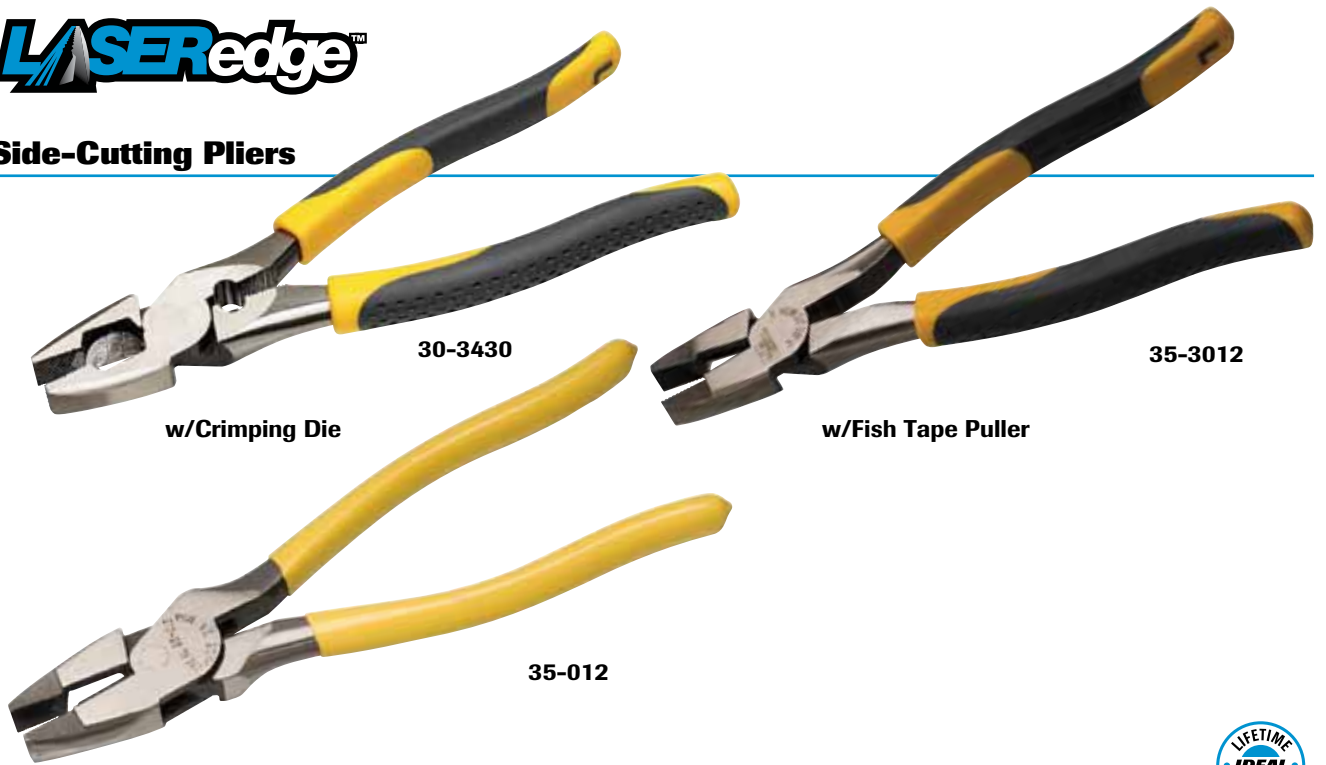
LASERedge™

Side-Cutting Pliers

30-3430

w/Crimping Die

35-3012

w/Fish Tape Puller

35-012

- Drop-forged, high-carbon steel construction withstands toughest applications
- Knife-to-anvil blades never need resharpening
- Cuts hardened wire, bolts and ACSR
- Laser-hardened blades and serrated jaws for long-term durability
- High-leverage design provides 40% more cutting power
- Unique reverse rivet protects smooth action of plier movement
- Vinyl-coated, comfort-grip handles for a secure grip

Description (Smart-Grip™ Plier Handles)	Cat. No.
9-1/4 in. New England nose high-leverage w/fish tape puller	**35-3012**
9-1/4 in. New England nose high-leverage w/crimping die	**30-3430**
Description (Dipped Handles)	**Cat. No.**
9-1/4 in. New England nose high-leverage w/fish tape puller	**35-012**
9-1/4 in. New England nose high-leverage w/crimping die	**30-430**

LIFETIME
IDEAL
GUARANTEE

IDEAL®

LASERedge™

Diagonal-Cutting Pliers

35-3028
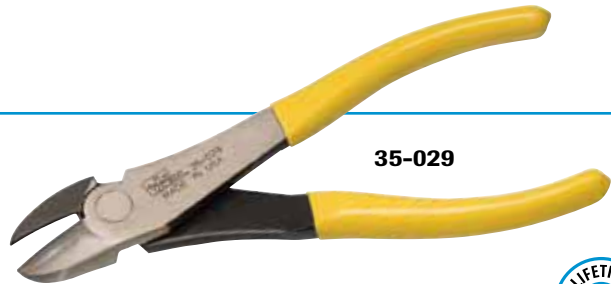
35-029

- Drop-forged, high-carbon steel construction withstands toughest applications
- Knife-to-anvil blades never need resharpening
- Laser-hardened blades cut hardened wire, bolts and ACSR
- Vinyl-coated, comfort-grip handles for a secure grip
- High-leverage design provides 40% more cutting power
- Models 35-029 and 35-3029 feature a convenient angled head for hard-to-reach areas and rocking out nails

Description (Smart-Grip™ Plier Handles)	Cat. No.
8 in. High-leverage Diagonal	**35-3028**
8 in. High-leverage Diagonal w/angled head	**35-3029**
Description (Dipped Handles)	**Cat. No.**
8 in. High-leverage Diagonal	**35-028**
8 in. High-leverage Diagonal w/angled head	**35-029**

Long-Nose Pliers
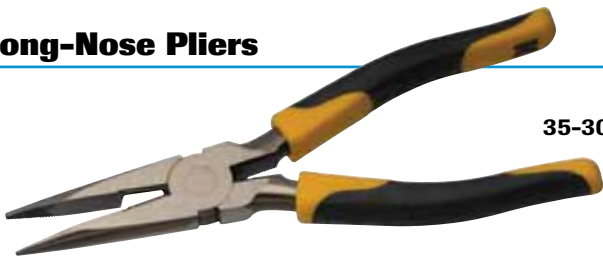
35-3038
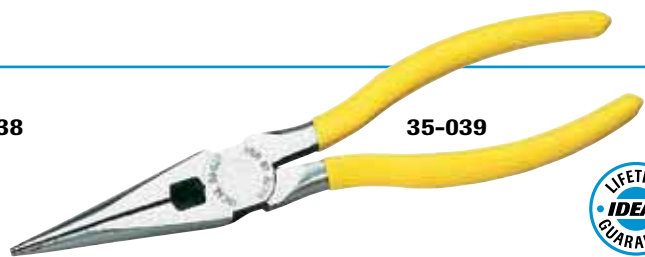
35-039

- Narrow profile head designed for working in tight areas
- Serrated jaws provide secure gripping surface
- Drop-forged, high-carbon steel construction
- Knife-to-anvil blades never need resharpening
- Laser-hardened blades cut hardened wire, bolts and ACSR
- Vinyl-coated, comfort-grip handles for a secure grip

Description (Smart-Grip™ Plier Handles)	Cat. No.
8-1/2 in. Long Nose w/Cutter	**35-3038**
Description (Dipped Handles)	**Cat. No.**
6 in. Long Nose w/Cutter	**35-036**
7-3/4 in. Long Nose w/Cutter	**35-037**
8-1/2 in. Long Nose w/Cutter	**35-038**
8-1/2 in. w/Cutter & stripping holes for 12 & 14 AWG wire	**35-039**

Tongue and Groove Pliers
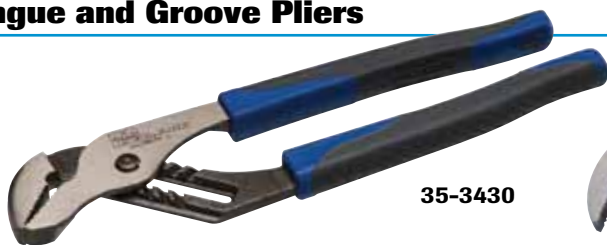
35-3430

35-440

- Patented undercut tongue and groove design ensures solid grip
- Patented reinforced flange protects against breakage
- Laser-hardened teeth remain sharp longer
- Drop-forged, high-carbon steel construction
- Vinyl-coated, comfort-grip handles for a secure grip

Description (Smart-Grip™ Plier Handles)	Jaw Opening (Inches)	Cat. No.
10 in. Tongue & Groove Pliers	2	**35-3430**
Description (Dipped Handles)	**Jaw Opening (Inches)**	**(Inches)**
10 in. Tongue & Groove Pliers	2	**35-430**
12 in. Tongue & Groove Pliers	2-1/4	**35-440**

LIFETIME IDEAL GUARANTEE

Hand Tools

LASERedge™

Cable Cutters
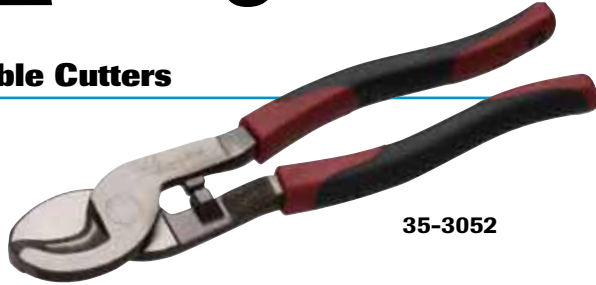
35-3052
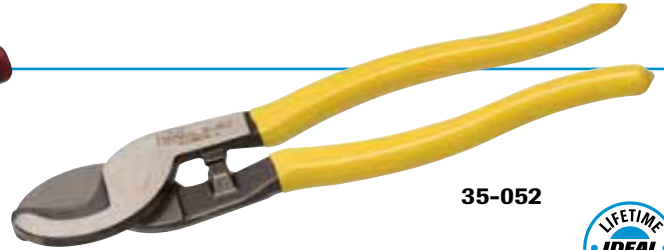
35-052

- Drop-forged, high-carbon steel construction
- Precision-ground, hardened cutting edges provide accurate cuts without cable distortion
- Designed for maximum leverage with minimum effort
- Cuts 2/0 copper and 4/0 aluminum (not for use on ACSR)
- Vinyl-coated, comfort-grip handles

Description (Smart-Grip™ Plier Handles)	Cat. No.
9-1/2 in. Cable Cutter	**35-3052**
Description (Dipped Handles)	**Cat. No.**
9-1/2 in. Cable Cutter	**35-052**

Multi-Crimp Tools

30-3429
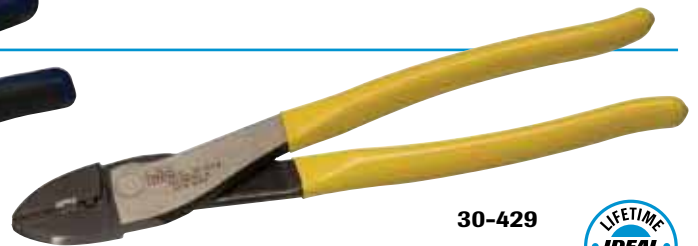
30-429

- Crimps bare or insulated terminals and splices on 10–22 AWG wire
- Knife-to-anvil blades never need resharpening
- Excellent leverage for easy crimping and cutting
- Drop-forged, high-carbon steel construction
- Vinyl-coated handles provide a solid, comfortable grip

Description (Smart-Grip™ Plier Handles)	Cat. No.
9-3/4 in. Multi-Crimp Tool	**30-3429**
Description (Dipped Handles)	**Cat. No.**
9-3/4 in. Multi-Crimp Tool	**30-429**

Crimp Tool

- Crimps all IDEAL crimp sleeves
- Excellent leverage for right-angle, double-indent crimps
- Cuts and twists wire
- Vinyl-coated handles provide a solid, comfortable grip

Description (Smart-Grip™ Handles)	Cat. No.
10-1/4 in. Crimp Tool	**30-425**

Wire Man™

WireMan™ pliers provide professional results for everyday use. These tools are the workhorse of electrical pliers; they are rugged yet precise, providing exceptional durability, easy cutting and a lifetime of quality use.

Hand Tools

Large head for extra strength

High leverage rivet requires less cutting force

LIFETIME **·IDEAL·** GUARANTEE

Cross-hatched jaws so wires won't slip when pulling

Custom hardened chrome vanadium steel for durability

Textured Santoprene™ slip-resistant grip

FastFinder™ letter identification on the inside of our handles provides quick identification, even by touch

Blade Design

WireMan pliers feature "knife-to-knife" cutting blades for easy cuts.

Diagonal **Long Nose** **Tongue & Groove** **Cable Cutter** **Crimper**

Hand Tools

Wire Man™

Side-Cutting Pliers
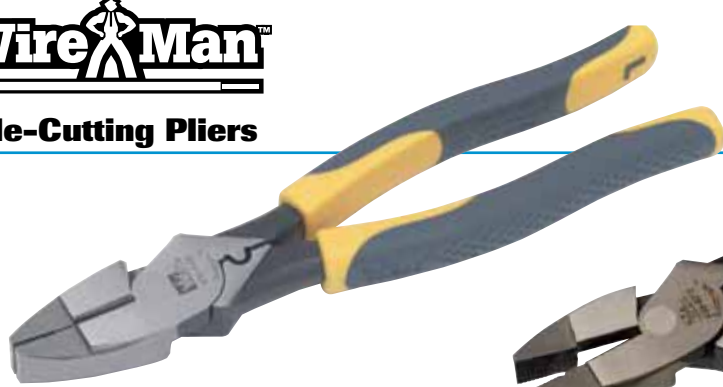
30-4430
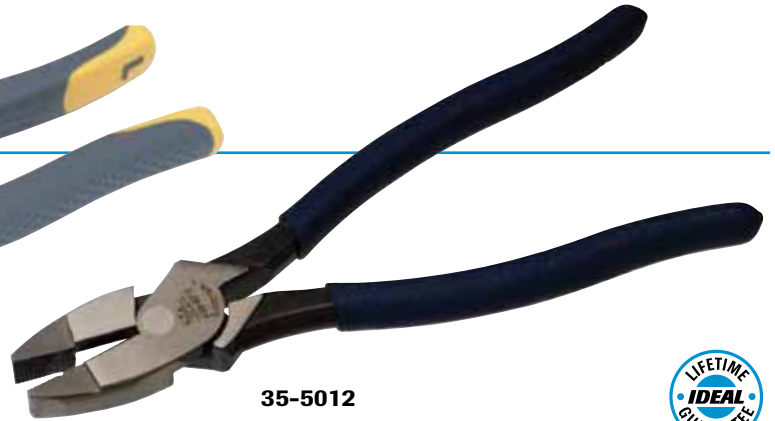
35-5012

- Custom chrome vanadium steel for durability
- High leverage pivot requires less cutting force
- Sharp, knife-to-knife blades for easy cutting
- Induction hardened teeth for long life
- Cross-hatched jaws so wires won't slip when pulling
- Ergonomic handles for comfortable, all-day use

Description (Smart-Grip™ Plier Handles)	Cat. No.
9-1/4 in. Side-Cutting Pliers	**35-4012**
9-1/4 in. Side-Cutting Pliers w/crimp and fish tape puller	**30-4430**
Description (Dipped Handles)	**Cat. No.**
9-1/4 in. Side-Cutting Pliers	**35-5012**
9-1/4 in. Side-Cutting Pliers w/crimp and fish tape puller	**30-5430**

LIFETIME IDEAL GUARANTEE

Diagonal-Cutting Pliers

35-4028

35-5029

- Custom chrome vanadium steel for durability
- High leverage pivot requires less cutting force
- Sharp, knife-to-knife blades for easy cutting
- Induction hardened teeth for long life
- Ergonomic handles for comfortable, all-day use

LIFETIME IDEAL GUARANTEE

Description (Smart-Grip™ Plier Handles)	Cat. No.
8 in. Diagonal-Cutting Pliers	**35-4028**
8 in. Diagonal-Cutting Pliers w/angled head	**35-4029**
Description (Dipped Handles)	**Cat. No.**
8 in. Diagonal-Cutting Pliers	**35-5028**
8 in. Diagonal-Cutting Pliers w/angled head	**35-5029**

Wire Man™

Hand Tools

Long-Nose Pliers
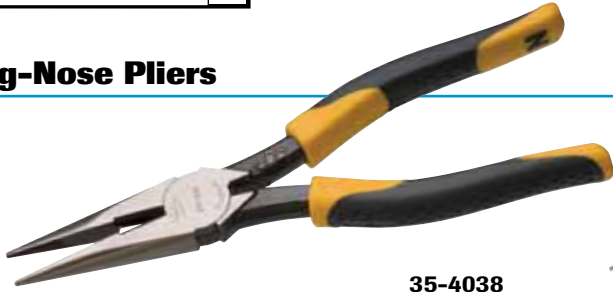
35-4038

35-5036

- Custom chrome vanadium steel for durability
- High leverage pivot requires less cutting force
- Sharp, knife-to-knife blades for easy cutting
- Induction hardened teeth for long life
- Cross-hatched jaws so wires won't slip when pulling
- Ergonomic handles for comfortable, all-day use

Description (Smart-Grip™ Plier Handles)	Cat. No.
6 in. Long-Nose Pliers	35-4036
8 in. Long-Nose Pliers	35-4038
Description (Dipped Handles)	**Cat. No.**
6 in. Long-Nose Pliers	35-5036
8 in. Long-Nose Pliers	35-5038

Tongue and Groove Pliers

35-4430

35-5430

- Custom chrome vanadium steel for durability
- Ergonomic handles for comfortable, all-day use

Description (Smart-Grip™ Plier Handles)	Cat. No.
10 in. Tongue & Groove Pliers	35-4430
Description (Dipped Handles)	**Cat. No.**
10 in. Tongue & Groove Pliers	35-5430

Wire Man™

Multi-Crimp Tools
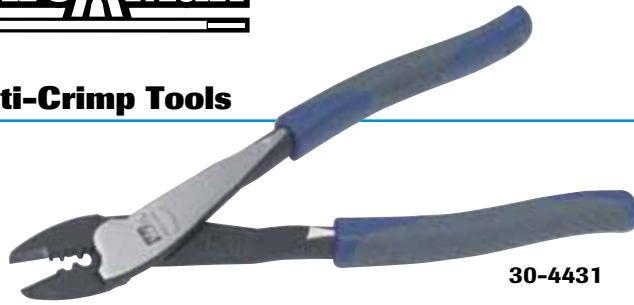
30-4431
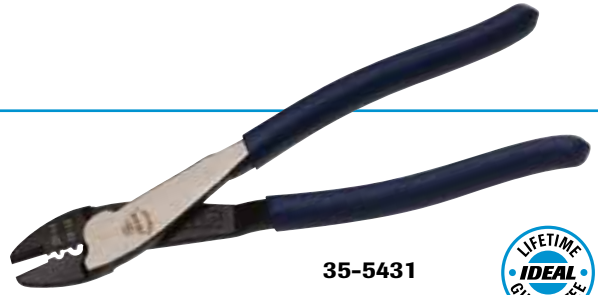
35-5431

- Custom chrome vanadium steel for durability
- High-leverage pivot requires less force
- Ergonomic handles for comfortable, all-day use
- Cuts, crimps and splices 10 – 22 AWG wire for insulated and non-insulated crimp connectors

Description (Smart-Grip™ Plier Handles)	Cat. No.
9-1/4 in. Multi-Crimp Tool	**30-4429**
9-1/4 in. Multi-Crimp Tool - Bare Terminals	**35-4431**
Description (Dipped Handles)	**Cat. No.**
9-1/4 in. Multi-Crimp Tool	**30-5429**
9-1/4 in. Multi-Crimp Tool - Bare Terminals	**35-5431**

Cable Cutters
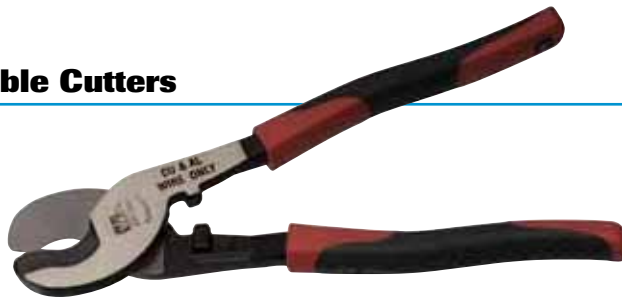
35-4052

35-5052

- Custom chrome vanadium steel for durability
- High-leverage pivot requires less force
- Sharp, knife-to-knife blades for easy cutting
- Induction hardened teeth for long life
- Ergonomic handles for comfortable, all-day use

Description (Smart-Grip™ Plier Handles)	Cat. No.
9 in. 2/0 Cable Cutter	**35-4052**
Description (Dipped Handles)	**Cat. No.**
9 in. 2/0 Cable Cutter	**35-5052**

Tenite Grips

- Fits LASERedge™ and WireMan™ Pliers
- Not insulated from electrical shock
- Boil in water to soften for easy installation onto handles

Description	Cat. No.
Replacement grips for 8 in. or 9 in. pliers (one pair)	**35-008**

Twist-a-Nut™ Screwdriver/Nutdriver

Textured Santoprene™ grip provides excellent torque and resists perspiration, water, oil and chemicals

Six torsion bars provide exceptional grip

Accu-Loop™ Wire Looping Hole

(Image actual size.)

Patented Wire-Nut® Wire Connector Wrench accepts a wide variety of connectors.

Patented Wire-Nut® Wire Connector Wrench accepts a wide variety of connectors.

| B-Cap® | Wing-Nut® | Wire-Nut® | Twister® |

Accu-Loop™ Wire looping holes

21-in-1 Twist-a-Nut™ Screwdriver

■ Wire connector wrench prevents finger fatigue and gets in tight spots

■ Premium screwdriver ratchet mechanism can handle high torque without failure

■ Ergonomic, slip-free comfort grip

■ Multiple bit storage unit and wire-looping hole in handle

■ Includes: #1 Phillips, #2 Phillips, #3 Phillips, 3/16" slotted, 1/4" slotted, 5/16" slotted, #1 square, #2 square, #15 star, #20 star, #25 star, #30 star, 3/32" hex, 1/8" hex, 3/16" hex, 5/32" hex, 1/4" nut, 5/16" nut and 7/16" nut

Multiple bit stoarge unit

(Lifetime warranty excludes bits)

PREMIUM
RATCHET
HIGH TORQUE

All-Metal Ratchet

• Pro-quality, 28 tooth double action, twin-tooth ratchet
• 225 lbs. of torque (stronger than human wrist can torque)

Description	Cat. No.
21-in-1 Twist-a-Nut™ Screwdriver	**35-688**

9-in-1 Ratch-a-Nut™ Screwdriver

■ Ratcheting wire connector wrench prevents finger fatigue and gets in tight spots

■ Premium screwdriver ratchet mechanism can handle high torque without failure

■ Ergonomic, slip-free comfort grip

■ Accepts Twist-a-Nut™ replacement bits

■ Includes: 1/4 in. and 3/16 in. slotted, #1 & #2 Phillips, 1/4 in., 5/16 in., 7/16 in. nutdrivers, ratcheting screwdriver end, ratcheting wire connector wrench and wire-looping hole in handle

RATCHETS AT BOTH ENDS

IDEAL LIFETIME GUARANTEE

(Lifetime warranty excludes bits)

Description	Cat. No.
9-in-1 Ratch-a-Nut™ Screwdriver	**35-988**

Replacement Bits (for both Ratch-a-Nut™ and Twist-a-Nut™)

Description		Cat. No.
1/4 in. slotted – #2 Phillips		**35-911**
3/16 in. slotted – #1 Phillips		**35-912**
1/4 in. slotted – #2 Square Recess		**35-913**
3/16 in. slotted – #1 Square Recess		**35-914**
#15 & #10 Torx®		**35-915**

Torx® is a trademark of Camcar division of Textron, Inc.

7-in-1 Twist-a-Nut™ Screwdriver/Nutdrivers

■ Includes universal Wire-Nut® Wire Connector Wrench in handle to help install twist-on wire connectors

■ Includes wire-looping hole in handle

■ Includes #1 & #2 Phillips, 1/4 in. & 3/16 in. slotted, 1/4 in. & 5/16 in. Nutdriver

■ #35-909 includes #1 & #2 Square Recess in place of #1 & #2 Phillips

■ Handle is interchangeable with conduit deburrer head (#35-096) and 6-in-1 Tap Tool (#35-922)

IDEAL LIFETIME GUARANTEE

Description	Cat. No.
7-in-1 Twist-a-Nut™ Screwdriver/Nutdriver	**35-908**
7-in-1 Twist-a-Nut™ Screwdriver/Nutdriver with square tip	**35-909**

6-in-1 Twist-a-Nut™ Tapping Tool

■ Forms new threads, re-forms burred threads and cleans out obstructions

■ Reversible, high-carbon tap with three clearly marked thread sizes on each end

■ Handle is interchangeable with 7-in-1 Screwdriver (#35-908) and Conduit Deburrer (#35-083)

Description	Cat. No.
Twist-a-Nut™ Tapping Tool includes: 6-32, 8-32 & 10-32 on one tapping side, 10-24, 12-24 & 1/4-20 on the other	**35-922**
Replacement collar and six taps	**35-923**

3-in-1 Twist-a-Nut™ Tap Tool

■ Forms new threads, re-forms burred threads and cleans out obstructions

■ Reversible, high-carbon tap with three clearly marked thread sizes on each end

■ Handle is interchangeable with 7-in-1 Screwdriver (#35-908) and Conduit Deburrer (#35-083)

■ Universal connector wrench in handle helps install twist-on wire connectors

Description	Cat. No.
3-in-1 Tap Tool includes handle and three taps	**35-412**

Twist-a-Nut™ Pro Electrician's Screwdrivers

IDEAL LIFETIME GUARANTEE

■ Convenient Wire-Nut® Wire Connector Wrench in end of handle

■ Wire-looping hole in handle

■ Vapor-blasted tip prevents plate chipping

■ Tough, chrome vanadium steel shank

■ Precision ground tip provides secure fit in screw slot

Description		Cat. No.
#2 x 6 in. Robertson		**30-330**
1/4 in. x 4 in. Slotted		**30-331**
#2 x 4 in. Phillips		**30-332**
1/4 in. x 6 in. Slotted Cabinet Tip		**30-333**

Twist-a-Nut™ Conduit Deburring Tools

Accu-Loop™ wire looping holes

- ■ Deburrs inside and outside edges of 1/2 in., 3/4 in. and 1 in. thin wall conduit
- ■ Hooded tip tightens EMT fitting set screws without slipping
- ■ Square tip "seats" much more quickly on fitting screws than slotted version
- ■ Head removes and is interchangeable with IDEAL 7-in-1 Twist-a-Nut™ Screwdriver shaft (#35-908)
- ■ Head can be used in drill or cordless screwdriver
- ■ Universal Wire-Nut® Wire Connector Wrench in handle end eases installation of twist-on connectors
- ■ Lifetime guarantee (excludes blades)

35-098

Description	Cat. No.
Conduit Deburring Tool, slotted tip	35-083
Conduit Deburring Tool - head only, slotted tip	35-096
Conduit Deburring Tool - #2 square tip	35-075
Conduit Deburring Tool - head only, #2 square tip	35-098
Replacement Blades (2/pack)	35-097

Twist-a-Nut™ Conduit Wiring Kit

- ■ Includes
  - – Twist-a-Nut™ Screwdriver (35-908)
  - – Twist-a-Nut™ Deburring Head - Square Tip (35-098)
  - – Twist-a-Nut™ Tap Tool Shaft (35-923)
  - – Three Spare Bits (1/4 in. slotted & #2 square, 3/16 in. slotted & #1 square, #10 & #15 Torx®)
  - – 8-Pocket Carrying Pouch (35-927)
- ■ Nylon carrying pouch holds all three Twist-a-Nut™ tools plus room for four replacement bits or taps
- ■ Strong easy-slide metal belt clip

Description	Cat. No.
Twist-a-Nut™ Combo Pack	35-926
Twist-a-Nut™ Carrying Pouch only	35-927

Hand Tools

Cushioned-Grip Screwdrivers

Cushioned-rubber grip

Special tip treatment for precise fit

Chrome vanadium steel shank

FastFinder™ identification on the end of handles

7-Piece Screwdriver Set

35-193
35-150
35-194
35-154
35-183
35-156
35-186
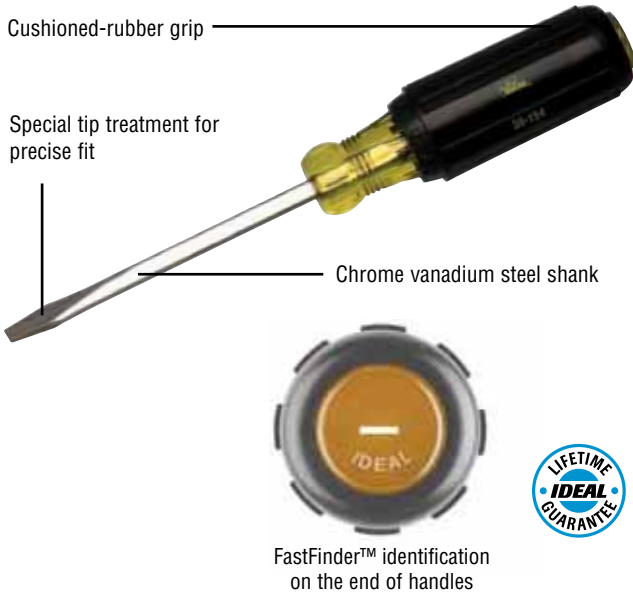
Includes:
- 1/4 in. x 4 in. HD Cabinet
- Phillips #1 x 3 in.
- Phillips #2 x 4 in.
- 3/16 in. x 6 in. Slotted Cabinet
- 3/16 in. x 3 in. Slotted Cabinet
- 5/16 in. x 6 in. HD Slotted w/ Keystone Tip
- 1/4 in. x 4 in. HD Slotted w/ Keystone Tip

Description	Cat. No.
7-Piece Screwdriver Set	35-1298

8-Piece Screwdriver Set

35-193
35-183
35-194
35-164
35-154
35-186
35-151
35-166

Includes:
- 1/4 in. x 6 in. HD Cabinet
- 1/4 in. x 4 in. Square Shank HD Keystone
- 1/4 in. x 4 in. HD Keystone
- 5/16 in. x 6 in. Keystone
- 3/16 in. x 3 in. Cabinet
- 3/16 in. x 6 in. Cabinet
- Phillips #1 x 3 in.
- Phillips #2 x 4 in.

Description	Cat. No.
8-Piece Screwdriver Set	35-298

5-Piece Screwdriver Set

35-194
35-154
35-186
35-151
35-166

Includes:
- 1/4 in. x 6 in. HD Cabinet
- 1/4 in. x 4 in. Square Shank HD Keystone
- 5/16 in. x 6 in. Keystone
- 3/16 in. x 6 in. Cabinet
- Phillips #2 x 4 in.

Description	Cat. No.
5-Piece Screwdriver Set	35-297

Slotted Heavy–Duty Keystone Tip

- Larger shank for heavy-duty applications
- Identification mark on ends
- Vapor-blasted tip prevents plate chipping
- Precision ground tip provides secure fit in screw slot
- Square-shank models offer wrench-assisted turning
- Tough, chrome vanadium steel shank
- Cushioned rubber grips

Square Shank	Blade Length	Total Length	Cat. No.
1/4 in. Shank and tip	4 in.	8-3/8 in.	35-154
5/16 in. Shank and tip	6 in.	11 in.	35-156
3/8 in. Shank and tip	8 in.	13 in.	35-158
Round Shank	Blade Length	Total Length	Cat. No.
1/4 in. Shank and tip	1 in.	3-3/8 in.	35-161
1/4 in. Shank and tip	4 in.	8-3/8 in.	35-164
5/16 in. Shank and tip	6 in.	11 in.	35-166
3/8 in. Shank and tip	8 in.	13 in.	35-168

Slotted Cabinet Tip

- Vapor-blasted tip prevents plate chipping
- Identification mark on ends
- Precision ground tip provides secure fit in screw slot
- Nickel-chrome plating for corrosion resistance
- Tough, vanadium steel shank with cushioned rubber grip
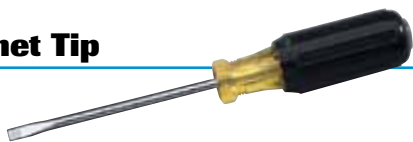
Description	Blade Length	Total Length	Cat. No.
3/16 in. Shank and tip	3 in.	6-3/4 in.	35-183
3/16 in. Shank and tip	4 in.	7-3/4 in.	35-184
3/16 in. Shank and tip	6 in.	9-3/4 in.	35-186
3/16 in. Shank and tip	8 in.	11-3/4 in.	35-188
3/16 in. Shank and tip	10 in.	13-3/4 in.	35-190

Phillips

- Vapor-blasted tip prevents plate chipping
- Identification mark on ends
- Nickel-chrome plating for corrosion resistance
- Tough, chrome vanadium steel shank with cushioned rubber grip
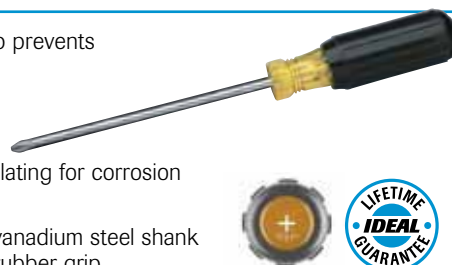
Description	Blade Length	Total Length	Cat. No.
#1 Phillips	3 in.	6-3/4 in.	35-193
#2 Phillips	1 in.	3-3/8 in.	35-191
#2 Phillips	4 in.	8-3/8 in.	35-194
#2 Phillips	6 in.	10-3/8 in.	35-195
#3 Phillips	6 in.	11 in.	35-196

Square Head

- Precise tip for square-recess screws
- Color-coded handle for easy identification
- Nickel-chrome plating for corrosion resistance
- Tough, chrome vanadium steel shank with cushioned rubber grip

Description	Blade Length	For Screw Sizes	Cat. No.
#0 x 4 in.	4 in.	3, 4	35-690
#1 x 4 in.	4 in.	5, 6, 7	35-691
#1 x 8 in.	8 in.	5, 6, 7	35-692
#2 x 4 in.	4 in.	8, 9, 10	35-693
#2 x 8 in.	8 in.	8, 9, 10	35-694
#3 x 4 in.	4 in.	12, 14	35-695
#3 x 8 in.	8 in.	12, 14	35-696

Quick-Rotating

- Ideal for threading screws in switches, fixtures and anchors
- Identification mark on ends
- One-handed crank action for quick and easy use
- Vapor-blasted tip prevents plate chipping
- Precision-ground tip provides secure fit in screw slot
- Nickel-chrome plating for corrosion resistance
- Tough, chrome vanadium steel shank
- Cushioned rubber grip
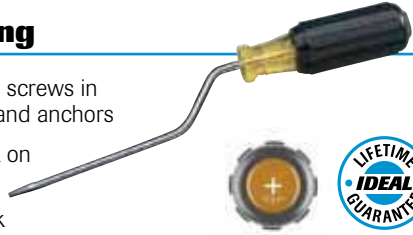
Description	Blade Length	Total Length	Cat. No.
3/16 in. Shank and Tip	6 in.	8-3/4 in.	**35-200**
3/16 in. Shank and #2 Phillips Tip	6 in.	9-3/4 in.	**35-203**

2-Piece Stubby Screwdriver/Nutdriver Sets

- For use in tight spaces

35-1300

35-1299

Description	Cat. No.
2-Piece Stubby Nutdriver Set	**35-1299**
2-Piece Stubby Screwdriver Set	**35-1300**

Grip-n-Screw™ Screwdriver

- Holds screw when collar is extended
- Holds screw in place when installing in hard-to-reach locations
- Tough, chrome vanadium steel shank and comfort grip handle

Description	Blade Length	Total Length	Cat. No.
3/16 Slotted	6 in.	10 in.	**35-406**
#2 Phillips	7 in.	11 in.	**35-404**

4-Piece Mini Cushion-Grip Screwdriver Set

Description	Cat. No.
4-Piece Mini Cushion-Grip Screwdriver Set Includes: #0 x 3 in. Phillips, 1/16 in. x 2 in. Keystone, 3/32 in. x 3 in. Cabinet and 1/8 in. x 3 in. Cabinet Screwdrivers	**35-1301**

Slim Electronics
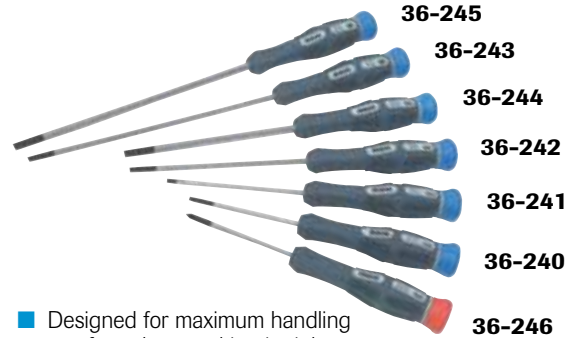
36-245
36-243
36-244
36-242
36-241
36-240
36-246

- Designed for maximum handling comfort when working in tight areas
- Tough, chrome vanadium steel shank
- Phosphate tip for longer wear life
- Rotating cap for optimum control for precise centering
- Color-coded cap for easy identification

Description	Style	Blade Length	Cat. No.
3/32 in.	Cabinet Tip	2-1/2 in.	**36-240**
3/32 in.	Cabinet Tip	3 in.	**36-241**
1/8 in.	Cabinet Tip	4 in.	**36-242**
1/8 in.	Cabinet Tip	6 in.	**36-243**
5/32 in.	Cabinet Tip	4 in.	**36-244**
5/32 in.	Cabinet Tip	6 in.	**36-245**
#0 - 1/8 in.	Phillips Head	2-1/2 in.	**36-246**
7-Piece Set includes one each of 36-240 thru 36-246			**36-248**
4-Piece Set includes one each of 36-240, -241, -242, & -246			**36-249**

Hand Tools

Awl

- Heavy-duty construction for piercing, punching and scribing
- Identification mark on end
- Cushioned rubber grip

LIFETIME IDEAL GUARANTEE

Description	Blade Length	Total Length	Cat. No.
Awl	3 in.	6-3/4 in.	**35-202**

2-Piece Hollow-Shaft Nutdriver Set

- Includes 1/4 in. & 5/16 in.
- Long, hollow shanks handle longer bolts
- Nickel/chrome plated to resist rust and corrosion
- Long shanks useful in deep electrical boxes
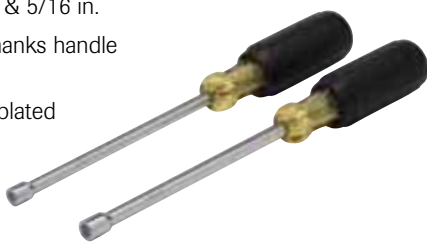
Description	Cat. No.
2-Piece Nutdriver Set	**35-1302**

11-in-1 Screwdriver/Nutdriver

Available Spring 2011

- Includes 1/4 in. slotted, #2 Phillips, 3/16 in. slotted, #1 Phillips, #1 & #2 square recess, #15 and #10 Torx® and 5/16 in. & 1/4 in. Nutdriver
- Cushion grip for comfort and performance
- Accu-Loop™ Wire looping holes

LIFETIME IDEAL GUARANTEE

Patented Wire-Nut® Wire Connector Wrench in handle.

Description	Cat. No.
11-in-1 Screwdriver/Nutdriver	**35-910**

Replacement Bits (for 10-in-1 Screwdriver)

Description		Cat. No.
1/4 in. slotted - #2 Phillips (2/pack)		**35-940**
3/16 in. slotted - #1 Phillips (2/pack)		**35-941**
#1 & #2 Square Recess (2/pack)		**35-942**
#15 & #10 Torx® (2/pack)		**35-943**

Torx® is a registered trademark of Camcar division of Textron, Inc.

6-in-1 Screwdriver/Nutdriver

Available Spring 2011

- Contains: 5/16 in. Nutdriver, #1 Phillips, #2 Phillips, 9/32 in. slotted and 3/16 in. slotted
- Cushion grip for performance and comfort
- Accu-Loop™ Wire looping holes

LIFETIME IDEAL GUARANTEE
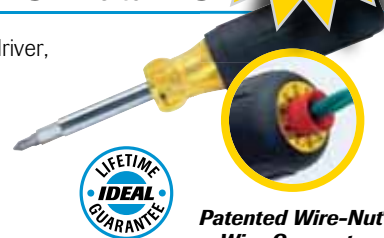
Patented Wire-Nut® Wire Connector Wrench in handle.

Description	Cat. No.
6-in-1 Screwdriver/Nutdriver	**35-905**

Replacement Bits (for 5-in-1 Screwdriver)

Description		Cat. No.
#1 Phillips - 3/16 in. slotted		**LA-4123**
#2 Phillips - 9/32 in. slotted		**LA-4124**

Nutmaster® Nutdrivers

- Long, hollow shank handles longer bolts
- Identification on ends
- Nickel/chrome plated to resist rust and corrosion
- Cushioned rubber grips
- Models 35-292 and 35-295 fit Twister® Wire Connectors

Description	Shaft Length	Cat. No.
3/16 in.	3-1/4 in.	**35-290**
1/4 in.	3-1/4 in.	**35-291**
5/16 in.	3-1/4 in.	**35-292**
11/32 in.	3-1/4 in.	**35-293**
3/8 in.	3-1/4 in.	**35-294**
7/16 in.	4 in.	**35-295**
1/2 in.	4 in.	**35-296**

7-Piece Nutdriver Set

35-290
35-291
35-292
35-293
35-294
35-295
35-296

Includes:
- 3/16 in. x 3-1/4 in.
- 1/4 in. x 3-1/4 in.
- 5/16 in. x 3-1/4 in.
- 11/32 in. x 3-1/4 in.
- 3/8 in. x 3-1/4 in.
- 7/16 in. x 4 in.
- 1/2 in. x 4 in.

Description	Cat. No.
7-Piece Nutdriver Set	**35-299**

Recessed Light Kit

- All the tools needed to install recessed lights
- Long spring tool easily installs and removes spring
- Compact nutdriver is 2-1/4 in. - providing added clearance in recess lighting
- Cushion grip for added comfort

Description	Cat. No.
Recessed Light Kit	**35-698**

Hand Tools

PowerBlade™ Cable Cutter

- Extremely versatile: fits almost any drill (12V minimum)
- Cuts copper up to 2 in. diameter or 750 MCM or aluminum up to 2 in. diameter or 1000 MCM
- Heavy-duty gears and specially hardened blades for professional quality
- Rounded blade design minimizes cable distortion during cutting
- No need to mess with battery packs or special chargers; this tool works with the drill you already carry!

(Drill not included)

(Folding handle for storage.)

Description	Cat. No.
PowerBlade™ Cable Cutter	35-078
PowerBlade™ Replacement Handle	K-8947R
PowerBlade™ Replacement Blades (pair)	K-8906R
PowerBlade™ Replacement Torque Arm Assembly	K-8909
PowerBlade™ Replacement Carrying Case	K-8926

*Max. Jaw Opening - 2 in. Not for cutting steel or ACSR.

Big Kahuna Cable Cutter

- Cuts copper up to 3-1/4 in. diameter or 750 MCM or aluminum up to 3-1/4 in. or 1000 MCM power cable
- Heavy-duty gears and specially hardened blades for long life
- Rounded blade design minimizes cable distortion during cutting
- Folding handle facilitates cuts in tight electrical boxes
- Comes complete with carrying case

Available Spring 2011

Description	Cat. No.
Big Kahuna Cable Cutter	35-076

ACSR Cable Cutter

- Cuts Tri-plex ACSR power cable up to 3/4 in. diameter and 7/16 in. Guy wire
- Heavy-duty gears and specially hardened blades for long life
- Rounded blade design minimizes cable distortion during cutting
- Folding handle facilitates cuts in tight electrical boxes
- Comes complete with carrying case

Available Spring 2011

Description	Cat. No.
ACSR Cable Cutter	35-077

Ratcheting Cable Cutter

- Cuts hard drawn copper up to 400 KCMIL (MCM) and soft copper, aluminum and multiple conductor cable up to 600 KCMIL (MCM)
- Hardened steel blades ensure consistent cuts and long-term durability
- Rounded blade design minimizes cable distortion during cutting
- Quick release mechanism simplifies blade back-out
- Locking mechanism keeps handles closed for easy storage

Description	Cat. No.
400 KCMIL (MCM) Ratcheting Cable Cutter*	35-056
Replacement blade (moveable side only)	35-085

*Max. Jaw Opening - 2 in. Not for cutting steel or ACSR.

Ratcheting Cable Cutter

- 750 KCMIL Ratcheting Cable Cutter is designed to cut 750 KCMIL (MCM) and smaller hard-drawn copper and aluminum cables
- Hardened steel blades ensure consistent cuts and long-term durability
- Rounded blade design minimizes cable distortion during cutting
- Quick release mechanism simplifies blade back-out
- Locking mechanism keeps handles closed for easy storage
- Molded-in foot provides stability and leverage when making multiple cuts

BIGFOOT™

Description	Cat. No.
750 KCMIL (MCM) Ratcheting Cable Cutter*	35-053
Replacement blade (moveable side only)	35-057

*Max. Jaw Opening - 2 in. Not for cutting steel or ACSR.

Cable Cutters

Sir Nickless ™ Cutter
TO SEVER AND PROTECT ARMORED CABLE

- Handles all common BX, MCAP, MC and Flex cables
- Blade cuts armor without damage to internal conductors
- Splices cleanly through casings with only a few turns
- Handle knob stores up to six replacement blades

Description	Cat. No.
Rotary Armored Cable Cutter	**35-782**
Replacement blades (5/pack)	**35-781**
Replacement blade (1/pack)	**35-781-1**

Long-Arm Cable Cutters

35-033

- High strength forged blades for ultimate durability
- Precision-ground jaws make clean cuts with minimal cable distortion
- Replaceable blades
- For copper and aluminum only. Not designed for steel or ACSR.

Description	Length	Cat. No.
250 MCM Long-Arm Cable Cutter	14	**35-031**
500 MCM Long-Arm Cable Cutter	22	**35-032**
1000 MCM Long-Arm Cable Cutter	32	**35-033**
Replacement Head - 250 MCM (for 35-031)	—	**35-031B**
Replacement Head - 500 MCM (for 35-032)	—	**35-032B**
Replacement Head - 1000 MCM (for 35-033)	—	**35-033B**

CAUTION: Comfort-grip handles are not designed to for protection against electrical shock. Do not use on live circuits.

Mechanical Indentor and Crimp Tool

- Use with aluminum (6 AWG to 4/0) and copper (8 AWG to 250 KCMIL) wires
- Adjustable crimping nests with clearly marked gauges
- Lightweight and easy to operate
- Rugged cast steel construction for long-term durability
- Connections are UL Listed when using this tool with IDEAL Non-Insulated Terminals (#8 - #4 AWG).
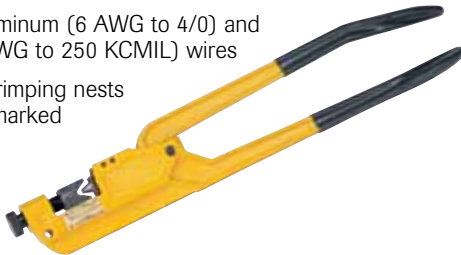
Description	Cat. No.
Mechanical Indentor	**88-843**

Crimp Tool

- Crimps all IDEAL crimp sleeves
- Excellent leverage for right-angle, double-indent crimps
- Cuts and twists wire
- Vinyl-coated handles provide a solid, comfortable grip
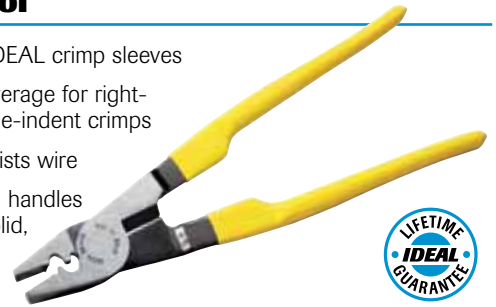
Description	Cat. No.
10-1/4 in. Crimp Tool	**30-425**

Buchanan Construction Products Four-Way Crimp Tool

- Patented design ensures even compression and reliable connections
- Spring-loaded, cam-actuated plungers
- Fingertip adjustment for different connector sizes
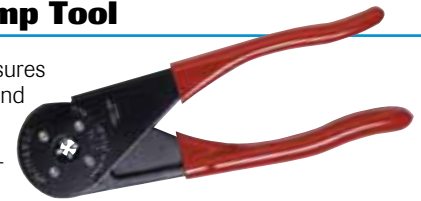
Description	Cat. No.
Four-Way Crimp Tool	**C24**

Ratchet Crimp Tool

- Crimps insulated or bare terminals and splices on 10–22 AWG wire
- Ratchet action prevents release prior to crimp connection — helps ensure uniform crimps
- Vinyl-coated handles provide a solid, comfortable grip

Description	Cat. No.
Ratchet Crimp Tool	**83-001**

Aviation Tin Snips

- Chrome-molybdenum steel forged blades for greater strength and durability
- Serrated edges provide a stable hold when cutting
- Labor-saving design for easier cutting
- Comfortable non-slip dual durometer grips

Description	Cat. No.
Straight-Cut Aviation Tin Snips	**35-001**

Adjustable Wrenches

35-020

35-021

- Narrow profile head reaches into tight spaces
- Tight tolerance on thumbscrew won't loosen or wobble with use
- Extra wide jaw capacity with standard and metric markings
- Forged steel construction
- Tempered and hardened for lifetime service

LIFETIME IDEAL GUARANTEE

Description	Jaw Capacity	Cat. No.
8 in. Adjustable Wrench	1-1/8 in.	35-020
10 in. Adjustable Wrench	1-5/16 in.	35-021

IDEAL Wipes™
The Multi-Purpose Towel

- Pre-moistened wipes require no water
- Cleans dirt, grease, lube and grime
- Durable fabric scrubs without tearing
- Infused with natural hand moisturizers and Vitamin E
- Orange citrus scent

Description	Cat. No.
IDEAL Wipes™, 12 in. x 9 in. (82/can)	38-500

Electric Engraving Tools

- Low-cost, industrial-quality marker quickly and easily engraves metal, glass, stone, ceramics, plastics, hard rubber, wood and many other hard materials
- Unique design reduces bouncing and provides smooth, easy writing
- Operates at 7,200 strokes per minute
- Stroke adjusts to vary depth of mark
- Includes carbide-tipped point for normal markings
- Diamond point available for engraving extra-hard materials (50 to 64 Rockwell, scale C)

Description	Cat. No.
Engraver w/carbide-tipped point — 120V, 60 Hz	11-111
Engraver w/carbide-tipped point & 3-conductor grounded cord & plug — 120V, 60 Hz	11-113
Carbide-Tipped replacement point	11-200
Diamond replacement point	11-201

Drop-Forged Handled Hammer

- One-piece drop-forged, tempered-steel polished head and handle
- Long, straight claws simplify removal of electrical fixtures
- Comfortable, perforated anti-vibe grips
- Elongated neck for hitting inside boxes

LIFETIME IDEAL GUARANTEE

Description	Cat. No.
18 oz. x 12-1/2 in. Drop-Forged Handled Hammer	35-210

25' Automatic Blade Lock Measuring Tape

- Blade automatically stays out when extended
- Push button for smooth blade retraction
- Comfortable, shock-resistant rubber grip
- Double-sided tape

Description	Cat. No.
Auto-Lock™ Tape Measure - 25 ft.	35-242

30' Magnetic-Tip Measuring Tape

- 30' length for commercial conduit installation use
- Measurement marks on both sides of tape
- Strong magnets on tip for one-person measurement
- Blade automatically stays out when extended
- Push button for smooth blade retraction
- Comfortable, shock-resistant rubber grip

Description	Cat. No.
Mag-Tape™ Tape Measure - 30 ft.	35-238

Hand Tools

Torpedo Level

- 9 in. aluminum frame with magnetic and V-grooved edges
- Windows provide easy reading of plumb level and 45° mitre in dim lighting
- Three rare earth magnets for strong cling to conduit

Description	Cat. No.
9 in. Torpedo Level	**35-205**

Center Punch

- Accurately start drilling holes on steel surfaces
- One-piece construction
- Hardened and tempered for long life

Description	Cat. No.
Center Punch	**35-192**

Cold Chisel

- Excellent for fitting electrical gear on concrete surfaces
- One-piece construction
- Hardened and tempered for long life

Description	Cat. No.
Cold Chisel	**35-187**

Wood Chisel

- Makes fitting J-boxes to wood studs easier
- Use by hand or mallet
- Hardened and tempered for long life
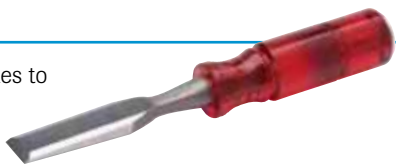
Description	Cat. No.
Wood Chisel	**35-189**

Hex–Key Sets

- 8650 steel construction
- Dual-durometer, slip-resistant grip

35-146

Description	Cat. No.
4 in. handle w/nine 3-in. keys (5/64 in., 7/64 in., 1/8 in., 9/64 in., 5/32 in., 3/6 in., 7/32 in. & 1/4 in.)	**35-146**
5-1/4 in. handle w/five 5-in. keys (3/16 in., 7/32 in., 1/4 in., 5/16 in. & 3/8 in.	**35-147**

Utility Knife

- Quick-change retractable blade system — no disassembly required
- Built in pull-line cutter
- Includes three blades in storage compartment

Description	Cat. No.
Utility Knife	**35-300**
Replacement blades - Universal (5/pack)	**35-301**

Pocket Knives

35-285   **35-286**   **35-287**

- 2-1/4 in. blade locks in position
- High-carbon stainless steel blade construction for extra strength and durability
- Durable Buyrate® non-slip handle
- Brass liners

Description	Cat. No.
Electrician's Knife w/spearpoint and screwdriver blade	**35-285**
Hawkbill Knife w/curved blade	**35-286**
Lineman's Jack Knife w/sheepfoot blade	**35-287**

Tool Kits featuring LASERedge™ Pliers

17-Piece Set – #35-809

Set Includes:
- Four LASERedge™ Pliers with Smart-Grip™ Handles (#35-3012 – 9-1/4" Linesman w/fish tape puller, #35-3038 – 8" Long Nose, #35-3430 – 10" Tongue and Groove, #35-3052 – 9-1/2" Cable Cutter)
- #45-915 – Kinetic™ Reflex™ T®-Stripper Wire Stripper
- #35-908 – 7-in-1 Twist-A-Nut™ Screwdriver
- #Five Cushion Grip Screwdrivers (#35-193 – #1 x 3 Phillips, #35-194 – #2 x 4 Phillips, #35-186 – 3/16" x 6 Slotted Cabinet Tip, #35-164 – 1/4" x 4 Slotted round shank, #35-406 – 3/16" x 6 Screw holding slotted)
- #35-286 – Hawkbill Knife
- #35-210 – Electrician's Hammer
- #35-242 – 25' Auto-Lock™ Tape Measure
- #35-205 – Torpedo Level
- #61-086 – Vol-Con® XL Voltage/Continuity Tester
- #35-975 – Tuff-Tote™ Premium Leather Tool Carrier

16-Piece Set – #35-800

Set Includes:
- Five LASERedge™ Pliers with dipped grips (#30-430 – 9-1/4" Linesman w/ crimper, #35-029 – 8" Offset Diagonal, #35-038 – 8" Long Nose, #35-430 – 10" Tongue and Groove, #35-052 – 2/0 Cable Cutter)
- #45-120 – Premium T®-5 T®-Stripper Wire Stripper
- #35-908 – 7-in-1 Twist-A-Nut™ Screwdriver
- Two Cushion Grip Screwdrivers (#35-194 – #2 x 4 Phillips, #35-164 – 1/4 x 4 Slotted round shank)
- #35-083 – Twist-A-Nut™ Conduit Deburring Tool
- #35-210 – Electrician's Hammer
- #35-242 – 25' Auto-Lock™ Tape Measure
- #35-285 – Electrician's Knife
- #61-086 – Vol-Con® XL Voltage/Continuity Tester
- #61-201 – Replacement battery
- #35-311 – Tuff-Tote™ Leather Tool Pouch

13-Piece Set – #35-790

Set Includes:
- Three LASERedge™ Pliers with Smart-Grip™ handles (#35-3012 – 9-1/4" Linesman w/fish tape puller, #35-3038 – 8" Long Nose, #35-3430 – 10" Tongue and Groove)
- #45-915 – Kinetic™ Reflex™ T®-Stripper Wire Stripper
- Four Cushion Grip Screwdrivers (#35-193 – #1 x 3 Phillips, #35-194 – #2 x 4 Phillips, #35-186 – 3/16" x 4 Slotted Cabinet Tip, #35-164 – 1/4" x 4 Slotted round shank)
- #35-242 – 25' Auto-Lock™ Tape Measure
- #35-286 – Hawkbill Knife
- #34-002 – Medium Size Fuse Puller
- #35-205 – Torpedo Level
- #35-462 – Journeyman Electrician's Tote™

16-Piece Set – #35-808

Set Includes:
- Four LASERedge Pliers with dipped grips (#35-012 – 9-1/4" Linesman w/fish tape puller, #35-038 – 8" Long Nose, #35-430 – 10" Tongue and Groove, #35-012 – 9-1/2" Cable Cutter)
- #45-415 – Reflex™ T®-5 T®-Stripper Wire Stripper
- #30-428 – Combo Crimp/Strip Tool
- Four Cushion Grip Screwdrivers (#35-193 – #1 x 3 Phillips, #35-194 – #2 x 4 Phillips, #35-186 – 3/16" x 6 Slotted Cabinet Tip, #35-164 – 1/4" x 4 Slotted round shank)
- #35-210 – Electrician's Hammer
- #35-242 – 25' Auto-Lock™ Tape Measure
- #34-002 – Pocket Fuse Puller
- #35-286 – Hawkbill knife
- #35-261 – Ergonomic Hacksaw
- #35-427 – 18" Large Mouth Bag

Tool Kits featuring **LASERedge™** Pliers

12-Piece Set – #35-805

Set Includes:
- Four LASERedge™ Pliers with dipped grip handles (#35-012 – 9-1/4" Linesman w/fish tape puller, #35-028 – 8" Diagonal, #35-038 – 8" Long Nose, #35-430 – 10" Tongue and Groove)
- #45-120 – Premium T®-5 T®-Stripper Wire Stripper
- Four Cushion Grip Screwdrivers (#35-193 – #1 x 3 Phillips, #35-194 – #2 x 4 Phillips, #35-186 – 3/16" x 4 Slotted Cabinet Tip, #35-164 – 1/4" x 4 Heavy-Duty Slotted round shank)
- #35-242 – 25' Auto-Lock™ Tape Measure
- #10-466 – Electrician's Leather Tool Pouch
- #10-398 – Web Belt

6-Piece Set – #35-794

Set Includes:
- One LASERedge™ Plier with dipped grip handles (#30-430 – 9-1/4" Linesman w/crimper)
- #45-120 – Premium T®-5 T®-Stripper Wire Stripper
- #35-908 – 7-in-1 Twist-a-Nut™ Screwdriver
- #35-242 – 25' Auto-Lock™ Tape Measure
- #35-300 – Utility Knife
- #35-505 – Pocket Pal™ Tool Holster

Tool Kits featuring **WireMan™** Pliers

12-Piece Set – #35-5805

Set Includes:
- Four WireMan™ Pliers with dipped grip handles (#35-5012 – 9-1/4" Linesman, #35-5028 – 8" Diagonal, #35-5038 – 8" Long Nose, #35-5430 – 10" Tongue and Groove)
- #45-120 – Premium T®-5 T®-Stripper Wire Stripper
- Four Cushion Grip Screwdrivers (#35-193 – #1 x 3 Phillips, #35-194 – #2 x 4 Phillips, #35-184 – 3/16" x 4 Slotted Cabinet Tip, #35-164 – 1/4" x 4 Slotted round shank)
- #25' Auto-Lock™ Tape Measure
- #10-466 – Electrician's Leather Tool Pouch
- #10-398 – Web Belt

5-Piece Set – 35-5792

Set Includes:
- One WireMan™ Plier with dipped grip handles (#30-5430 – 9-1/4" Linesman w/crimper)
- #45-120 – T®-5 T®-Stripper Wire Stripper
- Two Screwdrivers (#35-194 – #2 x 4 Phillips, #35-186 – 3/16" x 4 Slotted Cabinet Tip)
- #35-505 – Pocket Pal™ Tool Holster

4-Piece Set – 35-5799

Set Includes:
- #45-120 – T®-5 T®-Stripper Wire Stripper
- #35-5012 – WireMan™ 9-1/4" Side-Cutting Pliers
- #35-505 – Pocket Pal™ Tool Holster
- #35-905 – 5-in-1 Screwdriver/Nutdriver

Premium Leather Line

Top of the line tool carriers are handcrafted from heavy, top-grain cowhide and slow tanned in natural oils to enhance the leather's inherent strength. Each bag is hand waxed for lasting protection against stains and moisture and is warranted for life. Natural or black leather – your choice.

Standard Leather Line

Leather that stands up to the job like no other material, these tool carriers are constructed of top-grain, natural cowhide and tanned for added strength and durability. Watch their color age to a deep tan over the years.

Fabric Line

Durable, lightweight, portable tool totes in rugged nylon polyester or heavyweight canvas provide the perfect tool storage. Convenient pockets mean easy access; inner compartments keep your tools organized and safe when not in use.

Tuff-Tote™ Ultimate Tool Carriers

- 8 in. square tool carrier features 2 divided inside compartments with 6 screwdriver loops each, 1 large center compartment, 4 outside pockets and 8 outside tool loops

- Exclusive leather-wrapped grab handle for carrying comfort

- Removable shoulder strap helps relieve lower back strain

- Unique stand-alone design keeps tools standing upright for easy identification and access

- Rust-resistant, plated-steel hardware and heavy, lock-stitched nylon thread for long-term durability

- Oil and moisture-resistant reinforced bottom

Description	Cat. No.
Premium Leather Carrier w/shoulder strap	35-975
Premium Black Leather Carrier w/shoulder strap	35-975BLK
Standard Leather Carrier w/shoulder strap	35-325

Tuff-Tote™ Tool Carriers

- Convenient 6 in. x 8 in. tool carrier with 4 center screwdriver slots, 2 interior compartments, 2 divided outside pockets and 4 outside tool loops

- Exclusive leather grab handle for carrying comfort

- Removable shoulder strap helps relieve lower back strain

- Unique stand-alone design keeps tools standing upright for easy identification and access

- Rust-resistant, plated-steel hardware and heavy, lock-stitched nylon thread for long-term durability

- Oil and moisture-resistant reinforced bottom

Description	Cat. No.
Premium Leather Carrier w/shoulder strap	35-969

Tuff-Tote™ Tool Pouches

- 8-pocket, belt-mounted pouch features large utility compartment with 2 dividers and 6 screwdriver loops, 7 outside pockets, release snaps and tape chain

- Exclusive leather grab handle for carrying comfort

- Removable shoulder strap helps relieve lower back strain

- Rust-resistant, plated-steel hardware and heavy, lock-stitched nylon thread for long-term durability

- Tunnel belt loop accommodates belts up to 2-1/4 in. wide

Description	Cat. No.
Premium Leather Pouch w/shoulder strap	35-950
Premium Black Pouch Carrier w/shoulder strap	35-950BLK
Standard Leather Pouch w/shoulder strap	35-311

Carriers/Pouches

Electrician's Tool Pouch

- 7 -pocket tool pouch
- Full length belt tunnel
- Chain tape lanyard

Description	Cat. No.
Electrician's Tool Pouch	**10-466**

Hip Holster Tool Pouches

- Compact, multi-pocket holsters
- Heavy-duty leather construction
- Riveted corners for long life
- Tape measure holder

Description	Cat. No.
6-Pocket Hip Holster, Black	**35-784BLK**
3-Pocket Hip Holster, Standard	**35-964**

Canvas Tool Bag

- Extra large 16 in. x 16 in. tool bag
- Reinforced steel framework
- Genuine leather handles and straps
- Heavy-weight canvas sides with interior pocket

Description	Cat. No.
Canvas Tool Bag	**35-302**

Ergo Tool Pouches

- Compact ergonomic design for versatility and superior comfort
- Large tool holding capacity

Description	Cat. No.
Premium Tan Leather ERGO	**35-966**
Premium Black Leather ERGO	**35-966BLK**
Standard Natural Leather ERGO	**35-312**

Shoulder Straps

- Nickel-plated hardware for long-term durability and corrosion resistance
- 2-in. wide shoulder pad for added comfort

Description	Cat. No.
Premium Leather Strap	**35-965**
Standard Leather Strap	**35-338**

Belts

35-995

35-316

10-398

- Nickel-plated hardware for long-term durability and corrosion resistance

Description	Cat. No.
Premium Leather Belt - 2 in. x 48 in.	**35-995**
Standard Leather Belt - 1-3/4 in. x 46 in.	**35-316**
Web Belt	**10-398**

Hand Tool Pouches

Pocket Pal™ Tool Holster

- Protects pocket from sharp tools
- Doubles tool carrying capacity
- Can be worn in pocket or on belt

Description	Cat. No.
Pocket Pal™ Tool Holster	35-505

Note: Tools sold separately.

Zipper Pouches

- Durable, water resistant material
- Heavy duty, self-repairing zippers

Description	Cat. No.
Zipper Pouch, 10-1/2 in. long	35-402
Zipper Pouch, 12-1/2 in. long	35-403

Divider Pouch™ Small Parts Bag

- Designed to provide perfect small parts storage — keeps parts separate and organized
- Six internally divided 5-in. deep pockets
- Convenient drawstring protects contents from spillage
- Convenient handle loop
- Sized to stack in 5-gallon buckets
- Durable nylon polyester construction

Description	Cat. No.
Divider Pouch™ Small Parts Bag	35-655

Note: Wire Connectors sold separately.

Bucket Bag Tool Carrier

- 11-1/2 in. deep bag fits over the rim of a standard 5-gallon bucket
- Forty-three convenient pockets — 36 pleated outside and inside pockets
- Rugged nylon polyester construction

Description	Cat. No.
Bucket Bag Tool Carrier	35-665

Note: Tools sold separately.

Supplies Apron

- Two pockets for connectors and fasteners, each 8 in. x 15 in.
- Natural duck construction

Description	Cat. No.
Supplies Apron	35-474

Large Mouth Bags

- Top opens completely for easy access to large tools — reinforced to hold itself open
- Measures 9 in. wide x 12 in. deep with outside and inside pockets for convenient hand tool storage
- Rugged zipper closure helps prevent tool loss
- Removable shoulder strap
- Durable multi-ply construction

Description	Cat. No.
Large Mouth Bag - 13 in. long	**35-410**
Large Mouth Bag - 16 in. long	**35-418**
Large Mouth Bag - 18 in. long	**35-427**

Note: Tools sold separately.

Journeyman Electrician's Tote™ Tool Bag

- Compact and versatile design
- Carry as a hand-tote, shoulder-tote or tool-belt
- Includes removable shoulder strap and belt
- Durable multi-ply construction

Description	Cat. No.
Journeyman Electrician's Tote™	**35-462**

Master Electrician's Tote™ Tool Bag

- Spacious and durable design
- Organizes and displays tools for fast access
- Includes removable shoulder strap
- Durable multi-ply construction

Description	Cat. No.
Master Electrician's Tote™	**35-441**

Mechanic's Tool Bag

- Eight narrow inside pockets designed to hold small tools
- Two side pockets with closeable snaps for large tools or loose items
- Double inside liner and rigid bottom prevent bag distortion
- Durable nylon polyester construction

Description	Cat. No.
Mechanic's Tool Bag	**35-535**

Volt-Guard™ Insulated Tools

The IDEAL insulated tool line creates a perfect blend of safety, comfort and precision functionality. Each tool features double insulated Santoprene® handles with a soft, easy-to-grip outer surface. In addition to the ergonomic qualities found in our tools, the insulated coating process acts as an 'at-a-glance' safety check. If the orange outer coating reveals any of the inner yellow surface, an electrician will know that this tool needs to be replaced.

■ Meets OSHA requirements for insulated tools

Serrated jaws provide secure gripping surface

Cutting jaws and edges are laser hardened for greater strength and durability

High visibility ergonomic handles for maximum comfort and control

High carbon tool steel for precision durability

Non-slip guard for added safety

Textured Santoprene® handles provide a sure grip and are resistant to perspiration, water, oil and chemicals

Precision-ground tips provide secure fit for less spin-out

Molded on insulation provides permanent bonding

Tempered chrome vanadium tool steel blades are super hardened for maximum quality

Permanently bonded, double insulated handles for added safety

CLASSIFIED UL®

Pliers only

REGULATIONS
Testing:
• Every 1000V insulated tool we sell is individually tested to ensure no failure when subjected to live current.

UL and VDE Certification:
Listed below are some of the tests we perform in order to pass certification:
  • Tools are immersed in water for 24 hours, then tested under current for 3 minutes to ensure no current leakage or sparkover occurs.
  • After being stored for 168 hours at -40° C (-40° F), tools are dropped to ensure no damage from impact.
  • After being stored for 168 hours at +70° C (158° F), a tensile load is applied to ensure the grip is firmly bonded to the tool.
  • Tools are subjected to flame for 10 seconds to ensure no flammability of the insulating material.

OSHA Regulations:
OSHA 1910.335(a)(2)(i) When working near exposed energized conductors or circuit parts, each employee shall use insulated tools or handling equipment if the tools or handling equipment might make contact with such conductors or parts.
OSHA 1910.335 (a)(1)(i) Employees working in areas where there are potential electrical hazards shall be provided with, and shall use, electrical protective equipment that is appropriate for the specific parts of the body to be protected and for the work to be performed.

Make sure you are in compliance by providing and using IDEAL insulated tools!

Insulated Hand Tools

Journeyman Insulated Kit – #35-9102

Available Spring 2011

Kit Includes:

- #30-9430 – Insulated 9 in. Side Cutter w/Crimp
- #35-9029 – Insulated 8 in. Offset Diagonal Cutting Plier
- #35-9038 – Insulated 8-1/2 in. Long-Nose Plier
- #35-9430 – Insulated 10 in. Tongue & Groove Plier
- #35-9052 – Insulated 2/0 Cable Cutter
- #30-9429 – Insulated Multi-Crimp Tool
- #45-9120 – Insulated T®-5 T®-Stripper Wire Stripper
- #35-9340 – Insulated Knife
- #61-063 – Volt-Sensor® NCV Tester
- #34-002 – 7-1/2 in. Non-Conductive Fuse Puller
- #35-9352 – Heavy-Duty Soft Case

- #44-956 – Breaker Lockout, Tall and Wide
- #44-957 – Breaker Lockout, Standard and Double
- #44-916 – Red Safety Lock w/key
- Six Insulated Nutdrivers
  #35-9290 – 3/16 in. x 5 in.
  #35-9291 – 1/4 in. x 5 in.
  #35-9292 – 5/16 in. x 5 in.
  #35-9294 – 3/8 in. x 5 in.
  #35-9295 – 7/16 in. x 5 in.
  #35-9296 – 1/2 in. x 5 in.
- Seven Insulated Screwdrivers
  #35-9150 – 1/4 in. x 4 in. Slotted
  #35-9151 – 1/4 in. x 4 in. Slotted
  #35-9166 – 5/16 in. x 7 in. Slotted
  #35-9168 – 3/8 in. x 8 in. Slotted
  #35-9193 – #1 x 3-3/16 in. Phillips
  #35-9194 – #2 x 4 in. Phillips
  #35-9196 – #3 x 6 in. Phillips

Standard Insulated Kit – #35-9101

Available Spring 2011

Kit Includes:

- #30-9430 – Insulated 9 in. Side Cutter w/Crimp
- #35-9029 – Insulated 8 in. Offset Diagonal Cutting Plier
- #35-9038 – Insulated 8-1/2 in. Long-Nose Plier
- #35-9430 – Insulated 10 in. Tongue & Groove Plier
- #35-9052 – Insulated 2/0 Cable Cutter
- #45-9120 – Insulated T®-5 T®-Stripper Wire Stripper
- #35-9340 – Insulated Knife
- #61-063 – Volt-Sensor® NCV Tester

- #34-002 – 7-1/2 in. Non-Conductive Fuse Puller
- #35-9351 – Heavy-Duty Soft Case
- #44-956 – Breaker Lockout, Tall and Wide
- #44-957 – Breaker Lockout, Standard and Double
- #44-916 – Red Safety Lock w/key
- Five Insulated Screwdrivers
  #35-9150 – 1/4 in. x 4 in. Slotted
  #35-9151 – 1/4 in. x 4 in. Slotted
  #35-9166 – 5/16 in. x 7 in. Slotted
  #35-9168 – 3/8 in. x 8 in. Slotted
  #35-9193 – #1 x 3-3/16 in. Phillips

Basic Insulated Kit – #35-9100

Available Spring 2011

Kit Includes:

- #30-9430 – Insulated 9 in. Side Cutter w/Crimp
- #35-9029 – Insulated 8 in. Offset Diagonal Cutting Plier
- #35-9038 – Insulated 8-1/2 in. Long-Nose Plier
- #35-9052 – Insulated 2/0 Cable Cutter
- #45-9120 – Insulated T®-5 T®-Stripper Wire Stripper
- #34-002 – 7-1/2 in. Non-Conductive Fuse Puller

- #35-9350 – Heavy-Duty Soft Case
- #44-956 – Breaker Lockout, Tall and Wide
- #44-957 – Breaker Lockout, Standard and Double
- #44-916 – Red Safety Lock w/key
- Three Insulated Screwdrivers
  #35-9150 – 1/4 in. x 4 in. Slotted
  #35-9151 – 1/4 in. x 4 in. Slotted
  #35-9154 – #2 x 4 in. Phillips

IDEAL®

Insulated Pliers

45-9120

35-9029

35-9052

30-9430

35-9430

35-9038

45-9615
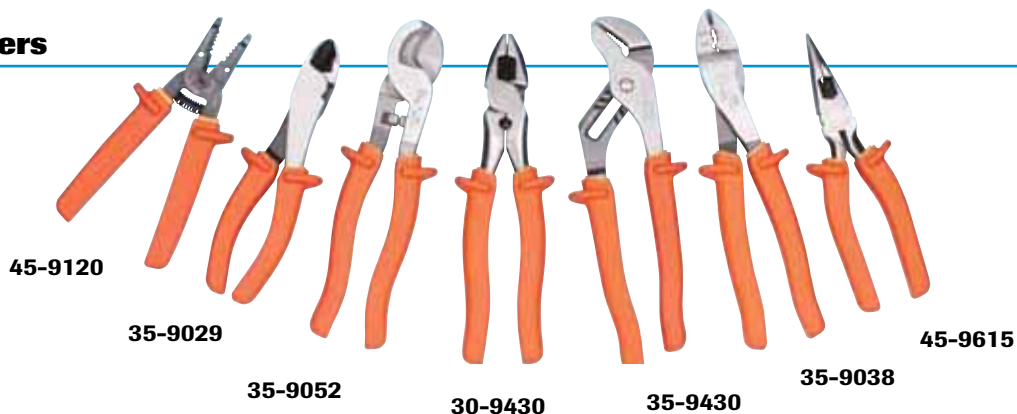
Description	Cat. No.
Premium T®-Stripper Wire Stripper	**45-9120**
8 in. Diagonal Cutting Pliers w/angled head	**35-9029**
9-1/2 in. High-Leverage Cable Cutter	**35-9052**
9-1/4 in. Side Cutting Linesman Pliers	**30-9430**

Description	Cat. No.
10 in. Tongue and Groove Pliers	**35-9430**
9-3/4 in. Multi-Crimp Tool	**30-9429**
8-1/2 in. Long-Nose Pliers	**35-9038**

Insulated Screwdrivers

Description	Cat. No.
9-Piece Insulated Screwdriver Kit	**35-9103**
Kit 35-9103 Includes:	**Cat. No.**
Phillips #1 x 3-3/16 in. Insulated Screwdriver	**35-9193**
Phillips #2 x 4 in. Insulated Screwdriver	**35-9194**
Phillips #3 x 6 in. Insulated Screwdriver	**35-9196**
Square SQ #0 1/4 in. x 4 in. Insulated Screwdriver	**35-9690**
Slotted 1/4 in. x 4 in. Insulated Screwdriver	**35-9150**
Slotted 7/32 in. x 5 in. Insulated Screwdriver	**35-9147**
Slotted 1/4 in. x 6 in. Insulated Screwdriver	**35-9151**
Slotted 5/16 in. x 7 in. Insulated Screwdriver	**35-9166**
Slotted 3/8 in. x 8 in. Insulated Screwdriver	**35-9168**

Insulated Knife

Description	Cat. No.
Insulated Electrician's Skinning Knife	**35-9340**

Insulated Nutdrivers

Description	Cat. No.
7-Piece Insulated Nutdriver Kit	**35-9104**
Kit 35-9104 Includes:	**Cat. No.**
3/16 in. x 5 in. Insulated Nutdriver	**35-9290**
1/4 in. x 5 in. Insulated Nutdriver	**35-9291**
5/16 in. x 5 in. Insulated Nutdriver	**35-9292**
3/8 in. x 5 in. Insulated Nutdriver	**35-9294**
7/16 in. x 5 in. Insulated Nutdriver	**35-9295**
1/2 in. x 5 in. Insulated Nutdriver	**35-9296**
9/16 in. x 5 in. Insulated Nutdriver	**35-9297**

Cases

Description	Cat. No.
Soft Zipper Case for Basic Kit (35-9300)	**35-9350**
Soft Zipper Case for Standard Kit (35-9301)	**35-9351**
Soft Zipper Case for Journeyman Kit (35-9302)	**35-9352**
Hard Case for Screwdriver Kit (35-9303) & Nutdriver Kit (35-9304)	**35-9353**

Fuse Puller and Test Light
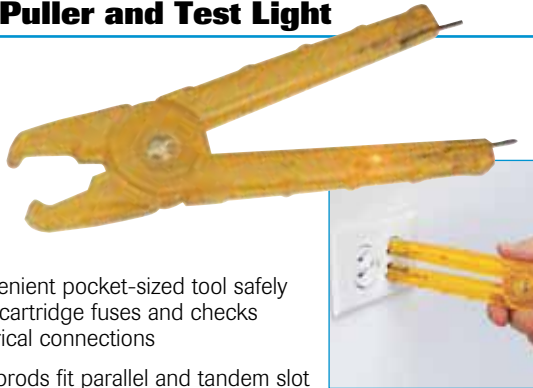
■ Convenient pocket-sized tool safely pulls cartridge fuses and checks electrical connections

■ Test prods fit parallel and tandem slot receptacles

■ Built-in resistors limit current flow to eliminate false indication

■ For 9/16 in. to 1 in. fuses

■ For use on fuses to 100A/250V and 60A/600V

■ Test capacity from 100V to 600V AC/DC

Description	Cat. No.
Fuse Puller & Test Light	34-012

Safe-T-Grip® Fuse Pullers

■ Maximum efficiency and convenience for removing or replacing cartridge-type fuses

■ Three sizes handle fuses ranging from 0 to 600A

■ Fully insulated, high-dielectric, glass-filled polypropylene construction

■ Notched handles provide safe, no-slip grip

■ Clearly marked amperage ranges

■ Exceed MIL specifications

Description	Cat. No.
Small Puller for 250V, 9/32 in. to 1/2 in. dia. fuses; 5 in. long	34-001
Medium Puller for 0 to 100A/250V & 600V, 1/2 in. to 1 in. dia. fuses; 7-1/2 in. long	34-002
Large Puller for 31 to 600A/250V & 31 to 400A/600V, 3/4 in. to 2-1/2 in. dia. fuses; 11-3/4 in. long	34-003

Fuse Pullers

■ Molded of tough, high-impact nylon for greater strength

■ No-slip gripping surface and protective finger stops for added safety

Description	Cat. No.
Small Puller for 0 to 30A/250V, 1/4 in. to 1/2 in. dia. fuses; 5 in. long	34-015
Large Puller for 0 to 100A/250V & 0 to 60A/600V, 9/16 in. to 1 in. dia. fuses; 7-1/4 in. long	34-016

IDEAL®

TKO™ Carbide Tipped Hole Cutters

Introducing the TKO™ Carbide Tipped Hole Cutters from IDEAL INDUSTRIES, INC. TKO cutters offer the most efficient and clean cutter replacement for traditional knockouts, by making smooth holes in a fraction of the time at a fraction of the cost. Specifically designed to cut sheet metal, TKO cutters will even cut stainless steel with fine grained, carbide tips. The innovative design includes the exclusive SmoothStart™ replaceable pilot drill, which guides the cutter to the surface, avoiding cutter damage and providing smoother holes. An integral overdrill flange prevents cutter penetration beyond the sheet metal. When it comes to quality, performance and durability, IDEAL is the professional's choice for carbide tipped hole cutters.

Carbide-Tipped Hole Cutters

Hole Size (Inches)	Conduit & Pipe Size (Inches)	Cat. No.
7/8	1/2	**36-301**
1	—	**36-302**
1-1/8	3/4	**36-303**
1-1/4	—	**36-304**
1-3/8	1	**36-305**
1-7/16	—	**36-306**
1-1/2	—	**36-307**
1-3/4	1-1/4	**36-308**
2	1-1/2	**36-309**
2-1/2	—	**36-310**
2-7/8	2-1/2	**36-315**
3-1/2	3	**36-316**
4	3-1/2	**36-317**
4-1/2	4	**36-318**
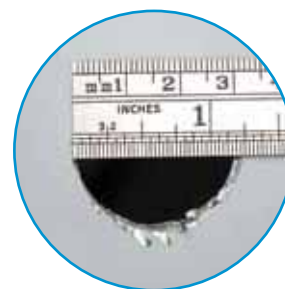
IDEAL TKO™   **Competitor**

IDEAL provides smoother, more precise holes than competitors (holes cut with 1-1/8 in. cutters)

SmoothStart™ Replacement Pilot Drill

Exclusive! SmoothStart™ pilot guides cutter to surface providing smoother holes and avoiding cutter damage.

Description	Cat. No.
SmoothStart™ Replacement Pilot Drill	**36-312**

4-Piece Kit

Includes the three most common sizes along with a spare SmoothStart™ pilot bit and a convenient carrying case

Description	Cat. No.
4-Piece Carbide Hole Cutter Kit — Includes SmoothStart™ Replacement Tip, 7/8 in. 1-1/8 in., 1-3/8 in.	**36-311**

Master Electrician's Kit

Includes six common sizes along with a spare SmoothStart™ pilot bit and a convenient carrying case

Description	Cat. No.
Master Electrician's Kit — Includes two SmoothStart™ Replacement Tips, 7/8 in. 1-1/8 in., 1-3/8 in., 1-3/4 in., 2 in. and 2-1/2 in.	**36-314**

Integrated overdrill flange prevents penetration beyond the sheet metal.

Hole Cutters

Carbide Tipped Hole Cutters

With SmoothStart™ Pilot

Carbide tips cut over 200 holes through stainless steel, and outperform HSS cutters and bi-metal hole saws in sheet steel

Integral arbor provides smoother, more accurate holes than hole saws or two-piece carbide-tipped cutters

Integrated overdrill flange prevents penetration beyond the sheet metal

Ejection spring effortlessly ejects slug

Exclusive SmoothStart™ pilot drill guides cutter

Hole Cutters

See how IDEAL TKO can save time...

Total time using the IDEAL TKO™
30 Seconds

Chuck Cutter

`00:10`

Drill hole & store
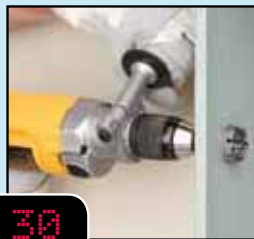
`00:30`

Total time using the competitors' knockout tool
More than 6 Minutes

Chuck Step Drill

`00:10`

Drill Pilot Hole

`00:30`

Assemble knockout punch & stud pull

`02:00`

Ratchet

`04:20`

Slug removed, disassemble & store

`06:20`

Step Drill Bits

35-511
35-512
35-513
35-514
35-515
35-516
35-517

Trust IDEAL step drill bits for precise, repetitive drilling through the toughest materials including brass, carbon steel, cast iron, stainless steel, and more. These tough and reliable tools are constructed with a rugged titanium nitrite exterior coating. Each step is gradually blended to ease stepping through hole sizes; reducing the need to keep changing drill bits, which speeds up the fabrication process. Improved Split-Point tip design eliminates the need for a starter hole or punch and delivers three times faster starts, saving valuable time. The double-fluted design provides balanced cuts and cooler operation.

BEST

Improved Split-Point design for 3x faster starts

Radius-blended, multi-diameter steps

Double-fluted design

Protective titanium nitrite coating

Drill Diameter Sizes (In.)	No. of Hole Sizes	Step Increments (In.)	Step Thickness (In.)	Shank Dia. (In.)	Cat. No.
1/8 to 1/2	13	1/32	1/8	1/4	**35-511**
1/4 to 3/4	9	1/16	1/8	3/8	**35-512**
1/4 to 7/8	11	1/16	1/16	3/8	**35-513**
1/2 to 1	8	1/16	1/8	3/8	**35-514***
1/4 to 1-1/8	16	1/16	1/16	3/8	**35-515**
3/16 to 1/2	6	1/16	3/8	1/4	**35-516**
1/4 to 1-3/8	10	1/32	1/16 to 1/4	3/8	**35-517**

Requires pilot holes.

Electrician's Step Bit Kit

- Durable blow-molded case securely holds and protects bits
- Kit includes four step bits (35-511, 35-513, 35-515 and 35-517)
- Kit provides a solution for every electrical hole size between 1/8 in. and 1-3/8 in.

Description	Cat. No.
Electrician's Step Bit Kit	**35-520**

Quick Change Step Bits

GOOD

35-521
35-522
35-523

- Split-point tip lasts longer and starts faster than competition
- High speed tool steel
- Double-tempered for superior tip life
- Double fluted and blended radius steps for smooth drilling
- 1/4" Quick change shank

Impact Ready!

35-524

Drill Diameter Sizes (In.)	No. of Hole Sizes	Step Increments (In.)	Step Thickness (In.)	Shank Dia. (In.)	Cat. No.
1/8 to 1/2	13	1/16	1/8	1/4	**35-521**
1/4 to 7/8	11	1/16	1/16	1/4	**35-522**
1/4 to 1-1/8	16	1/16	1/16	1/4	**35-523**

Description	Cat. No.
3-Piece Quick Change Step Bit Kit (35-521, 35-522, 35-523)	**35-524**

1-800-435-0705 for Customer Service

Hole Saws

TRI-BORE™

Tri-Bore™ Multi-Purpose Hole Saw

■ Massive carbide tips designed to cut wood with nails, cement board, composite enclosures, ceiling tile and more!

■ Faster than self-feed bits in wood

■ Faster than carbide grip in abrasive materials

■ Available in all popular sizes

Carbide teeth for wood with nails, cement board, composite enclosures and other abrasive materials.

Rugged construction for extra life

Deep gullets for easy plug removal

Spade Bit & Carbide Pilot

Catalog Number	Hole Size (in.)	Application
36-367*	Spade Bit	Wood boring
36-368*	Carbide Pilot	Abrasive material boring

*Sold separately.

Available in all recessed lighting sizes!

Catalog Number	Hole Size (in.)	Application
36-350	1-3/8	
36-351	2-1/8	1-1/2" Pipe and lock installation
36-352	2-1/4	1-1/2" Pipe with couplings
36-353	2-9/16	2" Pipe
36-354	3	2" Pipe with couplings
36-355	3-3/8	
36-356	3-5/8	3" Pipe
36-357	4	
36-358	4-1/4	3" Pipe with couplings, 4" dryer vent
36-359	4-1/8	
36-360	4-3/8	Capri®, Halo®, Marco, Mini Juno
36-361	4-5/8	4" pipe
36-362	5-3/8	Capri®, Juno®, Lightolier, Prescolite, Progress
36-363	6-1/4	6" Duct
36-364	6-3/8	Capri®, Halo®
36-365	6-5/8	Juno® and Progress
36-366	6-7/8	Capri®, Lightolier, Lithonia, Prescolite, Progress

IRONMAN™ Bi-Metal Hole Saws

IRONMAN™ Bi-metal hole saws from IDEAL INDUSTRIES, INC, with re-engineered bi-metal construction, a thick "flex-free" backing plate, and variable sized teeth, IDEAL IRONMAN™ hole saws will rival the cutting speed and longevity of any in the industry. The bi-metal construction cuts metal, wood and plastics including: tool and stainless steel, nail embedded wood, plywood, and pipe. An extensive list of 51 sizes, effective accessories, and kits are available to meet all your cutting needs. When it comes to quality, performance and durability, IDEAL is the professional's choice for hole saws.

New improved solid plate design resists flexing of the new hole saw for clean true holes and added durability

Bi-metal construction combines hardened and durable tool steel teeth welded to fatigue resistant body for long and consistent cutting life

Variable sized teeth clear chips away from the work quickly for faster cuts and reduced vibration

1-5/8 in. cutting depth cuts through 2' x 4's on the first cut

Threads fit all standard arbors

Hole Saws

- Thicker, FLEX FREE backing plate for clean true holes and longer tool life

- Improved bi-metal construction for long life and durability

- Variable pitch tooth geometry for fast cutting and reduced vibration

- Cuts all types of machinable metal including stainless steel, wood, nail embedded wood, plastic and fiberboard

Saw Diameter (Inches)	Pipe Tap Size* (Inches)	Pipe Entrance Size* (Inches)	Cat. No.
Use Arbor No. 35-391, 35-392 or 35-393			
9⁄16	–	–	**35-340**
5⁄8	–	–	**35-341**
11/16	–	–	**35-342**
3⁄4	1⁄2	3⁄8	**35-343**
13⁄16	–	–	**35-344**
7⁄8	3/4	1/2	**35-345**
15⁄16	–	–	**35-346**
1	–	–	**35-347**
1-1/16	–	–	**35-348**
1-1⁄8	1	3⁄4	**35-349**
1-3⁄16	–	–	**35-350**
Use Arbor No. 35-394, 35-536 or 35-537			
3-1/2	–	–	**36-317**
1-1⁄4	–	–	**35-351**
1-5⁄16	–	–	**35-352**
1-3/8	–	1	**35-353**
1-7/16	–	–	**35-354**
1-1⁄2	1-1⁄4	–	**35-355**
1-9⁄16	–	–	**35-356**
1-5⁄8	–	–	**35-357**
1-11⁄19	–	–	**35-358**
1-3⁄4	1-1⁄2	1-1⁄4	**35-359**
1-13⁄16	–	–	**35-360**
1-7⁄8	–	–	**35-361**
2	–	1-1⁄2	**35-362**
2-1⁄16	–	–	**35-363**
2-1⁄8	–	–	**35-364**
2-1⁄4	2	–	**35-365**
2-5⁄16	–	–	**35-366**
2-3⁄8	–	–	**35-367**
2-1⁄2	–	2	**35-368**
2-9⁄16	–	–	**35-369**
2-5⁄8	2-1⁄2	–	**35-370**
2-3⁄4	–	–	**35-371**
2-7⁄8	–	–	**35-372**
Use Arbor No. 35-394, 35-536, 35-537 or 35-538			
3	–	2-1⁄2	**35-373**
3-1⁄8	–	–	**35-374**
3-1⁄4	3	–	**35-375**
3-3⁄8	–	–	**35-376**
3-1⁄2	–	–	**35-377**
3-5⁄8	–	3	**35-378**
3-3⁄4	3-1⁄2	–	**35-379**
3-7⁄8	–	–	**35-380**
4	–	–	**35-381**
4-1⁄8	–	3-1⁄2	**35-382**
4-1⁄4	4	–	**35-383**
4-3⁄8	–	–	**35-384**
4-1⁄2	–	4	**35-385**
4-3⁄4	4-1⁄2	–	**35-386**
5	–	–	**35-387**
5-1⁄2	–	–	**35-388**
5-3⁄4	–	–	**35-389**
6	–	–	**35-390**

*All pipe sizes listed in the Pipe Tap Size and Pipe Entrance Size columns are standard industry sizes. All pipes are sized by the nominal inside diameter.

Hole Saw Kits

Electrician's Hole Saw Kit

- Reliable 8-piece kit in a durable plastic case
- Find electrical sizes for pipe and conduit through 2 in.

Description	Cat. No.
Hole Saw sizes 7/8 in., 1-1/8 in., 1-3/8 in., 1-3/4 in., 2 in. & 2-1/2 in. Also includes arbor models 35-393 & 35-394	**35-400**

14-Piece Electrician's Hole Saw Kit

- Generous 14-piece kit offers a tremendous selection
- You'll find electrical sizes for pipe and conduit through 4 in.
- Sturdy plastic case survives extra wear and tear

Description	Cat. No.
Hole Saw sizes 7/8 in., 1-1/8 in., 1-3/8 in., 1-3/4 in., 2 in., 2-1/2 in., 3 in., 3-5/8 in., 4-1/8 in., 4-1/2 in. Also includes arbor models 35-391, 35-393 & 35-394 and extension bar 35-396.	**35-401**

19-Piece Master Electrician's Hole Saw Kit

- For electrical, industrial and all-purpose maintenance needs
- 19-piece kit comes in sturdy durable plastic case
- Plumbing and electrical sizes for pipe and conduit through 4 in.

Description	Cat. No.
Hole Saw sizes 3/4 in., 7/8 in., 1 in., 1-1/8 in., 1-3/8 in., 1-1/2 in., 1-3/4 in., 2 in., 2-1/4 in., 2-1/2 in., 3 in., 3-5/8 in., 4-1/8 in. & 4-1/2 in. Also includes arbor models 35-393, 35-394, pilot drill 35-397 (two pieces) and extension bar 35-396.	**35-518**

Hole Saw Arbors
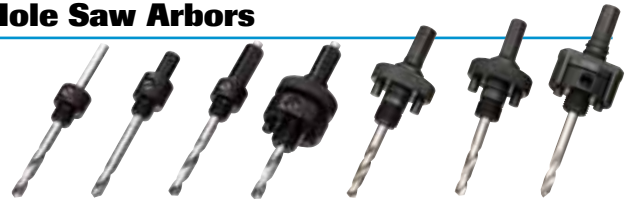
35-391   35-392   35-393   35-394   35-536   35-537   35-538

Durable steel construction means years of long-lasting performance. Set-screw in body allows easy replacement of the pilot drill. Save valuable time through this versatile design. Instantly change hole saws without tools and without having to remove the arbor from the chuck.

Shank Size	Thread Size	Chuck Size	Fits Hole Saw Sizes	Cat. No.
1/4 in. Round	1/2 - 20 in.	1/4 in.	9/16 - 1-3/16 in.	**35-391**
3/8 in. Hex	1/2 - 20 in.	3/8 in.	9/16 - 1-3/16 in.	**35-392**
7/16 in. Hex	1/2 - 20 in.	1/2 in.	9/16 - 1-3/16 in.	**35-393**
7/16 in. Hex	5/8 - 18 in.	1/2 in.	1/4 - 6 in.	**35-394**
7/16 in. Hex	5/8 - 18 in.	1/2 in.	1/4 - 6 in.	**35-536**
3/8 in. Hex	5/8 - 18 in.	3/8 in.	1/4 - 6 in.	**35-537**
7/16 in. Hex	5/8 - 18 in.	1/2 in.	2 - 6 in.	**35-538**

Replacement Pilot Drills for Hole Saw Arbors

Split point pilot drills start on contact for faster penetration and less walking.
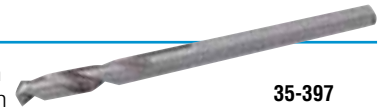
35-397

Description	Cat. No.
4-1/2 in. x 1/4 in. – Fits 35-391, 35-393, 35-394 & 35-538 arbors	**35-397**
3-1/4 in. x 1/4 in. – Fits 35-392, 35-536 & 35-537 arbors	**35-398**

Arbor Extension

For boring jobs that require a longer reach, arbor extensions add up to 18 in. length and can be easily connected to IDEAL hole saw arbors.

Description	Cat. No.
Extension for 7/16 in. Arbors, 12 in. long	**35-396**

Adjustable Can Light Hole Saws

- Cuts drywall and ceiling tile
- Self-sharpening carbide coated cutting blades
- Includes two dust shields to minimize clean up

Drill not included.

Description	Cat. No.
Adjustable Can Light Hole Saw – 10 sizes from 2-1/2 in. to 7 in.	**35-598**
Adjustable Can Light Hole Saw – 13 sizes from 6-1/4 in. to 10-3/8 in.	**35-599**
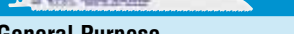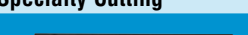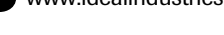
Reciprocating Blades

- Bi-metal blades last up to ten times longer than carbon steel blades
- Flexible spring-back provides long blade life
- Super-hard, high speed steel teeth for a sharp, long-lasting cutting edge
- Shatterproof for tough applications
- Fits all reciprocating saws using 1/2 in. universal shank
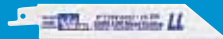
	L/W/TH (Inches)	TPI	Material	Blade Back	Qty.	Application	Cat. No.
Metal Cutting							
	6 x 3/4 x .035	14	Bi-metal	Straight	5	Pipe, structural steel, stainless steel: 3/32" - 1/4", Non-ferrous metal: 3/32" - 3/8"	36-059
	6 x 3/4 x .035	14	Bi-metal	Straight	25	Pipe, structural steel, stainless steel: 3/32" - 1/4", Non-ferrous metal: 3/32" - 3/8"	36-059B
	4 x 3/4 x .035	18	Bi-metal	Straight	5	Structural steel, pipe, conduit, stainless steel: 1/16" - 3/16" thick, Non-ferrous metal: 1/16" - 5/16" thick	36-055
	6 x 3/4 x .035	18	Bi-metal	Straight	5	Structural steel, pipe, conduit, stainless steel: 1/16" - 3/16" thick, Non-ferrous metal: 1/16" - 5/16" thick	36-057
	6 x 3/4 x .035	18	Bi-metal	Straight	25	Structural steel, pipe conduit, stainless steel: 1/16" - 3/16" thick, Non-ferrous metal: 1/16" - 5/16" thick	36-057B
	8 x 3/4 x .035	18	Bi-metal	Straight	5	Structural steel, pipe, conduit, stainless steel: 1/16" - 3/16" thick, Non-ferrous metal: 1/16" - 5/16" thick	36-060
	6 x 3/4 x .035	24	Bi-metal	Straight	5	All metal less than 1/8" thick: Tubing conduit, trim	36-058
	6 x 3/4 x .035	24	Bi-metal	Straight	25	All metal less than 1/8" thick: Tubing conduit, trim	36-058B
Heavy-Duty Metal Cutting							
	6 x 3/4 x .050	18	Bi-metal	Straight	2	Heavy-duty blade for cutting structural steel, pipe, conduit, stainless steel: 1/16" to 3/16" thick	36-085
	8 x 3/4 x .050	10/14	Bi-metal	Straight	2	Heavy-duty blade for cutting structural steel, pipe, conduit, stainless steel: 1/8" to 1/2" thick	36-086
	12 x 3/4 x .050	10/14	Bi-metal	Taper	5	Heavy-duty blade for cutting structural steel, pipe, conduit, stainless steel: 1/8" to 1/2" thick	36-087
Wood w/Nails							
	6 x 3/4 x .050	6	Bi-metal	Taper	5	Fast cutting, roughing-in work, nail-embedded wood, remodeling	36-065
	6 x 3/4 x .050	6	Bi-metal	Taper	25	Fast cutting, roughing-in work, nail-embedded wood, remodeling	36-065B
	9 x 3/4 x .050	6	Bi-metal	Taper	5	Fast cutting, roughing-in work, nail-embedded wood, remodeling	36-066
	12 x 3/4 x .050	6	Bi-metal	Taper	5	Fast cutting, roughing-in work, nail-embedded wood, remodeling	36-067
Demolition							
	9 x 7/8 x .062	6	Bi-metal	Taper	2	Demolition work in nail-embedded wood, remodeling	36-095
	9 x 7/8 x .062	10	Bi-metal	Taper	2	Demolition work in wood, metal, pipe and fire and rescue	36-096
General Purpose							
	6 x 3/4 x .035	10	Bi-metal	Straight	5	Nail embedded wood, metal and non-ferrous metal composition materials & plastics 1/8" - 1/2"	36-075
Specialty Cutting							
	8 x 3/4 x .050	Grit	Tung. Grit	Straight	2	Iron pipe, fiberglass, reinforced plastics, ceramic tile, stone, slate and brick.	36-090
	3 x 5/16 x .035	18	Bi-metal	Scroll	5	Scroll cutting wood, cast aluminum and non-ferrous metals	36-054
Plaster/Drywall							
	6 x 3/4 x .050	6	Bi-metal	Taper	2	For plaster, drywall, plaster board & lath. Bi-directional cutting	36-088

Reciprocating Blades

Long-Life Metal Cutting Reciprocating Blades

- Engineered to be the longest lasting, metal cutting blades available
- Long-life blades perform up to three times as many cuts as similar metal cutting blades
- 8% cobalt cutting edge for extreme durability
- Shatterproof bi-metal design
- Longer life for greater value

Long-Life Blades	L/W/TH (Inches)	TPI	Material	Blade Back	Qty.	Application	Cat. No.
	6 x 3/4 x .035	18	Bi-metal	Straight	5	Long-Life blade for cutting structural steel, pipe, conduit, stainless steel, sheet metal: 1/6" - 3/16" thick	**36-043**
	8 x 3/4 x .035	18	Bi-metal	Straight	5	Long-Life blade for cutting structural steel, pipe, conduit, stainless steel, sheet metal: 1/6" - 3/16" thick	**36-044**
	6 x 1 x .042	14	Bi-metal	Straight	5	Long-Life blade for cutting rebar, barstock, angle iron and other heavy gauge metals: 1/8" and thicker	**36-046**
	12 x 1 x .050	14	Bi-metal	Straight	5	Long-Life blade for cutting rebar, barstock, angle iron and other heavy gauge metals: 1/8" and thicker	**36-048**

Progressive Tooth Reciprocating Blades

- Specially designed for all purpose cutting
- Cut multiple materials without changing blades
- Tough bi-metal and HCS construction for long life.

Long-Life Blades	L/W/TH (Inches)	Material	Blade Back	Qty.	Application	Cat. No.
	6 x 3/4 x .035	Progressive	Bi-metal	5	All metal, non-ferrous metal, sheet metal, pipe and other metal materials	**36-056**
	8 x 3/4 x .050	Progressive	Bi-metal	5	For wood, nail-embedded wood, non-ferrous metals, plastic and fiberglass	**36-076**

Portable Band Saw Blades

- Bi-metal construction
- Fit all standard portable band saw machines
- For pipe, tubing and solids
- Cut any machinable metal, including conduit, angle iron, structurals, rebar and stainless steel tubing

L/W/TH (Inches)	TPI	Qty./Pack	Cat. No.
44-7/8 x 1/2 x .020	10	3	**36-070**
44-7/8 x 1/2 x .020	14	3	**36-071**
44-7/8 x 1/2 x .020	18	3	**36-072**
44-7/8 x 1/2 x .020	24	3	**36-073**

BULZ–EYE™ Self Feed Wood Boring Bits

Description	Diameter	Entrance Size for Pipe & EMT	Cat.
1 in. Self-Feed Wood Boring Bit	1 in.	1⁄2 in.	36-250
1-1⁄8 in. Self-Feed Wood Boring Bit	1-1⁄8 in.	—	36-251
1-1⁄4 in. Self-Feed Wood Boring Bit	1-1⁄4 in.	3⁄4 in.	36-252
1-3⁄8 in. Self-Feed Wood Boring Bit	1-3⁄8 in.	1 in.	36-253
1-1⁄2 in. Self-Feed Wood Boring Bit	1-1⁄2 in.	—	36-254
1-3⁄4 in. Self-Feed Wood Boring Bit	1-3⁄4 in.	1-1⁄4 in.	36-255
2 in. Self-Feed Wood Boring Bit	2 in.	1-1⁄2 in.	36-256
2-1⁄8 in. Self-Feed Wood Boring Bit	2-1⁄8 in.	—	36-257
2-1⁄4 in. Self-Feed Wood Boring Bit	2-1⁄4 in.	—	36-258
2-9⁄16 in. Self-Feed Wood Boring Bit	2-9⁄16 in.	2 in.	36-259
3 in. Self-Feed Wood Boring Bit	3 in.	2-1⁄2 in.	36-260
3-5⁄8 in. Self-Feed Wood Boring Bit	3-5⁄8 in.	3 in.	36-261
4-5⁄8 in. Self-Feed Wood Boring Bit	4-5⁄8 in.	4 in.	36-262
5-1⁄2 in. Extension Bar	—	—	36-273
18 in. Extension Bar	—	—	35-819

Wider precision ground teeth for maximum control

Twin cutting edges for faster, more balanced drilling and cleaner holes

Precision machined shaft eliminates wobble resulting in true, accurate holes

Quick change shank design for fast bit changes and use with pneumatic drills

Robust replaceable lead screw with burr-free threads

Black oxide coated, heat treated and hardened for improved durability

BUL·O·EYE™

Replacement Lead Screws

■ Keeps self-feed bits running fast and true

■ Easily replaced with hex wrench providing extended drill life and optimum cost-per-hole value

36-271   **36-270**

Description	Cat. No.
3-pack small replacement lead screws, fits bit sizes 1 in. - 2-9/16 in.	36-271
3-pack small replacement lead screws, fits bit sizes 3 in. - 4-5/8 in.	36-270

Extension Bars

■ Cuts into hard-to-reach areas

■ Fits IDEAL Auger Bits

Description	Cat. No.
5-1/2 in. Extension Bar	36-273
18 in. Extension Bar	35-819

Sharpening File

■ Keeps durable bits working like new

■ High-grade sharpener hones dulled edges quickly and efficiently

Description	Cat. No.
Sharpening File	36-272

6–Piece Kit

Includes five different bit sizes, a 5-1/2 in. extension bar, and a convenient carrying case, giving you everything you need for drilling multiple hole sizes in any wood material.
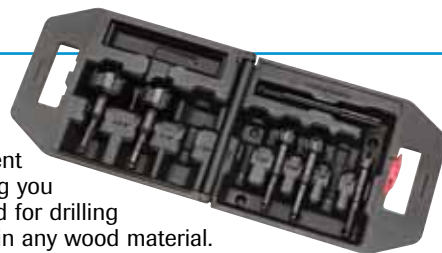
Kit 36-266 Includes:

Description	Cat. No.
5-1/2 in. extension bar, 1 in., 1-1/4 in., 1-3/8 in., 2 in., 2-9/16 in. bits	36-266

9–Piece Kit

Includes eight different bit sizes, a 5-1/2 in. extension bar, and a convenient carrying case, giving you everything you need for drilling multiple hole sizes in any wood material.
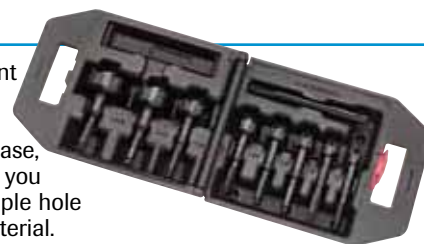
Kit 36-269 Includes:

Description	Cat. No.
5-1/2 in. extension bar, 1 in., 1-1/8 in., 1-1/4 in., 1-3/8 in., 1-1/2 in., 1-3/4 in., 2-1/8 in., 2-9/16 in. bits	36-269

Nailbiter™ Premium Ship Auger Bits

- Dual-Helix construction with twin cutting edges provides faster and smoother drilling action, even through nail-embedded timbers
- Full body, dual induction heat treatment ensures durability, minimizes warping and delivers long lasting performance
- Heavy-duty lead screw designed for quick gripping power, superior penetration and extra-long life
- Re-sharpenable for extended tool life
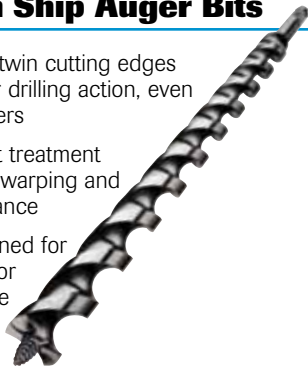
Power Ship Augers - Bit Length = 7-1/2", Twist = 5", Shank = 7/16" Description	Hole Diameter	Overall Length	Twist Length	Cat. No.
5/8 in. Power Ship Auger	5/8 in.	7-1/2 in.	5 in.	**35-810**
11/16 in. Power Ship Auger	11/16 in.	7-1/2 in.	5 in.	**35-811**
3/4 in. Power Ship Auger	3/4 in.	7-1/2 in.	5 in.	**35-812**
13/16 in. Power Ship Auger	13/16 in.	7-1/2 in.	5 in.	**35-813**
7/8 in. Power Ship Auger	7/8 in.	7-1/2 in.	5 in.	**35-814**
1 in. Power Ship Auger	1 in.	7-1/2 in.	5 in.	**35-815**
1-1/8 in. Power Ship Auger	1-1/8 in.	7-1/2 in.	5 in.	**35-816**
1-1/4 in. Power Ship Auger	1-1/4 in.	7-1/2 in.	5 in.	**35-817**
Power Ship Augers - Bit Length = 18", Twist = 15", Shank = 7/16" Description	**Hole Diameter**	**Overall Length**	**Twist Length**	**Cat. No.**
1/2 in. Power Ship Auger	1/2 in.	18 in.	15 in.	**35-820**
5/8 in. Power Ship Auger	5/8 in.	18 in.	15 in.	**35-821**
11/16 in. Power Ship Auger	11/16 in.	18 in.	15 in.	**35-822**
3/4 in. Power Ship Auger	3/4 in.	18 in.	15 in.	**35-823**
13/16 in. Power Ship Auger	13/16 in.	18 in.	15 in.	**35-824**
7/8 in. Power Ship Auger	7/8 in.	18 in.	15 in.	**35-825**
15/16 in. Power Ship Auger	15/16 in.	18 in.	15 in.	**35-826**
1 in. Power Ship Auger	1 in.	18 in.	15 in.	**35-827**
1-1/8 in. Power Ship Auger	1-1/8 in.	18 in.	15 in.	**35-828**
1-1/4 in. Power Ship Auger	1-1/4 in.	18 in.	15 in.	**35-829**

Mini™ Utility Bit Augers

- Designed to fit between wall studs when used with common drills
- Eliminates the need for expensive right angle drills
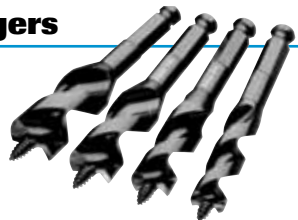
Mini™ Augers - Bit Length = 4-3/4" Twist = 2-1/2", Shank = 7/16" Description	Hole Diameter	Overall Length	Twist Length	Cat. No.
5/8 in. Mini™ Auger	5/8 in.	4-3/4 in.	2-1/2 in.	**35-862**
3/4 in. Mini™ Auger	3/4 in.	4-3/4 in.	2-1/2 in.	**35-864**
7/8 in. Mini™ Auger	7/8 in.	4-3/4 in.	2-1/2 in.	**35-866**
1 in. Power Ship Auger	1 in.	4-3/4 in.	2-1/2 in.	**35-868**

RESI-MASTER™ Heavy-Duty Ship Augers

- 62° cutting angle reinforces the cutting edge and provides greater durability
- Hardened lead screw and cutting edge provide increased wear resistance and extended life
- Secondary relief angle evacuates wood chips quickly and prevents auger from jamming
- Oversized cutting head makes hole larger than body of bit for easy ejection from work piece

Power Ship Augers - Bit Length = 7-1/2", Twist = 5", Shank = 7/16" Description	Hole Diameter	Overall Length	Twist Length	Cat. No.
5/8 in. RESI-MASTER™ Auger	5/8 in.	7-1/2 in.	5 in.	**35-892**
11/16 in. RESI-MASTER™ Auger	11/16 in.	7-1/2 in.	5 in.	**35-730**
3/4 in. RESI-MASTER™ Auger	3/4 in.	7-1/2 in.	5 in.	**35-893**
13/16 in. RESI-MASTER™ Auger	13/16 in.	7-1/2 in.	5 in.	**35-731**
7/8 in. RESI-MASTER™Auger	7/8 in.	7-1/2 in.	5 in.	**35-896**
15/16 in. RESI-MASTER™ Auger	15/16 in.	7-1/2 in.	5 in.	**35-897**
1 in. RESI-MASTER™ Auger	1 in.	7-1/2 in.	5 in.	**35-898**
1-1/8 in. RESI-MASTER™ Auger	1-1/8 in.	7-1/2 in.	5 in.	**35-899**
1-1/4 in. RESI-MASTER™ Auger	1-1/4 in.	7-1/2 in.	5 in.	**35-732**
Power Ship Augers - Bit Length = 18", Twist = 15", Shank = 7/16" Description	**Hole Diameter**	**Overall Length**	**Twist Length**	**Cat. No.**
1/2 in. RESI-MASTER™ Auger	1/2 in.	18 in.	15 in.	**35-726**
5/8 in. RESI-MASTER™ Auger	5/8 in.	18 in.	15 in.	**35-971**
11/16 in. RESI-MASTER™ Auger	11/16 in.	18 in.	15 in.	**35-727**
3/4 in. RESI-MASTER™ Auger	3/4 in.	18 in.	15 in.	**35-972**
13/16 in. RESI-MASTER™ Auger	13/16 in.	18 in.	15 in.	**35-728**
7/8 in. RESI-MASTER™ Auger	7/8 in.	18 in.	15 in.	**35-976**
15/16 in. RESI-MASTER™ Auger	15/16 in.	18 in.	15 in.	**35-977**
1 in. RESI-MASTER™ Auger	1 in.	18 in.	15 in.	**35-978**
1-1/8 in. RESI-MASTER™ Auger	1-1/8 in.	18 in.	15 in.	**35-979**
1-1/4 in. RESI-MASTER™ Auger	1-1/4 in.	18 in.	15 in.	**35-729**

Auger Bit Extensions

*Dual locking screws

Auger Bit Extensions, 18" Six flats to fit drill chuck - Allen wrench included Description	Cat. No.
Auger Bit Extension - 5/16 in.	**35-818**
Auger Bit Extension - 7/16 in.	**35-819**

IDEAL®

Flexible Drill Bits

- Premium heat-treated spring steel
- Extra durable braze where shank meets tip
- Fish holes in tip and shank for easy wire pulling
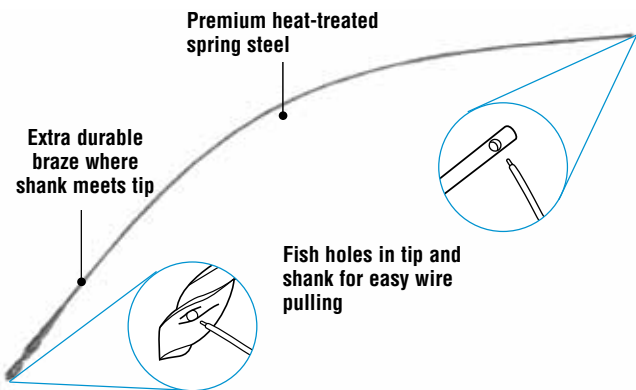
Screw Point Flexible Bits, Type B

- Fast and aggressive, self-starting bit
- Ultra-sharp ground threads provide increased pulling power through obstructions
- Designed for easy to tough wood drilling

Best for WOOD

Description	Shank (in.)	Cat. No.
3/8 in. x 54 in. Screw Point Flexible Bit	3/16	90-082
1/2 in. x54 in. Screw Point Flexible Bit	3/16	90-085
9/16 in. x 54 in. Screw Point Flexible Bit	3/16	90-088
3/4 in. x 54 in. Screw Point Flexible Bit	1/4	90-091

Serrated Combination Flexible Bits, Type C

- Multi-purpose versatile bit for clean holes
- Designed for easy to medium wood drilling and light metal
- Pressure is needed for starting and pulling the bit through the wood

Best for light WOOD & light METAL

Description	Shank (in.)	Cat. No.
1/4 in. x 54 in. Serrated Combination Flexible Bit	3/16	90-063
3/8 in. x 54 in. Serrated Combination Flexible Bit	3/16	90-067
1/2 in. x 54 in. Serrated Combination Flexible Bit	3/16	90-070
9/16 in. x 54 in. Serrated Combination Flexible Bit	3/16	90-073

Flexible Bit Extensions

- Connect to chuck end of shaft to increase the length of the bit

Description	Shank	Cat. No.
3/16 in. x 36 in. Flexible Bit Extension	3/16	90-170
1/4 in. x 36 in. Flexible Bit Extension	1/4	90-173

Flexible Bit Replacement Tool

Description	Cat. No.
Flexible Bit Replacement Tool	90-176

Installer Bits

- Hole in fluted head for pulling wires through walls, ceiling and floors
- Flutes designed for quick chip removal — no clogging or binding
- Premium quality, extra-hard 52-100 carbon bearing steel

Description	Length	Cat. No.
Installer Bit - 1/4 in.	18 in.	35-870
Installer Bit - 3/8 in.	18 in.	35-871
Installer Bit - 1/2 in.	18 in.	35-872

Power–Spade™ Spade Bits

- The most innovative and fastest spade bit ever!
- Smooth and effortless drilling

Description	Cat. No.
3/4 in. x 4 in. stubby	36-403
7/8 in. x 4 in. stubby	36-404
1 in. x 4 in. stubby	36-405
1/2 in.	36-413
5/8 in.	36-415
3/4 in.	36-417
7/8 in.	36-419
1 in.	36-421
1-1/8 in.	36-422
1-1/4 in.	36-423
4-pc. Kit with pouch (5/8 in., 3/4 in., 7/8 in., 1 in.)	36-432

Jab Saw

- Includes replaceable bi-metal wallboard blade
- Holds all reciprocating blades and hacksaw blades
- Ergonomic grip
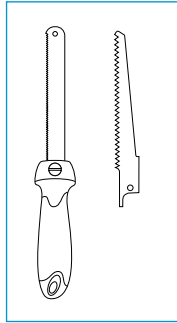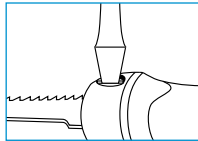
Description	Cat. No.
Jab Saw	**35-275**
Replacement Blade	**36-088**

Folding Saw
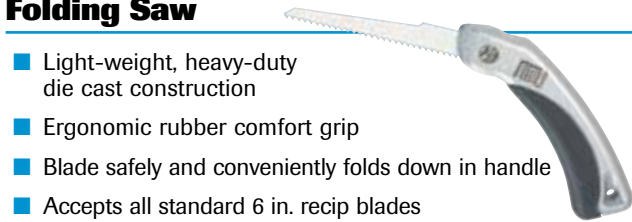
- Light-weight, heavy-duty die cast construction
- Ergonomic rubber comfort grip
- Blade safely and conveniently folds down in handle
- Accepts all standard 6 in. recip blades

Description	Cat. No.
Folding Saw	**35-274**

Aviation Tin Snips
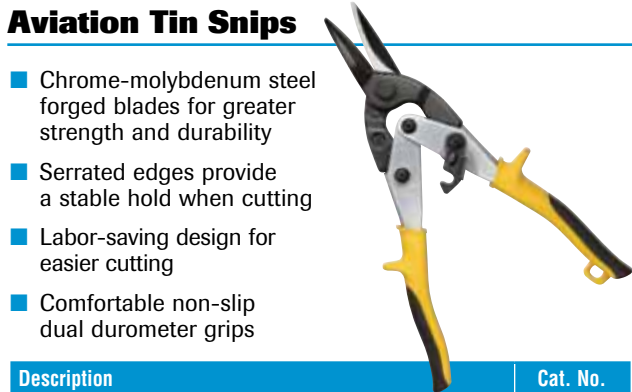
- Chrome-molybdenum steel forged blades for greater strength and durability
- Serrated edges provide a stable hold when cutting
- Labor-saving design for easier cutting
- Comfortable non-slip dual durometer grips

Description	Cat. No.
Straight-Cut Aviation Tin Snips	**35-001**

Heavy-Duty Hacksaw
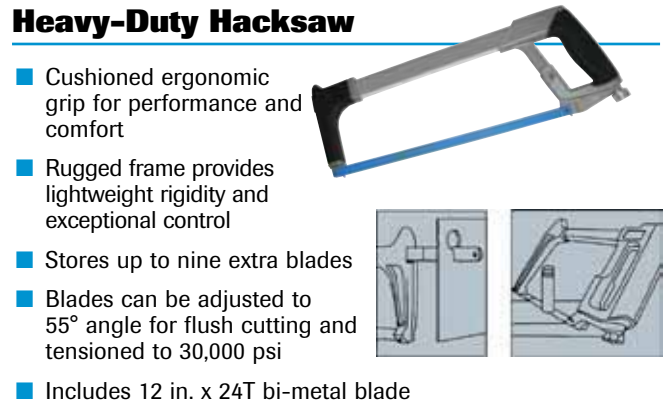
- Cushioned ergonomic grip for performance and comfort
- Rugged frame provides lightweight rigidity and exceptional control
- Stores up to nine extra blades
- Blades can be adjusted to 55° angle for flush cutting and tensioned to 30,000 psi
- Includes 12 in. x 24T bi-metal blade
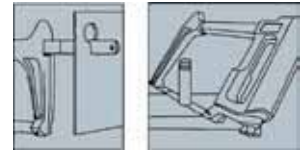
Description	Cat. No.
Heavy-Duty Hacksaw	**35-260**

Ergonomic Hacksaw
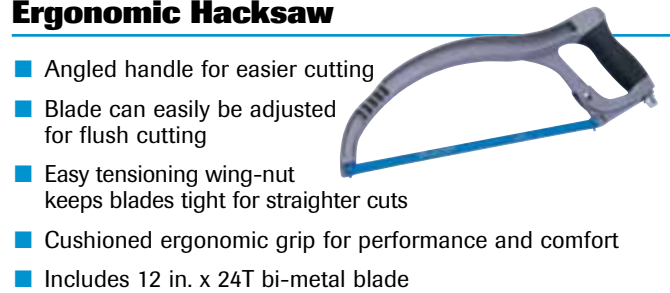
- Angled handle for easier cutting
- Blade can easily be adjusted for flush cutting
- Easy tensioning wing-nut keeps blades tight for straighter cuts
- Cushioned ergonomic grip for performance and comfort
- Includes 12 in. x 24T bi-metal blade

Description	Cat. No.
Ergonomic Hacksaw	**35-261**

Mini Hacksaw
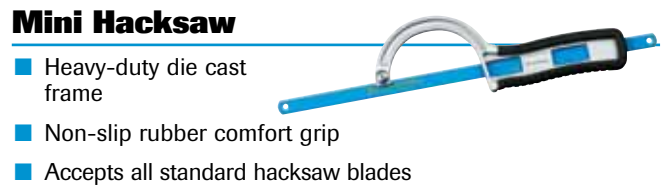
- Heavy-duty die cast frame
- Non-slip rubber comfort grip
- Accepts all standard hacksaw blades

Description	Cat. No.
Mini Hacksaw	**35-259**

Hacksaw Blades
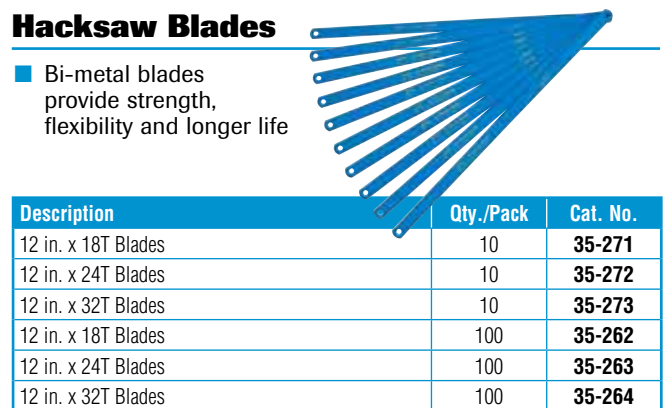
- Bi-metal blades provide strength, flexibility and longer life

Description	Qty./Pack	Cat. No.
12 in. x 18T Blades	10	**35-271**
12 in. x 24T Blades	10	**35-272**
12 in. x 32T Blades	10	**35-273**
12 in. x 18T Blades	100	**35-262**
12 in. x 24T Blades	100	**35-263**
12 in. x 32T Blades	100	**35-264**

IDEAL Cable Tie Catalog Numbering System

IT - 2 - S - MH - C - 0

IT	2	S	MH	CC	0
IT = IDEAL Powr-Tie™ Cable Ties	**Size**	**Tensile Strength**	**Style**	**Qty. Per Package**	**Color**
	Approximate Bundle Diameter for ties	M = Miniature (18 lbs.) I = Intermediate (40 lbs.) S = Standard (50 lbs.) LH = Light-Heavy Duty (120 lbs.) H = Heavy Duty (175 lbs.) EH = Extra Heavy-Duty (250 lbs.)	_ = Standard Tie MH = Mounting ID = Identification MB = Mounting Base LPMB = Low Profile Mounting Base MP = Mounting Pad CCL = Cable Clamp	L = 50 C = 100 D = 500 M = 1000	_ = Natural 0 = UV Black 8 = Gray 30 = Heat Stabilized Black 35 = Maroon 702 = Halar

Cable Tie Bag

- Keep your cable ties right where you need them, eliminate loss with this convenient easy-to-use bag that clips securely onto your belt

- Includes a bag for 8 in. cable ties and a bag for 11 in. cable ties, they easily clip together or can be used separately

- Elastic cord quickly and easily cinches to keep ties securely in place

Description	Cat. No.
Cable Tie Bag	**IT-BAG**

Cable-Tie Installation Tools

- Consistent, positive tension

- Flush cut-off leaves no projections to damage nearby wires or components

- Lightweight economy model for smaller jobs

- Standard and heavy-duty models feature rugged, construction with comfortable, cushioned grips

Description	Cat. No.
Economy – use w/intermediate & standard ties*	**BCTT-200**
Economy – use w/standard & heavy-duty ties**	**41-990**
Heavy-Duty – use w/standard & heavy-duty ties**	**41-995**

*Color may vary
**Not Shown

Plenum Ties

UL Listed for Air Handling Ties – Plenum

■ UL Listed nylon 6/6 cable ties are suitable for use in Air Handling Spaces (Plenum) in accordance with Section 300-22(C) & (D) of the National Electrical Code and Rules 12-010 (3), (4) and (5) and 12-020 of the Canadian Electrical Code, Part 1

Cable Ties

Standard Ties

Description	Length	Width	Thickness	Max. Bundle	Tensile Strength	Mil-Spec Reference	Qty./Bag	Cat. No.
Burgundy Nylon							100	IT2S-C35
Natural Nylon						MS3367-1-9	100	IT2S-C
Natural Nylon	7.5 in./190mm	.178 in./4.52mm	.053 in./1.34mm	1/16 - 1-7/8 in.	50 lbs.		1000	IT2S-M
UV Black Nylon						MS3367-1-0	100	IT2S-C0
UV Black Nylon							1000	IT2S-M0
Burgundy Nylon							100	IT3S-C35
Natural Nylon						MS3367-7-9	100	IT3S-C
Natural Nylon	11.2 in./284mm	.178 in./4.52mm	.053 in./1.34mm	1/16 - 3-1/16 in.	50 lbs.		500	IT3S-D
UV Black Nylon						MS3367-7-0	100	IT3S-C0
UV Black Nylon							500	IT3S-D0
Natural Nylon						MS3367-2-9	100	IT4S-C
Natural Nylon	14.5 in./368mm	.178 in./4.52mm	.053 in./1.34mm	1/16 - 4-1/8 in.	50 lbs.		500	IT4S-D
UV Black Nylon						MS3367-2-0	100	IT4S-C0
UV Black Nylon							500	IT4S-D0

Mounting Ties

Description	Length	Width	Strap Thickness	Max. Bundle	Tensile Strength	Screw Size	Qty./Bag	Cat. No.
Natural Nylon							100	IT2SMH-C
Natural Nylon	8.1 in./206mm	.178 in./4.52mm	.053 in./1.35mm	1/16 - 1-3/4 in.	50 lbs.	No. 10	1000	IT2SMH-M
UV Black Nylon							100	IT2SMH-C0

Definition of "Air Handling Spaces"

Ducts or plenums used for environmental air and other spaces used for environmental air, such as above hung ceilings or below raised floors. This does not include plenums used for the removal of dust, loose stock or vapor, or ventilation of commercial-type cooking equipment.[1]

[1] UL 1565 CSA C22.2 4th Edition

Powr–Tie™ Cable Ties

Quality Construction

- One-piece design for added strength
- Superior locking mechanism
- Exceeds industry tensile strength ratings
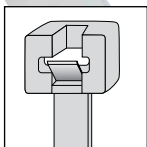
Low Insertion Force

- Tapered thin tip reduces initial friction
- Lowest insertion force with the highest tensile strength
- Reduces installation fatigue
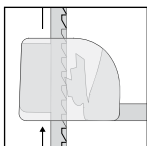
No Burrs or Sharp Edges

- Smooth corners provide added safety
- Rounded edges eliminate insulation damage
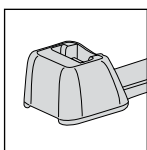
Stepped Tail Gripper

- Tapered tail grip assures positive threading
- Stepped tail allows for easier grabbing and tightening once engaged
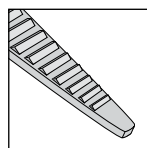
Angled Tail

- Provides quicker initial insertion
- Lowers installation costs
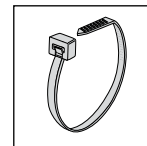
Material Selection

- **ROHS Compliant**

- **Natural General Purpose 6/6 Nylon**
  - Suitable for most applications
  - Meets UL 94V-2 flammability ratings
  - 85°C/185°F working temperature

- **UV Black Nylon 6/6**
  - Suitable for most applications with continuous or extended exposure to outdoor elements
  - Weather-resistant grade, able to endure ultraviolet (UV) light
  - Meets UL 94V-2 flammability ratings
  - 85°C/185°F working temperature

- **Heat Stabilized Black Nylon 6/6**
  - Suitable for most applications with continuous or extended exposure to high temperatures
  - Meets UL standards for electrical applications
  - Meets UL 94V-2 flammability ratings
  - 125°C/254°F working temperature

Miniature (18 lb.) Ties Natural & UV Black

Description	Length	Width	Thickness	Max. Bundle	Tensile Strength	Mil-Spec Reference	Qty./Bag	Cat. No.
Natural Nylon	4.0 in./102mm	.094 in./2.39mm	.042 in./1.06mm	1/16 - 7/8 in.	18 lbs.	MS3367-4-9	100	**IT1M-C**
Natural Nylon							1000	**IT1M-M**
UV Black Nylon						MS3367-4-0	100	**IT1M-C0**
Natural Nylon	6.1 in./154mm	.094 in./2.39mm	.042 in./1.06mm	1/16 - 3-1/2 in.	18 lbs.	—	100	**IT1_5M-C**
UV Black Nylon							100	**IT1_5M-C0**
Natural Nylon	8.1 in./206mm	.094 in./2.39mm	.042 in./1.06mm	1/16 - 2-3/16 in.	18 lbs.	—	100	**IT2M-C**
Natural Nylon							1000	**IT2M-M**
UV Black Nylon							100	**IT2M-C0**

*IM, 1_5M & 2M Series

Intermediate (40 lb.) Ties Natural & UV Black

Description	Length	Width	Thickness	Max. Bundle	Tensile Strength	Mil-Spec Reference	Qty./Bag	Cat. No.
Natural Nylon	5.7 in./145mm	.140 in./3.56mm	.049 in./1.24mm	1/16 - 1-7/16 in.	40 lbs.	MS3367-5-9	100	**IT1_5I-C**
Natural Nylon							1000	**IT1_5I-M**
UV Black Nylon						MS3367-5-0	100	**IT1_5I-C0**
UV Black Nylon							1000	**IT1_5I-M0**
Natural Nylon	8.8 in./224mm	.140 in./3.56mm	.049 in./1.24mm	1/16 - 2-3/8 in.	40 lbs.	MS53367-5-9	100	**IT2I-C**
Natural Nylon							1000	**IT2I-M**
UV Black Nylon						MS53367-5-0	100	**IT2I-C0**
UV Black Nylon							1000	**IT2I-M0**
Natural Nylon	11.5 in./292mm	.142 in./3.60mm	.055 in./1.40mm	1/16 - 3-3/8 in.	40 lbs.	—	100	**IT3I-C**
UV Black Nylon							100	**IT3I-C0**
Natural Nylon	14.5 in./368mm	.142 in./3.60mm	.055 in./1.40mm	1/16 - 4 in.	40 lbs.	—	100	**IT4I-C**
UV Black Nylon							100	**IT4I-C0**

*IM, 1_5 & 2I Series

Standard (50 lb.) Ties Natural, UV Black & Heat Stabilized Black

Description	Length	Width	Thickness	Max. Bundle	Tensile Strength	Mil-Spec Reference	Qty./Bag	Cat. No.
Natural Nylon	7.5 in./190mm	.178 in./4.52mm	.053 in./1.34mm	1/16 - 1-7/8 in.	50 lbs.	MS3367-1-9	100	IT2S-C
Natural Nylon							1000	IT2S-M
UV Black Nylon						MS3367-1-0	100	IT2S-C0
UV Black Nylon							1000	IT2S-M0
Natural Nylon	11.2 in./284mm	.178 in./4.52mm	.053 in./1.34mm	1/16 - 3-1/16 in.	50 lbs.	MS3367-7-9	100	IT3S-C
Natural Nylon							500	IT3S-D
UV Black Nylon						MS3367-7-0	100	IT3S-C0
UV Black Nylon							500	IT3S-D0
Natural Nylon	14.5 in./368mm	.178 in./4.52mm	.053 in./1.34mm	1/16 - 4-1/8 in.	50 lbs.	MS3367-2-9	100	IT4S-C
Natural Nylon							500	IT4S-D
UV Black Nylon						MS3367-2-0	100	IT4S-C0
UV Black Nylon							500	IT4S-D0
Natural Nylon	17.0 in./432mm	.190 in./4.82mm	.053 in./1.34mm	1/16 - 4-3/4 in.	50 lbs.	—	100	IT5S-C
UV Black Nylon							100	IT5S-C0

*2S, 3S & 4S Series
UL Listed Nylon 6/6 cable ties are suitable for use in Air Handling Spaces (Plenums) in accordance with Section 300-22(C) & (D) of the National Electrical Code and Rules 12-010 (3), (4) & (5) and 12-020 of the Canadian Electrical Code, Part 1.

Light Heavy-Duty, Heavy-Duty & Extra Heavy-Duty Ties Natural, UV Black & Heat Stabilized Black

Description	Length	Width	Thickness	Max. Bundle	Tensile Strength	Mil-Spec Reference	Qty./Bag	Cat. No.
Natural Nylon	8.7/220.9mm	.300 in./7.62mm	.076 in./1.93mm	2-1/16 in.	120 lbs.	—	100	IT2LH-C
UV Black Nylon							100	IT2LH-C0
Natural Nylon	15.1 in./384mm	.300 in./7.62mm	.075 in./1.90mm	3/16-4-1/16 in.	120 lbs.	MS3367-3-9	50	IT4LH-L
UV Black Nylon						MS3367-3-0	50	IT4LH-L0
Natural Nylon	17.8 in./451mm	.300 in./7.62mm	.075 in./1.90mm	3/16-5-1/4 in.	120 lbs.	—	50	IT5LH-L
UV Black Nylon							50	IT5LH-L0
Natural Nylon	24.2 in./614mm	.300 in./7.62mm	.075 in./1.90mm	3/16-7 in.	120 lbs.	—	50	IT7LH-L
UV Black Nylon							50	IT7LH-L0
Natural Nylon	25.3 in./642mm	.340 in./8.64mm	.090 in./2.29mm	3/16-7-3/16 in.	175 lbs.	MS3367-10-9	50	IT7H-L
UV Black Nylon						MS3367-10-0	50	IT7H-L0
Natural Nylon	37.1 in./942mm	.340 in./8.64mm	.090 in./2.29mm	3/16-11 in.	175 lbs.	MS3367-13-9	50	IT11H-L
UV Black Nylon						MS3367-13-0	50	IT11H-L0
Natural Nylon	47.8 in./1214mm	.340 in./8.64mm	.090 in./2.29mm	3/8-14-1/2 in.	175 lbs.	MS3367-16-9	50	IT14H-L
UV Black Nylon						MS3367-16-0	50	IT14H-L0
UV Black Nylon	22.8 in./579mm	.50 in./12.7mm	.080 in./2.03mm	3/16-6 in.	250 lbs.	—	100	IT6EH-C0

*4LH, 7H, 10H, 11H, 14H Series

Cable Ties

Mounting Head Ties Natural and UV Black

■ Secures and positions wire bundles, cables, hoses, etc. to panels or other surfaces with one fastener to reduce time and cost

■ Allows bundling before and after mounting
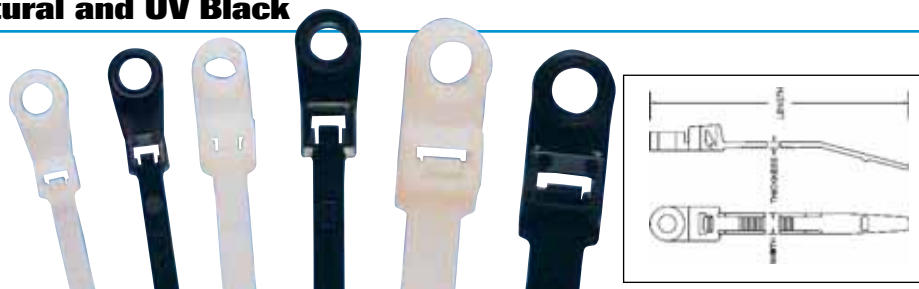
Description	Length	Width	Thickness	Max. Bundle	Tensile Strength	Screw Size	Qty./Bag	Cat. No.
Natural Nylon	6.0 in./152mm	.140 in./3.55mm	.048 in./1.21mm	1/16 - 1-1/4 in.	30 lbs.	No. 8	100	IT1_5IMH-C
UV Black Nylon							100	IT1_5IMH-C0
Natural Nylon	8.1 in./206mm	.178 in./4.52mm	.053 in./1.35mm	1/16 - 1-3/4 in.	50 lbs.	No. 10	100	IT2SMH-C
Natural Nylon							1000	IT2SMH-M
UV Black Nylon							100	IT2SMH-C0
Natural Nylon	11.8 in./300mm	.189 in./4.80mm	.050 in./1.27mm	1/16 - 3 in.	50 lbs.	No. 10	100	IT3SMH-C
UV Black Nylon							100	IT3SMH-C0
Natural Nylon	14.5 in./370mm	.189 in./4.80mm	.060 in./1.52mm	1/16 - 4 in.	50 lbs.	No. 10	100	IT4SMH-C
Natural Nylon	15.7 in./398mm	.300 in./7.62mm	.075 in./1.90mm	3/16 - 4-1/16 in.	120 lbs.	1/4 in.	100	IT4LHMH-C
UV Black Nylon							100	IT4LHMH-C0

*4LH Series; **2S Series
UL Listed Nylon 6/6 cable ties are suitable for use in air handling spaces in accordance with Section 300-22(C) & (D) of the National Electrical Code.

Identification Ties

■ Write-on surface

■ Bundle and identify at the same time
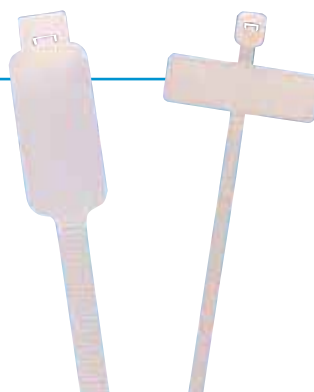
IT1MID-C
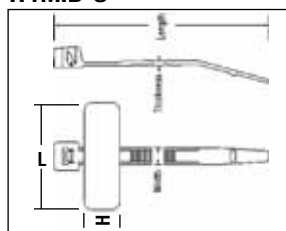
IT2SID-C & IT4SID-C
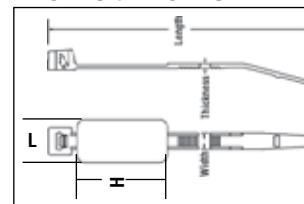
Description	Length	Width	Thickness	Max. Bundle	Tensile Strength	Pad Size (H X L)	Qty./Bag	Cat. No.
Natural Nylon	4.0 in./102mm	.100 in./2.54mm	.044 in./1.12mm	1/16 - 7/8 in.	18 lbs.	5/16 in. x 1 in.	100	IT1MID-C
Natural Nylon	7.8 in./200mm	.181 in./4.59mm	.055 in./1.40mm	1/16 - 1-7/8 in.	50 lbs.	1-1/8 in. x 1/2 in.	100	IT2SID-C

Mounting Pads

- Patented stay-in-place tab keeps cable ties from sliding down during vertical applications
- Lead-N-Feature allows easy insertion for hard to reach applications
- Four-sided entry slots save time during placement orientation
- Smooth radius cradle eliminates possible damage to cable while providing stable support
- Webbed punch through screw hole allows maximum adhesive surface area, along with easy insertion of mechanical fasteners
- Low Profile is essential in confined spaces
- UL recognized, rubber adhesive positioning device

"Stay-N-Place" Tab
Smooth Radius Cradle
Lead-N-Feature
Webbed Punch Through Screw Hole
4-Sided Entry
Rubber or Acrylic Base Adhesives
Low Profile
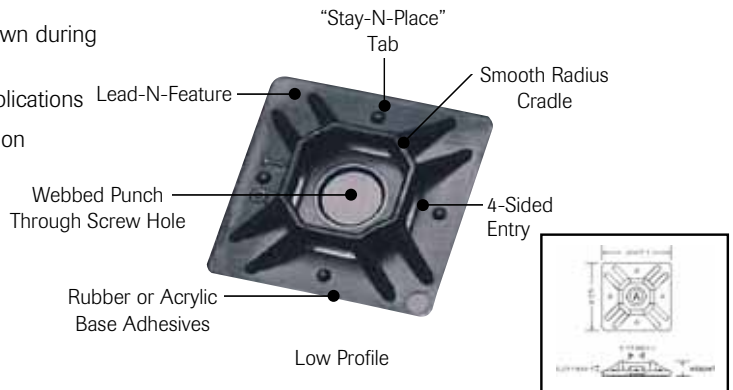
Description	Width	Height	Slot Height	Slot Width	Screw Size	Qty./Bag	Cat. No.
Natural Nylon	.74 in./19mm	.19 in./4.8mm	.05 in./1.2mm	.20 in./5.1mm	No. 4	100	IT750MP-C
UV Black Nylon						100	IT750MP-C0
Natural Nylon	.99 in./25mm	.20 in./5.0mm	.06 in./1.5mm	.20 in./5.1mm	No. 6	100	IT1000MP-C
UV Black Nylon						100	IT1000MP-C0

Screw Mounting Bases – Standard

- Deep cradle design provides minimum support for larger bundles and tubing
- Recessed screw hole allows cable ties to easily pass over screw head
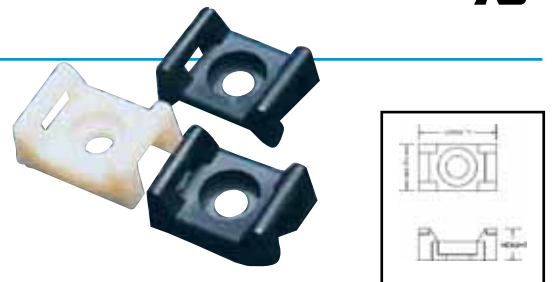
Description	Length	Width	Height	Slot Height	Slot Width	Screw Size	Qty./Bag	Cat. No.
Screw Mount Natural Nylon	.590 in./15mm	.370 in./9.40mm	.270 in./6.86mm	.062 in./1.59mm	.190 in./4.83mm	No. 6	100	IT1SMB-C
Screw Mount UV Black Nylon							100	IT1SMB-C0
Screw Mount Natural Nylon	.870 in./22mm	.640 in./16.26mm	.380 in./9.65mm	.125 in./3.18mm	.300 in./7.62mm	1/4 in.	100	IT2SMB-C
Screw Mount UV Black Nylon							100	IT2SMB-C0

Screw Mounting Bases – Low Profile

- Perfect for confined space, control panels or other areas where space is limited
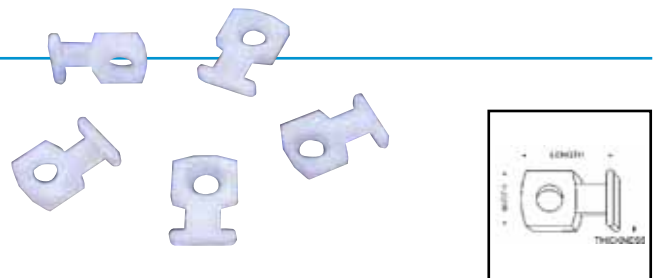
Description	Length	Width	Height	Slot Height	Slot Width	Screw Size	Qty./Bag	Cat. No.
Low Profile Mount	.750 in./19mm	.500 in./12.70mm	.120 in./3.04mm	.062 in./1.57mm	.180 in./4.57mm	No. 8	100	IT1LPMB-C

Clamps

- Use to secure wires, cables, pipes, tubing and fiber optics
- Ultraviolet black nylon clamps available for internal and external use
- Use with #10 mounting screw
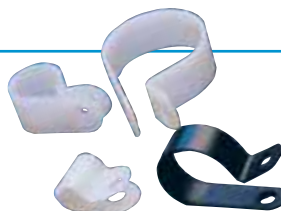
Description	Closed Diameter	Center to Center	Width	Thickness	Mounting Hole	Qty./Bag	Cat. No.
Natural Nylon	.125 in./3.18mm	.343 in./8.71mm	3/8 in.	.050 in./1.27mm	.203 in./5.16mm	100	IT125CCL-C
Natural Nylon	.250 in./6.35mm	.421 in./10.69mm	3/8 in.	.050 in./1.27mm	.203 in./5.16mm	100	IT250CCL-C
UV Black Nylon						100	IT250CCL-C0
Natural Nylon	.375 in./9.52mm	.500 in./12.70mm	1/2 in.	.060 in./1.52mm	.203 in./5.16mm	100	IT375CCL2-C
UV Black Nylon						100	IT375CCL2-C0
Natural Nylon	.500 in./12.70mm	.553 in./14.05mm	1/2 in.	.060 in./1.52mm	.203 in./5.16mm	100	IT500CCL2-C
Natural Nylon	.625 in./15.88mm	.625 in./15.88mm	1/2 in.	.060 in./1.52mm	.203 in./5.16mm	100	IT625CCL2-C
Natural Nylon	.750 in./19.05mm	.699 in./17.75mm	1/2 in.	.060 in./1.52mm	.203 in./5.16mm	100	IT750CCL2-C
Natural Nylon	1.000 in./25.40mm	.825 in./20.96mm	1/2 in.	.060 in./1.52mm	.203 in./5.16mm	100	IT1000CCL2-C

Flange-Type Plastic Anchors

- Multi-purpose use in solid materials or hollow walls, will not fall through
- For use with sheet-metal or wood screws
- High-impact plastic construction resists moisture, corrosion and deterioration

Description	Screw Size	Drill Size	Qty.	Cat. No.
Yellow – 7/8 in. long	6-8-10	3/16	100	90-041
Red – 1 in. long	10-12	1/4	100	90-042
White – 1-1/2 in. long	14-16	5/16	50	90-044

Flange-Type Plastic Anchor Kits

- Kits include flange-type anchors, slotted/Phillips head screws and masonry bit
- Convenient plastic storage container

Contents	Cat. No.
100 #6-8-10 x 7/8 in. Flange-type anchors, 100 #8 x 1 in. combo-head, sheet-metal screws & 1-3/16 in. masonry bit (carbide-tipped)	90-051
100 #10-12 x 1 in. Flange-type anchors, 100 #10 x 1-1/4 in. combo-combo-head, sheet-metal screws & 1-1/4 in. masonry bit (carbide-tipped)	90-052
100 #10-12 x 1 in. Flange-type anchors, sheet-metal screws & 1-1/4 in. masonry bit (carbide-tipped)	90-053
40 #14-16 x 1-1/2 in. Flange-type anchors, 40 #14 x 1-1/2 in. combo-head, sheet-metal screws 1-5/16 in. masonry bit (carbide-tipped)	90-054
100 #10-12 x 1 in. Flange-type anchors, 100 #10 x 1 in. combo-head, sheet-metal screws & 1-1/4 in. masonry bit (carbide-tipped)	90-055

Flexible Tubing*

- Flexible polyethylene cuts easily to desired length
- Splits open for neat "bundling" of wiring jobs
- Snaps shut to create a continuous protective cover

Description	Qty.	Cat. No.
3/8 in. Flexible Tubing	10 ft.	772240
1/2 in. Flexible Tubing	1 ft.	772241
1 in. Flexible Tubing	5 ft.	772242

*Buchanan branded

Grommets*

- Installs instantly! Flexible PVC grommets side slotted 1/16 in. for quick installation
- Snap into holes in electrical boxes, sheet metal, auto firewalls and more
- Prevents steel and other sharp edge chafing of wire insulation or cording
- Black, PVC, flexible, 60 durometer
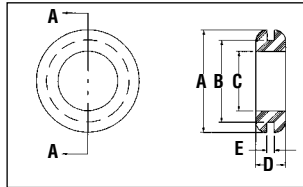
Description	A	B	C	D	E	Qty.	Cat. No.
1/4" Grommets	9/16	.37	1/4	.28	3/32	25	774116
3/8" Grommets	43/64	.49	3/8	.28	1/16	25	774137
1/2" Grommets	55/64	.69	1/2	.25	1/16	25	774113
3/4" Grommets	15/64	1.0	3/4	.31	1/16	25	774136

*Buchanan branded

Spacer Shims*

- Eliminates the need to cut plate screws for "GFCI" decorator devices when installing on tile, marble, etc.
- Supports loose outlets
- Prevents broken face plates
- Snaps over #6, #8, #10 screws
- Also works as a shim
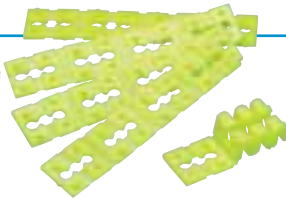
Description	Qty.	Cat. No.
Catepillar	5	772450
Catepillar	25	172451
Catepillar	500	772451

*Buchanan branded

Universal Metal Stud Bushings

- Non-metallic stud bushing fits all hole configurations you are likely to encounter in pre-punched steel studs
- Long pulls of cable slide smoothly through the bushing, make a difficult job easier
- Protects wire without falling out of the hole

CODE VIOLATION
SHARP EDGE
NM CABLE

Common hole configurations in metal studs.
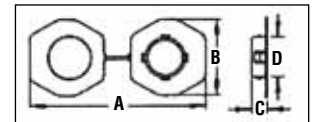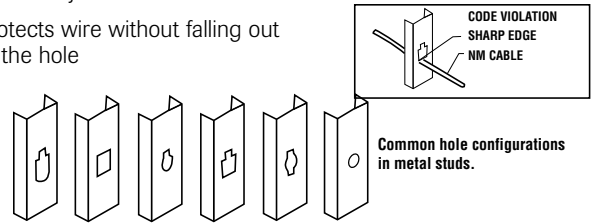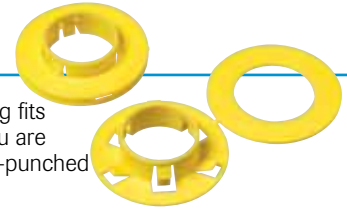
Description	A	B	C	D	Qty.	Cat. No.
Stud Bushing	5.670	2.50	.505	1.30	25	772271

Cable Staples

- Full line of quality insulated and non-insulated staples to fit all cabling applications
- Packaged to answer electrician's need for clean, dry, rust-free staples
- Convenient reclosable containers keep staples organized in the truck and on the job-site

Plastic Insulated Staples

- Use with wider cable such as Romex®, NM and UF
- Smooth plastic saddle prevents damage to cable
- Zinc-plated nails resist rust and corrosion

Description	Qty./Package	Cat. No.
1/2 in. Insulated	50/Bag	BPS2-50
	100/Bag	BPS2-1
	225/Jar	BPS2-JRL
	400/Jar	BPS2B-JR
	500/Bag	BPS2-5
	5,000/Bucket	BPS2-5M
	30,000/Barrel	BPS2-30K
3/4 in. Insulated	50/Bag	BPS3-50
	100/Bag	BPS3-1
	200/Jar	BPS3-JRL
	250/Bag	BPS3-2

Romex® is a registered trademark of Southwire.

Carbon Steel Staples

- Use with wider cable such as Romex®, NM and UF
- High-grade carbon steel construction
- Sharp-point legs drive straight without splitting wood
- Resist rust and corrosion
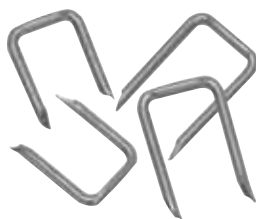
Description	Qty./Package	Cat. No.
1/2 in. x 1 in.	100/Box	BCS1-1
	500/Jar	BCS1-JR
	500/Box	BCS1-5
	5,000/Bucket	BCS1-5M
9/16 in. x 1-1/4 in.	100/Box	BCS2-1
	400/Jar	BCS2-JR
	500/Box	BCS2-5
	5,000/Bucket	BCS2-5M

Romex® is a registered trademark of Southwire.

Plastic Insulated Cable Staple

- Use with wider cable such as Romex®, NM and UF
- High-grade carbon steel construction
- Smooth plastic saddle prevents damage to cable
- Zinc-plated nails resist rust and corrosion
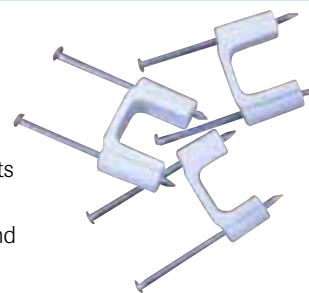
Description	Qty./Package	Cat. No.
1/2 in. 2 Cable Stacker	50/Bag	BPS2/2-50

Romex® is a registered trademark of Southwire.

Cable Stacker

- Perfect for centering multiple cables on 2 x 4 framing members in compliance with NEC 300.4.(2)
- Use with cable such as Romex®, NM and UF
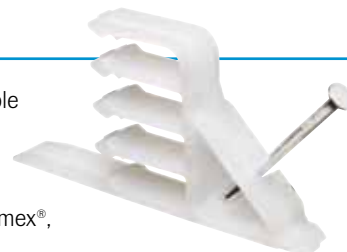
Description	Qty./Package	Cat. No.
Cable Stacker	15	BPSTCKR-15

Romex® is a registered trademark of Southwire.

Insulated Staples

- Use with wider cable such as Romex®, NM and UF
- High-grade carbon steel with flexible PVC insulation
- Sharp-point legs drive straight without splitting wood
- Resist rust and corrosion
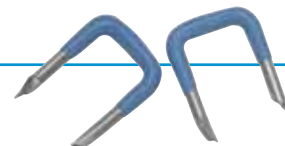
Description	Qty./Package	Cat. No.
9/16 in. x 1-1/4 in.	125	BICS2-125

Romex® is a registered trademark of Southwire.

Coaxial Cable Straps

- Use with round cable such as CATV/VCR, RG-5, RG-6 and phone cables or with plastic and metal tubing
- Smooth plastic saddle prevents damage to cable
- Zinc-plated nails resist rust and corrosion

Description	Nail Type	Qty./Package	Cat. No.
1/4 in. White	Standard	100/Clamshell	**772809**
		250/Jar	**BPCXSW-JR**
1/4 in. Black	Standard	250/Jar	**BPCXSB-JR**
	Roofing	25/Clamshell	**772891**
		200/Jar	**BPCSRB-JR**
	Masonry	25/Clamshell	**772890**
		200/Jar	**BPCXMBJR**
7/16 in. White	Standard	50/Bag	**BPS4-50**

Plastic Insulated Service Entrance Straps

- Use with service entrance cable and conduit
- Smooth plastic saddle prevents damage to cable
- Zinc-plated nails resist rust and corrosion

Description	Qty./Package	Cat. No.
#6 SER & 1/2 in. EMT	50/Bag	**BSER6-50**
#6 & #8 SEU	50/Bag	**BSEU6-50**
#2 SER & 3/4 in. EMT	25/Bag	**BSER2-25**
#2 SEU	25/Bag	**BSEU2-25**
4/0 SER	5/Bag	**BSER4/0-5**
4/0 SEU	5/Bag	**BSEU4/0-5**

Data Cable Staples

- Secures Category 3, 5 and other 4-pair twisted wire
- Blue plastic saddle prevents damage to cable
- Zinc-plated nails resist rust and corrosion

Description	Nail Type	Qty./Package	Cat. No.
Data Staple	Standard	25/Clamshell	**772880**
	Standard	250/Jar	**BPDATAS-JR**
	Standard	250/Clamshell	**772881**

Sound Straps

- Use with smaller insulated wire and cord applications such as lamps, thermostats, telephones and sound systems
- Smooth plastic saddle prevents damage to wires
- Zinc-plated nails resist rust and corrosion

Description	Nail Type	Qty./Package	Cat. No.
3/16 in. White	Standard	100/Clamshell	**772805**
		250/Jar	**BPLVSW-JR**
3/16 in. Black	Standard	25/Clamshell	**772810**
		250/Jar	**BPLVSB-JR**
3/16 in. Tan	Standard	25/Clamshell	**772881**
3/16 in. White	Masonry	250/Clamshell	**772813**

Carbon Steel Service Entrance Staples

- Use with service entrance cable and conduit
- High-grade carbon steel construction
- Sharp-point legs drive straight without splitting wood
- Resist rust and corrosion

Description	Qty./Package	Cat. No.
1-5/16 in. x 3/4 in.	100/Box	**BMSE150-1**
1-1/2 in. x 1-1/16 in.	100/Box	**BMSE175-1**

Heat Shrinkable Tubing

Thermo-Shrink® UF Splice Kits

- Direct burial rated
- 14/3 with and without ground thru 8/3 without ground, UF cable range
- Stretcher kit repairs a 7 in. to 10 in. section damaged or destroyed by a trencher
- 600V Maximum, 105°C rating
- Meets the requirements of the 2002 NEC Code 110-14(b) and UL486D

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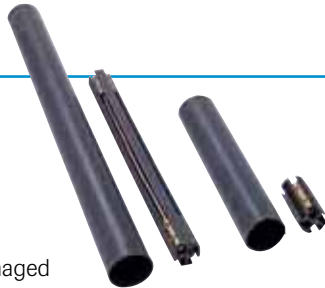
Description	Cat. No.
UF Splice Kit - 14-8 AWG, Tubing 1.1 in. x 8 in.	46-400
UF Stretcher Kit* - 14-8 AWG, Tubing 1.1 in. x 18 in.	46-410

*Stretcher kit connector is 11.5 in.

Thermo-Shrink® Al/Cu Splice Kits

- Direct burial rated, underground splice kits
- Heavy-wall heat shrink tubing with adhesive liner provides complete insulation and protection
- Connector can be used for aluminum and/or copper cable
- Meets the requirements of the 2005 NEC Code 110-14(B)
- 600V maximum, 105°C rating

Description	Cat. No.
Underground Splice Kit – 8 to 4 AWG, Tubing 3/4 in. x 6 in.	46-401
Underground Splice Kit – 4 AWG to 1/0, Tubing 1.1 in. x 8 in.	46-402
Underground Splice Kit – 1/0 to 250 KCMIL, Tubing 1-1/2 in. x 12 in.	46-403

Thermo-Shrink® Copper Butt Splice Kits

- UL Listed
- Provides a fully-insulated butt splice
- 600V Maximum, 105°C rating

Description	Cat. No.
Butt Splice Kit – Copper 14-8 AWG	46-404
Butt Splice Kit – Copper 8-2 AWG	46-405

BUCHANAN Thin-Wall Heat Shrink Tubing

- Electrically insulates and protects in-line components, terminals and splices
- Flame-retardant and flexible
- Resistant to common fluids and solvents
- Meets UL 224 125°C VW-1 600V
- RoHS compliant
- 2:1 shrink ratio
- Minimum shrink temperature: 70°C
- Operating temperature: -55°C to +125°C
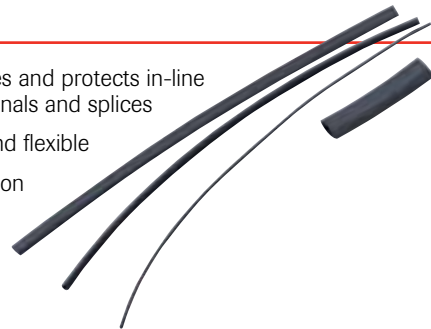
Description	Nominal Size (in.)	Color	Length (ft.)	Cat. No.
Thin Wall Heat Shrink	1/6	Black	4	772-1/16-BL
Thin Wall Heat Shrink	3/32	Black	4	772-3/32-BL
Thin Wall Heat Shrink	1/8	Black	4	772-1/8-BL
Thin Wall Heat Shrink	3/16	Black	4	772-3/16-BL
Thin Wall Heat Shrink	1/4	Black	4	772-1/4-BL
Thin Wall Heat Shrink	3/8	Black	4	772-3/8-BL
Thin Wall Heat Shrink	1/2	Black	4	772-1/2-BL
Thin Wall Heat Shrink	3/4	Black	4	772-3/4-BL
Thin Wall Heat Shrink	1	Black	4	772-1-BL

Thermo-Shrink® Thin-Wall Heat Shrinkable Tubing

- Polyolefin material electrically insulates and protects in-line components, disconnect terminals and splices with its high strength and excellent resilience

- Use to bundle wires for very flexible light-duty harnesses

- Highly flame-retardant and flexible

- Resistant to common fluids and solvents

- Meets UL 486D 125°C VW-1 600V

- Material: No PBB's, PBBE's, conforms to ROHS

- 2:1 shrink ratio

- Minimum shrink temperature: 70°C

- Operating temperature: -55°C to +125°C

Heat Shrink

Technical Data

Property	Test Method	Typical Data
Tensile strength	ASTM D 638	14MPa
Elongation at break	ASTM D 638	600%
Elongation after aging at 175°C for 168 hours	UL 224	350%
Flammability	UL 224 VW-1	Pass
Heat shock (250°C/4 hours)	UL 224	No cracking
Cold bend test (-55°C/4 hours)	UL 224	No cracking
Dielectric strength	ASTM D 150	20KV/mm
Volume resistance	ASTM D 876	1014Ω.cm
Copper corrosion	UL 224	Pass
Chemical resistance	UL 224	Pass
Longitudinal shrinkage	UL 224	0±5%
Eccentricity	UL 224	30%

Normal Size (in.)	Expanded I.D. (Min.)	Nominal Recovered I.D. (Max.)	Recovered Wall Thickness +/- 10%	Cable Range AWG*	Length (Pkg.)	Cat. No.
3/64	0.063"/1.6mm	0.024"/0.6mm	0.013"/0.33mm	22-18	4 ft. (Disk)	**46-600**
1/16	0.079"/2.0mm	0.031"/0.8mm	0.014"/0.36mm	16	4 ft. (Disk)	**46-601**
3/32	0.122"/3.1mm	0.047"/1.2mm	0.017"/0.44mm	14-12	4 ft. (Disk)	**46-602**
1/8	0.146"/3.7mm	0.063"/1.6mm	0.017"/0.44mm	24-20	6 in. (Bag)	**46-310**
					4 ft. (Disk)	**46-603**
					1,000 ft. (Spool)	**46-312**
3/16	0.205"/5.2mm	0.094"/2.4mm	0.020"/0.50mm	20-14	6 in. (Bag)	**46-313**
					4 ft. (Disk)	**46-604**
					1,000 ft. (Spool)	**46-315**
1/4	0.268"/6.8mm	0.126"/3.2mm	0.022"/0.56mm	14-8	6 in. (Bag)	**46-316**
					4 ft. (Disk)	**46-605**
					500 ft. (Spool)	**46-318**
5/16	0.346"/8.8mm	0.157"/4.0mm	0.022"/0.56mm	10-6	4 ft. (Disk)	**46-606**
3/8	0.421"/10.7mm	0.185"/4.7mm	0.022"/0.56mm	8-4	6 in. (Bag)	**46-319**
					4 ft. (Disk)	**46-607**
					200 ft. (Spool)	**46-321**
1/2	0.539"/13.7mm	0.252"/6.4mm	0.026"/0.65mm	4-1	6 in. (Bag)	**46-322**
					4 ft. (Disk)	**46-608**
					200 ft. (Spool)	**46-324**
3/4	0.807"/20.5mm	0.374"/9.5mm	0.027"/0.69mm	2-250 MCM	6 in. (Bag)	**46-325**
					4 ft. (Disk)	**46-609**
					200 ft. (Spool)	**46-327**
1	1.043"/26.5mm	0.500"/12.7mm	0.031"/0.80mm	2/0-500 MCM	6 in. (Bag)	**46-328**
					4 ft. (Disk)	**46-610**
					100 ft. (Spool)	**46-330**

*Reference only - Consult the wire manufacturer's catalog for specific O.D. of wire and insulation.

Thermo-Shrink® Heavy-Wall Heat Shrinkable Tubing

- TS-46 irradiated cross-linked polyolefin with 3:1 standard shrink ratio
- Adhesive liner provides complete insulation and protection to electrical splices in above-grade, underground or underwater applications
- Maximum flame retardancy
- Meets UL 486D, CSA C22.2 No. 198.2, ANSI C119.1, Western Underground Guides Nos. 2.4, 2.5, MIL-DTL-23053/15, IEEE 383 Vertical Flame Test, ANSI C37.20.2, ICEA S-19-8 and NEMA insulation thickness requirements
- Continuous operating temperature from -55°C to 110°C
- Rated for 600V, 90°C continuous use
- Shrink temperature of 120°C

Model	Expanded I.D. (Min.) (In.)	Recovered I.D. (Max.) (In.)	Nominal Recovered Wall Thickness (In.)	Cable Range*	Length (In.)	Cat. No.
TS-46-400	.400	.150	.060	12-6 AWG	6	**46-343**
					9	**46-344**
					48	**46-346**
TS-46-750	.750	.240	.090	8-1/0 AWG	6	**46-347**
					9	**46-348**
					48	**46-350**
TS-46-1100	1.100	.350	.120	2-4/0 AWG	6	**46-351**
					9	**46-352**
					48	**46-354**
TS-46-1500	1.500	.470	.160	3/0 AWG-400 KCMIL	9	**46-356**
					12	**46-357**
					48	**46-358**
TS-46-2000	2.000	.630	.160	250-750 KCMIL	9	**46-369**
					18	**46-371**
					48	**46-372**

*Reference only. Consult the wire manufacturer's catalog for specific O.D. of wire and insulation.

Properties	Heavy Wall
Shrink Temperatures	120°C to 250°C (200°C recommended)
Continuous Operating Temperature	-55°C to 110°C
Tensile Strength (PSI)	2,100 PSI min.
Ultimate Elongation	600% min.
Secant Modulus @ 2% Strain	25,000 PSI max.
Specific Gravity	1.20 max.
Heat Aging, 168 hrs. @ 175°C Tensile Strength Elongation	500%
Heat Shock, 4 hrs. @ 225°C	No cracks, flowing or dripping
Flammability	Self-extinguishing
Low Temperature Brittle Point	-55°C
Volume Resistivity	1013ohm-cm min.
Dielectric Strength	500V/mil (20kV/min.)
Corrosive Effect	Non-corrosive
Solvent Resistance 24 hrs. Immersion per MIL-DTL-23053	Good to excellent
Water Absorption	0.5%
Fungus Resistance	No growth
Longitudinal Change, 3 min.	+1%/-10%

All values are typical performance data and are not to be used as design data.

Thermo-Shrink® Medium-Wall Heat Shrinkable End Caps

■ Creates a watertight seal to protect ends of power and control cords

■ Protects against oxidation, ozone, UV radiation, etc.

■ Coated with hot melt adhesive to ensure environment seal

■ Fits easily over end of cable

■ Protect power cables up to 1000V and telecommunication cable

■ Recommended for both open air and underground power distribution cables with PVC, lead or XLPE sheaths

■ Thermally stabilized cross-linked polylelin, coated with specially designed hot melt adhesive

Technical Data		
Property	**Test Method**	**Typical Data**
Operating Temperature	IEC 216	-55°CC to +110°C
Tensile Strength	ASTM D 638	>14 MPa
Elongation at break	ASTM D 638	>400%
Density	ASTM D 792	1.05g/cm3
Elongation of break after aging	150°C, 168 hrs.	>300%
Dielectric Strength	IEC 243	>15KV/mm
Volume Resistance	IEC 93	1014Ω.cm

Heat Shrink

Expanded I.D. (Min.)	Recovered I.D. (Max.)	Recovered Wall Thickness +/-10%	Cable Dia. Range*	Length	Cat. No.
0.55"/14mm	0.18"/4.5mm	0.079"/2.0mm	0.20"/5mm - 0.47"/12mm	1.77"/ 45mm	**46-381**
0.98"/25mm	0.31"/8mm	0.091"/2.3mm	0.39"/10mm - 0.71"/18mm	2.76"/ 70mm	**46-382**
1.38"/35mm	0.59"/15mm	0.118"/3.0mm	0.67"/17mm - 1.18"/30mm	3.35"/ 85mm	**46-383**
2.95"/75mm	1.38"/35mm	0.138"/3.5mm	1.77"/45mm - 2.76"/70mm	5.12"/ 130mm	**46-384**

*Consult the wire manufacturer's catalog for specific O.D. of wire and insulation.

Heat Shrink

Thermo-Shrink® Heat Shrink Kit

Kit includes:

■ Heat Elite Pro Heat Gun
■ Eleven sizes of thin-wall heat shrinkable tubing disks (3/64 in. — 1 in.)
■ Small deflector
■ Premium T®-Cutter Wire Cutter

Description	Cat. No.
Kit includes: 46-203, 45-223, 46-941, & 46-600 through 46-610	**46-007**

Heat Elite Heat Gun Kit

■ Temperature range — 930°F (500°C)
■ Two-step switch for heat and air flow adjustments
■ Double-insulated power cord
■ Ergonomical distribution of weight
■ Comfortable non-slip handle for ease of use

Description	Cat. No.
Heat Elite Kit - Includes #46-202 Heat Gun, #46-941 Small Deflector and #46-954 Wide-Slot Adapter	**46-202**

Heat Elite Pro Heat Gun Kit

■ Temperature range — 180°F - 1020°F (100 - 550°C)
■ Two-step switch for heat and air flow adjustments
■ Double-insulated power cord
■ Ergonomical distribution of weight
■ Comfortable non-slip handle for ease of use

Description	Cat. No.
Heat Elite Pro Kit - Includes #46-203 Heat Gun, #46-941 Small Deflector, #46-950 Reduction Adapter and #46-954 Wide-Slot Adapter	**46-203**

Heat Elite Plus LCD Heat Gun Kit

■ Temperature range — 180°F - 1200°F (80 - 650°C)
■ Double-insulated power cord
■ Ergonomical distribution of weight
■ Comfortable non-slip handle for ease of use
■ LCD display with memory functions
■ Temperature and airflow adjustments
■ Stand-by mode to minimize the energy consumption
■ Ceramic heating element ensures long-term coil performance

Description	Cat. No.
Heat Elite Plus LCD Kit - Includes #46-204 Heat Gun, #46-941 Small Deflector, #46-952 Welding Adapter, #46-953 Solder Reflector Adapter, #46-955 Overlap Welding Adapter, #46-956 Pressure Roller	**46-204**

Heat Gun Accessories

Description	Cat. No.
Small Deflector, 1-1/4 in. diameter (For use with all Heat Elite Heat Guns)	**46-941**
Reduction Adapter (For use with 46-203 and 46-204)	**46-950**
Glass Protection Adapter (For use with all Heat Elite Heat Guns)	**46-951**
Welding Adapter (For use with 46-203 and 46-204)	**46-952**
Solder Reflector Adapter (For use with 46-204)	**46-953**
Wide-Slot Adapter (For use with all Heat Elite Heat Guns)	**46-954**
Overlap Adapter (For use with 46-203 and 46-204)	**46-955**
Pressure Roller (For use with 46-204)	**46-956**

Wire Marker Booklets

Legend Assortments*

Legend	Qty.	Cat. No.
0-9	45 Markers each	**44-101**
A-Z 0-15 +, −, /	10 Markers each	**44-102**
1-45	10 Markers each	**44-103**
46-90	10 Markers each	**44-104**
1, 2, 3	150 Markers each	**44-105**
A, B, C	150 Markers each	**44-106**
A-Z	45 Markers each	**44-148*****
T1, T2, T3	150 Markers each	**44-107**
L1, L2, L3	150 Markers each	**44-108**
1-15 16-90 A-Z +, −, /, 0	6 Markers each 4 Markers each 2 Markers each 2 Markers each	**44-109**
1, 2, 3 A, B, C T1, T2, T3 L1, L2, L3	45 Markers each 45 Markers each 30 Markers each 30 Markers each	**44-110**
+, −, AC, DC POS, NEG, GND NEUT SPARE, BLANK	45 Markers each 33 Markers each 27 Markers each 21 Markers each	**44-111****

Ten pages per booklet with each page bearing the legend assortment indicated.
All booklets (except 44-111) contain 450 wire markers and 450 terminal markers.
**Booklet 44-111 includes 348 wire markers and 348 terminal markers.
***Booklet 44-148 contains 26 pages, one page of 45 markers per letter, 1170 total markers.

- Convenient pocket-size booklets
- Plastic-impregnated cloth construction for long-lasting durability
- Resists abrasion, moisture, dirt and oil
- Perforated 1/4 in. x 1-1/2 in. markers can be separated into half-length sizes
- Non-smear black legend ensures high visibility
- Self-sticking on wire and cable
- For applications above or below ground

Specifications:
Temperature Range: -40°F to 180°F (-40°C to 82°C)
Adhesion: 45 oz./in. width ultimate

Write-On Marker Booklets*

- Use for developing personal identification systems
- Surface accepts pen, pencil or rubber stamp

Marker Size* (In.)	Markers per page	Pages per book	Cat. No.
1 x 2-1/2	6	10	**44-151**
1 x 5	3	10	**44-152**

*Write-on area for 2-1/2 in. markers is 3/4 in. x 1 in. Write-on area for 5 in. markers is 1 in. x 1 in.
Adhesion: .25 oz./in. width ultimate

Wire Marker Booklets

- Self-sticking on wire and cable
- Perforated 1/4" x 1-1/2" markers
- For applications above or below ground
- Resists abrasion, moisture, dirt and oil
- Non-smear black legend ensures high visibility

Legend	Quantity	Cat. No.
0-9	45 each	**775101**
A-Z, 0-15, +, -, /	10 each	**775102**
1-45	10 each	**775103**
46-90	10 each	**775104**

Ten pages per booklet with each page bearing the legend assortment indicated. All booklets contain 450 wire and terminal markers.

Wire Markers

Load Centers

- Contains common household legends — bedroom, living room, dryer, water heater, security system, etc.
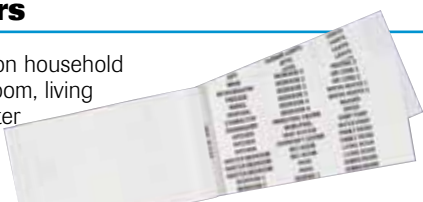
Description	Cat. No.
Load Center Wire Marker Booklet	**44-154**

Write-On Marker Cards

- Use for developing personal identification systems
- Cloth write-on surface
- Accepts most writing instruments
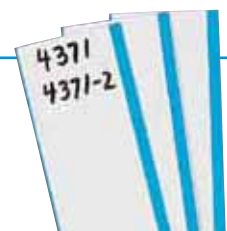
Marker Size	Qty.	Cat. No.
5/8 in. x 1-1/2 in.	14/card	**44-753**

Marking Pen

- Fast-drying, permanent ink will not smear
- Use on write-on marker cards and write-on cable-tie marker plates

Description	Cat. No.
Marking Pen w/black ink	**41-697**

Wire Marker Cards

- Use for positive identification and keying of wires, terminal blocks, etc.
- Convenient pocket-size cards
- Bold, easy-to-read black characters
- Self-sticking on wire and cable
- Polyester film over laminate/cloth construction for long-term durability
- Resists abrasion, moisture, dirt and oil
- Individual markers measure approximately 1/4 in. x 1-1/2 in.

Specifications:
Temperature Range: -40°F to 180°F (-40°C to 82°C); Adhesion: 45 oz./in. width ultimate

Legend	Markers per Lenged	Markers per Card	Cat. No.
0-9 (Repeated)	3	30	**43-953**

Wire Marker Dispenser

- Convenient pocket-size case holds ten wire marker rolls
- Dispenser tab holds tapes firmly in place — allows removal of proper tape length without waste
- Flip top for easy access and refill
- Built-in hook for hanging from belt or tool pouch
- High-quality adhesive and 3 mil. thickness provide long-lasting, low-profile application
- Each plastic reel holds Tyvek® tape

Specifications:
Temperature Range: -40°F to 180°F (-40°C to 82°C)
Adhesion: 25 oz./in. width ultimate

Description	Cat. No.
Dispenser w/0-9 legend rolls	**42-301**
Refill pack with one each of 0-9 legend rolls	**42-399**

Standard and Heavy-Duty Toggle Switches

- Great for power tool and motor control switch applications
- Rugged long-wearing solid brass/nickel-plated bushings
- 1/2 in. diameter mounting hole
- Dielectric Strength: 1500V
- Mechanical Life: 100,000 cycles
- Operating Temperature: 32°F to 185°F (0°C to 85°C)
- DC Rating: Factory tested 100,000 cycles to 21 Amp 14.8 VDC
- Bulk packaging of 100 available upon request

Product	Description	Poles	Circuitry	Termination Style	No. of Terminals	Rating Amps 125 VAC	Rating Amps 227 Vac	Rating HP 125-250 VAC	Dimensions (L" x W" x H")	Cat. No.
	Toggle switch with On-Off Faceplate	SPST	On-OFF	Screw	2	20	10	3/4	1.13 x .57 x .61	774011
				Spade						774008
										774008BK†
	Toggle Switch		On-OFF	Spade						774010
			(On)-OFF	Screw						774093
										774088BK†
	Toggle Switch w/ boot	SPST	On-OFF	Spade	2	20	20	3/4	1.18 x .68 x .75	774111
										774111BK†
	Toggle Switch	SPDT	On-On	Screw	3	20	10	3/4	1.13 x .57 x .61	774012
	Toggle Switch	SPDT	On-On	Spade	3	20	10	3/4	1.13 x .57 x .61	774100
	Toggle Switch	SPDT	On-Off-On	Screw	3	20	10	3/4	1.13 x .57 x .61	774013
	Toggle Switch	SPDT	On-Off-On	Spade	3	20	10	3/4	1.13 x .57 x .61	774027
	Toggle Switch	SPDT	On-Off-(On)	Screw	3	20	10	3/4	1.13 x .57 x .61	774094
	Toggle Switch	SPDT	(On)-Off-(On)	Screw	3	20	10	3/4	1.13 x .57 x .61	774009
	Heavy-Duty Toggle Switch	DPST	On-OFF	Screw	4	20	10	1-1/2	1.30 x .76 x .80	774014
	Heavy-Duty Toggle Switch	DPST	On-OFF	Spade	4	20	10	1-1/2	1.30 x .76 x .80	774005
	Heavy-Duty Toggle Switch	DPST	(On)-OFF	Screw	4	20	10	1-1/2	1.30 x .76 x .80	774103

( ) denotes momentary action   †Bulk Package of 100

Standard and Heavy-Duty Toggle Switches

Product	Description	Poles	Circuitry	Termination Style	No. of Terminals	Rating			Dimensions (L" x W" x H")	Cat. No.
						Amps 125 VAC	Amps 227 Vac	HP 125-250 VAC		
	Heavy-Duty Toggle Switch	DPDT	On-On	Screw	6	20	10	1-1/2	1.30 x .76 x .80	774015
										774015BK†
	Heavy-Duty Toggle Switch	DPDT	(On)-On	Screw	6	20	10	1-1/2	1.30 x .76 x .80	774028
										774028BK†
	Heavy-Duty Toggle Switch	DPDT	On-Off-On	Screw	6	20	10	1-1/2	1.30 x .76 x .80	774016
	Heavy-Duty Toggle Switch	DPDT	On-Off-On	Spade	6	20	10	1-1/2	1.30 x .76 x .80	774003
										774003BK†
	Heavy-Duty Toggle Switch	DPDT	(On)-Off-(On)	Screw	6	20	10	1-1/2	1.30 x .76 x .80	774000
	Heavy-Duty Toggle Switch	DPDT	(On)-Off-(On)	Spade	6	20	10	1-1/2	1.30 x .76 x .80	774115
										774115BK†
	Toggle Switch	3PDT	On-On	Screw	9	15	10*	3/4	1.31 x 1.09 x .80	774089
										774089BK†
	Toggle Switch	3PDT	On-Off-On	Screw	9	15	10*	3/4	1.31 x 1.09 x .80	774092
	Toggle Switch	4PST	On-Off	Screw	8	15	10*	3/4	1.31 x 1.44 x .80	774108
	Toggle Switch	4PDT	On-On	Screw	12	15	10*	3/4	1.31 x 1.44 x .80	774109
	Toggle Switch	4PDT	On-Off-On	Screw	12	15	10*	3/4	1.31 x 1.44 x .80	774110

*250VAC, Dielectric strength: 1000V   ( ) denotes momentary action   †Bulk Package of 100   *All spade terminals are 1/4" (.250).

Medium and Light–Duty Toggle Switches

- Great for household appliances and equipment
- Bat toggle switch, 774007, is ideal for battery-powered equipment including trimmers and lawn mowers
- Wire leads are #18 AWG, 6 in. stripped wire
- 1/2 in. diameter mounting hole
- Bulk packaging available upon request
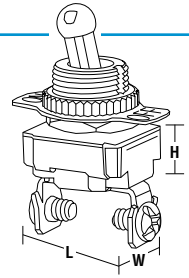
Product	Description	Poles	Circuitry	Termination Style	No. of Terminals	Rating	Dimensions (L" x W" x H")	Cat. No.
	Bat Toggle with On-Off Faceplate	SPST	On-Off	Screw	2	6 Amps 120 VAC, 3 Amps 240 VAC	.69 × .55 × .34	**774017**
	Bat Toggle with On-Off Faceplate	SPST	On-Off	Wire Leads	2	4 Amps 250VAC/DC, 8 Amps 125VAC/DC, 10 Amps 125 VAC, 1/3 HP 125 VAC	.98 × .64 × .62	**774018**
	Bat Toggle*	SPST	On-Term Ground	Spade	1	21 Amps 14 VDC	.69 × .55 × .34	**774007**
	Short Ball Toggle Switch	SPST	On-Off	Screw	2	6 Amps 120 VAC, 3 Amps 240 VAC	.69 × .55 × .34	**774001**
	Short Ball Toggle Switch	SPST	On-Off	Wire Leads	2	6 Amps 125 VAC, 3 Amps 250 VAC	.89 × .47 × .55	**774002**

*DC rating not CSA or RU listed

Extra Heavy–Duty AC/DC Toggle Switches

- The switch that can handle your heavy-duty requirements
- Quick-make/quick-break type switches are ideal for DC voltage applications
- Perfect for industrial motor control, with its sturdy metal construction and stiff actuation force, it will withstand the abuses of virtually any application
- Bulk packaging of 100 available upon request

Product	Description	Poles	Circuitry	Termination Style	No. of Terminals	Rating			Dimensions (L" x W" x H")	Cat. No.
						Amps 125 VAC	Amps 227 Vac	HP 125-250 VAC		
	Heavy-Duty Toggle Switch	SPST	On-Off	Screw	2	16	8	1	1.75 x .84 x .76	**774095**
	Heavy-Duty Toggle Switch	DPST	On-Off	Screw	4	16	8	1	1.75 x .84 x .76	**774096**
	Heavy-Duty Toggle Switch	DPST	On-Off	Screw	4	20	10	1-1/2	2.09 x 1.00 x .90	**774097**

Toggle Switches

Toggle Switch Accessories

- These neoprene covers are great for outdoor and other environmentally tough conditions. They screw onto toggle switches to protect switches from moisture, dust and dirt.
- Nickel indicator plate fits easily on most toggle switches to identify the On-Off positions

Product	Description	Mounting	Dimensions	Qty./Card	Cat. No.
	Toggle Switch Cover	15/32 - 32 NS-2B	.93 Height x .62 Base Dia.	2	**774020**
	Push Button Switch Cover (Clear)	3/8 - 27 NS-2B	.59 Height x .60 Base Dia. x .34 I.D.	2	**774117**
	Push Button Switch Cover (Gray)	15/32 - 32 NS-2B	.72 Height x .62 Base Dia. x .42 ID	2	**774087**

Double Insulated Plastic Toggle Switches

- Great for outdoor, marine/recreational equipment, automotive and weather resistant applications
- Double-insulated with an internal "O" ring design for moisture and dust resistance
- 1/2 in. diameter mounting hole
- Bulk packaging available upon request

Product	Description	Poles	Circuitry	Termination Style	No. of Terminals	Rating Amps 125 VAC	Amps 250 VAC	Dimensions (L" x W" x H")	Cat. No.
	Double Insulated, Plastic Toggle Switch	SPST	On-Off	Screw	2	20	10	1.37 × .76 × .94	**774019**
	Double Insulated, Plastic Toggle Switch	SPDT	(On)-Off-(On)	Spade	3	20	10	1.37 × .76 × .94	**774004BK†**
	Double Insulated, Plastic Toggle Switch	DPDT	(On)-Off-(On)	Spade	6	20	10	1.37 × .76 × .94	**774006**

c⒩us c⒮   †Bulk Package of 100   ( ) Denotes momentary action

Full-Size Rocker Switches

- For commercial appliances, industrial controls, automotive and marine applications
- Moisture- and dust-resistant
- Suitable for low-voltage DC applications
- Recommended .830 in. x 1.450 in. mounting hole, .125 in. panel thickness
- Operating temperature: 32°F to 185°F (0°C to 85°C)
- Bulk packaging available upon request

| Product | Description | Poles | Circuitry | Termination Style | No. of Terminals | Rating | | | Dimensions (L" x W" x H") | Cat. No. |
						Amps 125 VAC	Amps 227 Vac	HP 110-250 VAC		
	Black Rocker Switch	SPST	On-Off	Spade	2	20	15	2	1.70 x .97 x 1.09	**774045**
										774045BK†
	Black Rocker Switch	DPST	On-(Off)	Spade	4	20	15	2	1.70 x .97 x 1.09	**774121**
	Black Rocker Switch	DPDT	(On)-On	Spade	6	20	15	2	1.70 x .97 x 1.09	**774122**
	Black Rocker Switch	DPDT	On-Off-On	Spade	6	20	15	2	1.70 x .97 x 1.09	**774040BK†**
	Black Rocker Switch	DPDT	(On)-Off-On	Spade	6	20	15	2	1.70 x .97 x 1.09	**774123**
	Red Lighted Rocker Switch***	DPST	On-Off	Spade	4	15	10*	3/4**	1.70 x .97 x 1.09	**774056**

( ) Denotes momentary action   *Amps 250 VAC   **HP 125-250VAC   †Bulk package of 100

Appliance Rocker Switches

- Great for home appliances, computer equipment, automotive and industrial controls
- Appliance Rockers fit standard .55 in. × 1.12 in. panel cut outs
- Miniature Rockers fit .520 in. × .776 in. panel cut outs
- Plain and lighted versions available
- Operating temperature: 32°F to 185°F (0°C to 85°C)
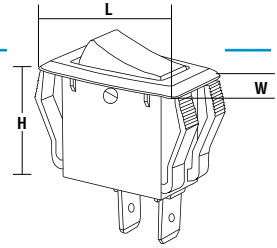
Product	Description	Rocker	Poles	Circuitry	Termination Style	No. of Terminals	Ratings	Dimensions (L" x W" x H")	Cat. No.
	Appliance Rocker Switch	Black	SPST	On-Off	Spade	2	16 Amp 1/3 HP 125 VAC, 10 Amp 1/2 HP 250 VAC	1.24 x .68 x .77	774038
			SPDT	On-On	Spade	3			774049BK†
			SPDT	On-Off-On	Spade	3			774059
									774059BK†
	Appliance Rocker Switch	Red Lighted	SPST	On-Off	Spade	3*	16 Amp 1/3 HP 125 VAC, 10 Amp 1/2 HP 250 VAC	1.24 x .68 x .77	774039
	Appliance Rocker Switch**	Visi-Red, Printed On-Off Vertical	SPST	On-Off	Spade	2	16 Amp, 125 VAC, 10 Amp 250 VAC, 3/4 HP 125-250 VAC	1.24 x .68 x .72	774047
	Miniature Rocker Switch	Red Lighted	SPST	On-Off	Spade	3*	16 Amp 1/3 HP 125 VAC, 10 Amp 1/2 HP 250 VAC	.83 x .59 x .50	774048

** ℞Ⓛ Ⓒℝ cℝus   †Bulk Package of 100

*3rd terminal to power lighted rocker

Push–Button Switches

- Great for household appliances, lamps and motor controls
- Available in normally open, normally closed and standard On-Off circuitry
- Wire leads are #18 AWG, 6 in. stripped wire
- 1/2 in. diameter mounting hole
- Bulk packaging of 100 available upon request
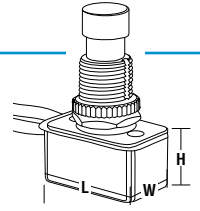
Product	Description	Actuator	Poles	Circuitry	Termination Style	No. of Terminals	Ratings	Dimensions (L" x W" x H")	Cat. No.
	Round Body Push-Button Switch**	Black Plastic	NPST NC	On-(Off)	Screw	2	3/4 Amp 125 VAC/DC, 1/4 Amp 250 VAC/DC	.66 Dia. x 1.89	**774084**
	Momentary Contact Push-Button Switch	Black Plastic	SPST NO	(On)-Off	Screw	2	6 Amp 120 VAC, 3 Amp 240 VAC	.88 x .54 x .35	**774022**
	Momentary Contact Push-Button Switch	Red Plastic	NPST NC	On-(Off)	Screw	2	3 Amp 120 VAC, 1.5 Amp 240 VAC	.88 x .54 x .35	**774023**
	Maintained Contact Push-Button Switch	Black Plastic	SPST	On-Off	Wire Leads	2	8 Amp 125 VAC/DC, 4 Amp 250 VAC/DC, 10 Amp 125 VAC, 1/3 HP 125	.98 x .64 x .62	**774021**
	Maintained Contact Push-Button Switch*	Nickel Plated	SPST	On-Off	Wire Leads	2	6 Amp 125 VAC, 3 Amp 250 VAC	.97 x .80 x .36	**774024**
	Maintained Contact Push-Button Switch*	Brass Plated	SPST	On-Off	Wire Leads	2	6 Amp 125 VAC, 3 Amp 250 VAC	.97 x .80 x .36	**774025**
	Momenary Contact Push-Button Switch**	Nickel Plated	SPST NO	(On)-Off	Screw	2	15 Amp 125 VAC, 10 Amp 250 VAC	1.38 x .58 x .60	**774085**
	Momenary Contact Push-Button Switch**	Nickel Plated	SPST NC	On-(Off)	Screw	2	15 Amp 125 VAC, 10 Amp 250 VAC	1.38 x .58 x .60	**774086**

** ℞Ⓤ ℗ * c℞ℓus   ( ) Denotes momentary action

Push–Button Switches

Lever and Pull Chain Switches

- Use for ceiling fixtures, lamps and fans
- Wire leads are #18 AWG, 6 in. stripped wire
- Push in connectors for #18 AWG wire
- 13/32 in. diameter mounting hole
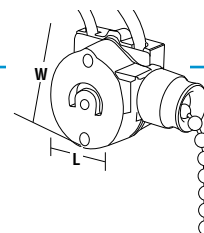
Product	Description	Pull-Chain Color	Poles	Circuitry	Termination Type	Circuit	Rating			Dimensions (L" x W" x H")	Cat. No.
							Amps 125 VAC	Amps 250 Vac	Amps 125 VL		
	All-Angle Lever Switch*	Nickel	SPST	On-Off	Wire Leads	2 Pos - 2 Wire	6	3	—	1.50 x 1.28 x .50	**774035**
	Pull Chain	Nickel	SPST	On-Off	Wire Leads	2 Pos - 2 Wire	6	3	3	.92 x .88 x .67	**774031**
	Pull Chain	Brass	SPST	On-Off	Wire Leads	2 Pos - 2 Wire	6	3	3	.92 x .88 x .67	**774032**
	2-Speed Pull Chain*	Brass	SPDT	Off-On-On	Push-In	3 Pos - 3 WIre	6	3	6	1.43 x 1.25 x .73	**774033**
	3-Speed Pull Chain*	Brass	SPTT	Off-On-On-On	Push-In	4 Pos - 4 WIre	6	3	—	1.43 x 1.25 x .73	**774034**
	3-Speed Pull Chain	Brass	SPTT	Off-On(A)-On(B)-On(A+B)	Wire Leads	4 Pos - 3 Wire	6	3	—	.87 x 1.05 x .65	**774037** / **774037BK†**

Ⓒ**NU**us   *Ⓝ**NU**®ⒸSⓇ   †Bulk package of 100

Cord Switches

- Place your lighting controls in a convenient location with a lamp cord toggle switch
- Available in brown or ivory
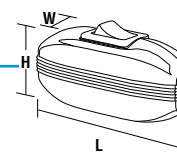
Product	Description	Color	Poles	Circuitry	Termination Style	Ratings	Dimensions (L" x W" x H")	Cat. No.
	Cord Toggle Switch	Brown	SPST	On-Off	Pass Thru	10 Amp 125VAC, 6 Amp 250VAC	2.50 x .83 x 1.28	**774073**

1-800-435-0705 for Customer Service

Door and Slide Switches

- Standard slide switch fits 9/16 in. x 7/8 in. opening
- Door switches are great for closets, turning the light on when the door is open and off when it is closed
- Door switch kit comes with metal box, cover plate and mounting hardware
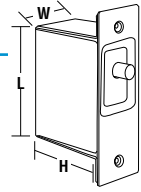
Product	Description	Color	Poles	Circuitry	Termination Style	Ratings	Dimensions (L" x W" x H")	Cat. No.
	AC/DC Door Switch Kit	White Button	SPST	Normally On-(Off)	Wire Leads	10 Amp 1/3 HP 125/250VAC	1.25 x 2.75 x 2.0	**774026K**
	Door Replacement Switch	White Button	SPST	Normally On-(Off)	Wire Leads	10 Amp 1/3 HP 125/250VAC	1.17 x .69 x .98	**774026BK†**

Ⓡ Ⓒ cⓇus   ( ) Denotes momentary action   †Bulk package of 25

Rotary Switches

- Rotary switches are perfect for household appliances, ceiling fixtures and lamps
- Single or three-position switches available
- #18 AWG, 6 in. stripped wire leads
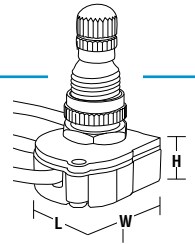
Product	Description	Color	Poles	Circuitry	Termination Style	Ratings	Dimensions (L" x W" x H")	Cat. No.
	Rotary Swtich	Brass Plated	SPST	On-Off	Wire Leads	6 Amp 125VAC, 3 Amp 250VAC	.97 x .80 x .39	**774061**
	3-Way Rotary Swtich	Brass Plated	SPTT	Off-On(A)-On(B)-On(A+B)	Wire Leads	6 Amp 125VAC, 3 Amp 250VAC	.86 x 1.03 x .34	**774062**
	Rotary Swtich	Black Plastic	SPST	On-Off	Wire Leads	6 Amp 125VAC, 3 Amp 250VAC	.89 x .79 x .31	**774069**

Slide/Rotary Switches

Flush Indicator Lights

- Nylon body with flush transparent polycarbonate lens and stainless steel bezel, 94V-2 flammability rating
- 6 in. wire leads, 1/2 in. mounting diameter
- Lamp voltage is AC/DC
- Operating Temperature: Nylon Body: 140°C
  Polycarbonate lens: 135°C
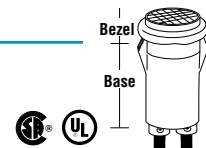
Product	Description	Lens Color	Lamp Voltage	Watts	Amp Rating	Average Life (hrs.)	Lamp Type	Termination Style	Height (Base" x Bezel")	Cat. No.
	Flush Indicator Light	Red	125V	1/3	2mA Max.	25,000	Neon	6" Wire Leads	.91 x .10	777121*
										777121BK†
	Flush Indicator Light	Green	125V	1/3	2mA Max.	15,000	Neon	6" Wire Leads	.91 x .10	777221
										777221BK†
	Flush Indicator Light	Amber	125V	1/3	2mA Max.	25,000	Neon	6" Wire Leads	.91 x .10	777321
										777321BK†

*VDE certified   †Bulk Package of 100

Raised Indicator Lights

- Nylon body with raised transparent polycarbonate lens and stainless steel bezel, 94V-2 flammability rating
- 1/2 in. mounting diameter
- Lamp voltage is AC/DC
- Operating Temperature: Nylon Body: 140°C
  Polycarbonate lens: 135°C
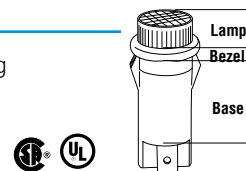
Product	Description	Lens Color	Lamp Voltage	Watts	Amp Rating	Average Life (hrs.)	Lamp Type	Termination Style	Height (Base" x Bezel")	Cat. No.
	Raised Indicator Light	Red	14V	1.2	.08	50,000	Incandescent	6" Wire Leads	.91 x .10 x .20	775111*
	Raised Indicator Light	Red	28V	1.2	.04	25,000	Incandescent	6" Wire Leads	.91 x .10 x .20	776111*
	Raised Indicator Light	Green	28V	1.2	.04	25,000	Incandescent	6" Wire Leads	.91 x .10 x .20	776211*
	Raised Indicator Light	Amber	28V	1.2	.04	25,000	Incandescent	6" Wire Leads	.91 x .10 x .20	776311*
	Raised Indicator Light	Red	125V	1/3	2mA Max.	25,000	Neon	6" Wire Leads	.91 x .10 x .20	777111*
	Raised Indicator Light	Green	125V	1/3	2mA Max.	15,000	Neon	6" Wire Leads	.91 x .10 x .20	777211*
										777211BK†
	Raised Indicator Light	Amber	125V	1/3	2mA Max.	25,000	Neon	6" Wire Leads	.91 x .10 x .20	777311*
	Raised Indicator Light	Red	250V	1/2	2mA Max.	25,000	Neon	6" Wire Leads	.91 x .10 x .20	778111*
	Raised Indicator Light	Green	250V	1/2	2mA Max.	15,000	Neon	6" Wire Leads	.91 x .10 x .20	778211*
	Raised Indicator Light	Green	28V	1.2	.04	25,000	Incandescent	.187" Spade	1.09 x .10 x .20	776212BK†
	Raised Indicator Light	Red	28V	1.2	.04	25,000	Incandescent	.187" Spade	1.09 x .10 x .20	776112BK†
	Raised Indicator Light	Amber	28V	1.2	.04	25,000	Incandescent	.187" Spade	1.09 x .10 x .20	776312BK†
	Raised Indicator Light	Red	125V	1/3	2mA Max.	25,000	Neon	.187" Spade	1.09 x .10 x .20	777112
										776112BK†
	Raised Indicator Light	Green	125V	1/3	2mA Max.	15,000	Neon	.187" Spade	1.09 x .10 x .20	777212
										777212BK†
	Raised Indicator Light	Amber	125V	1/3	2mA Max.	25,000	Neon	.187" Spade	1.09 x .10 x .20	777312BK†

*VDE certified   †Bulk Package of 100

*Insulators sold separately

Miniature Indicator Lights

- Nylon body with flush transparent polycarbonate lens
- 6 in. wire leads
- 5/16 in. mounting diameter
- Lamp voltage is AC/DC
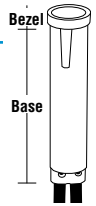
Product	Description	Lens Color	Lamp Voltage	Watts	Amp Rating	Average Life (hrs.)	Lamp Type	Termination Style	Height (Base" x Bezel")	Cat. No.
	Miniature Indicator Light	Red	125V	1/3	2mA Max.	25,000	Neon	6 in. Wire Leads	1.43 × .13	**777131**
	Miniature Indicator Light	Green	125V	1/3	2mA Max.	15,000	Neon	6 in. Wire Leads	1.43 × .13	**777231**
	Miniature Indicator Light	Amber	125V	1/3	2mA Max.	25,000	Neon	6 in. Wire Leads	1.43 × .13	**777331**
										777331BK†

†Bulk Package of 100

Indicator Light Part No. System

Series	Voltage	Color	Mounting Diameter Lens Style	Terminators
77	5 - 14V	1 - Red	1 - 1/2 in. Raised	1 - 6 in. Wire Leads
	6 - 28V	2 - Green	2 - 1/2 in. Flush	2 - .187 in. Spade
	7 - 125V	3 - Amber	3 - 5/16 in. Flush	—
	8 - 250V	4 - Blue	—	—
	—	5 - Clear	—	—

Battery Clips

- Great for testing and many other electrical applications
- Insulated grips are color-coded for positive (red) and negative (black) identification
- For screw and/or crimp connections
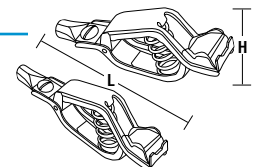
Product	Description	Amps	Dimensions (L"x H")	Jaw Opening	Wire Diameter	Qty.	Cat. No.
	Miniature General Purpose Clip	5	1-17/32 x 15/32	5/16 in.	9/64 in.	2	**770218L**
	General Purpose Clip	10	2 x 5/8	1/2 in.	3/16 in.	1 Red/1 Black	**170207L**
	Test and Battery Clip	20	2-1/2 x 5/8	5/8 in.	3/16 in.	1 Red/1 Black	**170208L**
	Test and Battery Clip	30	2-1/2 x 5/8	5/8 in.	3/16 in.	1 Red/1 Black	**170209L**
	Copper Test and Battery Clips*	40	2-7/16 x 11/16	5/8 in.	3/16 in.	2	**770217L**
	Copper Test and Battery Clips*	75	3 x 15/16	3/4 in.	9/32 in.	2	**770216L**
	Copper Test and Battery Clips*	100	4-7/64 x 19/16	1-1/16 in.	11/30 in.	2	**770215L**
	Insulated grips for 770217L	—	3-1/2 x 3/4 ID	—	—	1 Red/1 Black	**770223L**
	Insulated grips for 770216L	—	3-7/8 x 11/64 ID	—	—	1 Red/1 Black	**770219L**
	Insulated grips for 770215L	—	5 x 1-13/32 ID	—	—	1 Red/1 Black	**770221L**

*Insulators sold separately.

Alligator Clips

- Great for temporary connections, testing wires and troubleshooting projects
- Spring-loaded, grab-tight jaws make these clips quick and easy-to-use
- For screw and/or crimp connections
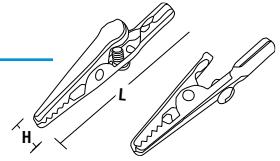
Product	Description	Amps	Dimensions (L" x H")	Jaw Opening	Wire Gauge	Qty.	Cat. No.
	Non-Insulated	—	2 x 7/16	5/16 in.	#22 - #14	2	**770200L**
	Insulated Barrel	—	2-1/2 x 7/16	5/16 in.	#22 - #14	1 Red/1 Black	**770204L**
	Fully Insulated	—	2-1/2 x 7/16	5/16 in.	#22 - #14	1 Red/1 Black	**770205L**

Plier-Type Battery Clamps

- Great for battery charging and test equipment
- Insulated grips are color-coded for positive (red) and negative (black) identification
- For crimp or solder connections
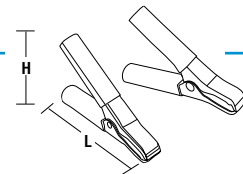
Product	Description	Amps	Dimensions (L" x H")	Jaw Opening	Wire Dia.	Qty.	Cat. No.
	Plier-Type Battery Clip, Steel	50	2-7/8 x 2	1-1/8 in.	9/32 in.	1 Red/1 Black	**770213L**
	Plier-Type Battery Clip, Copper	75	2-7/8 x 2	1-1/8 in.	9/32 in.	1 Red/1 Black	**770212L**

How to Select Resurfacer Grade

Small Motor and Pocket Resurfacers

Grade code letters designate the following grade combinations:

A Medium/Finish   **G** Coarse/Medium

B Coarse/Finish   **H** Medium/Polish

D Finish/Polish

All Other Resurfacers

Resurfacers for commutators and copper-alloy slip rings are made in five grades:

X Extra coarse—very fast cutting, for "hogging" off excessive copper

C Coarse—fast cutting

M Medium—for general use, high mica, small ridges and burns

F Finish—for use after the three grades above, for periodic application and for removing small burns and ridges immediately after their appearance

P Polish—very fine grade (220 aggregate grain) for burnish finish

For all resurfacers, specify grade by adding the appropriate letter as a suffix to the catalog number. (Example: 80-475M for medium grade.)

How to Select Resurfacer Size

Size is always written length x width x thickness (working face area x depth of stone). For handle types, the handle is mounted parallel to the first dimension. Always use a resurfacer with the largest face possible (length x width). Thickness should be governed by clearance around commutator or ring.

Commutator Resurfacers

The resurfacer should have a width of approximately 3/4 the length of the commutator bar and as long as will conveniently go between the brush riggings. For periodic application, three or four sizes are generally sufficient. After determining approximate dimensions, select nearest standard size and type.

Slip Ring Resurfacers

When space permits, use a resurfacer about 1 in. wider than the face width of the ring. Length should be at least three times greater than the longest flat spot to bridge over and ensure a true ring.

Small Motor-Type Resurfacer

- Different grades of stone on each end
- 10 in. handle
- For use on small fractional horsepower motors

Size (In.)	Grades	Cat. No.
3/4 x 1/2 x 3/8	A, B, D	**80-012***

*Add grade letter suffix to Cat. No. Please allow 2-3 weeks for delivery.

Tool-Type Resurfacer

- For use in lathe-turning device
- Two resurfacers required for each grinder

Sizes (In.)	Grades	Cat. No.
3/4 x 3/4 x 3	C	**80-504***
1 x 1-1/2 x 6-1/2		**80-454***
1 x 2 x 8	C, M, F	**80-461***
2 x 2 x 8		**80-475***

*Add grade letter suffix to Cat. No. Please allow 2-3 weeks for delivery.

Pencil-Type Resurfacer

- For use on fans, signal motors, auto generators, locomotive headlight motors and other fractional horsepower motors

Size (In.)	Grades	Cat. No.
5/8 x 3/8 x 6	C, M, F, P	**80-075***

*Add grade letter suffix to Cat. No. Please allow 2-3 weeks for delivery.

Tramway-Handle Resurfacer

- Handle shaped to ensure secure grip
- 10-1/2 in. handle permanently mounted at 45° angle
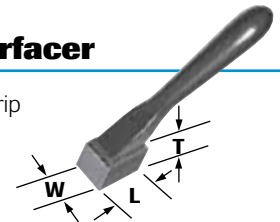
Sizes (In.)	Grades	Cat. No.
2 x 1-1/2 x 2	M, F	**80-255***
2 x 2 x 2	C, M, F	**80-265***

*Add grade letter suffix to Cat. No. Please allow 2-3 weeks for delivery.

Powr-Polish™ Flexible Abrasive

- Fine-grain, non-dusting abrasive held together by a flexible bond
- Serves as both commutator cleaner and burnisher
- Removes dirt and grease—imparts super-finished surface
- Non-conductive and non-loading

Sizes (In.)	Cat. No.
3/8 x 1/2 x 5	82-001
3/8 x 3/4 x 5	82-002
5/8 x 1 x 5	82-003
1 x 2 x 5	82-004
1 x 4 x 5	82-005
1/8 x 1 x 5	82-006

Please allow 2-3 weeks for delivery.

Brush Seater and Commutator Cleaner

- Gentle acting abrasive for seating carbon brushes and cleaning commutators and slip rings
- Soft, loosely bound grain produces a scouring effect when held against commutator
- Will not remove or scratch copper
- Self-cleaning
- Available in soft(S), medium(M) and hard(H) grades

Sizes (In.)	Grades	Cat. No.
1/4 x 1/4 x 4-3/4	M, H	23-001*
1/2 x 1/4 x 4-3/4	M, H	23-002*
3/8 x 3/8 x 4-3/4	M	23-003*
1/2 x 3/8 x 4-3/4	M, H	23-004*
1/2 x 1/2 x 4-3/4	M	23-005*
5/8 x 1/2 x 4-3/4	M	23-006*
3/4 x 1/2 x 4-3/4	S, M, H	23-007*
1-1/8 x 5/8 x 4-3/4	S, M, H	23-008*
1/2 x 1 x 4-3/4	S, M	23-027*
1 x 1 x 4-3/4	—	23-035S
2 x 1 x 4-3/4	—	23-036S
3 x 2 x 6	—	23-041S
3 x 2 x 8	—	23-042S

*Add grade letter suffix to Cat. No. Please allow 2-3 weeks for delivery.

Commutator Smoothie® Resurfacing Tool

- Designed to smooth commutators of auto generators, starting motors and other similar equipment
- 8-1/2 in. plastic handle with a 5/16 in. x 7/8 in. x 11/16 in. resurfacer on each end
- Features one polish-grade and one finish-grade resurfacer
- Bent handle reaches into any motor frame
- Non-conductive for user safety

Description	Cat. No.
Commutator Smoothie® Resurfacing Tool	80-033

Please allow 2-3 weeks for delivery.

Midget Precision Grinder

1-1/4 in.
3 in.
16-1/2 in.
13/16 in.
6 in.
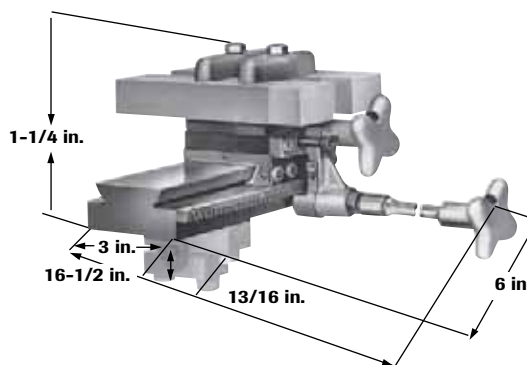
- Right-angle rack and pinion allows for operation in small areas
- 6 in. base — recommended for commutator widths up to 9-1/4 in. (includes extra 1 in. travel obtained by setting resurfacers at slight angle)
- Includes convenient carrying case
- Two tool-type resurfacers required — 80-454 recommended

Description	Cat. No.
Midget Precision Grinder	24-033

Order tool-type resurfacers and brush arm supports separately.

Basic Lockout/Tagout Kit

■ A great selection of the most popular lockout/tagout devices

■ Small nylon zipper pouch features belt loops and d-rings for easy attachment to belts, tool pouches, tool carts and more

Description		Cat. No.
Basic Lockout/Tagout Kit		**44-970**
Kit 44-970 Includes:	**Qty.**	**Cat. No.**
Hinged Single-Pole Breaker Lockouts	2	**44-810**
Universal 277V Breaker Lockout/Single Pole	1	**44-809**
480/600V Breaker Lockout	1	**44-807**
Wall Switch Lockout	1	**44-789**
3/4 in. Red Padlock	1	**44-906**
1 in. Safety Lockout Hasp	1	**44-800**
Lockout Tags – Do Not Operate (striped)	5	**44-849**
Universal Multi-Pole Breaker Lockout	1	**44-783**
110V Plug Lockout	1	**44-818**
Zipper Pouch	1	**IA-3240**

Quantities listed in kit description are for individual pieces, not carded packages.

Starter Lockout/Tagout Kit

■ A starter selection of the lockout/tagout devices every electrician/maintenance person needs

■ Small nylon zipper pouch features belt loops and d-rings for easy attachment to belts, tool pouches, tool carts and more

Description		Cat. No.
Starter Lockout/Tagout Kit		**44-973**
Kit 44-973 Includes:	**Qty.**	**Cat. No.**
Universal 277V Breaker/Single-Pole Lockout	1	**44-809**
Universal Multi-Pole Lockout	1	**44-783**
3/4 in. Shackle Red Padlock	1	**44-906**
1 in. Safety Lockout Hasp	1	**44-800**
Lockout Tags – Do Not Operate (striped)	2	**44-849**
110V Plug Lockout	1	**44-818**
Zipper Pouch	1	**IA-3240**

Quantities listed in kit description are for individual pieces, not carded packages.

Personal Lockout Pouch Kit

■ Easy to carry, zippered pouch holds a worker's personal padlocks and other small devices

Description		Cat. No.
Personal Lockout Pouch Kit		**44-969**
Kit 44-969 Includes:	**Qty.**	**Cat. No.**
1 in. Safety Lockout Hasp	1	**44-800**
Lockout Tags	12	**44-833***
Red Safety Padlocks - Keyed Alike	3	**44-916****
Personal Lockout Pouch	1	—

*Masterlock equivalent.

**Keyed alike and master keyed padlocks can be special ordered by contacting IDEAL Customer Service.

Standard Lockout/Tagout Kit

■ Excellent selection of lockout/tagout devices, tags and locks for maintenance workers or contractors

■ Small nylon zipper pouch features belt loops and d-rings for easy attachment to belts, tool pouches, tool carts and more

Description		Cat. No.
Standard Lockout/Tagout Kit		**44-971**
Kit 44-971 Includes:	**Qty.**	**Cat. No.**
Hinged Single-Pole Breaker Lockouts	3	**44-810**
Universal 277V Breaker Lockouts/Single Pole	2	**44-809**
480/600V Breaker Lockout	1	**44-807**
Wall Switch Lockout	1	**44-789**
110V Small Plug Lockout	1	**44-818**
2 in. Shackle Red Padlocks	2	**44-907**
1 in. Safety Lockout Hasps	2	**44-800**
Lockout Tags – Do Not Operate	5	**44-848**
Lockout Tags – Do Not Operate (striped)	5	**44-849**
Cleat for 277V Breaker Lockout	1	**44-785**
Cleat for 480/600V Breaker Lockout	1	**44-786**
Universal Multi-Pole Breaker Lockouts	2	**44-783**
Zipper Pouch	1	**IA-3240**

Quantities listed in kit description are for individual pieces, not carded packages.

Plant Facility Lockout/Tagout Kit

■ Ideal for plant facility personnel to keep all lockout/tagout devices in one convenient place

■ Polypropylene plastic tool box resists oil and chemicals

Description		Cat. No.
Plant Facility Lockout/Tagout Kit		**44-972**
Kit 44-972 Includes:	**Qty.**	**Cat. No.**
Hinged Single-Pole Breaker Lockouts	5	**44-810**
Universal 277V Breaker/Single Pole Lockouts	3	**44-809**
480/600V Breaker Lockout	1	**44-807**
Wall Switch Lockouts	2	**44-789**
110V Plug Lockout	1	**44-818**
1 in. Safety Lockout Hasps	3	**44-800**
Red Labeled Lockout	1	**44-791**
220/550V Plug Lockout	1	**44-819**
Lockout Tags – Do Not Operate (striped)	10	**44-849**
Fuse Blockout	1	**44-815**
Fuse Blockout	1	**44-816**
Gate Valve Lockout	1	**44-824**
Cleat for 277V Breaker Lockout	1	**44-785**
Cleat for 480/600V Breaker Lockout	1	**44-786**
Universal Multi-Pole Breaker Lockouts	3	**44-783**
Tool Box*	1	**IA-3241**

Quantities listed in kit description are for individual pieces, not carded packages.
*Tool box color may vary.

Group Lock Box

■ Helps ensure maximum security for complex work team situations

■ Allows up to 13 individuals to personally lock the closed box

■ Heavy-duty steel construction resists unauthorized entry and job-site abuse

■ Compact 8-3/4 in. x 3-1/2 in. x 6 in. design

Description	Cat. No.
Group Lock Box	**44-804**

1-800-435-0705 for Customer Service

Industrial Lockout/Tagout Kit

- An industrial selection of lockout/tagout devices
- Polypropylene plastic tool box resists oil and chemicals

Description		Cat. No.
Industrial Lockout/Tagout Kit		**44-974**
Kit 44-974 Includes:	**Qty.**	**Cat. No.**
Hinged Single-Pole Breaker Lockouts	3	**44-810**
Universal 277V Breaker/Single Pole Lockouts	2	**44-809**
480/600V Breaker Lockout	1	**44-807**
Wall Switch Lockout	1	**44-789**
110V Small Plug Lockout	1	**44-818**
Ball Valve Lockout	1	**44-820**
1 in. Safety Lockout Hasps	2	**44-800**
Red Labeled Lockout	1	**44-791**
220/550V Plug Lockout	1	**44-819**
Lockout Tags – Do Not Operate (striped)	10	**44-849**
Fuse Blockout	1	**44-815**
Fuse Blockout	1	**44-816**
Gate Valve Lockout	1	**44-824**
Cleat for 277V Breaker Lockout	1	**44-785**
Cleat for 480/600V Breaker Lockout	1	**44-786**
Red Lockout Padlocks	4	**44-916**
Universal Multi-Pole Breaker Lockouts	2	**44-783**
Tool Box*	1	**IA-3241**

Quantities listed in kit description are for individual pieces, not carded packages.

*Tool Box color may vary.

Job Site Lockout/Tagout Kit

- Perfect kit for an individual worker; padlocks are keyed-alike for added worker convenience
- Excellent selection of lockout/tagout devices, tags and keyed-alike padlocks for most applications

Description		Cat. No.
Job Site Lockout/Tagout Kit		**44-979**
Kit 44-979 Includes:	**Qty.**	**Cat. No.**
Circuit Breaker Lockouts - tall and wide toggles	2	**44-956**
Circuit Breaker Lockouts - standard single and double toggles	3	**44-957**
Circuit Breaker Lockout Padlock	1	—
Red Lockout Padlocks	3	**44-916****
1 in. Safety Lockout Hasp	1	**44-800**
Red Labeled Lockout	1	**44-791***
Universal Wall Switch Lockout	1	**44-772**
Lockout Tags - Do Not Operate (striped)	12	**44-833***
Tool Box	1	**IA-3241***

*Masterlock equivalent.

**Reference part number is keyed-different, keyed-alike and master-keyed products can be special ordered by contacting IDEAL Customer Service.

Lock Stations

- Resilient polycarbonate material provides twice the heat resistance and quadruple the impact strength of typical stations

- Lockable cover prevents loss of valuable safety products and innovative hinge holds cover open for easy product selection

Description	Cat. No.
Four-Lock Station Kit includes Four-Lock Station Board (44-777), four red Safety Padlocks (44-916), 12 Heavy-Duty Lockout Tags and two 1 in. Safety Lockout Hasps (44-800)	**44-778***
Ten-Lock Station Kit includes Ten-Lock Station Board (44-805), ten red Safety Padlocks (44-916), 24 Heavy-Duty Lockout Tags and two 1 in. Safety Lockout Hasps (44-800)	**44-806**

*Not shown.

Lockout/Tagout Training Programs and Compliance Manuals

- Kinds of energy lockout/tagout can control

- Lockout/tagout basics

- OSHA's LO/TO Standard

- The six steps to lockout/tagout

- Removing lockout/tagout devices after a job is complete

- Length: 15:00 minutes

Description	Cat. No.
Lockout/Tagout Training	**44-941**

Industrial Lockout/Tagout Station

- Large Lockout/Tagout Station can be wall mounted or easily transported

- All metal, lockable cabinets come with two adjustable shelves (extra shelves available)

- Lockout safety tips are conveniently located inside of door for frequent reminders of proper lockout procedures

Description		Cat. No.
Industrial Lockout/Tagout Station – 16 in. H x 14 in. W x 6 in. D		**44-975**
Kit 44-975 Includes:	**Qty.**	**Cat. No.**
Hinged Single-Pole Breaker Lockouts	2	**44-810**
Universal Single-Pole Breaker Lockouts	2	**44-809**
Cleat for Universal Single-Pole Lockouts	2	**44-785**
Universal Multi-Pole Breaker Lockouts	2	**44-783**
480/600V Breaker Lockout	1	**44-807**
Cleat for 480/600V Breaker Lockout	1	**44-786**
Wall Switch Lockout	1	**44-789**
1 in. Safety Lockout Hasps	3	**44-800**
Red Safety Padlocks	4	**44-916**
100V Small Plug Lockout	1	**44-818**
220/550V Plug Lockout	1	**44-819**
Lockout Tags – Do Not Operate	10	**44-849**
Gate Valve Lockout - 1 in. to 2-1/2 in.	1	**44-824**
Gate Valve Lockout - 2-1/2 in. to 5 in.	1	**44-825**
Ball Valve Lockout	1	**44-820**
Pnuematic Lockout	1	**44-774**
Description	**Qty.**	**Cat. No.**
Extra Shelf	1	**IA-4990**

Multi-Pole Breaker Lockout
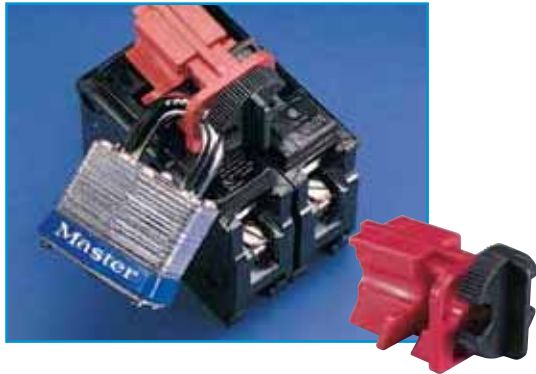
- Works with most major multi-pole breakers with tie-bar type switches including GE, ITE Sylvania, Challenger, Bryant, Westinghouse, Square D (2/3 poles) and General Switch Co.
- Easy to install — thumbscrew secures and locks tie bar in place; no cable ties or tools required
- Please see breaker guide for your application

Description	Qty.	Cat. No.
Multi-Pole Breaker Lockout	1	**44-783**

Oversized Circuit Breaker Lockout System

- Unique Lockout system for oversized 480/600V Circuit Breakers
- System can be permanently installed into an electrical panel putting all lockout items at the point of need
- Easy installation of adhesive mounting rails – no tools required
- Pegs in mounting rails mate with holes in locking arms for security of arm when lock is in place
- Red arms lock off, green arms lock on
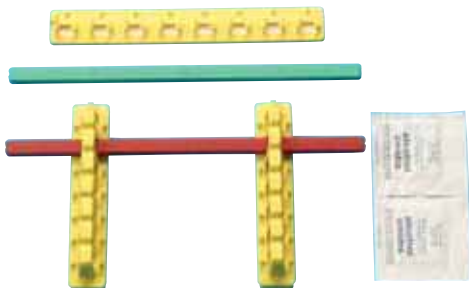
Description	Qty.	Cat. No.
Oversized Circuit Breaker System – 480-600 Volt	1	**44-822**

480/600V Single/Multi-Pole Breaker Lockouts

- Use thumbscrew to clamp lockout securely on to switch tongue, then pull cover over thumbscrew and lock in place to prevent clamp from being loosened
- Blade design provides tighter grip with less torque on thumbscrew

Description	Qty.	Cat. No.
480/600V Single/Multi-Pole Lockout	1	**44-807**
480/600V Single/Multi-Pole Lockouts	50	**44-1807**
Cleat for 480/600V Single/Multi-Pole Lockout	1	**44-786**

Large Breaker Lockout

- Designed to lockout large 480/600V breaker switches up to 2-1/2 in. wide and 7/8 in. thick
- Easy to install — no tools required

Description	Qty.	Cat. No.
Large Breaker Lockout	1	**44-823**

Lockout/Tagout

Universal 120/277V Breaker Lockouts
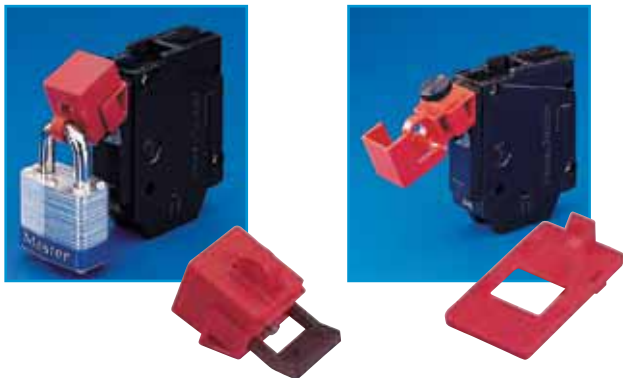
■ Use thumbscrew to clamp lockout securely on to switch tongue, then pull cover over thumbscrew and lock in place to prevent clamp from being loosened

■ New blade design provides tighter grip with less torque on thumbscrew

Description	Qty.	Cat. No.
Single-Breaker Lockouts	3	**44-809**
Cleat for Single-Pole Breaker Lockouts	3	**44-785**
Single-Pole Breaker Lockouts	50	**44-1809**

Hinged Single-Pole Breaker Lockouts

■ Hinged single-pole lockout with locking post design, locks lever in off position to isolate and prevent breaker use

■ Ideal for applications where panel closure is preferred

■ Please see breaker guide for your application

Description	Qty.	Cat. No.
Hinged Single-Pole Breaker Lockouts	3	**44-810**
Hinged Single-Pole Breaker Lockouts	100	**44-1810**

Circuit Breaker Lockouts

■ Attaches securely to breaker with simple thumb turn and clamping handle

■ 44-956 is designed for breakers with wide or tall toggles

■ 44-957 fits standard height and tie-bar toggles

■ The narrow profile permits side-by-side breaker lockout

Description	Cat. No.
Circuit Breaker Lockout, wide & tall toggles	**44-956**
Circuit Breaker Lockout, standard toggles	**44-957**

Circuit Breaker Lockout System

■ Covers most 120V - 277V breakers!

■ Works on wide range of breakers, including single- and multi-pole configurations

■ Makes use of unique lock rail system, providing the following benefits:

- Allows panel door to be closed even when lockouts are in place
- Accommodates multiple locks, facilitating group lockout activity without hasps
- Keeps weight off the breakers, protecting delicate electrical components from damage
- Positions locks and tags outside the panel, making sure lockout activity is clearly visible to anyone in the area

Technical Information

• Lockout devices constructed of high-impact Isoplast polymers

• Cables are 2 ft. in length

• Lock rails made of durable isoplast polymers with acrylic adhesive backing

How the System Works

1. Peel liner off bottom of the lock rail, exposing super-bond adhesive. Permanently affix to any location on the panel. No drilling required.

2. Attach the lockout device to the breaker and snap into locked position.

3. Pass plastic key through lock rail and attach lock, preventing key from sliding down cable and opening lockout device.

4. For group lockouts, run key through multiple loops in lock rail and apply locks. No hasps required!

5. Lockout device is unlocked by inserting and turning the red plastic key.

Perfect when locking out adjacent breaker lockouts.

Snap-on

For use on Square D NQO and other breakers that have a hole in the switch tongue. Just align pins with hole and snap closed. Pins prevent switch from being thrown.

Clamp-on

For use on breakers that do not have a hole in the switch tongue, including multiple breakers with tie bars. Turn thumbscrew to clamp lockout securely onto switch, then snap the cover closed to prevent thumbwheel from being loosened.

"No Shackle" Locks

Especially useful when lockout devices will be kept at the panel in accordance with NEC regulations. Everything you need to lockout breakers is kept conveniently right at the point of need!
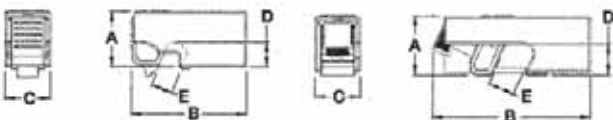
Description	Outer Dimensions (In.)			Switch Clearance (In.)	
	A	B	C	D	E
Snap-on	0.90	1.88	0.74	0.40	0.35
Clamp-on	0.95	2.56	0.74	0.35	0.42

Description	Qty.	Cat. No.
Snap-on lockout for Square D NQO and other breakers with a hole in the switch tongue	1	**44-768**
Clamp-on lockout for breakers without hole in the switch tongue, including multi-pole breakers with tie bars	1	**44-764**
4 in. Lock Rail with seven lock loops	1	**44-769**
No shackle lock	1	**444.001**

Lockout/Tagout

Wall Switch Lockouts

- Our patent pending universal Wall Switch Lockout locks out both toggle and decora wall switches
- The universal design assures switch is locked on or off. It also hinges open for unobstructed normal switch operation
- The standard wall switch lockout fits most wall-mounted single or three-way electrical switches

Description	Qty.	Cat. No.
Universal Wall Switch	1	**44-772**
Standard Wall Switch (not shown)	1	**44-789**

Electric Plug Lockout

- Slides over cord prongs and locks in place to prevent cord from being plugged into an outlet
- Cannot be removed without key
- Works on any 2- or 3-prong plug

Description	Cat. No.
Electric Plug Lockout	**44-782**

Plug Lockouts

- Accommodate a variety of electrical plug and cord sizes to prevent accidental connection or disconnection
- Durable plastic body resists wear, chemicals and job-site abuse
- Accommodates cable ties or padlocks (with up to 3/8 in. shackles)

Description	Size	Cat. No.
Plug Lockouts - 100V	2 in. x 2 in. x 3-1/2 in.	**44-818**
Plug Lockouts - 220/550V	3-1/4 in. x 3-1/4 in. x 7 in.	**44-819**

Plug Lockouts

- Plug lockout, 44-792 works with high and low voltage plugs up to 3 in. in diameter and 5-1/2 in. in length, up to 1-1/4 in. cord diameter
- Plug lockout, 44-973 works with 110V/220V plugs up to 1-3/4 in. in diameter and 2-1/2 in. in length, up to a 1/2 in. cord diameter

Description	Cat. No.
Plug Lockout - up to 3 in. diameter	**44-792**
Plug Lockout - 110V/20V	**44-793**

Adjustable Cable Lockout

- Infinitely adjustable safety hasp and cable

- Ideal for multiple circuit breaker panels and side-by-side gate valve lockouts

- Feed the cable end through the points to be locked out, then back through the lockout body. Cinch it tight to remove any slack with the patented locking feature.

- Tough, flexible multi-stranded 6 ft. 1/4 in. dia. steel cable is insulated with a clear vinyl coating

- Tough, lightweight, dielectric Xenoy® thermoplastic body withstands chemicals; performs effectively in extreme conditions

- Up to four workers can apply their personal safety locks

- Complete with high-visibility, re-usable, write-on safety labels (English, French & Spanish). Identify the responsible person, then erase for the next job.

Description	Cat. No.
Adjustable Cable Lockout	**44-808**

Cable Lockout

- 44-829 Unique hasp lockout device accepts up to six 9/32 in. padlocks and comes with a 6 ft. plastic-coated steel cable

Description	Cat. No.
Cable Lockout, 6 ft. cable	**44-829**

Gate Valve Lockouts

- Unique patent pending rotating design allows for easier installation in confined space applications

- Each size rotates into itself and nests within the next larger size to save space in storage

- Up to four workers can apply their personal safety locks

- Complete with high-visibility permanent safety labels (English, French & Spanish) that can be written on to identify the responsible person, then erased for the next job

- Tough, lightweight, dielectric Xenoy thermoplastic bodies withstand chemicals and perform effectively in extreme conditions, temperature range: -50°F (-46°C) to +350°F (177°C)

Valve Size	Qty.	Cat. No.
1 in. to 3 in.	1	**44-824**
2 in. to 5 in.	1	**44-825**
Set of five sizes (1 in. to 13 in.)	1	**44-817**

Ball Valve Lockout Devices

- Best available method for locking out ball valves

- Patented design fits most major brand ball valves

- Designed to lock in off position only

- Complies with OSHA lockout standard
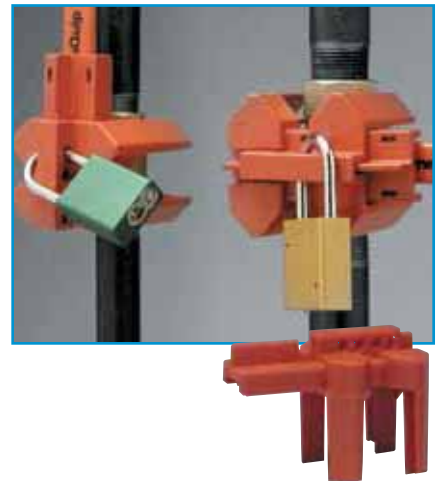
Valve Size	Max. Shackle Length	Material	Cat. No.
1/2 to 1-1/4 in.	—	Polypropylene	**44-846**
1-1/4 to 3	—	Polypropylene	**44-847**
1/4 to 1 (not shown)	9/32 in.	Nylon	**44-820**
1-1/4 to 3 (not shown)	9/32 in.	Heavy Steel	**44-821**

Lockout/Tagout

Steel Padlocks

- Rustproofed, steel case with nickel-plated shackle withstands abuse and environmental hazards
- Includes two keys
- 1-1/2 in. wide lock with 9/32 in. shackle diameter
- Keyed-alike and Master-Keyed locks available by special order

Bumper Color	3/4 In. Shackle Clearance Cat. No.	2 In. Shackle Clearance Cat. No.
Blue	**44-900**	**44-901**
Red	**44-906**	**44-907**

Lock Labels

- Easy identification of employees' locks
- Write-on, vinyl labels with peel-off adhesive backing
- Polyester over laminate protects label

Description	Qty.	Cat. No.
Lock Labels	8 labels	**44-898**

Xenoy® Safety Lockout Padlocks w/Key Retention

- Dedicated safety lockout device reduces confusion with other locks
- Complies with OSHA's "1-key, 1-lock"
- Non-conductive, lightweight Xenoy® body
- Key retention ensures keys do not get lost while not in use and that padlocks are not left untouched
- 1-1/2 in. shackle clearance
- 1-1/2 in. wide lock with 1/4 in. shackle
- Four colors for easy identification
- Keyed-alike, Master-Keyed, 2nd key, additional colors and engraving available by special order

Bumper Color	Cat. No.
Blue	**44-912**
Black	**44-914**
Red	**44-916**
Yellow	**44-918**

Marking Pen

- Fast-drying, permanent ink will not smear
- Use on write-on marker cards and write-on cable-tie marker plates

Description	Cat. No.
Marking Pen w/black ink	**41-697**

Heavy-Duty Lockout Tags

- High-visibility lettering
- Laminated plastic tags have non-fade legends, resist corrosive and harsh environmental conditions and a 7/8 in. grommet
- Vinyl tags are silk screened with a metal grommet; fastener included
- Exceeds OSHA's 50-lb. pullout requirement

Legend	Type	Qty.	Cat. No.
Do Not Operate	Heavy-Duty Laminated	Card of 5	**44-830**
	Heavy-Duty Laminated	Box of 100	**44-1830**
	Economy Vinyl	Bag of 25	**44-848**
Do Not Operate - Electricians at Work	Heavy-Duty Laminated	Card of 5	**44-832**
	Economy Vinyl	Bag of 25	**44-843**
Do Not Operate - (red striped background)	Heavy-Duty Laminated	Card of 5	**44-833**
	Heavy-Duty Laminated	Box of 100	**44-1833**
	Economy Vinyl	Bag of 25	**44-849**

Bilingual Lockout Tags

- Spanish/English tags provide extra safety and information in bilingual situations
- High-visibility lettering
- Laminated plastic tags with non-fade legends resist corrosive and harsh environmental conditions
- Write-on tag with 7/8 in. grommet can be padlocked to device to help prevent unauthorized removal

Legend	Qty.	Cat. No.
Do Not Operated (striped)	5	**44-841**

Safety Lockout Hasps

- Allow up to six workers to lock out a single energy source
- Rustproofed, plated and vinyl-coated
- Labeled hasps feature anodized aluminum alloy construction for long-term durability
- Permanent "Do Not Operate" labels accept pens, pencils and permanent markers

Safety Lockout Hasps

Jaw Diameter	Qty.	Cat. No.
1 in.	3	**44-800**
1-1/2 in.	2	**44-801**

Labeled Safety Lockout Hasps

Legend	Color	Qty.	Cat. No.
Do Not Operate	Blue	1	**44-790**
	Red	1	**44-791**
	Red	50	**44-1791**

Lockout Signs

■ Resistant to both chemicals and abrasion — protected graphics for indoor and outdoor use

Legend	Material	Size (In.)	Cat. No.
OSHA Regulation 36 in. clearance	Self-sticking polyester	3-1/2 x 10	**44-877**
OSHA Regulation – Bilingual 36 in. clearance	Self-sticking polyester	7 x 10	**44-878**

Safety Signs

■ Resistant to both chemicals & abrasion — protected graphics for indoor & outdoor use

Legend	Material	Size (In.)	Cat. No.
Danger – High Voltage	Fiberglass	10 x 14	**44-862**
Danger – High Voltage	Self-Sticking Polyester	7 x 10	**44-863**
Danger – High Voltage – Keep Out	Fiberglass	10 x 14	**44-880**
Danger – High Voltage – Keep Out	Self-Sticking Polyester	7 x 10	**44-881**
Danger – High Voltage – Spanish	Self-Sticking Polyester	7 x 10	**44-865**

Flash Protection Labels and Signs

National Electric Code 110.16 Flash Protection: *Switchboards, panel boards, industrial control panels and motor control centers,* in other than dwelling occupancies, that are likely to require examination, adjustment, servicing or maintenance while energized, shall be field marked to warn qualified persons of potential electric arc flash hazards. The marking shall be located so as to be clearly visible to qualified persons before examination, adjustment, servicing or maintenance of the equipment.

Required Labels –
44-892/44-893/44-892BK

Arc Flash Labels
44-894/44-895

Recommended Signs –
44-896

Description	Type	Size	Qty./Bag	Cat. No.
NEC Arc Flash, Warning	Self-Sticking Polyester	3-1/2 in. x 5 in.	5	**44-892**
NEC Arc Flash, Warning		3-1/2 in. x 5 in.	100	**44-892BK**
NEC Arc Flash, Warning		5 in. x 7 in.	5	**44-893**
NEC Arc Flash, Danger		5 in. x 7 in.	5	**44-894**
NEC Arc Flash, Danger		4 in. x 6 in.	5	**44-895**
NEC Arc Flash, Warning		7 in. x 10 in.	1	**44-896**

Detectable Underground Tapes

- Solid aluminum foil core tapes for protection, location and identification of underground utility installations
- Meets or exceeds industry standards including the American Public Works Association (APWA) color code
- Formulated to resist degradation from acid and alkali found in soils
- Lead-free pigments and organic lead-free ink
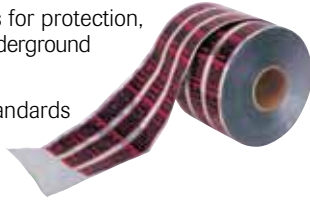
Property	Method	Value
Thickness	ASTMD2103	5.0 Mils
Elongation	ASTMD882-75B	80%
Composition	IDEAL Specs.	Bottom Layer PE Top layer PET Foil industry standard
Tensile Strength	ASTMD882	35 lbs./in. (15,000 PSI)

Legend	Color	Size	Cat. No.
Caution Buried Electric Line Below	Red	3 in. x 1,000 ft.	42-201
		6 in. x 1,000 ft.	42-251
Caution Buried Fiber Optic Line Below	Orange	6 in. x 1,000 ft.	42-252

Non–Detectable Underground Tapes

- For protection, location and identification of underground utility installations
- Formulated to resist degradation from acid and alkali found in soils
- Lead-free pigments and organic lead-free ink

Property	Method	Value
Thickness	ASTMD2103	4.0 Mils
Elongation	ASTMD882-75B	500%
Composition	IDEAL Specs.	LDPE
Tensile Strength	ASTMD882	2,750 PSI
Recommended Burial Depth		
3 in. Tape – 4 in. to 6 in.		
6 in. Tape – less than 12 in.		

Legend	Color	Size	Cat. No.
Caution Buried Electric Line Below	Red	3 in. x 1,000 ft.	42-101
		3 in. x 250 ft.	42-131
	Yellow	3 in. x 1,000 ft.	42-102
Caution Buried Telephone Line Below	Orange	3 in. x 1,000 ft.	42-103
Caution Buried Fiber Optic Line Below	Orange	3 in x 1,000 ft.	42-104
Caution Buried Electric Line Below	Red	6 in. x 1,000 ft.	42-151
	Yellow	6 in. x 1,000 ft.	42-152

Barricade Tapes

- High-visibility safety yellow or red polyethylene construction with bold black letters
- Meets OSHA specifications Section 1010.144 for marking physical hazards

Property	Method	Value
Elongation	ASTMD882-75B	≥ 400%
Composition	IDEAL Specs.	LDPE
Tensile Strength	ASTMD882	2,350 PSI TD 1,893 PSI MD

Legend	Color	Size	Thickness	Cat. No.
Caution	Yellow		4.0 Mils	42-001
Caution Do Not Enter	Yellow		4.0 Mils	42-002
Caution High Voltage	Yellow	3 in. x 1,000 ft.	4.0 Mils	42-003
Danger	Red		4.0 Mils	42-051
Danger High Voltage Keep Out	Red		4.0 Mils	42-052

Legend	Color	Size	Thickness	Cat. No.
Caution	Yellow	3 in. x 250 ft.	2.0 Mils	42-031
Caution	Yellow		2.0 Mils	42-011
Caution Do Not Enter	Yellow	3 in. x 1,000 ft.	2.0 Mils	42-012
Danger	Red		2.0 Mils	42-015

Lockout/Tagout

Voltage and Conduit Markers

Large:
1 marker per card
2-1/4 in. x 9 in. each w/1-3/4 in. type

Medium:
4 markers per card
1-1/8 in. x 4-1/2 in. each w/3/4 in. type
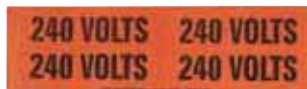
Small:
18 markers per card
2-1/4 in. x 1/2 in. each w/5/16 in. type

440 VOLTS

240 VOLTS 240 VOLTS
240 VOLTS 240 VOLTS

- Identify junction boxes, switches, circuit breakers, raceways, pipe and fuse boxes
- Non-conductive for user safety
- High-adhesion properties with easy removability
- Vinyl-impregnated cloth construction provides long-lasting durability
- Resist abrasion, moisture, dirt and oil
- Non-smear, black legend on bright orange background for high visibility

Specifications:
Temperature Range: -40°F to 180°F (-40°C to 82°C)
Adhesion: 45 oz./in. width ultimate

Legend	Large Cat. No.	Medium Cat. No.	Small Cat. No.
120/280	**44-295**	**44-296**	–
277/480V	**44-298**	**44-299**	–
120V	–	**44-353**	–
208V	–	**44-355**	–
240V	–	**45-358**	–
277V	–	–	**44-410**
480V	**44-314**	**44-364**	–
DANGER	**44-289**	–	–
HIGH VOLTAGE	**44-292**	–	–

Python™ Adjustable Locking Cables

Python™ Adjustable Locking Cable secures anything within its grasp. It's the only locking cable that is always the right length for your application. This exclusive, patented product holds the flexible steel cable tight at any position for infinite possibilities.

- Infinite Locking Positions – The patented lock holds the cable tight at any position from 1 ft. (30cm) to 6 ft. (1.8m)
- Application Flexibility – Interchangeable cables
- Keyed Alike Convenience – Rekeyable cylinder
- Cut Resistance – 3/8 in. (10mm), 100% steel braided cable
- Weather Tough – Rust resistant aluminum lock body
- Scratch Resistant – Vinyl cable sleeve and lock body bumper

Other Applications: Bikes, lawn furniture, lawn mowers, job sites, canoes, boats, skis, snowboards, generators, pickup truck cargo, spare tire locks and much more.

Description	Cat. No.
Master Lock Python Kit with 6 ft. Cable-keyed different	**44-990**
Master Lock Python Kit with 6 ft. Cable-keyed alike*	**44-991**
12 ft. (3.7m) x 3/8 in. (10mm) Cable for Python Lock*	**44-992**

*Special order thru Customer Service.

Stripmaster® and Stripmaster® Lite Wire Strippers

- One-step stripping enhances productivity
- Spring-action motion increases leverage and reduces operator fatigue
- Precision-ground, knife-type blades provide clean, accurate stripping
- Sturdy die-cast frame provides long-term durability
- Wire gripper holds wire securely in position
- Stripmaster® Lite designed for smaller hands — 3/4 the size of the standard Stripmaster®

Stripmaster® Wire Stripper

Stripmaster® Lite Wire Stripper
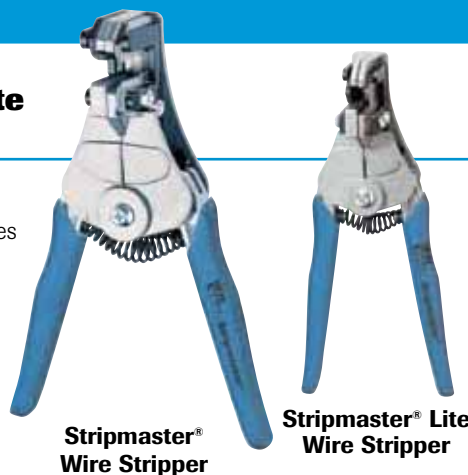
Gripper holds the wire securely in position.

Knife-type stripping blades have form-ground holes which penetrate the insulation like a knife, giving a clean insulation cut.

Stripmaster® Wire Strippers and Knife-Type Blades

Specifications — Stripping Hole Diameter in Inches (mm)													Cat. No.	Replacement Blades (Pair) Cat. No.	Replacement Frame Cat. No.
Wire Size AWG															
6	8	10	12	14	16	18	20	22	24	26	28	30			
	0.159 (4.0)	.141 (3.6)	.106 (2.7)										45-090* or 45-290**	L-4419	L-5620
		.144 (3.6)	.105 (2.7)	.085 (2.2)	.073 (1.8)	.073 (1.8)							45-091	L-4420	L-5620
		.144 (3.6)	.113 (2.9)	.090 (2.3)	.072 (1.8)	.061 (1.5)	.048 (1.2)	.048 (1.2)					45-092* or 45-292**	L-4421	L-5620
				.090 (2.3)	.072 (1.8)	.061 (1.5)	.039 (1.0)	.039 (1.0)					45-093	L-4422	L-5620
.230 (2.3)	.198 (1.9)												45-096	L-4453	L-4453
					.072 (1.8)	.061 (1.5)	.048 (1.2)	.039 (1.0)	.032 (0.8)	.026 (0.7)			45-097	L-4994	L-5620
							.048 (1.2)	.039 (1.0)	.032 (0.8)	.026 (0.7)	.021 (0.5)	.016 (0.4)	45-098	L-5361	L-5620
	.198 (5.0)	.167 (4.2)			.062 (1.6)	.055 (1.4)							45-099	L-8763	L-5620

*Boxed   ** Blister Card   Tolerances +001 - .005

Stripmaster® Lite Wire Strippers and Knife-Type Blades

Specifications — Stripping Hole Diameter (Inches)										Cat. No.	Replacement Blades (Pair) Cat. No.	Replacement Frame Cat. No.
Wire Size AWG												
12	14	16	18	20	22	24	26	28	30			
		.072 (1.8)	.061 (1.5)	.048 (1.2)	.039 (1.0)					45-671	LB-1001	LB-1421
						.032 (0.8)	.026 (0.7)	.021 (0.5)	.016 (0.4)	45-672	LB-1002	LB-1421
.113 (209)	.090 (2.3)	.072 (1.8)	.061 (1.5)	All stranded wire						45-673	LB-1003	LB-1421
.096 (2.4)	.085 (2.2)	.073 (1.9)	.061 (1.5)	12 & 14 Solid Wire, 16 & 18 Stranded Wire						45-674	LB-1004	LB-1421

Tolerances +001 - .005

Stripmaster® Wire Strippers and Knife-Type Blades for Metric Wire

Specifications — Stripping Hole Diameter (mm)															Cat. No.	Replacement Blades (Pair) Cat. No.	Replacement Frame Cat. No.
Wire Size mm²																	
0.05	0.1	0.15	0.22	0.34	0.5	0.75	1	1.5	2.5	4	6	8	10				
												4.3	5.0		45-090-341	L-4419M	LA-2358
						1.3	1.6	1.9	2.4	3	3.6				45-092-341 or 45-292-341*	L-4421M	LA-2358
0.6	0.7	0.8	0.9	1.0	1.1										45-098-341	L-5361M	LA-2358

*Boxed   Tolerances +001 - .005

Stripmaster® Lite Wire Strippers and Knife-Type Blades for Metric Wire

Specifications — Stripping Hole Diameter (mm)									Cat. No.	Replacement Blades (Pair) Cat. No.	Replacement Frame Cat. No.
Wire Size mm²											
0.05	0.1	0.15	0.22	0.34	0.5	0.75	1	1.5			
				1.0	1.1	1.3	1.6	1.9	45-671-341	LB-1001M	H-2909
0.6	0.7	0.8	0.9						45-672-341	LB-1002M	H-2909

Free Application Engineering Service available. Contact IDEAL INDUSTRIES, INC. for complete information at 1-800-324-9571 or download application at www.idealindustries.com/products/wire-processing.

Coax Stripmaster® Wire Strippers and Blades

Description	Coax Cable Type (RGU)	Repl. Blade Cat. No.	Cat. No.
Coax Stripmaster® for RG-6	RG-6	LB-740	45-262
Coax Stripmaster® for RG-58	RG-58	LB-742	45-264
Coax Stripmaster® for RG-59	RG-59	LB-743	45-265
Coax Stripmaster® for RG-6 QuadShield	RG-6 QuadShield	LA-3953	45-282

Coaxial Cables: two-step strip for termination, jacket and dielectric.

Stripmaster® Wire Strippers with Rectangular Holes

Description	Cat. No.	Replacement Blades (Pair) Cat. No.
For Flat Telephone Cable (.060 in. or 1.52mm)	N/A	LB-1155
For European Flat Lamp Cord	45-089	L-8762
For SP-SPT Lamp Cord	45-095*	L-4452

*Also strips 2- and 3-conductor low-voltage wire used in E.E. and Touchplate remote control wiring system.

Transparent Adjustable Wire Stop Assembly

■ Provides uniform stripping length

Short Stop Latch

■ Protects wire strands by limiting stripping stroke to 5/32 in.

■ Retains slug until wire is ready for terminating

Optional Accessories	Cat. No.
Transparent Adjustable Wire Stop (for Stripmaster® Wire Strippers)	L-5270
Transparent Adjustable Wire Stop (for Stripmaster® Lite Wire Strippers)	LB-1195
Replacement Moveable Gripper	L-1953

Replacement Frame Assemblies	Cat. No.
For Stripmaster® Wire Strippers	L-5620
For Stripmaster® Lite Wire Strippers	LB-1421

Stripmaster® Wire Strippers

Custom Stripmaster® Wire Strippers

- Strips 30 through 10 AWG solid or stranded wire
- Mil-spec die-type blades allow precision stripping
- Inner cutting hole sized to conductor and counter-bored holes sized to insulation
- Replaceable grippers
- Optional short stop-latch and transparent wire stop
- Cushioned, comfort grip handles
- Engineering service and made-to-order blades available.
  Contact factory for complete product and blade number listing.

Gripper pads hold the wire securely in a centerline relationship with the blade.
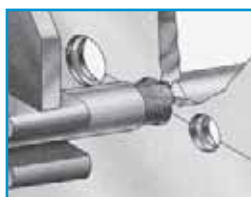
Die-type blades incorporate a counter-bored hole sized to the insulation and an inner cutting hole sized to the conductor. This varies depending on insulation type and thickness.

Custom Stripmaster® Wire Strippers and Die-Type Blades

					Specifications – $\frac{\text{Cutting Hole Diameter}}{\text{Counterbore Diameter}}$ in Inches (mm)								
Wire Size AWG											**Stripper Cat. No.**	**Blade Only Cat. No.**
10	**12**	**14**	**16**	**18**	**20**	**22**	**24**	**26**	**28**	**30**		
For Type E Teflon® (600V)												
.119/.136 (3.02/3.45)	.096/.113 (2.44/2.87)	.076/.0985 (1.93/2.37)									45-176	L-5559
			.061/.081 (1.55/2.06)	.052/.070 (1.33/1.78)	.042/.0595 (1.07/1.5)	.034/.052 (.863/1.32)	.028/.043 (.711/1.09)	.026/0.39 (.584/.99)			45-177	L-5560
								.023/.039 (.584/.99)	.019/.035 (.482/.889)	.016/.032 (.406/.813)	45-178	L-5561
For Type EE Teflon® (1000V)												
.119/.144 (3.02/3.45)	.096/.125 (2.44/3.17)	.076/.104 (1.93/2.64)									45-173	L-5562
			.061/.089 (1.55/2.49)		.042/.067 (1.07/1.70)	.034/.0595 (.863/1.50)	.028/.055 (.711/1.39)	.023/.0465 (.584/1.17)			45-174	L-5563
				.052/.0785 (1.33/1.99)				.023/.0465 (.584/1.17)	.019/.043 (.482/1.09)	.016/.042 (.406/1.07)	45-175	L-5564
For Other Misc. Insulations												
.116/.154 (2.94/3.91)	.0937/.138 (2.38/3.45)	.076/.113 (1.93/2.87)									45-170	L-5210
			.062/.096 (1.57/2.44)	.052/.086 (1.33/2.18)	.042/.073 (1.07/1.85)	.035/.0635 (.889/1.61)	.0292/.0595 (.763/1.50)	.022./052 (.560/1.33)			45-171	L-5211
							.024/.043 (.609/1.09)	.020/.040 (.508/1.01)	.016/.037 (.406/.940)	45-172	L-5436
Other Thin Insulations												
					Three identical holes					.012./020 (.305./508)	45-179	L-7625
					Solid Wires		.024/.033 (.609/.838)	.018/.025 (.457/.635)	.014/.023 (.356/.584)	.012/.019 (.305/.508)	45-169	L-9300

Tolerances: Cutter Dia.: ± .001; Counter-bore Dia.: ± .002. The 45-170 Series is a Custom Stripmaster® Wire Stripper frame without the short stop latch and wire stop.
Teflon® is a registered trademark of E.I. du Pont de Nemours and Company.

Stripmaster® Wire Strippers

Custom Stripmaster® Lite Wire Strippers

- Custom Stripmaster® Lite is 3/4's the size of Custom Stripmaster® Wire Stripper and strips 16 through 30 AWG solid or stranded wire

- Custom Stripmaster® Lite requires one-third less hand pressure for each strip actuation

- Engineering Service and made-to-order blades available. Contact factory for complete product and blade number listing.

Custom Stripmaster® Lite Wire Strippers and Die-type Blades

Specifications – Cutting Hole Diameter / Counterbore Diameter in Inches (mm)								Stripper Cat. No.	Blade Only Cat. No.
16	18	20	22	24	26	28	30		
For Type E Teflon® (600V)									
.061/.081 (1.55/2.06)	.052/.070 (1.33/1.78)	.042/.0595 (1.07/1.5)	.034/.052 (.863/1.32)					45-638	LB-918
		.042/.0595 (1.07/1.5)	.034/.052 (.863/1.32)	.028/.043 (.71/1.09)	.023/.039 (.584/.99)			45-639	LB-919
				.028/.043 (.71/1.09)	.023/.039 (.584/.99)	.019/.035 (.482/.89)	.016/.032 (.41/.82)	45-640	LB-920
For Type EE Teflon® (1000V)									
.061./089 (1.55/2.26)	.052./0785 (1.32/1.99)	.042./067 (1.07/1.70)	.034/.0595 (.86/1.51)					45-635	LB-915
		.042./067 (1.07/1.70)	.034/.0595 (.86/1.51)	.028/.055 (.71/1.40)	.023/.0465 (.58/1.18)			45-636	LB-916
				.028/.055 (.71/1.40)	.023/.0465 (.58/1.18)	.019/.043 (.48/1.09)	.016./042 (.41/1.07)	45-637	LB-917
For Other Misc. Insulations									
.062./096 (1.57/2.44)	.052./086 (1.32/2.18)	.042./073 (1.07/1.70)	.034/.0595 (.89/1.61)					45-632	LB-912
		.042./073 (1.07/1.70)	.034/.0595 (.89/1.61)	.0292/.0595 (.74/1.51)	.022/.052 (.56/1.32)			45-633	LB-913
				.024/.033 (.74/1.51)	.018/.025 (.61/1.09)	.020/.040 (.51/1.02)	.016/.037 (.41/0.86)	45-634	LB-914
Other Thin Insulations									
							.012/.020 (.305./508)	45-641	LB-921
				.024/.033 (.61/.84)	.018/.025 (.46/.64)	.014/.023 (.36/.58)	.012/.019 (.30/.48)	45-631	LB-911

Tolerances: Cutter Dia.: ± .001; Counter-bore Dia.: ± .002.
Teflon® is a registered trademark of E.I. du Pont de Nemours and Company.

Custom Steel Stripmaster® Wire Strippers and Special Flat-Blades for Ribbon and Multi-Conductor Cable

Description	Blade Gap ("x") vertical height	Blade Only Cat. No.	Frame & Blade Cat. No.
Custom Steel frame only	N/A	N/A	LB-1091
Flat blade for 26 AWG (.40mm dia.) multi-conductor	.022 in.	LB-1151	45-890
Flat blade for 24 AWG (.00mm dia.) multi-conductor	.030 in.	LB-1152	45-891
Flat blade for 22 AWG (.64mm dia.) multi-conductor	.038 in.	LB-1153	45-892
Flat blade for 20 AWG (.00mm dia.) multi-conductor	.050 in.	LB-1154	45-893
Flat blade for 18 AWG (1.02mm dia.) multi-conductor	.060 in.	LB-1155	45-894
Flat blade for 16 AWG (1.29mm dia.) multi-conductor	.075 in.	LB-1156	45-895

Stripmaster® Wire Strippers
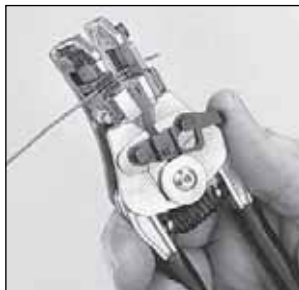
Short stop-latch protects wire strands by limiting the stripping stroke to 5/32 in. and retains the slug until the wire is ready for terminating.

Transparent wire stop provides uniform stripping length.

Gripper pads are available in your choice of either parallel, file or grit-type. File-type pads may be used on hard-to-grip insulations such as Kapton® and some Teflon®.

Stationary Gripper for Red Handle Units
For 10, 12 & 14 AWG Wire

L-5215

.129
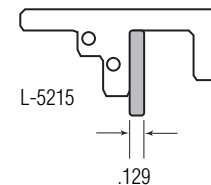
Stationary Gripper for Black Handle Units
For 16 thru 30 AWG wire.

L-5217

.156
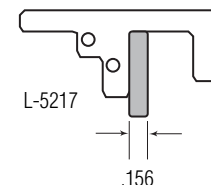
Replacement Gripper Pads

For Custom Stripmaster® and Custom Steel Stripmaster® Wire Strippers			
Surface Type	Gripper Set* Cat. No.	Movable Gripper Cat. No.	Stationary Gripper (Thickness)
Grit**	LB-197	L-5212	L-5215 (.129 in.)
Grit**	LB-198	L-5212	L-5217 (.156 in.)
File	LB-721	LB-718	LB-719 (.129 in.)
File	LB-722‡	LB-718	LB-720 (.156 in.)
Parallel	LB-730	LB-727	LB-728 (.129 in.)
Parallel	LB-731	LB-727	LB-729 (.156 in.)
For Custom Stripmaster® Lite Wire Strippers			
Surface Type	Gripper Set* Cat. No.	Movable Gripper Cat. No.	Stationary Gripper (Thickness)
Grit*	LB-1188	LB-882	LB-883 (.109 in.)
File	LB-1189	LB-1184	LB-1185 (.109 in.)
Parallel	LB-1190	LB-1186	LB-1187 (.109 in.)

* Gripper Set includes one movable gripper, one stationary gripper.
** Grit pads are standard for most Custom Stripmaster® and Custom Stripmaster® Lite products.
‡ These are for use on hard-to-grip surfaces such as Kapton® and Teflon®.
Gripper pad selection depends on insulation type and user preference.
Note: For 10-14 AWG, use .129 in. stationary gripper. For 16-30 AWG, use .156 in. gripper.

Replacement Frame Assemblies

For Custom Stripmaster® Wire Strippers	Cat. No.
Frame only, 10-14 AWG	L-5616
Frame only, 16-30 AWG	L-5617
Frame only, 10-14 AWG, Wire Stop and Latch	L-5618
Frame only, 16-30 AWG, Wire Stop and Latch	L-5619
Frame only, 10-14 AWG, internal spring (see note)	L-9039
Frame only, 16-30 AWG, internal spring (see note)	L-9038

Note: Frames with internal springs allow additional blade penetration pressure for difficult and multi-layered insulation types.

For Custom Stripmaster® Lite Wire Strippers	Cat. No.
Frame only	LB-895
Frame only, Wire Stop and Latch	LB-896

For Custom Steel Stripmaster® Wire Strippers	Cat. No.
Frame only, 10-14 AWG	LB-1091
Frame only, 16-30 AWG	LB-1092
Frame only, 10-14 AWG, internal spring (see note)	LB-1090
Frame only, 16-30 AWG, internal spring (see note)	LB-1089

Note: Frames with internal springs allow additional blade penetration pressure for difficult and multi-layered insulation types.

Optional Accessories

Short Stop-Latch	Cat. No.
For Custom & Custom Steel Stripmaster® Wire Strippers	L-5269
For Custom Stripmaster® Lite Wire Strippers	LB-1194

Transparent Adjustable Wire Stop Assembly	Cat. No.
For Custom & Custom Steel Stripmaster® Wire Strippers	L-5270
For Custom Stripmaster® Lite Wire Strippers	LB-1195

Stripmaster® Wire Strippers

Stripmaster® Wire Strippers

Custom Stripmaster® Wire Stripper and Custom Stripmaster® Lite Wire Stripper MIL-spec reference chart

Wire Specification	Custom Stripmaster®			Custom Stripmaster® Lite		
	Cat. No.	Blade Only Cat. No.	Wire Gauge	Cat. No.	Blade Only Cat. No.	Wire Gauge
MIL-W-81044/4/5/6 MIL-W-5086/1/7	45-170 45-171	L-5210 L-5211	10-14 AWG 16-26 AWG	N/A	N/A	N/A
MIL-W-81044/8/9/10 MIL-W-16878/5 MIL-W-81381/3/4	45-173 45-174 45-175	L-5562 L-5563 L-5564	10-14 AWG 16-26 AWG 26-30 AWG	45-635 45-637 45-637	LB-915 LB-917 LB-917	16-22 AWG 24-30 AWG 24-30 AWG
MIL-W-22759/32/33/44/45/46	45-1987 45-1654	45-1987-1 45-1654-1	16-26 AWG 16-26 AWG	45-2133 45-2132	45-2133-1 45-2132-1	16-24 AWG 16-24 AWG
MIL-81044/11/12/13 MIL-W-22759/34/35/41/42/43	45-1611 45-2500 45-1987 45-178	45-1611-1 45-2500-1 45-1987-1 L-5561	10-14 AWG 10-14 AWG 16-26 AWG 26-30 AWG	45-2133 45-2118 45-640	45-2133-1 45-2118-1 LB-920	16-24 AWG 20-26 AWG 24-30 AWG
Raychem 44A021X, 44/051X MIL-W-16878/4 MIL-W-22759/11/12/22/23	45-176 45-1611 45-177 45-178	L-5559 45-1611-1 L-5560 L-5561	10-14 AWG 10-14 AWG 16-26 AWG 26-30 AWG	45-640	LB-920	24-30 AWG
MIL-W-81044/16/17	45-1611 45-1610	45-1611-1 45-1610-1	10-14 AWG 16-26 AWG	45-2131	45-2131-1	16-24 AWG
MIL-W-81381/1/2//6/7/8/9/10/17/21	45-1609 45-1551 45-178	45-1609-1 45-1551-1 L-5561	10-14 AWG 16-26 AWG 26-30 AWG	45-640	4LB-920	24-30 AWG
MIL-W-81381/11/12/13/14/22	45-1608 45-1654 45-178	45-1608-1 45-1654-1 L-5561	10-14 AWG 16-26 AWG 26-30 AWG	45-640	4LB-920	24-30 AWG
MIL-W-22759/18/19	45-1608 45-1551	45-1608-1 45-1551-1	10-14 AWG 16-26 AWG	N/A	N/A	N/A
MIL-W-81381/17/21	45-1633	45-1633-1	16-26 AWG	45-2020	45-2020-1	20-26 AWG
MIL-W-81381/18/19/20	45-1609 45-1551	45-1609-1 45-1551-1	10-14 AWG 16-26 AWG	N/A	N/A	N/A
MIL-W-22759/16/17	45-1611 45-1987	45-1611-1 45-1987-1	10-14 AWG 16-26 AWG	45-2133 45-2118	45-2133-1 45-2118-1	16-24 AWG 22-26 AWG
MIL-W-24640/19/22/23/24	45-1957	45-1957-1	14-22 AWG	N/A	N/A	N/A
MIL-W-85485/5/6/7/8	45-1925 45-1924	45-1925-1 45-1924-1	10-14 AWG 16-24 AWG	N/A	N/A	N/A
MIL-W-85485/9/10/11/12 MIL-W-85485/9/10	45-1611 45-1610	45-1611-1 45-1610-1	10-14 AWG 16-24 AWG	45-2131	45-2131-1	16-24 AWG
BMS 1360 Type 1-6, 19-21, 23-27, 33-34	45-2541 45-2543	45-2541-1 45-2543-1	10-14 AWG 16-24 AWG	45-2697	45-2697-1	16-24 AWG
BMS 1360 Type 12-18, 28-32	45-2542 45-2544	45-2542-1 45-2544-1	10-14 AWG 16-24 AWG	N/A	N/A	N/A
BMS 1360 Type 7-12	45-2565 45-2564	45-2565-1 45-2564-1	10-14 AWG 16-26 AWG	N/A	N/A	N/A
MIL-W-22759/80/81/82/91/92	45-2542 45-2544	45-2542-1 45-2544-1	10-14 AWG 16-24 AWG	45-2693 45-2692	45-2693-1 45-2692-1	16-22 AWG 20-26 AWG
MIL-W-22759/83/84/85/86/87/88/89/90	45-2541 45-2543 45-2618	45-2541-1 45-2543-1 45-2618-1	10-14 AWG 16-24 AWG 16-26 AWG	45-2685	45-2685-1	16-24 AWG

NOTE: The above blades represent the best blade for nominal conductor sizes within the wire spec. tolerance. If the conductor size is over or under the nominal dims. an alternate blade may be required. Please contact our wire stripping applications engineer at 1-800-324-9571 for alternate blades and for blade numbers for MIL-specs. not listed on this chart.

Free Application Engineering Service

Whatever your particular wire or cable preparation challenge, we're ready to assist you with practical solutions. Simply send us at least five feet of your wire or cable and complete the questionnaire below. Copy this form and mail to:

IDEAL INDUSTRIES, INC.
Becker Place, Sycamore, IL 60178
Attn: Wire Stripping Applications Analysis

We'll quickly recommend a practical stripping or cutting solution designed to meet your needs. Remember, this is a free service that we're eager to provide whenever you need it.

For immediate assistance, call our Industrial Support Line at 800-324-9571.

Free Application Engineering Service for Wire Stripping Recommendations

Completion of this information is a request for recommended tools or equipment only and does not place the individual or the company inquiring under any obligation to purchase. This is a free service of IDEAL INDUSTRIES, INC., Sycamore, Illinois.

Please enclose at least **five feet of your wire or cable** and answer the following questions to expedite a reply for your particular application.

1. **Method Preference:**

   ☐   **A. Hand Type**

   ☐   **B. Production Strippers**

        ☐   **1. 45-930 STP Stripping System**

        ☐   **2. 45-950 Stripmaster® Model 950 Wire Stripper**

2. **Stripping Tolerance:**

   A. Precision

   B. Non-Precision

3. **Present Method:** _____

4. **Type of Insulation:** _____
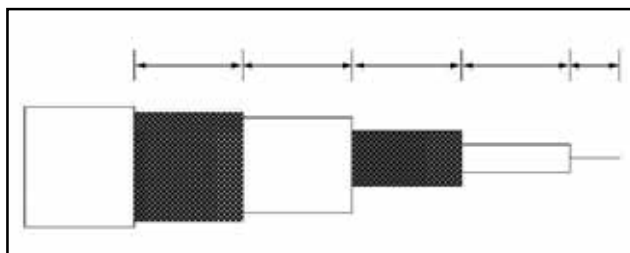
Customer Information

Please enclose business card or complete the following:

Name _____

Title _____

Company _____

Street _____

City _____ State _____ Zip _____

Phone _____ Fax _____

E-mail _____

5. **Wire Gauge:** _____

6. **MIL-Spec:** _____

7. **Number of Strips per Day:** _____

Triaxial Cable

Coax Cable

5. **Remarks:** _____

D
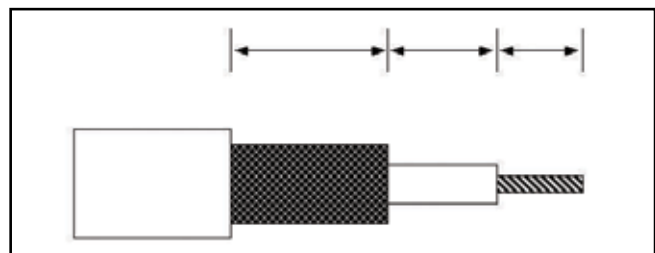
Clamp Meter Selection Guide

CLAMP METER SELECTION GUIDE	700 Series		740 Series		760 Series		770 Series	
	61-702	61-704	61-744	61-746	61-763	61-765	61-773	61-775
MEASUREMENT FUNCTIONS								
AC Voltage	•	•	•	•	•	•	•	•
DC Voltage	•	•	•	•	•	•	•	•
AC Current	•	•	•	•	•	•	•	•
DC Current						•		•
Resistance	•	•	•	•	•	•	•	•
Audible Continuity	•	•	•	•	•	•	•	•
Diode Test	•	•						
Capacitance	•	•			•	•	•	•
Frequency					•	•	•	•
FEATURES								
Display Type (Analog or Digital)	D	D	D	D	D	D	D	D
AC Current Capacity	200	200	600	600	660	660	1000	1000
DC Current Capacity						660		1000
True RMS		•		•	•	•	•	•
Auto Ranging	•	•						
Auto/Manual Ranging			•	•	•	•	•	•
Data Hold	•		•	•	•	•	•	•
Max Hold	•	•						
Peak Hold					•	•	•	•
Min/Max					•	•	•	•
DCA Zero						•		•
Auto Power Off	•	•	•	•	•	•	•	•
Non-Contact Voltage Indication	•	•	•	•				
Harmonics Indicator	•	•						
Vibration Mode	•	•						
Backlight		•			•	•	•	•
Low Battery Indication	•	•	•	•	•	•	•	•
High Voltage Warning	•	•			•	•	•	•
Overload Protection on all Ranges	•	•	•	•	•	•	•	•
Conductor Size – Inches (mm)	1.3" (33)	1.3" (33)	1.5" (38)	1.5" (38)	1.4" (36)	1.4" (36)	2.0" (51)	2.0" (51)
Warranty (years)	2	2	2	2	2	2	2	2
CERTIFICATIONS								
UL 61010 Listed ᴄ(UL)ᴜs	•	•	•	•	•	•	•	•
CAT III, 100V/CAT IV 600V	III	III	III	III	IV	IV	IV	IV
CE	•	•	•	•	•	•	•	•

Selection Guide

TightSight® Clamp Meters 1000 & 660 Amp

- TightSight® bottom display
- Tapered jaws with hook tip
- Measures AC current
- True RMS
- AC/DC Voltage
- Capacitance
- Audible continuity
- Frequency via clamp head or test leads
- Resistance
- High frequency rejection*
- Peak hold
- Max/min hold
- Data hold
- Selectable audible and visual voltage alerts on AC/DC voltage functions
- Selectable auto power off
- Backlit display
- Low battery indicator
- 2-year warranty

*Reads accurately on noisy electrical circuits.

Description	Cat. No.
1000AAC Clamp Meter w/ differentiating features	**61-773**
1000A AC/DC Clamp Meter	**61-775**
660AAC Clamp Meter	**61-763**
660A AC/DC Clamp Meter	**61-765**

Includes: Carrying Case and Test Leads w/Alligator Clips.

1000A Clamp (61-773)

Exclusive TightSight® Display

660A Clamp (61-763)

Specifications	Range & Resolution				Accuracy
	61-773	**61-775**	**61-763**	**61-765**	
AC Current	0.0-999.9A		0.0-660.0A		2.0%
DC Current	—	0.0-999.9A	—	0.0-660.0A	2.0%
AC Voltage	0.0-750.0V				1.0%
DC Voltage	0.0-999.9V				1.0%
Resistance	0.0-999.9Ω				1.5%
Capacitance	0.0-999.9µF				5.0%
Continuity	0.0-999.9Ω				Audible @ <30Ω
Frequency	20.0-400.0Hz				0.5%
Jaw Size	2" (51mm)		1.42" (36mm)		—

4-in-1 Test Tools (700 Series)

- 200AAC current capability
- Non-contact voltage (40-600VAC)
- Vibration mode to verify AC voltage
- Harmonics indicator
- Capacitance
- Max hold
- Continuity
- Low battery indication
- Integral lead storage
- Audible dangerous voltage warning on all ranges
- Auto power off
- Ergonomic hourglass shape
- Compact clamp head
- 2-year warranty

61-704

Description	Cat. No.
4-in-1 Test Tool w/TRMS, Backlight	**61-704**
4-in-1 Test Tool	**61-702**

Includes: Carrying Case and Silicone Test Leads.

Specifications	Range & Resolution	Accuracy
	61-702 & 61-704	
AC Voltage	2000m/200.0/750 V	1.2%
DC Voltage	2000m/200.0/1000 V	0.5%
AC Current	200.0 A	3.0%
Resistance	200.0/200.0k Ω	1.0%
Capacitance	200.0µ F	3.0%

Jaw opening is 1.3" (33mm).

Clamp-Pro™ Clamp Meters 600 Amp (740 Series)

- Measures up to 600AAC
- Non-contact voltage indicator (70V-600VAC)
- Continuity
- Tapered jaws with hook tip
- Auto/manual ranging
- Data hold
- Auto power off
- Low battery indicator
- 2-year warranty

61-744

Description	Cat. No.
600A Clamp Meter w/TRMS	**61-746**
600A Clamp Meter	**61-744**

Includes: Carrying Case and Test Leads.

Specifications	Range & Resolution	Accuracy
		61-744 & 61-746
AC Current	40.00/400.0/600A	1.7%
AC Voltage	400.0/600 V	1.2%
DC Voltage	400.0/600 V	0.5%
Resistance	400.0/4.000k/ 40.00k 400.0k/4.000M/40.00M Ω	1.0%

Jaw opening is 1.25" (32mm).

Compact jaw for use in tight locations.

Multimeter Selection Guide

MULTIMETER SELECTION GUIDE	310 Series		340 Series		360	480 Series		490 Series		600	610 Series	
	61-310	61-312	61-340	61-342	61-361	61-484	61-486	61-497	61-498	61-605	61-610	61-614
MEASUREMENT FUNCTIONS												
AC & DC Voltage	•	•	•	•	•	•	•	•	•	•	•	•
AC Current	•	•	•	•	•	•	•	•	•			
DC Current	•	•	•	•	•	•	•	•	•		•	•
Resistance	•	•	•	•	•	•	•	•	•	•	•	•
LV Resistance						•	•	•	•			
Audible Continuity	•	•	•	•	•	•	•	•	•	•		•
Diode Test	•	•	•	•	•	•	•	•	•	•		
Capacitance		•	•	•	•	•	•	•	•			
Frequency		•	•	•	•	•	•	•	•			
Temperature	•	•	•	•			•	•	•			
Duty Factor			•	•				•	•			
Battery Test	•										•	•
Decibels								•	•			
Phase Rotation					•							
FEATURES												
Display Type (**D**igital or **A**nalog)	D	D	D	D	D	D	D	D	D	D	A	A
True RMS				•	•	•	•	•	•			
Auto/Manual Ranging		•	•	•		•	•	•	•	•		
Non-Contact Voltage Detection						•	•					
Data Hold / **A**uto Hold	D	D	D	D		D	D	A	A	D		
Min/Max			•	•		•	•	•	•			
Min/Max/Avg			•	•		•	•	•	•			
Peak Min/Max						•	•	•	•			
Relative Mode								•	•			
High Speed Analog Bar Graph						•	•	•	•		•	•
Auto Power Off			•	•	•	•	•	•	•	•		
Backlight			•	•		•	•	•	•	•		
Low Battery Indication			•	•	•	•	•	•	•	•		
Dual Display								•	•	•		
Overload Protection on all Ranges	•	•	•	•	•	•	•	•	•	•		
Data Logging								•	•			
Data Acquisition								•	•			
Memory Storage & Recall								•	•			
Optical USB Interface								•	•			
ProVision™ II Software								•	•			
Warranty (years)	2	2	2	2	2	2	2	2	2	2	2	2
CERTIFICATIONS												
UL 61010 Listed	•	•	•	•	•	•	•	•	•	•	•	•
CAT Rating c(UL)us	II	II	III	III	III	IV	IV	IV	IV	II	II	II
CE	•	•	•	•	•	•	•	•	•	•	•	•

Selection Guide

490 Series Industrial–Grade Multimeters

- True RMS
- Data acquisition
- Data logging
- Data storage
- Auto AC/DC voltage and current mode w/frequency indication
- High voltage indicator
- Frequency
- Temperature
- High frequency rejection mode*
- Auto selection for resistance/continuity/ diode/capacitance
- Auto hold

- Peak hold
- dBm/dB measurement
- Relative mode
- Min/Max/Avg
- Dual display
- Duty factor
- Auto power off
- Auto sensing backlight
- Low battery indicator
- USB cable and software included
- 2-year warranty

*Reads accurately on noisy electrical circuits.

Description	Cat. No.
Digital Multimeter, 0.015% DCV Accuracy	**61-498**
Digital Multimeter, 0.03% DCV Accuracy	**61-497**

Accessories

Includes	
Test Leads w/Alligator Clips	**TL-497**
Magnetic Strap	**61-565**
USB Cable	**61-902**
ProVision™ II Software	**61-906**
K-Type Thermocouple	**61-461**
Thermocouple Adapter	**61-465**
Carrying Case	**C-230**

61-498

Specifications	Range & Resolution		Accuracy	
	61-497	**61-498**	**61-497**	**61-498**
AC Voltage	40.000m/400.00m/ 4.0000/40.000/400.00/1000.0 V	100.000m/1000.00m/ 10.0000/100.000/1000.00V	±0.7%	±0.40%
DC Voltage	40.000m/400.00m/ 4.0000/40.000/400.00/1000.0 V	100.000m/1000.00m/ 10.0000/100.000/1000.00V	±0.03%	±0.015%
AC Current	40.000m/400.00m/10.000 A	10.0000m/100.000m/10.0000A	±0.8%	±0.7%
DC Current	40.000m/400.00m/10.000 A	10.0000m/100.000m/10.0000A	±0.2%	±0.1%
Resistance	400.00/4.0000k/40.000k/400.00k/ 4.0000M/40.000M Ω	1000.00/10.0000k/100.000k/1000.0k 10.0000M/40.000M Ω	0.6%	0.6%
Capacitance	4.000n/40.00n/400.0n/4.000µ/ 40.00µ/ 400.0µ/4.000m/40.00mF	4.000n/40.00n/400.0n/4.000µ/40.00µ/ 400.0µ/4.000m/40.00mF	0.9%	0.9%
Diode Test	2.000 V	0.400 V - 0.800 V	±1.5%	±1.5%
Frequency	40.000/400.00/4.0000k/40.000k/400.00k/ 4.0000M Hz	40.000/400.00/4.0000k/40.000k/400.00k/ 4.0000M Hz	±0.002%	±0.002%
Duty Factor	20% - 80%	20% - 80%	±0.1%	±0.1%
Temperature	-328° F to 2192° F (-200° C TO 1200° C)	-328° F to 2192° F (-200° C TO 1200° C)	±1.0% +2°F/1°C	±1.0% +2°F/1°C

480 Series Commercial–Grade Multimeters

- True RMS
- Auto AC/DC voltage detect w/low impedance (Auto - VLoZ)
- Capacitance
- Frequency
- Analog bar graph
- Min/max
- Non-contact voltage detect
- Low battery indication
- Auto power off
- 2-year warranty

61-486

Description	Cat. No.
Digital Multimeter w/peak hold, temperature, includes thermocouple	**61-486**
Digital Multimeter	**61-484**

Include: Test Leads & Carrying Case.

Specifications	Range & Resolution		Accuracy	
	61-484	**61-486**	**61-484**	**61-486**
AC Voltage	6.000/60.00/600.0/1000.0 V		1.0%	0.80%
AC mV	600.0 mV		1.5%	1.2%
DC Voltage	6.000/60.00/600.0/1000.0 V		0.1%	0.08%
DC mV	600.0 mV	60.00/600.0 mV		
AC Current	60.00m/600.0m/6.000/10.00A		1.5%	1.2%
DC Current	60.00m/600.0m/6.000/10.00A		1.0%	0.80%
Resistance	600.0/6.000k/60.00k/600.0k/6.000M/40.00M Ω		1.0%	0.80%
Capacitance	1nF to 10.mF		0.1%	
Frequency	99.9 to 100.0k Hz		0.1%	
Temperature	—	-40°F to 752°F (-40°C to 400°C)	1.0%	

490/480 Series

361 Contractor–Grade Multimeter

- Phase rotation
- Capacitance
- Frequency
- Voltage
- Current
- Resistance
- Audible continuity
- Manual ranging
- Rugged construction
- Auto power off
- Low battery indication
- 2-year warranty

Description	Cat. No.
361 Multimeter w/TRMS	**61-361**

Includes: Test Leads.

Specifications	Range & Resolution	Accuracy
	61-361	
AC Voltage	200.0m/2000m/200.0/600 V	2.0%
DC Voltage	200.0m/2000m/20.00/200.0/600 V	1.2%
AC Current	2.000 A	3.0%
DC Current	2.000 A	2.5%
Resistance	200.0/2.000k/20.00k/200.0k/20.00M/200.0M Ω	1.0%
Capacitance	20.00μ/200.0μ/2.000m/20.00m F	4.0%
Frequency	10.0-100.0k Hz	0.5%
Phase Rotation	80-500V (50-500Hz)	—

340 Series Test–Pro® Multimeters

- Capacitance
- Frequency
- Temperature
- Voltage
- Current
- Resistance
- Audible continuity
- Relative mode
- Backlight
- Min/max
- Data hold
- Low battery indicator
- Auto power off
- 2-year warranty

Description	Cat. No.
Test-Pro® Multimeter w/TRMS	**61-342**
Test-Pro® Multimeter	**61-340**

Includes: Test Leads and Thermocouple.

61-342

61-340

360/340 Series

Specifications	Range & Resolution	Accuracy
	61-340 & 61-342	
AC Voltage	4.000/40.00/400.0/600 V	1.5%
DC Voltage	400.0m/4.000/40.00/400.0/600 V	0.5%
Current	400.0μ/4000μ/40.00m/400.0m/4.000/10.00A AC/DC	1.5%
Resistance	400.0/4.000k/40.00k/400.0k/4.000M/40.00M Ω	1.0%
Capacitance	40.00n/400.0n/4.000μ/ 40.00μ/400.0μ F	3.0%
Frequency	10.000/100.00/1.000k/10.00k/100.0k/1.000M/4.000M Hz	0.3%
Temperature	-4° F to 1382° F (-20° C to 750° C)	3.0%

IDEAL®

310 Series Residential Meters

- Voltage
- Current
- Resistance
- Audible continuity
- Temperature
- Data hold
- Diode test
- Large numbers displayed
- 2-year warranty

61-310

61-312

Description	Cat. No.
Resi-Pro™ Meter w/Auto Ranging, AC/DC Current, Capacitance, Frequency, Auto Power Off, Low Battery Indication	61-312
Resi-Pro™ Meter w/Manual Ranging, Tests Batteries	61-310

Includes: Test Leads and Thermocouple.

Specifications	Range & Resolution	Accuracy	Range & Resolution	Accuracy
	61-310		**61-312**	
AC Voltage	200.0/600 V	1.2%	4.000/40.00/400.0/600 V	1.2%
DC Voltage	200.0m/2.000/20.00/200.0/600 V	0.5%	400.0m/4.000/40.00/400.0/600 V	0.5%
Current	200.0m/10.00 ADC	1.5%	400.0µ/4000µ/40.00m/400.0m/10.00A AC/DC	1.5%
Resistance	200.0/2.000k/20.00k/200.0k/20.00M Ω	1.0%	400.0/4.000k/40.00k/400.0k/4.000M/40.00M Ω	1.0%
Capacitance	—	—	40.00n/400.0n/4.000µ/40.00µ/400.0µ F	3.0%
Frequency	—	—	10.00/100.0/1.000k/10.00k/100.0k/1.000M/10.00M Hz	0.3%
Temperature	-4-1382°F (-20-750°C)	2.5%	-4-1382°F (-20-750°C)	2.5%

Pocket Meter

- Convenient pocket size
- Built-in test stand
- Audible continuity
- Auto power off
- Test lead storage
- 2-year warranty

Description	Cat. No.
Pocket Meter	61-605

Includes: Test Leads.

Specifications	Range & Resolution	Accuracy
	61-605	
AC Voltage	200.0m/2.000/20.00/200.0/600 V	4.0%
DC Voltage	200.0m/2.000/20.00/200.0/600 V	2.0%
Resistance	200.0/2.000k/20.00k/200.0k/2.000M/20.00M Ω	3.0%

Analog Meters

- Multi-color analog display with mirrored scale
- High-impact thermoplastic case
- Battery test
- 2-year warranty

61-614

Description	Cat. No.
Analog Multimeter w/Audible Continuity, built-in stand	61-614
Analog Multimeter (pocket-size)	61-610

Includes: Test Leads.

61-610 61-614

	61-610		**61-614**	
AC Voltage	10/50/250/500 V	+/- 4.0% Full Scale	10/50/250/1000 V	+/- 4.0% Full Scale
DC Voltage	10/50/250/500 V	+/- 3.0% Full Scale	2.5/10/50/250/1000 V	+/- 3.0% Full Scale
DC Current	500µ/50m/250mA	+/- 3.0% Full Scale	5m/50m/500m/20A	+/- 3.0% Full Scale
Resistance	1 M Ω Full Scale 5 k Ω Mid Scale	+/- 3.0% Arc Length	10k/100k/10M Ω Full Scale 50/500/50k Ω Mid Scale	+/- 3.0% Arc Length
Decibels	-20 to +56 dB	—	-8 to +62 dB	—
Battery Test	1.5 , 9.0 VDC	—	1.5 , 9.0 VDC	—

310/600 Series

Open/Closed Circuit Tracers

- Identifies breakers and fuses
- Pinpoints opens and shorts
- Traces wires
- "0-99" display of signal strength
- Audible intensifies in tone/pitch
- Works on energized or de-energized circuits (0 - 600V AC/DC)
- Four modes of sensitivity – search high, search low, trace and breaker
- Peak bar graph
- 2-year warranty

61-958 Pictured

RC-958

The only circuit tracer with *SwivelDisplay*™

RC-954

TR-958

TL-956

CR-958

Description	Cat. No.
Kit Includes: Rotating Display, Inductive Clamp and Battery Pack	**61-958**
Kit Includes: Rotating Display	**61-956**
Kit Includes: Standard Display	**61-954**

Accessories

Includes	
Fuse – High-energy, Fast-acting, 1A/1000V	**C-958**
Magnetic Strap	**61-565**
Tracer Test Lead Set (includes 1-6 below)	**TL-956**
1. Outlet Plug Adapter for Transmitter	**TLOP-956**
2. Blade Prongs for Lead Adapters (2/set)	**TLBP-956**
3. Ground Prong for Lead Adapter	**TLGP-956**
4. Alligator Clips for Lead Adapters (2/set)	**TLAC-956**
5. 3 ft. Lead Adapters for Transmitter (2/set)	**TLA1-956**
6. 25 ft. Lead Adapter for Transmitter	**TLA2-956**
Optional	
Cradle for Receiver*	**CR-958**

*Threaded for use on standard extension pole.

Kit Contents	61-954	61-956	61-958
Transmitter	TR-958	TR-958	TR-958
Receiver	RC-954	RC-958	RC-958
Tracer Test Lead Set	TL-956	TL-956	TL-956
Inductive Clamp			IC-958
Battery Pack			BP-958
Magnetic Hanging Strap			61-565
Hard Carrying Case	C-956	C-956	C-958
Batteries	•	•	•
Instruction Manual	•	•	•

Circuit Tracers

Exclusive Rotating Display

Revolutionary technology in the receiver rotates the display in 90° increments so that you always receive an upright reading. Even when the receiver is pointing down, you can keep up.

Transmitter will work on a de-energized circuit and won't affect GFCIs and sensitive equipment on an energized circuit.

AA batteries provide the transmitter and receiver 4x the power.

1-800-435-0705 for Customer Service

HeatSeeker® Thermal Imagers

- Blended thermal/digital image (0-100% & PIP)
- Hottest/coldest temperature cursors instantly display on live screen
- Sequence image recording activated by alarm settings
- Class II laser
- Built-in LED light
- High and low temperature alarms
- Save images with text and voice annotation
- Adjustable emissivity for maximum accuracy
- Multi-lingual - nine languages included
- Six-hour battery life
- Tripod mountable
- ThermalVision™ PC software included
- Two-year warranty

CE ⓒ N12966

Description	Cat. No.
HeatSeeker® 160 Thermal Imager, Carrying Case, Power Supply, Removable-Rechargeable Battery, ThermalVision™ II PC Software and USB cable	61-846
HeatSeeker® Thermal Imager, Removable Handle, Carrying Case, Power Supply, ThermalVision™ PC Software and USB Cable	61-844

Accessories	61-846	61-844
Includes		
Removable Battery	61-846BAT	—
USB Cable	61-844USB	61-844USB
Camera Handle	—	61-844HAN
Carrying Case	61-844CC	61-844CC
Power Supply	61-846PS	61-844PS
ThermalVision™ Software	61-846SW	61-844SW
Optional		
Light Shade	61-844LS	61-844LS
Car Charger	61-846CAR	61-844CAR
Desktop Charger	61-846DT	—
Hard Transport Case	61-846HC	61-846HC

HeatSeeker® Thermal Imaging Camera Specifications

Feature	HeatSeeker® (61-844)	HeatSeeker® 160 (61-846)
Temperature Range	14°F to 662°F (-10°C to 350°C)	14°F to 482°F (-10°C to 250°C)
Temperature Accuracy	±2°C or ±2% of reading	
Emissivity Table	0.2 to 1.0 (adjustable)	
Cursors	Two-movable	Four-movable (with independent emissivity setting)
Image Storage (2 GB micro SD card)	2000 Images	
Field of View	20° x 20°	10° x 15°
Thermal Sensitivity	< 0.3°C at 30°C	< 0.08°C at 30°C
Focal Plane Array	2,209 pixels (47 x 47)	19,200 pixels (160 x 120)
Display	3.5" LCD	
Visible Light Camera Resolution	1.0 Megapixels	2.0 Megapixels
Spectral Range	8µm to 12µm	8µm to 14µm
Image Control	Eight color palettes (Ironbow, Rainbow, Isotherm, Hot Metal, High Contrast, Rainbow 16, Black Hot and White Hot)	
Focus	Manual	
Power	Internal rechargeable Li-ion battery	Field replaceable rechargeable Li-ion battery

61-846
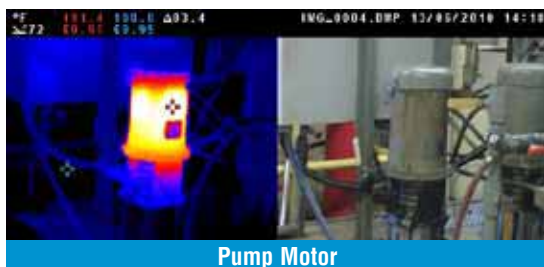
Pump Motor

Fuse Panel

Thermal Imagers
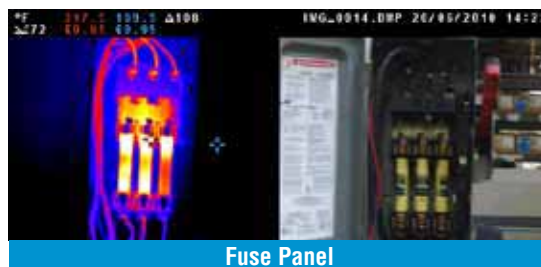
Adjustable LCD brightness
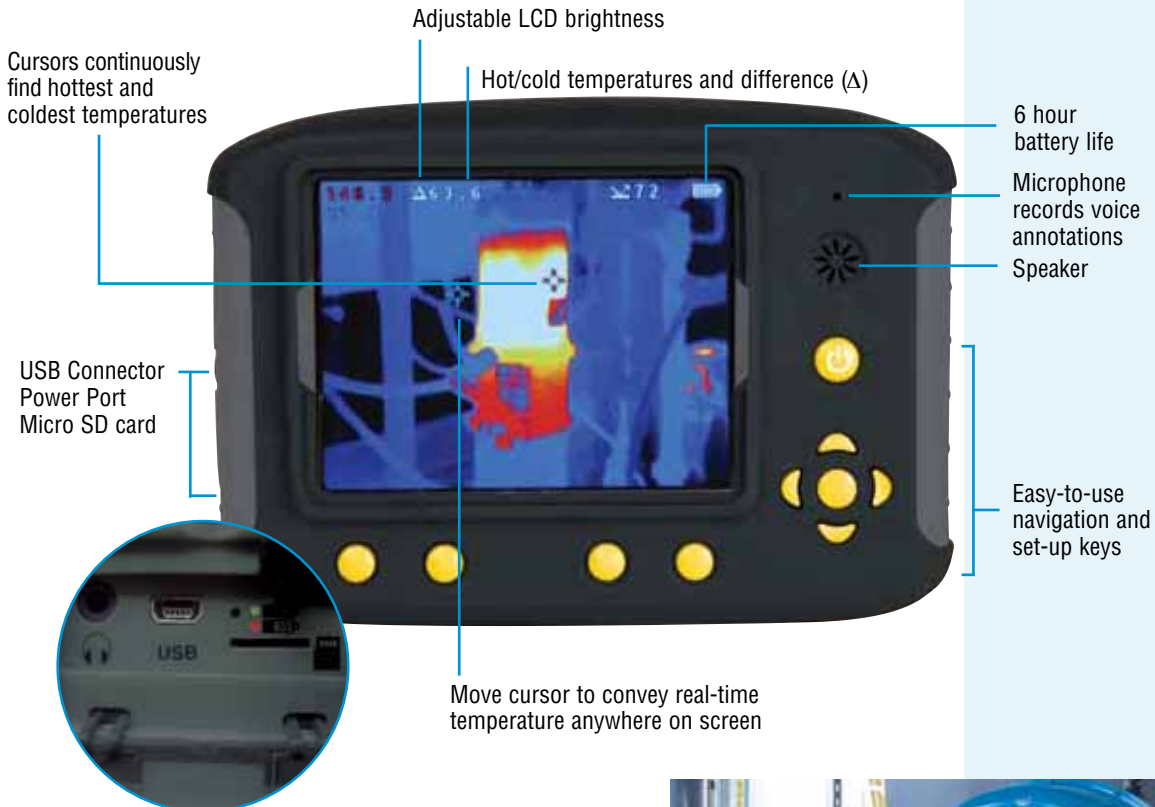
Cursors continuously find hottest and coldest temperatures

Hot/cold temperatures and difference (Δ)

6 hour battery life

Microphone records voice annotations

Speaker

USB Connector Power Port Micro SD card

Easy-to-use navigation and set-up keys

Move cursor to convey real-time temperature anywhere on screen

Side door allows quick access to headphone and USB connections, charging port and removable Micro SD card

ThermalVision™ PC Software Included

Easy-to-use software allows image download to PC for analysis.

Features
• View, edit and analyze images
• Automatic report generating capabilities
• Disk also includes user manual
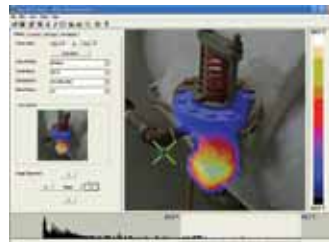
HeatSeeker® provides real-time analysis and is ideal for:

Electrical Safety
• Identifies overloaded circuits, loose/corroded connections and failing breakers in electrical panels
• Identifies blown fuses, overloads, phase imbalance and harmonics problems
• Identifies hot spots from high resistance connections

Energy Efficiency
• Identifies inefficient heating and cooling transfer
• Identifies draft sources from missing insulation in rafters/walls/floors
• Identification of problem areas helps reduce heat gain/loss and carbon footprint

Building Maintenance
• Discovers sources of moisture in roofs and areas behind walls
• Checks air distribution for blockages in pipes, damaged duct work and insulation gaps
• Checks fluid distribution for stuck valves and burst pipes

Preventive Maintenance
• Identifies equipment efficiencies/inefficiencies
• Applications include motors, pumps, boilers, radiators, heaters, chillers and transformers

SureTest® Circuit Analyzers

- Measures voltage drop under load*
- Hot and neutral conductor impedances
- Estimates Load on Line (ELL) up to 15A
- Tests GFCIs and EPDs for proper operation
- Super-bright display
- High accuracies
- True RMS
- Line voltage
- Peak voltage
- Frequency
- Ground to neutral voltage
- Ground impedance
- Identifies proper wiring in 3-wire receptacles
- Identifies false (bootleg) grounds
- Conducts testing without disturbing sensitive loads
- Verifies isolated grounds (with 61-176 adapter)
- 2-year warranty

*12A, 15A, 20A load tests

61-165

61-183

61-175

61-182

61-176

Description	Cat. No.
SureTest® Circuit Analyzer - Tests AFCIs wiring, tests for shared neutrals	61-165
SureTest® Circuit Analyzer	61-164

Accessories

Includes	
Carrying Case	61-179
1' Extension Cord	61-182
Optional	
Ground Continuity Adapter	61-175
Isolated Ground Adapter	61-176
Alligator Clip Adapter	61-183

Specifications	Range & Resolution	Accuracy
61-160 Series		
AC Voltage	85.0 - 265.0 VAC	1.0%
Frequency	45.0 - 65.0 Hz	1.0%
Impedance	0.00 - 1.99 Ω	5.0%
Ground-Neutral Voltage	0.0 - 24.0 VAC	2.0%
% Voltage Drop 12A, 15A, 20A load tests	0.1% - 50.0%	5.0%
GFCI Test Current/Time	6.0 - 9.0 mA 0.0 - 6500 mS	2.0%

SureTest® Circuit Analyzer Functions

Voltage Drop
- NEC recommends no more than 5% voltage drop
- Higher voltage drop leads to heat buildup and performance issues
- <108V is a poor level for voltage load

Line Voltage
- Specification is 120VAC +/-10% (108 to 132 VAC)
- True RMS ensures accuracy in harmonic environments

Ground-to-neutral Voltage
- Good circuit has 2VAC or less
- Higher reading indicates loaded circuit, harmonic distortion or shared neutral

Ground Impedance
- Ground impedance should be 1Ω or less (0.25Ω or less for sensitive equipment to run properly)

GFCI
- Applies a 6-9mA fault current and measures the trip time
- Applies a 30mA fault current to check for equipment protection

Troubleshoots branch circuit problems with a variety of tests at the receptacle.

AFCI testing with alligator clips on an installed device.

Mini AFCI/GFCI Fault Tester

- Tests AFCIs circuit wiring
- Tests GFCIs for proper operation
- Tests for shared neutrals
- Verifies wiring configuration
- Compact size fits comfortably in pocket
- 1-year warranty

C-50 w/Belt clip

Description	Cat. No.
AFCI/GFCI Circuit Tester	**61-059**

Accessories

Optional	
1' Cord Adapter	**61-177**
Alligator Clip Adapter (3-wire)	**61-184**
Alligator Clip Adapter (2-wire)	**TL-532A**
Carrying Case with Belt Clip	**C-50**

Voltage Performance Monitor

- Real-time TRMS voltage, frequency and harmonics monitoring
- Logs voltage, sags, swells and impulses
- Measures %THD and logs periods over 3% (line to neutral)
- Selectable thresholds based on the most accepted international standards, defaults to ITIC*
- Custom programmable event thresholds
- Invertible display, when it is necessary to plug in upside down
- 2-year warranty

Captures events that would affect equipment on branch circuit

Description	Cat. No.
Voltage Performance Monitor	**61-830**

Accessories

Includes	
Adapters (set of 4)	**PA-830**
Carrying Case	**61-179**
Optional	
Alligator Clip Adapters (2-wire)	**TL-532A**
1 ft. US Extension Cord	**61-177**
Kit with (1) SureTest® 61-164, (2) VPM 61-830, Soft Case C-2004	**61-2003**
Kit with (1) SureTest® 61-164, (4) VPM 61-830, Soft Case C-2004	**61-2004**

Specifications

61-830	
Operating Range	15-265V
Memory	513 Events
Sampling Method	Continuous (128 samples per cycle)
Voltage Accuracy	1%
Impulse Detection	6μs, 4kV
Harmonic Distortion	2%, FFT to 51st

Applications

Monitor voltage near sensitive equipment

- Installation and Service Technicians – Monitor voltage at point of equipment connection
- Electricians – Eliminate guesswork on service calls
- Building Maintenance Technicians – Identify voltage caused equipment failures
- Equipment Manufacturers – Eliminate unnecessary warranty costs
- Hospital/IT Maintenance Engineers – Monitor voltage quality to critical equipment

61-179

See voltage through the eyes of your equipment

Poor voltage quality increases facility expenses, warranty costs and downtime plus shortens the life of equipment. The IDEAL VPM identifies only those voltage conditions that can damage equipment or cause equipment failure.

PA-830

Analyzers

3-Phase Power Analyzer (800 Series)

- True RMS
- Single- or three-phase measurements
- Data logging (1MB memory)
- Up to one month of recording time
- 4-channels for voltage measurements
- 4-channels for current measurements
- Auto ranging
- Min/Max/Avg
- Energy and Harmonics Program
- PowerVision™ Software
- Lightweight, portable design
- Easy-to-use push-button operation
- Backlit display
- Customized data collection
- Optional FIFO memory
- Real-time clock
- Programmable trigger-points and start/stop time
- Intelligent battery charging system
- Easy set-up
- Interactive demo CD
- 2-year warranty

POWER & ENERGY MEASUREMENTS

- Kilowatts (kW)
- Volt-amperes (VA)
- Inductive reactive power (kvarL)
- Capacitive reactive power (kvarC)
- Power factor (PF)
- Frequency
- Kilowatt hours (kWh)
- Reactive power per hour (kvarhL, kvarhC)

HARMONICS MEASUREMENT

- Total harmonic distortion (% THD)
- Harmonic factorization (FFT) to 51st harmonic

Description	Cat. No.
Power Analyzer w/four Clamps	61-807
Power Analyzer without Clamps	61-806-X

Model 807 includes neutral clamp.

Standard Equipment	61-806-X	61-807
1000AAC Clamps (61-811)	optional	•
100AAC Neutral Clamp (61-813)	optional	•
Voltage leads with Alligator Clips (TL-805)	•	•
Power supply with RS-232 Interface and cables	•	•
PowerVision™ Analysis Software	•	•
Demonstration CD and Instructions	•	•

Accessories

Optional	
1000AAC Clamps (set of 3)	61-811
100AAC Neutral Clamp (1)	61-813
5AAC Compact Neutral Clamp (blue)	61-814
2000AAC Clamps (set of 3)	61-810
5AAC Compact Clamps (set of 3)	61-819
100AAC Compact Clamps (set of 3)	61-820
100AAC Compact Neutral Clamp (blue)	61-821
200/2000/20000AAC Flexible Clamp adapters (set of 3)	61-457
Voltage Leads with Alligator Clips	TL-805

Power Analyzer Specifications	61-806-X, 61-807	
	RANGE & RESOLUTION	**ACCURACY**
AC VOLTAGE	20 to 600 V (phase-neutral)	0.5%
	20 to 866 V (phase-phase)	0.5%
AC CURRENT	10 to 1000A (with supplied clamp adapters)	1.0%
ACTIVE POWER	866 kW (with supplied clamp adapters)	1.0%
REACTIVE POWER	866 kW (with supplied clamp adapters)	1.0%
POWER FACTOR	0.5 to 1.0	1.0%

CAT III 600V

Power Quality

100AAC Neutral Clamp

1000AAC Clamp Adapters

Test Leads with Alligator Clips

Power Analyzer

RS-232 Interface/Power Supply

61-807 pictured
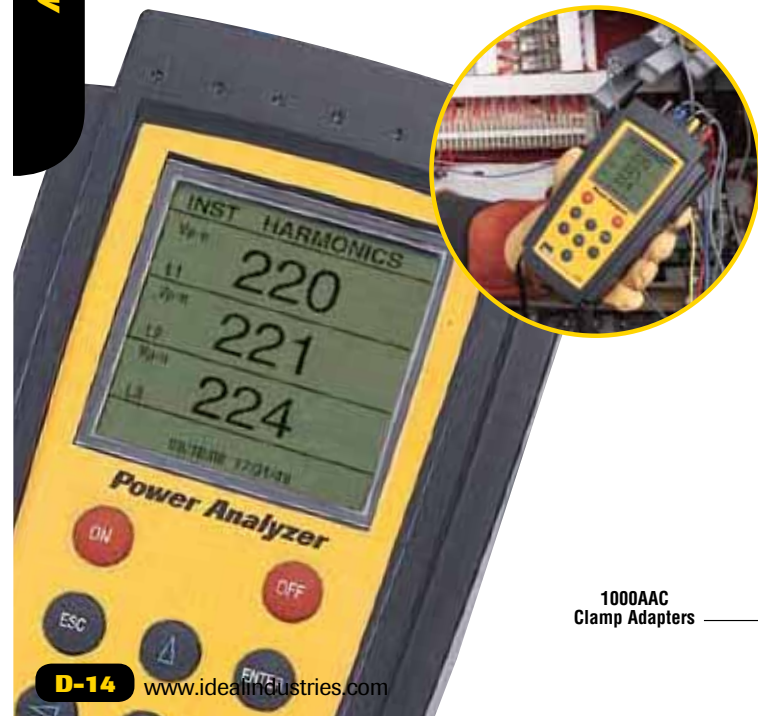
Insulation Testers

- Checks new installations for proper insulation
- Checks existing installations and motor windings for breakdowns in insulation
- 2-year warranty

c(UL)us CE C N12966

61-797

61-795

CAT IV 600V

Description	Cat. No.
Insulation Meter w/PI, DAR, Remote Probe	**61-797**
Insulation Tester	**61-795**

Accessories

Includes (61-795)	
Test Leads	**TL-795**
Carrying Case	**C-795**
Includes (61-797)	
Test Leads	**TL-797**
Remote Probe	**TL-797RP**
Carrying Case	**C-230**

Specifications	Range & Resolution	
	61-795	**61-797**
Test Voltage	250/500/1000 VDC	50/100/250/500/1000 VDC
Voltage AC/DC	0.1-600.0 V	0.1-600.0 V
Continuity	0.01-20.0 Ω	—
Resistance	0-200.0Ω	—
Insulation Resistance	Up to 4000M Ω	Up to 20G Ω
Earth-Bond Resistance	—	0.01 Ω to 40.00k Ω

Ground Resistance Meters

- Auto ranging
- Auto power off
- Hard case included
- 2-year warranty

CE C N12966

61-796

61-920

CAT III 300V

CAT IV 300V

Description	Cat. No.
Ground Resistance Clamp Meter	**61-920**
3-Pole Ground Resistance Tester - includes TL-796 lead set kit	**61-796**
Earth Resistance Lead Set Kit	**TL-796**

TL-796

Specifications	Range & Resolution	Accuracy	Range & Resolution	Accuracy
	61-920		**61-796**	
Ground Resistance	0/120/1200 Ω	1.5%	20.00/200.0/2000 Ω	2.0%
Ground Leakage Current	100M/1000M/15/30 A	2.0%	—	—

Insulation/Ground Testers

IDEAL®

Vol–Con® Elite Digital Voltage Testers

- Tests for AC Voltage from 24-600VAC
- Tests for DC Voltage from 6-220VDC
- Visual and audible warning
- Audible continuity
- Non-contact voltage indication (40-600VAC)
- Low impedance to eliminate ghost voltages
- Low battery indicator
- Replaceable silicone test leads
- Integral lead storage
- 2-year warranty
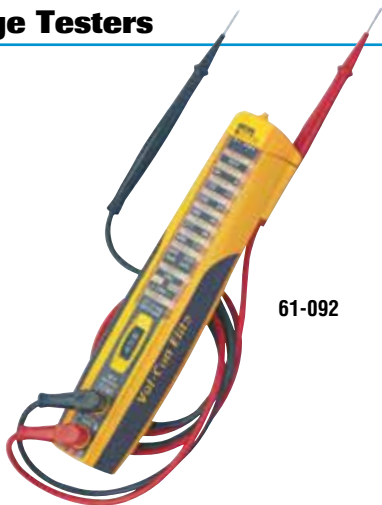
61-092

Description	Cat. No.
Vol-Con® Elite Digital Voltage Tester w/vibration mode	**61-092**
Vol-Con® Elite Digital Voltage Tester	**61-090**

Accessories

Includes	
Silicone Test Leads	**TL-102**
Optional	
Carrying Case	**C-90**

Solenoid Voltage Testers

- Extremely rugged and reliable
- Vibrates when voltage is present
- Indicates AC/DC voltage level
- Replaceable leads with shielded probe tips
- Bright, long-life LED's and neon indicator lamp
- Dual voltage indication for backup safety
- 2-year warranty

61-076

Description	Cat. No.
Vol-Con® Voltage/Continuity Tester, 5-600V AC/DC	**61-076**
Vol-Test® Voltage Tester, 100-600V AC/DC	**61-065**

Accessories

Includes	
Standard Test Leads	**61-070**
Optional	
Resistor-fused Leads*	**61-072**
Padded Nylon Case	**C-90**
Leather Case	**61-010**
Batteries	**61-201**

*Special, current-limiting resistor in each lead acts as a fuse to open in a short- circuit situation

XL–Series Solenoid Voltage Testers

- Rugged and reliable tester
- Vibrates when voltage is present
- Indicates AC/DC voltage level
- Replaceable leads with shielded probe tips
- Bright, long-life LED's and neon indicator lamp
- Dual voltage indication for backup safety
- Compact size
- 2-year warranty

AUDIBLE
Vol-Con® Tests
Voltage & Continuity

61-086

Description	Cat. No.
Vol-Con® XL Voltage/Continuity Tester, 6-600V AC/DC	**61-086**
Vol-Test® XL Voltage Tester, 80-600V AC/DC	**61-085**

Accessories

Includes	
Standard Test Leads	**TL-80**
Optional	
Resistor-fused Leads*	**TL-82**
Padded Nylon Case	**C-90**
Leather Case	**61-010**

*Special, current-limiting resistor in each lead acts as a fuse to open in a short-circuit situation.

Split–Jaw™ Smart Meter

- Measures 0.9-200AAC
- Measures 1.3-750VAC
- Measures 2.1-1000VDC
- Measures 0.0-9999Ω
- Audible continuity
- Data hold
- Integral lead storage
- Replaceable test leads
- Auto power off
- Low battery indication
- 2-year warranty

Description	Cat. No.
Split-Jaw™ Smart Meter	**61-096**

Includes: Test Leads.

Specifications

61-096		
AC Voltage	1.3 - 750 V	1.5%
DC Voltage	1.8 - 1000 V -0.6 - 1000 V	1.0%
AC Current	0.6 - 200.0A	3.0%
Resistance	0 - 2000 Ω	1.0%

*Note: Jaw opening is 0.6 in. (16mm) – up to 1/0 copper cable.

Circuit Breaker Finders

- Fully automatic operation
- Positively identifies circuit breakers and fuses without service interruption
- Self calibrating
- Visual and audible indicators
- 2-year warranty

Description	Cat. No.
Circuit Breaker Finder w/Digital Receiver & GFCI Circuit Tester	**61-534**
Circuit Breaker Finder w/Analog Receiver	**61-532**

61-534 w/GFCI wiring tester

Specifications

	61-532	61-534
Operating Voltage	100 - 140 VAC	100 - 250 VAC
Operating Frequency	47 - 63 Hz	47 - 63 Hz

61-532

TL-532A

Alligator clip adapter allows connections to exposed wiring.

Lighting adapter allows connection to light fixtures.

Electrical Testers

IDEAL®

VoltAware™ Non-Contact Voltage Tester

- Indicates presence of voltage from 40-1000VAC
- Visual indication of voltage
- Selectable audible indication of voltage
- Sleek, compact design
- Green LED indicates power on
- Low battery indicator
- Battery replacement (AAA size)
- 2-year warranty

Description	Cat. No.
VoltAware™ Non-Contact Voltage Tester	61-025
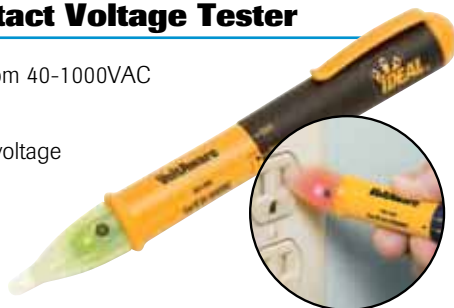
Convenient button turns audible voltage indication on or off.

Volt-Sensor® Non-Contact Voltage Tester

- Tests for voltage from 40-600VAC
- Audible and visual indication
- Locates breaks along live insulated wires
- Tests for energized circuits
- Battery replacement (LR44/61-201)
- 1-year warranty

Description	Cat. No.
Volt-Sensor® Non-Contact Voltage Tester	61-063

Continuity Tester

- Checks continuity of dead circuits and ground on conduit systems and identifies wires in multi-wire cables
- Light signal indicates completed circuit
- Bulb-in end can serve as flashlight
- Pocket clip functions as probe
- Removable 4-ft. test lead with alligator clip
- 1-year warranty

Description	Cat. No.
Continuity Tester	61-030

E-Z Check® Circuit Testers

- Tests for correct wiring, open ground, reverse polarity, open hot, open neutral, hot on neutral, hot and ground reversed with open hot, and ground fault interruption in 3-wire, 120VAC circuits
- No-slip ergonomic design maximizes comfort
- Premium neon lamps prevent false readings
- Tough, impact-resistant case
- 2-year warranty

61-051

Description	Cat. No.
E-Z Check® Plus GFCI Circuit Tester	61-051
E-Z Check® Circuit Tester	61-035

Receptacle Testers

- Warns against faulty wiring in 3-wire receptacles
- For use on 120VAC circuits
- 1-year warranty

61-501

Description	Cat. No.
GFCI Receptacle Tester	61-501
Receptacle Tester	61-500

Test-Glo™ Circuit Tester

- Industrial-quality tester checks voltage from 80V to 600V AC/DC
- Neon test lamp at front of probe
- Resistors reduce voltage reaching leads
- 24-in. lead — rated 1,000V
- 1-year warranty

Description	Cat. No.
Test-Glo™ Circuit Tester	61-040

Electrical Testers

Digital Light Meter

- Auto or manual ranging
- Measures in four ranges up to 20,000 FC or 200,000 Lux
- +/- 3% basic accuracy
- Data hold mode
- Max reading mode
- Auto zero adjustment
- Low battery indication
- Auto power off
- Remote sensor with 59 in. (1.5m) cable

CE C N12966

Description	Cat. No.
Digital Light Meter	**61-686**

Includes: Carrying Case.

Infrared Thermometer

- Measurement range: -76°F to 932°F
- Distance spot: 12:1
- Modes: Ave., Difference, Hi/Lo limits w/alarm, Max, Min, Lock
- Emissivity Range: Adjustable from 0.1 to 1
- Precision K-type thermocouple (optional)
- Backlight
- Auto power off
- Low battery indicator
- 2-year warranty

Description	Cat. No.
Infrared Thermometer	**61-685**

Includes: Carrying Case.

Accessories

Optional	
K-type Thermocouple	**61-461**

Specifications	Range & Resolution	Accuracy
	61-685	
Object Temperature	-27 to 932°F (33 to 500°C)	+/- 2% or +/- 4°F (+/-2°C) of reading whichever is greater
Ambient Temperature	73 +/-5°F (23 +/-3 °C)	

3-Phase/Motor Rotation Tester

- Identifies three-phase sequence
- Indicates motor rotation
- Checks for open phases
- For use up to 600V
- 2-year warranty
- Includes carrying case

CE C N12966 CAT III 600V
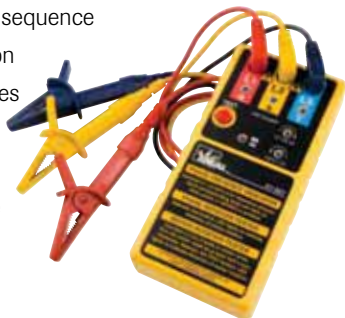
Description	Cat. No.
3-Phase/Motor Rotation Tester	**61-521**

3-Phase Sequence Tester

- For use up to 600V
- Color-coded insulators over alligator clips
- Shock resistant housing
- Easy to read
- 2-year warranty
- Includes carrying case

CE C N12966 CAT III 600V

Description	Cat. No.
3-Phase Sequence Tester	**61-520**

Specialty Testers

![IDEAL logo]

Magnetic Strap

- Frees up hands to help work safely
- Fits 490/480/340 Series Multimeters

Description	Cat. No.
Magnetic Strap	**61-565**

ProVision™ Software

Description	Cat. No.
490 Series ProVision™ II Software	**61-906**

USB Cable

Description	Cat. No.
Optical USB Cable for 490 Series Meters & Software	**61-902**

Current Clamp Adapter

- Provides safe, easy measurement of AC current
- Extends the current measurement capabilities of digital multimeters
- AC milli-volt output (1mVAC = 1mA)

CE c N12966

Description	Cat. No.
600A AC/DC Clamp Adapter - 2 ft. lead length	**61-334**

Specifications

61-334	
AC Current	1 – 600 A
DC Current	1 – 600 A
Output Signal	1mV/A
Max Conductor Size	1.125" (28.5cm)

Flexible Clamp Adapter

- Provides safe, easy measurement of high AC currents
- Large opening and flexible materials to wrap around conductors and bus bars
- Shape Memory allows pre-forming before installation
- Extends the current measurement capabilities of digital multimeters

CE c N12966
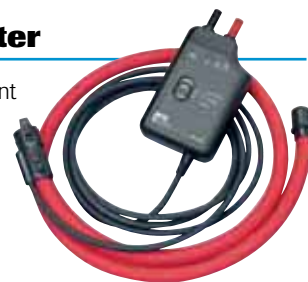
Description	Cat. No.
300/3000AAC Flexible Clamp Adapter	**61-331**

Specifications

61-331	
AC Current	300/3000A
DC Current	—
Output Signal	1mV/A/10mV/A
Max Conductor Size	8" (19cm)
Sensor Length	36" (91cm)

Test Leads

TL-100

TL-104

TLF-252

Description	Cat. No.
Premium Test Leads w/alligator clips	**TL-100**
Silicone Test Leads	**TL-102**
Test Leads w/large alligator clip	**TL-104**
Fused Test Leads w/alligator clips, 10A/600V, CAT III - 1000V	**TLF-252**

Accessories

Thermocouple

- Measures up to 1500° F (816° C)
- K-type thermocouple plugs into digital multimeter voltage jacks with 61-465 adapter

61-461

61-465

Description	Cat. No.
Beaded K-type Thermocouple	**61-461**
Thermocouple Adapter	**61-465**
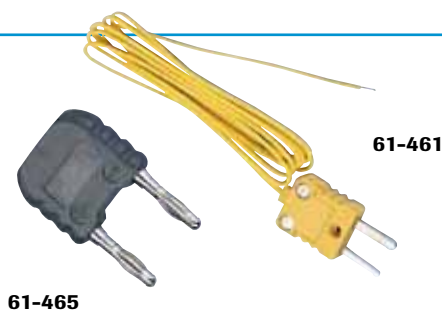
Leather Carrying Cases

Description	Cat. No.
Standard Leather Case – for use with voltage testers	**61-010**
Premium Leather Case – for use with voltage testers	**61-020**

Nylon Carrying Cases

Description	Cat. No.
Small Nylon Carrying Case w/four pockets	**61-445**
Nylon Carrying Case - for use with all Vol-Con® and Vol-Test® Voltage Testers	**C-90**
Nylon Carrying Case - for use with Digital Multimeters	**C-290**

Carrying Case Selection Guides

		VOLTAGE TESTERS								160		310		340		360	480		490		610		700		740		760		770		830
		61-059	61-065	61-076	61-085	61-086	61-090	61-092	61-096	61-164	61-165	61-310	61-312	61-340	61-342	61-361	61-484	61-486	61-497	61-498	61-610	61-614	61-702	61-704	61-744	61-746	61-763	61-765	61-773	61-775	61-830
61-010	Leather Tester Case		•	•	•	•																									
61-020	Premium Leather Tester Case		•	•																											
61-179	Nylon Carrying Case									•	•																				•
C-50	Nylon Carrying Case	•																													
C-90	Nylon Carrying Case		•	•	•	•	•	•	•																•	•					
C-230	Nylon Carrying Case																		•	•											
C-290	Nylon Carrying Case											•	•	•	•	•	•	•	•	•	•	•									
C-700	Nylon Carrying Case																						•	•							
C-760	Nylon Carrying Case																										•	•			
C-770	Nylon Carrying Case																												•	•	

Accessories

Replacement Parts Selection Guide

METER REPLACEMENT PARTS SELECTION GUIDE			090 61-096	310 61-310	310 61-312	340 61-340	340 61-342	360 61-361	480 61-484	480 61-486	490 61-497	490 61-498	600 61-605	610 61-610	610 61-614	700 61-702	700 61-704	710 61-710	740 61-744	740 61-746	760 61-763	760 61-765	770 61-773	770 61-775	790 61-795	790 61-797
FUSES																											
F-1	0.5A (250V)	6.35 x 38mm												•				•									
F-102	1A (600V)	6.35 x 38mm																									
F-103	15A (600V)	6.35 x 38mm																									
F-105	1A (600V)	10.3 x 35mm																							•	
F-310	250mA (250V)	5 x 20mm		•										•													
F-312	500mA (250V)	5 x 20mm			•																						
F-314	10A (250V)	5 x 20mm			•																						
F-340	0.5A (500V)	6.35 x 32mm				•	•																				
F-341	10A (1000V)	10 x 38mm				•	•																				
F-497	440mA (1000V)	10 x 35mm							•	•	•	•															
F-498	11A (1000V)	10 x 38mm							•	•	•	•															
F-797	315mA (1000V)	5 x 32mm																									•
LA-3893	2A (600V)	6.35 x 25.4mm						•																			
LA-3896	0.5A (500V)	6.35 x 32mm																									
LA-3897	10A (600V)	63.5 x 25.4mm																									
LA-3898	0.25A (500V)	5 x 32mm						•																			
BATTERIES																											
61-201	1.5V (LR44)												•														
—	1.5V (AA)										•			•	•			•								
—	1.5V (AAA)			•															•	•					•	•
—	9V		•	•		•	•	•	•	•	•	•				•	•				•	•	•	•		
TEST LEADS																											
TL-34	Leads w/pin connectors													•												
TL-56	Test leads														•											
TL-95	Test leads		•																							
TL-100	Test leads w/alligator clips					•	•	•	•	•	•	•						•	•	•						
TL-102	Silicone test leads															•	•									
TL-104	Test leads w/large alligator clips																				•	•	•	•		
TL-310	Test leads			•	•																					
TL-795	Test Leads																								•	
TL-797	Test Leads																									•

Safety in the Field
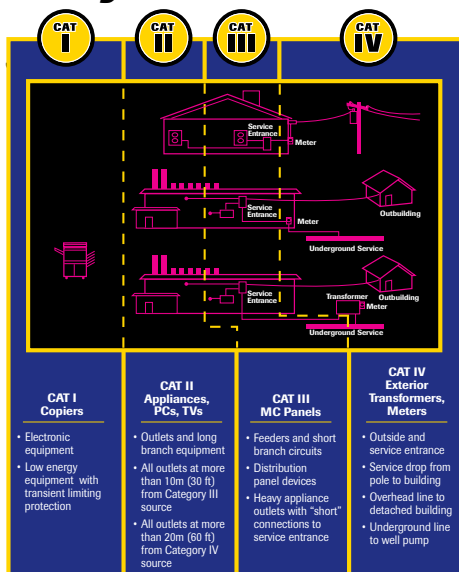
The power demands of today's high-tech world have caused a marked increase in occurrences and levels of transient overvoltages. The International Electrotechnical Commission (IEC) has developed a safety standards model for measurement, control and laboratory use.

Category I – The signal level for telecommunications, electronic and other low-energy equipment with transient-limiting protection. Peak impulse transient range is 600–4,000 volts with a 30 ohm source.

Category II – The local level for fixed and non-fixed powered devices including appliances, lighting and portable equipment. Outlets located more than 30 feet from CAT III sources and 60 feet from CAT IV sources. Peak impulse transient range is from 600–6,000 volts with a 12 ohm source.

Category III – The distribution level for fixed primary feeders or branch circuits. Circuits that are separated from CAT IV sources by at least one level of transformer isolation. Peak impulse transient range is 600–8,000 volts with a 2 ohm source.

Category IV (proposed) – The primary supply level for the highest levels of transient overvoltage. Includes the utility service both outside and at the service entrance, service drop from the pole to the building, overhead line to remote buildings, and underground line to a well pump. Peak impulse transient range is 600–12,000 volts with less than a 1 ohm source.

DATACOMM/NETWORKS

LanTEK® II Series Cable Certifier

LanTEK® II offers the best speed, performance and price available today. Nine second Cat 5E and 14 second Cat 6 tests with full performance data plus 10 Gigabit Alien Crosstalk testing, more than 4x faster than other systems making LanTEK® II the ultimate copper certification platform. The patented universal adapter system lets you certify most cabling with off-the-shelf patch cords saving time and money by eliminating the need for proprietary permanent link adapters.

The optional FiberTEK® FDX modules provide the world's only dual wavelength, bi-directional fiber certification available. That's more than 3x faster than existing testers. Three models provide the needed performance without the added expense; choose from 350 MHz/Cat 6, 500 MHz/Cat 6A or 1000 MHz/Cat7A all with accuracy independently verified by ETL.

LanTEK® II also offers ultimate versatility with options for certification of TERA, GG45 and EC7 category 7/7A systems, plus M12 industrial Ethernet and coaxial test adapters.

■ Best price/performance options - models ranging from 350 MHz to 1000 MHz

■ Most internal memory available - store over 1700 Category 6/ISO E tests with graphs

■ Extraordinary fast fiber testing with FiberTEK® FDX - the first dual wavelength, bidirectional fiber certification tool

■ Large, ultra-bright display - 4.3 in. wide screen display with white LED backlighting provides easy viewing of high-frequency data plots

■ 350 MHz & 500 MHz models are fully upgradable to 1000 MHz

■ Smart lithium-ion battery technology - 18 hour battery life with self calibrating "fuel gauge" for accurate capacity readings

More Ways to Save

Save time and money in more ways than ever with LanTEK® II.

Universal Link Testing
The patented testing process eliminates the need for costly permanent link adapters. Using universal test adapters for Category 5E through 6A certification, patch cords are typically the only item that needs to be replaced when worn or damaged. This eliminates the wait and expense of proprietary adapters meaning more time spent testing and less time searching for replacement parts.

Channel and Permanent Link Testing with One Adapter
LanTEK® II allows permanent link and channel certification without changing adapters. The patented DualMODE™ function allows cabling to be certified to two different standards with one press of the Autotest button; half the time of any other certifier.

Certify cabling to both Category 6 permanent link and Category 6 channel link standards at the same time, satisfying requirements from cabling manufacturers and end users without costing more time in the field. Or certify cabling to existing current standards and proposed future standards which eliminates retesting at a later date.

Most Memory Capacity
LanTEK® II has 7x the storage capacity as competitive certifiers. Save an astonishing 1700 Category 6 results with graphs. If the memory fills, simply off-load the data to a USB flash drive for portability and archiving.

Cut the Power Cord
The smart lithium battery technology provides 18 hours of use in the field. The revolutionary battery technology has two charging modes that offer the best flexibility available. Slow charge the battery overnight while it is inside the LanTEK® II, or remove the battery and plug in to its dedicated charging port for a quick five hour charge. Plus, the battery's internal fuel gauge automatically self-adjusts every time the pack is completely discharged and recharged, providing accurate charge readings over the life of the battery pack.

FIBERTEK® FDX

■ The only solution that completely eliminates the need to swap fibers or modules, allowing complete one-step certification of horizontal and backbone cabling.

■ More than 2x as fast as any other fiber certification tester

■ Complies to TIA/ISO/IEC certification standards

■ Real-time power meter to aid in troubleshooting active equipment

Attenuation 850nm + Attenuation 1300nm   Length   Attenuation 850nm + Attenuation 1300nm

Five results with one Autotest, the fastest fiber certification solution available

LanTEK® Series Cable Certifier Specifications

LanTEK® II

Handset Dimensions	Height/Width/Depth: 10 in. x 5 in. x 2.1 in. (25.4cm/12.7cm/5.3cm)
Handset weight w/battery	Display: 2.4lbs/1.1kg; Remote: 2.3lbs/1.0kg
Battery	Lithium ion, 7.4VDC, 6.6AH; Input: 12V/2A DC; Typical operating time: 18 hours (new battery running a Cat6 test every 2.5 minutes, full backlight); Charge time: 4 hours quick charge with battery removed from handset, 6 hours inside handset.
Input power	Handset: DC 12-15V, 2A; Line/mains power: AC 110-240V, 50/60Hz
Display	4.3" wide screen TFT, 480 x 272 pixel, 95 x 54mm viewable area
Connectivity	Adapter port: 168 pin ultra low crosstalk, mini-USB device port, USB host port (display handset only), four pin serial port (service use only), 1/8" talkset jack, power/charging jack
Frequency range	LanTEK II-350: 1-350MHz, LanTEK II-500: 1-500MHz, LanTEK II-1000: 1-1000MHz
Memory	Non-volatile flash, storage capacity for 1700 TIA-Cat 6 tests with graphs. Tests can be copied to USB flash drive, up to 64GB.
Measurements	Wire map, DC loop resistance length, capacitance, NEXT, insertion loss (formerly attenuation), ACR-N (formerly ACR), return loss, average impedance, propagation delay, delay skew, power sum NEXT, power sum ACR-N (formerly power sum ACR), ACR-F (formerly ELFEXT), power sum ACR-F (formerly power sum ELFEXT), alien crosstalk (with optional AXT testing kit)
Length measurement	0-2000 ft.; 1 ft. resolution, +/-(3% + 3 ft.), distance to short/open reported
Supported cable types	TIA/EIA Category 3, 4, 5, 5E, 6 and 6A: 100Ω; ISO/IEC Class C, D, E, EA, F, FA: 100Ω Cat 6/6A Class E/FA RJ-45 permanent link adapters: shielded and un-shielded cable, universal adapters provide channel, permanent link and basic link measurements.
Supported connectors	Additional adapters: GG45, ARJ45, TERA, EC7 (MMCPRO3000), Coax 50-75Ω (BNC connector), M12 industrial
Tone generator	Integrated into display and remote handset, compatible with standard analog inductive probes, selectable tone (high/low/warble) 500/600 Hz, selectable pin output.
Environmental	0°C to 50°C non-condensing Operating Temperature , -20°C to 70°C, non-condensing Storage Temperature, Vibration - MIL-PRF-28800 F, Class 3
Accuracy	Baseline: Certified by ETL to meet IEC 61935 Level III/IIIe/IV; Channel/Permanent link: TIA 568-B.2-2 and IEC 61935 Level III/IIIe/IV
Warranty)	One (1) Year from date of purchase; Batteries and accessories are warranted 90 days from date of purchase ((LanTEK II and FiberTEK FDX)
PC Software	Requirements: Microsoft Windows® XP or Vista, (32/64 bit) 512MB RAM, 500MB hard disk + 1GB for every 1,500 Category 6 tests

FiberTEK FDX

Compatability	LanTEK® II (any model)
Connector	User changeable adapter (SC, FC, ST), 2.5mm ferrule
Laser safety	Multi-mode 850 VCSEL: class 3, 5mW max; multi-mode 1300 laser: class 3, 5mW max; Single mode 1310 & 1550: class: 3, 5mW max
Power meter accuracy	± .25dB from 0dBm to -40dBm 850-1550nm; system dynamic range 40dB
Length accuracy	±3%; maximum distance measurement 3000m
Display resolution	Power/attenuation: 0.1dB, length: 0.1m/0.1ft

Contents: Two FiberTEK FDX modules, lockable semi-rigid carrying case, SC, FC, ST adapters for modules (2 ea.), SC-SC patch cords (MM kits: 3x 62.5μm, 3x 50μm; SM kits: 3x 9um SMF) compliant to ISO/IEC 14763-3 standard, quick reference guide, and electronic operation manual.

Cat. No.	Description	Cat. No.	LanTEK® II – Add-on Options
33-993	LanTEK® II-1000: TIA/EIA Cat7A, ISO Class F/FA certifier w/Cat6A adapters	33-990-FA01	Multimode (850/1300nm) kit with LED light sources for standard multi-mode fiber
33-992	LanTEK® II-500: TIA/EIA Cat6A, ISO Class EA certifier w/Cat6A adapters	33-990-FA02	Multimode (850/1300nm) kit with VCSEL/laser light sources for laser optimized fiber
33-991	LanTEK® II-350: TIA/EIA Cat6, ISO Class E certifier w/Cat6 adapters	33-990-FA03	Single mode (1310/1550nm) kit with laser light sources for single mode fiber
33-993-FA01	LanTEK® II-1000 with MM LED FiberTEK FDX Kit	33-990-FA04	Combination MM/SM kit with LED MM sources and laser SM sources (33-990-FA01 & 33-990-FA03)
33-993-FA02	LanTEK® II-1000 with MM VSCEL/Laser FiberTEK FDX Kit	33-990-FA05	Combination MM/SM kit with VCSEL/laser MM sources and laser SM sources (33-990-FA02 & 33-990-FA03)
33-993-FA03	LanTEK® II-1000 with SM Laser FiberTEK FDX Kit	FDX2-CP-3	Three year Care Plan for FiberTEK FDX, 3 year warranty + annual calibration for FA04 or FA05 kits
33-993-FA04	LanTEK® II-1000 with MM LED & SM Laser FiberTEK FDX Kit	FDX-CP-3	Three year Care Plan for FiberTEK FDX, 3 year warranty + annual calibration for FA01-FA03 kits
33-993-FA05	LanTEK® II-1000 with MM VSCEL & SM Laser FiberTEK FDX Kit	LT2-CP-3	Three year Care Plan for LanTEK® II, 3 year warranty + annual calibration and accessory replacement
		LANTEK10GBKIT	Alien Crosstalk Testing Kit for 10GbE Certificatioin. Compatible with 33-992 and 33-993.

Contents: LanTEK® II display and remote handset, two smart lithium ion batteries, two 110-240V power adapters with US/EU/UK plugs, lockable semi-rigid carrying case, Cat6A F/FTP patch cords, USB cable, DataCENTER data management and reporting software, two headsets, hanging straps and ETL accuracy certificate.

Testers

CE · RoHS · N12966

10 Gigabit Alien Crosstalk Testing Kit

Perform a standard 6-around-1 cable test with PS ANEXT and PS AACR-F results for both ends of the cable in as little as 5-1/2 minutes compared to over 20 minutes for some competitive models.

■ Add Alien Crosstalk testing capability to any LANTEK® 6A or 7G and LanTEK® II

■ Perform PS Alien NEXT and Attenuation to Alien Crosstalk Ratio measurements

■ Unique Dual-port AXT adapter allows PSANEXT testing with just one handset for quick initial site testing

■ Dual-handset mode allows complete AXT certification 4 times faster than other AXT test systems

■ No PC required in the field - all test results calculated on-the-fly for instant pass/fail indication

■ Kit includes 2 Dual-port AXT adapters, 12 AXT terminators, shielded patch cords, manual, firmware update and PC reporting software

Description	Cat. No.
Alien Crosstalk Testing Kit for LANTEK®	**LANTEK10GBKIT**

SIGNALTEK™ Gigabit Ethernet Certifier & SIGNALTEK™–FO Multimedia Ethernet Certifier

SIGNALTEK™ provides a technically innovative method to test and document performance of voice, data, video and VoIP applications for cabling installers and network technicians. It tests the link's ability to support applications by transmitting Ethernet packets on the wire and measuring the link performance according to IEEE 802.3ab Gigabit Ethernet standard. By monitoring transmitted and received data packets, it can report the BERT (Bit Error Rate Test) for the link.

SIGNALTEK™-FO is the first active ethernet certifier that offers both copper and fiber optic testing; and SIGNALTEK™-FO does it for less than the price of an Optical Test Set alone.

■ Simulate real world network traffic with full-duplex gigabit performance testing

■ User selectable 10/100/1000 Bit Error Rate Testing (BERT) to ensure performance for all Ethernet devices. Decibel (dB) loss measurements of optical lines.

■ Smart autotest function detects line condition and automatically chooses appropriate test to run to allow testing cable that is terminated with a SIGNALTEK remote, a network device or unterminated

■ Save time using the remote to perform 10/100 or gigabit service detection AND initiate an Autotest when main unit is connected

■ Maximum flexibility with two USB ports. Connect to a computer to upload test results, connect directly to a printer, or connect a USB memory drive for unlimited storage

■ Get maximum coverage with a full two-year warranty

■ Configure multiple target IP addresses for pinging several network devices to ensure communications with servers, printers, IP cameras, home automation controls, etc.

■ Offers network interrogation tools such as link establishment, port LED blink and ping

■ TDR to accurately measure length and locate shorts and opens

■ ARP test discovers active network devices

■ Exceeds 100m measurement distance required by IEE 802.3ab gigabit Ethernet

■ Dual Wavelength Capability – available in both 850nm and 1300mn wavelengths to support virtually all LAN and campus fiber applications.

Description	Cat. No.
SIGNALTEK™-FO w/850 Modules	**33-981**
SINGALTEK™-FO w/13X0 Modules	**33-982**
SIGNALTEK™-FO w/850 & 13X0 Modules	**33-983**
SIGNALTEK™-FO w/o Modules (Fiber-Ready)	**33-987**
SIGNALTEK™ Kit - Copper Only	**33-974**
Universal 120-240V Power Adapter	**4010-00-0136**
RJ-45 to 8 Head Alligator Clip	**K-7920**
Pair of 850nm SFP Modules	**SFP-850**
Pair of 13X0nm SFP Modules	**SFP-13X0**
Replacement Cable Accessory Kit - contains all original cables in SIGNALTEK™ Kit	**1219-91-0003**

#33-974 - SIGNALTEK™ Kit - Copper Only

#33-983 – SIGNALTEK™-FO w/850 & 13X0 Modules

Testers

LanXPLORER PRO

NEW

With full In-Line and Endpoint test capabilities, LanXPLORER PRO tests not only copper cables but also active LAN connections over copper and fiber links. In addition, it liberates the user from cables by allowing most tests to be conducted through a wireless connection offering unparalleled flexibility. With such comprehensive test capability and ease of use, LanXPLORER PRO is the perfect tool to meet the needs of professional IT installers and systems administrators in any enterprise, campus or industrial Ethernet environment.

- Network connectivity and diagnositcs for 10/100/1000Mb Ethernet
- Options for dual copper ports for in-line testing, fiber optic SFP port and Wi-Fi
- Network mapping to all devices on the network and group into categories
- Save and recall Network Maps to identify changes in the network such a new or missing devices
- List top talkers to identify the source of network slowness
- Power over Ethernet (PoE) testing with load simulation to fully test PoE power supply equipment and in-line testing to measure power consumption of PoE devices
- Full wire map testing with TDR to located cabling faults
- Displays total, average, peak network bandwidth, error generation and packet size distribution
- Monitoring of VoIP calls and quality including RTP Jitter

WIFI

USB interface & internal memory

QVGA 3-1/2" color touch screen

SFP Fiber slot

RJ-45 Connection
Exchangeable RJ-45 interface
In-line test

Multifunction softkeys

Autotest

Cursor keys

Mains charger input

Rubber molded housings

Features

	LanXPLORER	LanXPLORER Plus	LanXPLORER Pro
Display	Color, 3.5" QVGA	Color, 3.5" QVGA	Color, 3.5" QVGA **Touchscreen**
Test interfaces	1 x RJ45	1 x RJ45, Wi-Fi	2 x RJ45, Wi-Fi, 1 x SFP
Wiremap with length	✔	✔	✔
PoE and PoE+ tests	✔	✔	✔
Wi-Fi		✔	✔
SFP fiber interface			✔
Network detection	✔	✔	✔
Network device mapping	✔	✔	✔
Traffic/Top Ten/Error counting	✔	✔	✔
PC diagnosis			✔
In-line tests			✔
VoIP testing			✔
Test storage	✔	✔	✔
VLAN / 802.1x support	✔	✔	✔
Loopback mode			✔

Ordering Information

Description	Cat. No.
LanXPLORER Tester Soft carrying case, 2 x RJ-45 STP patch cords, 1 smart remote, 6 AAA batteries, printed quick reference guide, manual on CD	**33-940B**
LanXPLORER PLUS Premium Kit Includes tester, soft carrying case, 2 x RJ-45 STP patch cords, 1 smart remote, printed quick reference guide, manual on CD, **rechargeable battery pack, AC power supply, inductive cable tracing probe**	**33-941P**
LanXPLORER PRO Premium Kit Includes tester, soft carrying case, 2 x RJ-45 STP patch cords, 1 smart remote, printed quick reference guide, manual on CD, **rechargeable battery pack, AC power supply, inductive cable tracing probe**	**33-942P**
Battery Pack - rechargeable	**33-940-BP**
Remote #1	**33-940-R1**
Remote Kit #2 - #12	**33-940-R12**
RJ-45 Inserts with removal tool	**33-940-RJ45**
Power Supply/Battery Charger	**33-940-PS**

Testers

SecuriTEST™ PRO CCTV/Security Tester

SecuriTEST™ PRO is the most versatile all-in-one installation and troubleshooting tool for the CCTV professional. CCTV installers often need to carry a variety of testing tools to complete their work. SecuriTEST™ PRO combines the most-needed tools in one easy-to-carry package. Since all connections (video/communications/DMM) attach to a single unit, SecuriTEST™ PRO eliminates the need to juggle several devices while on a ladder or lift, making working conditions safer and increasing productivity.

Features of SecuriTEST™ PRO

- IRE video level and sync tests

- Sound level test through integrated speaker and on screen level indicator

- High capacity lithium ion battery

- Support for additional PTZ protocols

- Carrying case included

- **Seven Essential CCTV Tools** - Combines a CCTV video tester, PTZ camera controller, Digital Multimeter, UTP cable tester, video test pattern generator, PTZ protocol analyzer and camera programmer in a single compact package.

- **Save Time & Money** - Test, aim, focus and program cameras when working alone. Save time by not having to walk back to the control center to verify functionality of each camera.

- **Compact Design** - Combines all the most needed security tools in a lightweight easy-to-carry unit. Sharp, bright 2.5 in. (6.3 cm) color LCD screen with on-screen displays for PTZ control/diagnostics and DMM readouts.

- **PTZ Protocol Analyzer** - Compatible with 20+ PTZ protocols to test and program cameras in the field. Decodes and identifies output from PTZ console to aid in troubleshooting.

LED Indicators

UTP Test Port

Audio Input

PTZ Control Pad

IRE On/Off

Test Lead Ports

Testers

Description	Cat. No.
SecuriTEST™ PRO CCTV/Security Tester only	**33-892**

VDV Pro Cable Tester

The VDV PRO Cable Tester is an easy-to-use cable testing and verification device that can quickly test all wiring requirements found throughout today's residential and commercial environments.

- Voice – tests 3-pair USOC and 6-position RJ-11/12 jacks for voice cable testing
- Data – tests wire map of shielded and unshielded cable to T568A/B standard
- Video – tests coax cable for opens, shorts and length with F-Connector interface
- Larger backlit LCD screen for better test results readability
- Network link LED blink for visual cable tracing
- Voice testing capability detects RJ-11 (1, 2, or 3 pair)
- Voice test also shows Normal or Reverse for pins 1 through 6
- Length measurement is shown during initial test results for convenience and time savings
- Eight remotes have RJ-45, RJ-11 and Coax F-jacks for increased testing capabilities
- Tests for shield continuity, shorts, opens, miswires, reversals and split pairs with remote connected
- Full dot-matrix LCD display for user convenience to read display results
- One-ended testing for shorts, opens and split pairs (no remote needed)
- Test results displayed in wire map format with message line for shorts and split pairs

Description	Cat. No.
VDV PRO w/one remote and terminator	**33-770**
VDV PRO w/eight remotes and terminators	**33-771**
VDV Pro (33-770) w/one remote and Amplifier Probe (62-164)	**33-780**

Description	Cat. No.
VDV PRO Eight Remote Replacement Kit (ID 1-8)	**33-774**
Eight Coax Terminator Kit	**33-775**

IENet™ Pro Cable Tester for RJ-45 and M-12 Industrial Ethernet Cable Testing

The IENet™ PRO tester makes it a snap to quickly verify wiring integrity and assure proper terminations for diverse types of industrial cabling and provides automatic pin conversion between M-12 and RJ-45 connections.

- Simple selection between Voice, 2 and 4 pair Data, and Coax testing functions. Voice and Video/Security tests via optional adapters
- Tests for opens, shorts, miswires, reversals, split pair (user selectable) and length
- Indicates correct wiremap to T568A/B standards for shielded and unshielded cabling
- Easy-to-read LCD display with "PASS" or "Miswire" indicator for each test
- Identifies presence of voltages on cables
- Tone generator supports four different tones making fault isolation easier
- Network LED blink for visual cable tracing
- Numerical indication for UTP "No Shield" and STP - "Shield" to comply with industrial ethernet PROFINET® requirements

    PROFINET® is a registered trademark of PROFIBUS International.

Ordering Information

Description	Cat. No.
IENet™ PRO w/single remote	**33-772**
IENet™ Pro w/eight remotes	**33-773**
Eight Coax Terminator Kit	**33-775**
IENet™ Pro Eight Remote Kit (ID 1-8)	**33-776**

Accessories

	Description	Cat. No.
	RJ-45 to RJ-11 jack adapter (2/card)	**LA-4233**
	RJ-45 to F-Connector adapter (2/card)	**LA-4234**
	F to BNC Adapter Kit	**LA-4173**

Testers

Test-Tone-Trace Kit

- Kit includes the VDV (33-856) and Amplifier Probe (62-164)

- Tests and traces coax, twisted pair and telephone cables

Description	Cat. No.
Test-Tone-Trace Kit	**33-866**

PRO Amplifier Probe and Tone Generator

Amplifier Probe

- Identifies and traces wire or cables within a group

- Battery low indicator

Tone Generator

- Emits three different types of tones

- Auto-off after three hours of non-use

- F-Connector port for toning & tracing coaxial CATV cabling systems

- Tone can be added in any status

Description	Cat. No.
Amplifier Probe & Tone Generator Kit - includes 62-164, 62-160, Lead Set, Cable Assembly	**33-864**
Amplifier Probe	**62-164**
Tone Generator	**62-160**

TRACETone™ Tone Generator & Amplifier Probe

- Test continuity and locate signal of installed wire and cable

- Two selectable tone styles

- Tone Generator & Amplifier Probe fit together for easy storage

- Adjustable volume control

- RJ-11 Alligator Clip, RJ-11 Cable Assembly included

Description	Cat. No.
TRACETone™ Tester	**62-140**

VDV MultiMedia Cable Tester

Easy-to-use tester for installers working with voice, data and video applications. One tester for all applications!

- **Voice** — supports 3-pair USOC and 6-position RJ-11/12 jacks for telephone cable testing

- **Data** — supports both shielded and unshielded cable testing to T568A/B (RJ-45)

- **Video** — tests coax cable for opens and shorts with F-connector interface

- Tests for opens, shorts, miswires, reversals and split pairs. Also indicates correct wiremap. Has automatic shut off (to prolong battery life) and low battery indicator.

- Easy-to-read LCD display with "PASS or ERROR" indicator after each test

- Tone generator supports four different tones making fault isolation easier

- One remote wiremap and testing unit is stored inside tester — easier to keep all parts together

- Uniquely designed remote accommodates RJ-11, RJ-45 and F-style connectors

Description	Cat. No.
Kit with integrated remote and accessories	**33-856**

LinkMaster™ Tester

Tests wiring configurations on UTP/STP cables. Checks for shorts, miswires, reversals and split pairs. Debug feature, automatic shut-off and low battery LED indication.

- Designed to test installed twisted pair wiring

- Tests unshielded and shielded modular plugs

- Main unit and remote allow one person testing

Description	Cat. No.
LinkMaster™ Tester and Remote	**62-200**

Testers

OmniSeal™ Pro Compression Tools

The IDEAL OmniSeal™ Compression Tools now offer additional features and increased connector compatibility in a smaller, more compact tool designed to meet the demands of the professional installer. (OmniSeal™ requires no accessory attachment to terminate IDEAL branded compression connectors.) Most other manufacturers compression connectors can be terminated with an easy plunger depth adjustment. The simple intuitive design combined with its size and universal connector acceptance makes this the only compression tool needed by professional installers.

■ Factory preset to work with IDEAL compression connectors

■ Compresses F-type, RCA, BNC and Mini connectors

■ Adjustable to fit other manufacturer's connectors — no accessory adapters required

OmniSeal™ Pro
30-603

OmniSeal™ Pro XL
30-793

Description	Cat. No.
OmniSeal™ Pro XL Compression Tool	**30-793**
OmniSeal™ Pro Compression Tool	**30-603**

	BNC	F-Type	RG-11	RCA	Mini Coax
OmniSeal™ Pro XL 30-793	✓	✓	✓	✓	✓
OmniSeal™ Pro 30-603	✓ with adjustment	✓	✓	✓	✓

Convenient handle lock for easy fit in pouch

Spring loaded handle

Textured Santoprene™ slip resistant comfort grip

For BNC connectors (Model 30-793)

High strength aluminum body for durability, lighter weight

Compresses F-type, Mini F-type, RCA, and Mini RCA connectors

Universal tip for all connectors

Spin knob for fast depth adjustment

Lock nut holds adjustments in place

F-Compression Tool

■ Easily compresses series 6 and 59 coax compression F-connectors

■ Permanent connection – never comes loose

■ Works with most brands of compression connectors

Description	Cat. No.
Economy Compression Tool	**30-633**
Economy Compression Tool Kit - Includes four RG-6 Connectors	**33-633**

Compression Tools

Compression Connectors

RTQ™ Reg/Tri/Quad & Plenum F-Connectors

- Fits 60% regular, tri-shield and quad shield cables
- Nickel-plated, brass-construction for superior corrosion resistance
- Designed for use by satellite and cable TV companies
- Weatherproof for indoor and outdoor use
- Use 30-603, 30-793 or 30-633 Compression Tools

RG-11 F-Connectors

- Fits 60% regular RG-11 cable
- Nickel-plated, brass-construction for superior corrosion resistance
- Designed for use by satellite and cable TV companies
- Weatherproof for indoor and outdoor use
- Use 30-603 or 30-793 Compression Tools
- Use 45-111, 1/4" x 1/4" RG-11 Coax Stripper

BNC Connectors

- Nickel-plated, brass-construction for superior corrosion resistance
- Moisture-inhibiting design
- Use 30-793 Compression Tool
- 75 Ohm nominal impedance
- Gold-plated pin contact area
- Available in plenum versions

OmniCONN™ F-Connectors

- Non corrosive nickel plated brass body and polycarbonate bushing
- Delrin/Nylon adapter sleeve and o-ring provide double protection for a watertight seal
- Free spinning hex nut for ease of installation onto all 7/16 ports
- 75 ohm nominal impedance
- Two-piece pre-assembled connectors
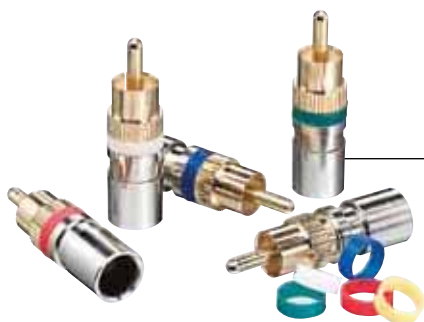
RCA Connectors

- Constructed of nickel plated brass and gold plated head
- 75 ohm nominal impedance
- Bandwidth up to 3 GHZ
- Compatible with 30-603 and 30-793 Compression Tools

Compression Connectors

	Connector Type	Cable Type	Qty.	Cat. No.
	F	RG-6 Reg/Tri/Quad	Card of 4	**92-654**
			Card of 10	**92-651**
			Jar of 50	**92-650**
			Jar of 100	**92-656**
			Box of 1,000 (20 bags of 50 ea.)	**92-759**
			Box of 1,000 bulk	**92-659**
	F	RG-6 Plenum	Jar of 50	**92-660**
			Box of 1,000	**92-669**
	F	RG-59 Reg/Tri/Quad	Jar of 50	**92-610**
			Box of 1,000	**92-619**
	F	RG-11	Card of 10	**89-211**
			Box of 500	**89-1211**
	F	RG-6	Jar of 50	**89-044**
			Box of 1,500	**89-1544**
	F	Quad	Jar of 50	**89-045**
			Box of 1,500	**89-1545**
	BNC	RG-6	Card of 4	**92-705**
			Card of 15	**89-048**
			Jar of 35	**89-5048**
			Box of 1,000 (10 bags, 100 ea.)	**89-1048**
	BNC	RG-6 Plenum	Card of 15	**89-050**
			Jar of 35	**89-5050**
			Box of 1,000 (10 bags, 100 ea.)	**89-1050**
	BNC	RG-59	Card of 4	**92-704**
			Card of 15	**89-047**
			Jar of 35	**89-5047**
			Box of 1,000 (10 bags, 100 ea.)	**89-1047**
	BNC	RG-59 Plenum	Card of 15	**89-049**
			Jar of 35	**89-5049**
			Box of 1,000 (10 bags, 100 ea.)	**89-1049**
	RCA*	RG-6	Card of 4	**92-582**
			Card of 10	**89-582**
			Jar of 35	**89-580**
	RCA*	RG-59	Card of 4	**92-572**
			Card of 10	**89-572**
			Jar of 35	**89-570**
	RCA	Mini (21 - 23 AWG)	Card of 10	**89-014SMRCA**

*RCA Connectors include an assortment of color ID bands.

Compression Port Seals – 1/2 in.

■ Used with compression F-connectors to weatherproof connector by placing onto the female port. Made from EPDM for superior sealing.

Description	Qty.	Cat. No.
Long Sleeve Compression F-Connector Port Seals, 1/2 in.	Bag of 100	**89-127**

Compression Connectors

Compression Connector Instructions

Compression F–Connector

1. Use IDEAL Data T®-Cutter (45-074) to cut cable to desired length.
2. Use IDEAL Coax Stripper (45-603 or 45-526) to strip coax to proper dimensions.
   - Proper strip length settings will leave 1/4" of center conductor exposed and 1/4" of braiding (shield) exposed.
   - After stripping, make sure tip of center conductor is straight and not bent. Straighten conductor if necessary.
3. Fold back outer layer of braiding (shield) against cable jacket. Keep braid strands as straight and as close to jacket as possible.
   - Note: For Quad Shield cables (with 4 layers: outer braid, outer foil, inner braid, inner foil), first fold back outer braiding. Use 45-074 to score and remove exposed 1/4" of outer foil. Remove outer foil, and fold back inner braiding.

STEP 1 — 45-074

STEP 2 — 45-603

4. Push F connector on to prepared cable until white center dielectric is flush with bottom of the nut of the F connector.
5. Insert connector/cable assembly into the OmniSeal™ Pro XL compression tool, squeeze handle completely to compress fitting. Remove completed cable assembly.

STEP 2 & 3 — 1/4", 1/4"

STEP 4

STEP 5
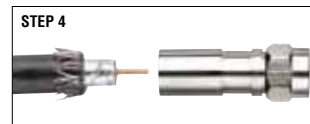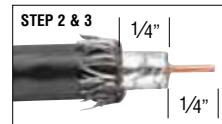
Compression RG-11 F–Connector

1. Use IDEAL Data T®-Cutter (45-074) to cut cable to desired length.
2. Use IDEAL Coax Stripper (45-111) to strip RG-11 coax to proper dimensions.
   - Proper strip length settings will leave 1/4" (minimum) of center conductor exposed and 1/4" of braiding (shield) exposed.
   - After stripping, make sure tip of center conductor is straight and not bent. Straighten conductor if necessary. Conductor must be straight to make proper contact with pin contact inside of connector.
3. Fold back outer layer of braiding (shield) against cable jacket. Keep braid strands as straight and as close to jacket as possible.
   - Note: For Quad Shield cables (with 4 layers: outer braid, outer foil, inner braid, inner foil), first fold back outer braiding. Use 45-074 to score and remove exposed 1/4" of outer foil. Remove outer foil, and fold back inner braiding.

STEP 1 — 45-074

STEP 2 — 45-111

4. Measure and mark cable insertion length. Align tip of center conductor with bottom of hex nut fitting of connector. Mark or lightly score cable jacket near base of connector. Connector should be within 1/8" of this mark after it is pushed on to cable. If it is more than 1/8" away from mark, continue rocking and guiding connector on to cable. Approximately 1-1/4" of cable length should be inserted into connector prior to compressing the connector.
5. Insert the connector/cable assembly into OmniSeal™ Pro XL compression tool (adjust plunger setting if necessary), squeeze handle completely to compress fitting. Remove completed cable assembly.

STEP 2 & 3 — 1/4", 1/4"

STEP 4

STEP 5
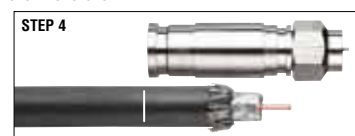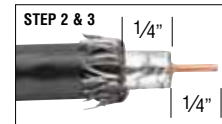
Compression BNC/RCA Connectors

1. Use IDEAL Data T®-Cutter (45-074 to cut cable to desired length.
2. Use an IDEAL coax stripper (45-603 or 45-526) to strip coax to proper dimensions.
   - Proper strip length settings will leave 1/4" (minimum) of center conductor exposed and 1/4" of braiding (shield) exposed.
   - After stripping, make sure tip of center conductor is straight and not bent. Straighten conductor if necessary. Conductor must be straight to make proper contact with pin contact inside of connector.
3. Fold back outer layer of braiding (shield) against cable jacket. Keep braid strands as straight and as close to jacket as possible.
   - Note: For Quad Shield cables (with 4 layers: outer braid, outer foil, inner braid, inner foil), first fold back outer braiding. Use 45-074 to score and remove exposed 1/4" of outer foil. Remove outer foil, and fold back inner braiding.

STEP 1 — 45-074

STEP 2 — 45-603

STEP 2 & 3 — 1/4", 1/4"

STEP 4

4. Measure and mark cable insertion length. For BNC's, align tip of center conductor with top of the nut fitting. For RCA's, align tip of center conductor with top of retention collar. Mark or lightly score cable jacket near base of connector. Connector should be within 1/8" of this mark after it is pushed on to cable. If it is more than 1/8" away from the mark, continue rocking and guiding connector on to cable. Approximately 1-1/4" of cable length should be inserted into the connector prior to compressing connector for BNC. Approximately 1-1/8" of cable length should be inserted into connector prior to compressing connector for the RCA.
5. Insert connector/cable assembly into OmniSeal™ Pro XL compression tool, squeeze handle completely to compress fitting. Remove completed cable assembly.

STEP 5
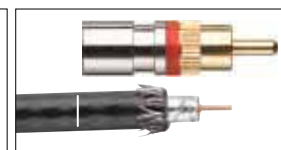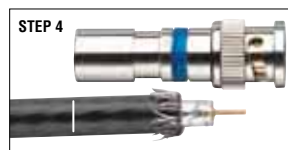
Crimpmaster™ Crimp Tools & Die Sets

High quality ratchet-type crimp tool for electricians, contractors and installers who require guaranteed repeatability of good mechanical and electrical connections.

Dies change quickly and easily with a screwdriver. Interchangeable dies provide versatility in a single tool.

Crimp release provides operator safety.

Ratchet crimp action provides repeatable and reliable terminations.

Pressure adjustment for actuation force.

Description	Cat. No.
Crimpmaster™ Crimp Frame Tool	30-506

Also available in these kits:

33-400

33-917
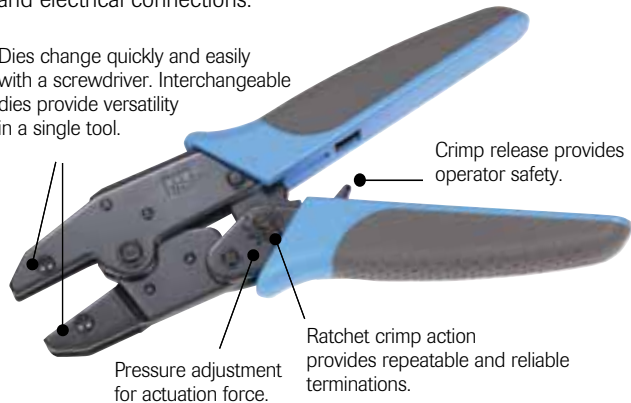
30-556
RJ-11 Crimp Tool for two, four or six-position modular plugs
Tool w/die N/A

30-559
RJ-45 Eight-position Crimp Tool for keyed or non-keyed modular plugs
Tool w/die 30-522

30-560
RJ-45 Eight-position Crimp Tool for AMP RJ-45 modular plugs
Tool w/die 30-521

30-570
RG-6, RG-174, Belden-Type RG-8281 cables (Hex. 0.324 (8.23mm), 0.178 (4.52mm), 0.068 (1.73mm)
Tool w/die N/A

30-573
Cambridge CP-88, CP-89 BNC/TNC coax connectors with RG-58, RG-59/RG-62 AU cables (Hex 0.305 (7.75mm), 0.068 (1.73mm), 0.228 (5.79mm)
Tool w/die 30-481

30-576
RG-174, Mini 59 BNC/TNC Connectors (Hex, 0.178 (4.52mm), 0.128 (3.25mm), 0.068 (1.73mm)
Tool w/die 30-485

30-577
N-Series and RG-8/11 Connectors (Hex, 0.429 (10.90mm), 0.100 (2.54mm), 0.080 (2.03mm)
Tool w/die 30-482

30-578
RG-59, RG-6, and 8281 50 and 75 OHM cables (Hex, 0.324 (8.23mm), 0.255 (6.48mm), 0.068 (1.73mm), 0.042 (1.07mm)
Tool w/die 30-483

30-581
RG-58, RG-59/62, BNC/TNC Coax Connectors (Hex, 0.255 (6.48mm), 0.213 (5.41mm), 0.068 (1.73mm)
Tool w/die 30-502

30-582
F-type CATV RG-59, RG-6 Connectors (Hex, 0.350 (8.89mm), 0.320 (8.13mm), 0.255 6.48mm)
Tool w/die 30-503

30-587
RG-58, RG-174 and G-8218 for both 50 and 75 ohm cables (Hex 0.213 (5.41mm), 0.178 (4.52mm), 0.068 (1.73mm), 0.042 (1.07mm)
Tool w/die N/A

30-591
Plenum and Non-Plenum Thinwire Cables RG-58 and 59 (Hex, 0.213 (5.41mm), 0.190 (4.83mm), 0.068 (1.73mm), 0.042 (1.07mm)
Tool w/die N/A

30-593
Mini UHF and BNC/TNC 5 cavity (Hex, 0.052 (1.32mm), 0.068 (1.73mm), 0.100 (2.54mm), 0.213 (5.41mm), 0.255 (6.48mm)
Tool w/die N/A

30-572
16-26 AWG (1.31mm^2 - .128mm^2) miniature insulated rings, spade and butt splices
Tool w/die N/A

30-579
22-10 AWG (.324mm^2 - 5.261mm^2) insulated terminals/color coded nests
Tool w/die 30-500

30-580
22-8 AWG (.3mm^2 - 8mm^2) non-insulated terminals
Tool w/die N/A

30-586
22-12 AWG (.324mm^2 - 3.31mm^2) Non Insulated Open Barrel Connectors, Commercial Type
Tool w/die N/A

30-594
Fully Insulated quick disconnect terminals with thinner wire barrels 22-10 AWG (.324mm^2 - 5.261mm^2)
Tool w/die N/A

30-599
30-18 AWG (.205mm^2 - 2.08mm^2) Open Barrel Pins and Sockets
Tool w/die N/A

30-479 (Tool w/die)
For insulated terminals, 22-10 AWG with built-in locator

Crimp Tools/Die Sets

F-Type Coaxial Connectors

F-Series Connectors utilize threaded couplings and cable conductors as contacts for CATV and other UHF applications.

- ■ Available in the three most popular styles, RG-6/6Q/59
- ■ All brass design
- ■ One-piece body design
- ■ Crimp with the Crimpmaster™ 30-503 Crimp Tool

	Connector Type	Cable Type	Termination Type	Qty.	Cat. No.
	F	RG-6	Crimp	Card of 4	**84-017**
				Card of 10	**85-037**
				Card of 50	**85-017**
				Box of 100	**86-017**
	F	RG-6 Quad	Crimp	Card of 4	**84-030**
				Card of 10	**85-057**
				Card of 50	**85-030**
				Box of 100	**86-030**
	F	RG-59	Crimp	Card of 4	**84-016**
				Card of 10	**85-036**
				Card of 50	**85-016**

Push-On F-Connectors, RG-6 & RG-59

- ■ No terminator tool required
- ■ All brass nickel-plated construction
- ■ Knurled nut for superior grip
- ■ Designed for indoor use

Connector Type	Cable Type	Qty.	Cat. No.
F	RG-6	Card of 4	**85-065**
		Jar of 50	**89-165**
		Box of 1,500	**85-1165**
F	RG-6 Quad	Card of 4	**85-066**
		Jar of 50	**85-166**
		Box of 1,500	**85-1166**
F	RG-59	Card of 4	**85-067**
		Jar of 50	**85-167**
RCA	RG-6	Card of 10	**89-500**
Description			**Cat. No.**
Coax Connector Kit w/Economy Coax Stripper and four RG-6 Push-on Connectors			**33-320**

Connector Installation Tools

- ■ Works on compression and hex connectors
- ■ New comfort grip handle aids in installing and removing connectors on coax cable   **35-046**

Description	Cat. No.
F & BNC Coax Connector Tool - 8 in.	**35-046**
F & BNC Coax Connector Tool - 12 in.	**35-042**
F & BNC Coax Connector Tool - 16 in.	**35-043**

Twist-On F-Connectors, RG-6 & RG-59

- ■ After cable is stripped, simply twist on connector
- ■ No termination tool required
- ■ Available in two styles, RG-6 and 59

Connector Type	Cable Type	Qty.	Cat. No.
F	RG-6	Card of 10	**85-053**
		Card of 50	**85-039**
		Box of 100	**86-039**
F	RG-59	Card of 4	**84-018**
		Card of 10	**85-035**

Coax Strip and Crimp Tool

- ■ Precision, form-ground stripping holes remove outer jacket and insulation from RG-59 and RG-6 coaxial cable
- ■ Durable blades cut copper-coated steel conductors
- ■ Three crimping nests for crimping F-connectors and ring terminals
- ■ Cushioned, comfort-grip handles

(Kit includes ten connectors)

Description	Cat. No.
Coax Strip & Crimp Tool	**30-433**
Coax Strip & Crimp Tool Kit w/ten RG-6 F-Connectors	**30-433F**

F-Type Adapters & Terminators

- Nickel-plated brass construction
- For 75Ω applications

	Description	Qty.	Cat. No.
	1GHz Female-to-Female F-Type Coaxial Adapter	Card of 10	**85-031**
	3GHz F-Splice Adapter, high bandwidth, OMHz to 3GHz for standard and high definition applications, <0.25dB insertion loss, >25dB return loss	Card of 4	**85-339**
	Female to RCA Male Adapter – converts female F-connectors to male RCA connectors	Card of 2	**85-936**
	Coax Cable F-Terminators - for all open ports on coax wall plates and splitters	Card of 10	**85-038**
	90° F-Adapter - F-female to F-male coax adapter	Card of 2	**85-070**

BNC Connectors

- Connector construction covers both plenum and non-plenum cable jackets
- Captive gold center contacts provide maximum conductivity and minimal resistance
- Nickel plating resists corrosion, tarnish and ensures signal quality
- Meets military specifications. MS39012 and MIL202 where applicable.
- Available in both small and bulk quantities to suit a range of application requirements

	Connector Type	Cable Type	Center Conductor	Jacket	Connector Impedance	Insulation	Qty.	Cat. No.
	BNC Plug	RG-59	20 AWG Solid	Non-Plenum	75 Ohm	Delrin	Bag of 5	**85-502**
							Box of 100	**86-502**
				Plenum			Bag of 5	**85-512**
	BNC Plug	RG-6	18 AWG Solid	Non-Plenum	75 Ohm	Delrin	Bag of 5	**85-545**
	BNC Adapter	—	Jack to Jack	—	50 Ohm	Delrin	Bag of 5	**85-590**
	BNC Twist-on Plug	RG-59	22-23 AWG Solid	Non-Plenum	50 Ohm	Delrin	Bag of 5	**85-480**
	F to BNC Adapter Kit							**LA-4173**

4-Way Indent Crimp Tools

Crimps solid barrel contacts for RS232 interface connectors. Features four-way indent dies (per MS22520 specifications), full cycle ratchet, built-in pin and socket locator and comfort-grip handles.

35-465

- High-grade steel construction for outstanding performance

Description	Cat. No.
20-26 AWG (.519 mm2 - .128 mm2) RS232 D-sub Round Barrel Contacts, Pins or Sockets	**35-465**
Trompeter BNC Connector Center Pins	**35-468**

D-Sub/Double-D Service Tool

- Exact replacement of the AMP open-barrel service tool for stamped contacts and D-Sub contacts
- Also crimps Double-D, high density, miniature contacts
- Includes openings for crimping insulated terminals and cutters for machine screws

Description	Cat. No.
D-Sub/Double-D Service Tool	**30-426**

Connectors/Tools

Punch Down Tools

Storage for extra blade

Adjustment for Hi/Lo settings

Visual indicator for cut or non-cut side

Replaceable Blade

35-485

Release for the storage blade

Multi-colored to help distinguish between cut & non-cut side of the blade

35-492
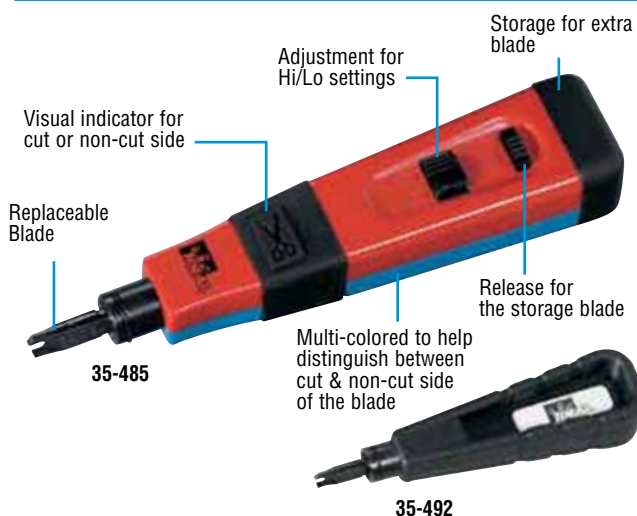
Impact Turn-Lock™ Punch Down Tools	Cat. No.
Punchmaster™ II Punch Down Tool - body only	**35-483**
Punchmaster™ II Punch Down Tool w/110 blade	**35-485**
Punchmaster™ II Punch Down Tool w/66 blade	**35-487**
Non-Impact Turn-Lock™ Punch Down Tools	**Cat. No.**
Punch Down Tool w/110 blade	**35-492**
Economy Punch Down Tool	**Cat. No.**
Non-impact Tool w/permanent non-cut blade	**35-185**

35-495	35-497	35-407	35-478	35-479
110 Blade	66 Blade	110/66 Blade	Krone® Blade	Bix® Blade

Removable Blades*	Cat. No.
110 Turn-Lock™ blade	**35-495**
66 Turn-Lock™ blade	**35-497**
110/66 combo blade w/cutting edges	**35-407**
Krone® blade	**35-478**
Bix® blade	**35-479**

*Not applicable for Economy Punch Down tool.
Bix® is a registered trademark of Nortel. Krone® is a registered trademark of Krone, Inc.

Also available in these kits:

33-505

33-706

Ratchet Telemaster™

- For paired conductors
- Ratchet version of popular Telemaster™ Tool for RJ-45 and RJ-11 modular plugs
- Repeatable crimp action for consistent, high quality connections
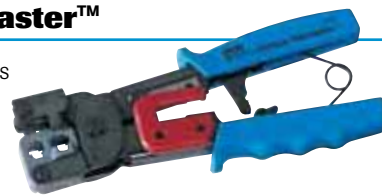
Description	Cat. No.
Ratchet Telemaster™	**30-696**
Replacement Cut & Strip Blade Set for 30-696	**LA-4102**

Telemaster™ Telephone Tools

- For paired conductors
- Multi-function telephone tool cuts, strips and crimps for easy one-tool application
- Steel frame for long-term durability. (Crimps primary modular plug strain relief only)

Description	Kit Cat. No.	Tool Only Cat. No.
Tool for RJ-11 (1, 2, 3 pair) and RJ-45 (4 pair) Plugs	**33-700***	30-496
Tool for RJ-22 (handset) and RJ-11 (1, 2, 3 pair)	**N/A**	30-499
Replacement Cut and Strip Blade Set for Telemaster™	**N/A**	LB-1747

*Kit includes 10 each, RJ-45 8P8C, RJ-11 6P6C and RJ-11 6P4C modular plugs.

Modular Plug Tool Kit

- Multi-function telephone/ network tool; cuts, strips and crimps
- Steel frame construction for durability
- Interchangeable dies allow for crimping RJ-45 and RJ-11 modular plugs
- Tool-less die change for added convenience
- Spring return handle for comfort

Die Set

RJ-11

RJ-45

Description	Cat. No.
Modular Plug Tool Kit - includes ten each RJ-11, 6P4C Telephone Plugs & RJ-45, CAT 5e Data Plugs, RJ-11 & RJ-45 Die Sets	**33-296**

Tools

Kinetic Super™ Wire Stripper/Crimper

- Cuts and strips 22 to 24 AWG
- Crimps IDC Connectors

Description	Cat. No.
Kinetic Super™ Wire Stripper/Crimper	**45-719**
Kinetic Super™ Wire Stripper/Crimper Kit – includes 25 IDC connectors (UR-I, 3-Wire Butt Splice)	**33-719**

Insulation Displacement Connectors (IDC)

IDC connectors create fast splice and tap connections on solid copper wires. Designed for low voltage telecommunication cables.

85-900   **85-925**

85-950

- Moisture-resistant sealant protects wires from corrosion
- Use with solid copper single-conductor wire
- Kinetic Super™ Wire Stripper/Crimper easily cuts and strips 22 to 24 AWG solid wire
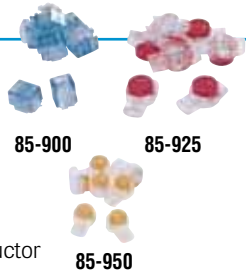
Description	Qty.	Cat. No.
UR-I, 3-Wire Butt Splice IDC	25	**85-925**
UR-I, 2-Wire Butt Splice IDC	100	**86-925**
UR-I, 3-Wire Butt Splice IDC	1,000	**87-925**
IDC Combo Pack	25	**85-960**
UY-I, 2-Wire Butt Splice IDC	25	**85-950**
UB-I, 2-Wire Tap Splice IDC	25	**85-900**

Strain Relief Boots for Modular Plugs

- Prevents broken connector tabs and snagging while extending connector life
- Minimizes cable bends that can reduce data speed and result in data loss
- Dampens cable movement and vibrations that can result in premature connector failure

Description	Qty.	Cat. No.
Strain Relief Boots for Modular Plugs	25	**85-380**

Modular Plugs

85-346 RJ-45

85-344 RJ-11
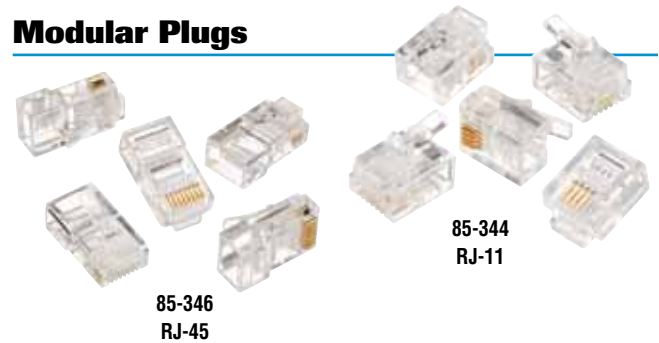
- Plugs are capable of supporting the latest EIA/TIA cable system performance categories when installed in compliance with appropriate EIA/TIA standards and methods
- All plugs work with 24 AWG solid or stranded conductors and round or flat cables.

Description	Qty.	Cat. No.
8-Position 8-Contact, RJ-45	25	**85-346**
	50	**85-396**
	100	**86-396**
	250	**85-1396**
6-Position 6-Contact, RJ-11	25	**85-345**
	100	**86-395**
6-Position 4-Contact, RJ-11	25	**85-344**
	50	**85-394**
	100	**86-394**

CAT 6 RJ-45 Modular Plugs

- Unique three-piece design provides easy installation and optimal performance
- Crimps with a standard RJ-45 crimp die
- 50 micron gold contacts, 8-position, 8-contact
- Suitable for solid or stranded conductors – 22 – 23 AWG

Description	Qty.	Cat. No.
CAT 6 RJ-45 Modular Plugs	25	**85-366**

Wiring Configurations for Modular Plugs

T568-A   **T568B (AT&T)**   **USOC**

Connectors/Modular Plugs

IDEAL
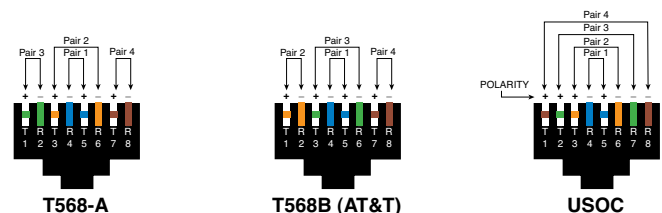
UTP/STP/Coaxial Cable Strippers

■ Adjustable blades can be set for any depth to help ensure nick-free stripping and slitting of cables

45-164

45-162   **45-163**   **45-165**   **45-168**
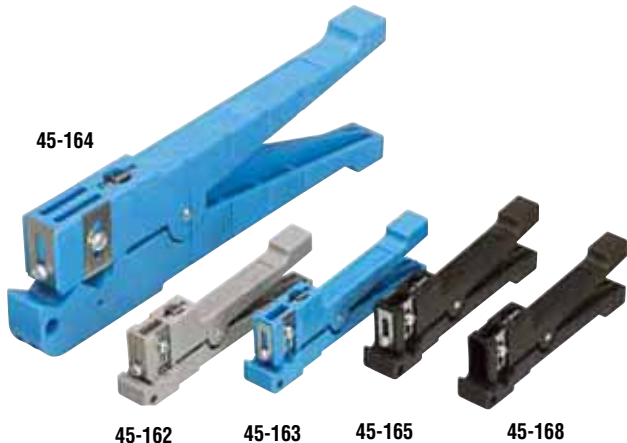
Description	Typical RG Cables	Cat. No.
Coaxial Cable Stripper, up to 1/8 in. (3.2mm) O.D	RG-174, RG-187	**45-162** (Gray)
Coaxial Cable Stripper, 1/8 in. (3.2mm) to 7/32 in. (5.556mm) O.D.	Mini Coax RG-58,CB	**45-163** (Blue)
Coaxial Cable Stripper, 1/4 in. (6.4mm) to 9/16 in. (14.3mm) O.D.	RG-11, RG-8	**45-164** (Blue)
Cable Stripper, 3/16 in. (4.8mm) to 5/16 in. (8mm) O.D.	RG-59/6, UTP Cable	**45-165** (Black)
UTP/STP Ringer Stripper, one blade	UTP/STP	**45-168** (Black)
Replacement Blade Set* for 45-162, 45-163, 45-165	—	**L-9225**
Replacement Blade Set* for 45-164	—	**L-9226**

*A set of blades consists of three straight blades and one round blade.

UTP Cable Stripper

■ Strips Cat 3, 5, 5e & 6 cables
■ One-step stripping

Description	Cat. No.
UTP Cable Stripper	**45-167**

Cyclops® Data Cable Stripper

■ Fast, easy removal of outer sheath insulations (PVC and Plenum types, UTP & STP)

Description	Cat. No.
Data Cable Stripper for unshielded and shielded twisted pair cable	**45-514**

CAT 5e Cable

■ Customizable cable
■ CAT 5e solid 4-pair, CMR rated, 24 AWG, 350 MHz cable

Description	Cat. No.
CAT 5e Cable - 100 ft.	**85-780**

In–Wall Speaker Wire

■ Customizable cable
■ In-wall rated 16 AWG speaker wire

Description	Cat. No.
In-wall 2-conductor Speaker Wire - 50 ft.	**85-770**
In-wall 4-conductor Speaker Wire - 100 ft.	**85-771**

Strippers/Cables

Cable/Satellite/CCTV Coax Stripper

- Designed for fast and easy 1/4" x 1/4" strip lengths
- Blades auto-adjust to different diameter coax cables
- Spinner ring for fast stripping
- Strips RG-6/6 Quad and RG-59 coax cable

NEW

Description	Cat. No.
Video Coax Stripper	**45-321**

Coax Strippers

- Specific adjustments needed for each cable size

Description	Cat. No.	Replacement Cassette
Coax Stripper - 2 Step • For most IDEAL compression connectors and single crimp/twist-on BNC/TNC • Strips 0.250 in. or 6.35mm	**45-526**	**45-524** (Blue)
Coax Stripper - 3 Step • For crimp BNC and TNC connectors • Strips braid 0.240 in. or 6mm and	**45-520**	**45-522** (Black)
Coax Stripper - 3 Step • For dual crimp BNC/TNC and Thinnet BNC conn. • For 735A Belden® cable • Strips braid 0.328 in. or 8.2mm and dielectric 0.109 in. or 2.7mm	**45-521**	**45-523** (Brown)

Coax Cable Stripper

- For RG-6, RG-6 Quad and RG-59
- No adjustment required
- Strips center conductor and cable jacket

33-320

Description	Cat. No.
Coax Cable Stripper	**45-320**
Coax Connector Kit w/four Push-On F-Connectors	**33-320**

RG-11 Coax Stripper

- For use with IDEAL RG-11 compression connectors (89-211, 89-1211), provides 1/4 in. x 1/4 in. strip

Description	Cat. No.
RG-11 Coax Stripper for Compression Connectors	**45-111**

Proper Coax Strip Procedure

1/4 in. x 1/4 in. standard strip.
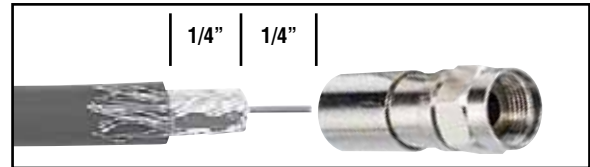
- Proper strip length settings will leave 1/4" of the center conductor exposed and 1/4" of the braiding (shield) exposed.
- After stripping, make sure the tip of the center conductor is straight and not bent. Straighten the conductor if necessary.

Fold back the outer layer of braiding (shield) against the cable jacket. Keep the braid strands as straight and as close to the jacket as possible.

- Note: For Quad Shield cables (with four layers; outer braid, outer foil, inner braid, inner foil), first fold back the outer braiding. Use the 45-074 to score and remove the exposed 1/4" of outer foil. Remove outer foil and fold back inner braiding.

Multi-Strip Coax/UTP Cable Stripper

- Strips UTP, RG-59 and RG-6 coax cable
- Provides a 1/4 in. (minimum) x 1/4 in. strip on coax
- Spare cartridge compartment provided
- Push-on ring for easy connector termination

Description	Cat. No.
Coax/UTP Cable Stripper	**45-603**
RG-6/59 Replacement Cartridge	**LB-2726**
RG-7/11 Replacement Cartridge	**LB-2728**
UTP Replacement Cartridge	**LB-2727**

Coax Stripmaster® Wire Strippers

- Provides precision stripping with easy spring cushion grip
- Knife-type blades feature multiple hole diameters sized for two step removal of outer jacket insulation and center conductor
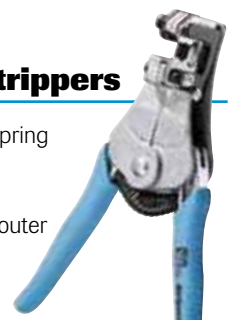
Description	Coax Cable Type (RGU)	Cat. No.	Repl. Blade Cat. No.
Coax Stripmaster® for RG-6	RG-6	**45-262**	**LB-740**
Coax Stripmaster® for RG-59	RG-59	**45-265**	**LB-743**
Coax Stripmaster® for RG-6	RG-6 Quad Shield	**45-282**	**LA-3953**
Coax Stripmaster® for RG-58	RG-58	**45-264**	—
Coax Stripmaster® for MediaTwist	MediaTwist	**45-274**	—

Strippers

Round Cable Slitting and Ringing Tool

- Cuts around cable jacket as well as slits the length of jacket for easy removal
- Use with single or multiple conductor cable up to 1.75 in. O.D.
- Blade adjusts for jacket thicknesses up to .125 in.
- Spare blade in handle base

Description	Cat. No.
Round Cable Slitting and Ringing Tool	**45-144**
Replacement Blades for 45-144 (2/pkg.)	**LB-1748**

Data T®-Cutter

- Cuts round communication cable and maintains cable geometry for better cable performance
- Cuts multi-pair cable up to .500 in. (12.7mm) and coaxial cable up to RG-9/U
- Suitable for soft cables (not ACSR)
- Steel reinforced center conductors can be trimmed with bolt cutting holes
- Locking latch keeps tool closed in pouch
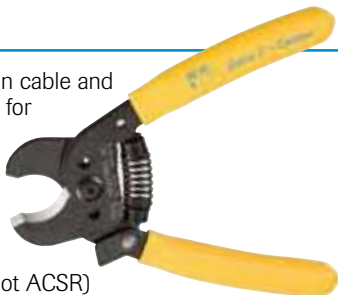
Description	Cat. No.
Data T®-Cutter	**45-074**

Lever™ Snips Electrician's Scissors with Stripping Notches

- Ergonomic design gives added leverage
- Spring-action, mechanical advantage increases stripping leverage and reduces operator fatigue
- Double plated for added rust protection
- Extra-deep serrations grip wire better

Description	Cat. No.
Electrician's Scissors with Stripping Notches	**35-087**

Electrician's Scissors

- Designed for use in telephone and electrical service applications
- Cut up to 16 AWG solid and 12 AWG stranded wire
- Serrated surface on back blade edge cleans wire
- Stripping notches strip 19 and 23 AWG wire
- Chrome over nickel plating

Description	Cat. No.
Electrician's Scissors w/stripping notches	**35-088**

Cable Splicing Kit

- Kit designed for use in telephone and electrical service applications
- High carbon steel blade in Splicing Knife remains sharp and cuts easily through many insulation types
- Kit includes Scissors, Splicing Knife and Leather Holder
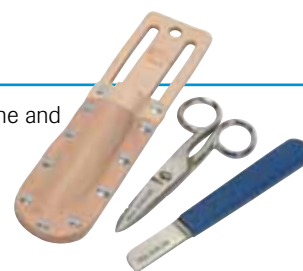
Description	Cat. No.
Cable Splicing Kit (Scissors, Splicing Knife, Leather Holder)	**35-093**

Also available in these kits:

33-917

33-623

Cutters/Scissors

Surge Suppression Cable Splitters

Digital Surge Suppression Cable Splitters withstand a one-time surge up to 6KV on cable line

- Bandwidth: 5 MHz - 1 GHz
- Impedance: 75 ohm
- Over 130 dB of RFI Shielding
- Low 8 db Insertion Loss
- Printed Circuit Board Design
- Nickel-plated Housing
- Splits signals up to 4 outlets

Description	Cat. No.
2-Way Surge Suppression Splitter	**85-135**
4-Way Surge Suppression Splitter	**85-137**

Use terminators (85-038) on all unused ports for optimal performance.

2.4 GHz Satellite and Digital TV Splitters

85-332

85-333

85-334

- Designed for easy mounting over cable
- All ports are F female connectors, 75Ω
- Two grounding screws eliminate the need for grounding block
- All ports power pass

Description	Cat. No.
2-Way, 5MHz - 2.4GHz	**85-332**
3-Way, 5MHz - 2.4GHz	**85-333**
4-Way, 5MHz - 2.4GHz	**85-334**

1 GHz Splitters

- Nickel-plated housing
- High-performance impedance - balanced Printed Circuit Board design
- Bandwidth: 5MHz - 1 GHz Impedance: 75 Ohm; over 120 dB of RFI shielding; Splits signals up to 8 outlets

85-132

85-133

85-134

Description	Cat. No.
High Performance Cable Splitter, 5MHz-1GHz, 2-Way	**85-132**
High Performance Cable Splitter, 5MHz-1GHz, 3-Way	**85-133**
High Performance Cable Splitter, 5MHz-1GHz, 4-Way	**85-134**
Digital Cable Splitter, 8-Way	**85-138**

Grounding Block

- Solid zinc alloy, nickel plated and chromate finished
- High Performance beryllium copper contact
- Electrical performance rated 0 - 3 GHz
- Dual grounding holes can accept up to #6 wire

Description	Cat. No.
3 GHz Double Grounding Block	**85-311**

Diplexer 5 MHz – 2.1 GHz

- Combine or split cable/antenna signals with satellite signals
- Use two Diplexers per installation, one to combine and one to split
- High quality PCB design
- Nickel-plated die-cast zinc housing
- Grounding hole for up to 6 AWG wire

Description	Cat. No.
Diplexer, 2.1 GHz, SATV/TV Combiner Splitter - 2 Amp	**85-323**

Splitters

![IDEAL logo]

Pro Installer Kit – 33-945

- This professional kit includes a mix of tools that are needed by anyone who does low voltage installation or maintenance.
- Kit Includes:

35-427	Large Mouth Bag – 18 in.	**35-473**	Probe Pic and Spudger
30-603	OmniSeal™ Compression Tool	**35-485**	Punchmaster™ II 110 Blade only
30-696	Ratchet Telemaster™		
35-046	F-Connector Tool	**35-497**	66 Blade only
35-087	Lever™-Snips Electrician's Scissors	**35-908**	7-in-1 Twist-a-Nut™ Screwdriver/Nutdriver
35-091	Cable Splicing Knife	**35-4038**	Long Nose Pliers – 8 in.
35-205	Torpedo Level	**45-074**	Data T®-Cutter
35-238	Mag-Tape™ Tape Measure	**45-165**	UTP/STP Stripper
35-275	Jab Saw	**45-526**	Coax Stripper - 2-Step
35-407	110/66 Blade	**62-160**	Tone Generator
35-430	Tongue & Groove Pliers – 10 in.	**62-164**	Amplifier Probe

Master Series Network Service Kit – 33-706

NEW

- Kit allows user to cut, strip, terminate and test data cables.
- Kit Includes:

30-696	Ratchet Telemaster™	**33-864**	PRO Amplifier Probe & Tone Generator Kit
35-485	Punchmaster™ II w/110 Blade		
35-473	Probe Pic and Spudger	**62-096**	Smart6™ Modular Tester
45-165	UTP/STP Stripper	**45-719**	Kinetic Super™ Wire Stripper/ Crimper
35-093	Electrician's Scissors		
35-497	66 Blade only	**85-396**	8-Position, RJ-45 Modular Plugs, qty. 50
62-200	LinkMaster™ Tester		
35-908	7-in-1 Twist-a-Nut™ Screwdriver	**35-410**	Large Mouth Bag – 13 in.

RF Coax Crimp & Compression Kit – 33-410

NEW

- This professional kit allows user to crimp or compress coax connectors. Multiple die sets give the Crimpaster™ Crimp Tool a wide range of connectors it can terminate.
- Kit Includes:

30-793	OmniSeal™ Pro XL Compression Tool	**30-581**	58/59, BNC/TNC Die Set
		30-573	RG-59 Cambridge-type Die Set
30-503	Ratchet Crimp Tool	**30-576**	RG-174, Mini-59 Die Set
45-526	2-Step Coax Stripper	**92-650**	RG-6 RTQ Compression F-Connector, 50/jar
45-520	3-Step Coax Stripper		
45-523	45-521 Replacement Cassette	**35-535**	Mechanic's Bag
45-074	Data T®-Cutter		

Low Voltage Starter Kit – 33-920

NEW

- This starter kit allows user to terminate jacks and modular plugs as well as coax connectors.
- Kit Includes:

30-496	Telemaster™ Telephone Tool	**35-497**	66 Blade only
30-633	Economy Compression Tool	**30-503**	Ratchet Crimp Tool
45-321	Cable/Satellite/CCTV Coax Stripper	**45-168**	UTP/STP Ringer Stripper, one blade
35-492	Punch Down Tool w/110 blade		
45-074	Data T®-Cutter	**35-535**	Mechanic's Bag

Kits

Data/Video Kit – 33-917

- Kit includes professional tools to terminate both coax and twisted pair cables. VDV gives user the ability to test terminated cables.

- Kit Includes:

30-522	Crimpmaster™ Crim Tool for RJ-45 Modular Plugs	**35-473**	Probe Pic and Spudger
30-793	OmniSeal™ Pro XL Compression Tool	**35-485**	Punchmaster™ II Punch Down Tool w/110 Blade
33-856	VDV MultiMedia Cable Tester	**35-908**	Twist-a-Nut™ 7-in-1 Screwdriver
35-046	Coax Connector Tool - F & BNC	**45-074**	Data T®-Cutter
35-088	Electrician's Scissors w/Stripping Notch	**45-165**	UTP Stripper
		45-526	Coax Stripper w/Replaceable Cartridge
35-407	110/66 Blade Combo Punch Down Blade	**62-164**	Amplifier Probe
35-410	Large Mouth Bag — 13 in.		

Coax Termination Hip Kit – 33-624

- IDEAL for anyone who is installing security cameras, cable or satellite TV, or working with general coax compression installations.

- Kit Includes:

30-793	OmniSeal™ Pro XL Compression Tool	**45-603**	Coax/UTP Cable Stripper
45-074	Data T®-Cutter	**36-240**	Cabinet Tip Screwdriver, 1/8 in.

Compression Connector Installation Kit – 33-623

- This basic kit includes tools to cut, strip and terminate coax cables.

- Kit Includes:

45-074	Data T®-Cutter
45-320	Coax Cable Stripper
30-633	Economy Compression Tool
	Pouch w/belt clip

Service Compression Kit – 33-630

- This service kits includes both F and BNC connectors as well as the professional tools to cut, strip and terminate coax cables. Designed for security and cable/satellite installation.

- Kit Includes:

30-793	OmniSeal™ Pro XL Compression Tool	**89-048**	BNC RG-59 Compression Connectors, qty. 10
45-074	Data T®-Cutter	**92-650**	RG-6 RTQ Compression Connectors, 50/jar
45-262	Coax Stripmaster® Wire Stripper for RG-6	**92-660**	RG-6 Plenum Compression Connectors, qty. 10
89-127	Compression F-Connector Port Seals, qty. 5	**LA-3953**	Replacement Blade for 45-262
89-047	BNC RG-6 Compression Connectors, qty. 10		

Economy Compression Kit – 33-620

- The 33-620 is a starter kit that includes the tools and connectors to cut, strip and terminate coax cables.

- Kit Includes:

30-633	Economy Tool	**92-610**	RG-59 RTQ Compression Connectors, qty. 10
45-074	Data T®-Cutter	**92-650**	RG-6 RTQ Compression Connectors, qty. 30
45-526	Coax Stripper		

Kits

Technician's Service Kit – 33-505

■ Kit includes tools to install twisted pair cable on blocks and data jacks.

■ Kit Includes:

35-088	Electrician's Scissors w/ Stripping Notches	**35-497**	66 Blade Only
35-473	Probe Pic & Spudger	**35-908**	7-in-1 Twist-a-Nut™ Screwdriver/Nutdriver
35-485	Punchmaster™ Punch Down Tool w/110 Blade	**45-165**	UTP/STP Stripper
		62-205	Nylon case

RJ-45/11 Four, Six & Eight-Position Combination TelCom Termination Kit – 33-704

■ This TelCom Kit is designed for the user who will terminate RJ-11 and RJ-45 twisted pair cables.

■ Kit Includes:

30-496	Telemaster™ for RJ-11/RJ-45 Plugs
85-344	4-Position, RJ-11 Modular Plugs, qty. 15
85-345	6-Position, RJ-11 Modular Plugs, qty. 15
85-346	8-Position, RJ-45 Modular Plugs, qty. 15

RJ-45 Termination Kit – 33-750

■ This kit is suited for the user who will cut and terminate RJ-45 Modular Plugs. The kit includes 50 modular plugs, enough to make 25 separate cables.

■ Kit Includes:

30-496	Telemaster™ for RJ-11/RJ-45 Plugs
45-165	UTP/Coax Stripper
85-346	8-Position, RJ-45 Modular Plugs, qty. 50

Telemaster™ Crimp Kit – 33-700

■ This kit is the Telemaster™ tool along with 30 modular plugs.

■ Kit Includes:

30-496	Telemaster Tool for RJ-11 (1, 2, 3 pair) and RJ-45 Plugs
85-346	RJ-45 8P8C, qty. 10
86-395	RJ-11 6P6C, qty. 10
85-344	RJ-11 6P4C, qty. 10

NEW

PRO Network/Telco Installer Kit – 33-506

■ This kit gives the user the ability to terminate modular plugs as well as data blocks or jacks.

■ Kit Includes:

30-696	Ratchet Telemaster™	**35-088**	Electrician's Scissors w/Stripper Notches
35-485	Punchmaster™ II 110 Blade only	**35-497**	66 Blade only
35-473	Probe Pic and Spudger	**85-396**	8-Position, RJ-45 Modular Plugs, qty. 50
45-165	UTP/STP Stripper	**35-535**	Mechanic's Bag

Crimpmaster™ 10Base-T RJ-45 Crimping Kit – 33-652

■ This foam fitted kit includes the Crimpmaster™ Crimp Tool with an 8-position die set as well as 200 RJ-45 Modular Plugs. Kit allows user to cut, strip and terminate twisted pair cables.

■ Kit Includes:

30-506	Crimpmaster™ Crimp Tool Frame only	**45-074**	Data T®-Cutter
30-559	8-Position Die Set for RJ-45 Plugs	**45-165**	UTP/Coax Stripper
		86-396	8-Position RJ-45 Plugs, qty. 200

Kits

33-960 Series – Micro OTDRs

Designed with installers in mind, 33-960 Series Micro OTDRs offer excellent performance and ease of use in a truly handheld, lightweight and rugged package. Available as either an 850/1300 nm (multimode) or 850/1300/1310/1550 nm (multimode and single mode) OTDR, they are ideally suited for the installation and troubleshooting of LAN, campus and WAN fiber networks. Both models combine high measurement precision with the user friendliness of one-button operation resulting in accurate characterization of connectors and splices in addition to fast and reliable fault location.

With the MB option, these OTDRs provide clear PASS/FAIL indications. Distance, loss and ORL for each event is reported in a trace summary table making full certification of the link possible. Each OTDR is shipped in a kit containing everything you need to get started on the job, including a ruggedized carrying case, PC software, rechargeable batteries and wall charger.

- **Short Attenuation and Event Dead Zones** — for accurate location and characterization of events
- **Autotest Function** — provides simple one-button operation
- **Fast Data Acquisition** — important for troubleshooting intermittent problems
- **Certifying OTDR Option** — for tier-2 certification
- **Optional Macro Bend detection** — accurately detects macro bends in singlemode fiber

Specifications

Testing	33-960-10	33-960-30
Wavelength [nm]	850, 1300	850, 1300, 1310, 1550
Dynamic Range [dB]	24 / 25	24 / 25 / 29 / 28
Attenuation dead zone [m]	11 / 11	11 / 11 / 11 / 12
Pulse width [ns]	10, 30, 100, 275, 1000, 2500, 10000	
Event dead zone [m]	2.5 worst case	
Launch Conditions (MM)	Class CPR 1 or 2	
Linearity [dB / dB]	± 0.03	
Loss threshold [dB]	0.05	
Loss resolution [dB]	0.01	
Sampling resolution [m]	0.16 to 5	
Sampling points	Up to 30000	
Typical real time refresh [1/sec]	4	
Distance uncertainty [m]	± (0.75 + 0.0025% x distance + sampling resolution)	
Distance range [km]	0.1 to 40	MM: 0.1 to 40 SM: 0.65 to 160
Stable source output power [dBm]	-1.5	MM: -1.5 SM -6.5
Laser Safety	21 CFR 1040.10 and IEC 60825-1:1993+A2:2001 / Class 1M	

Hardware	All Models
Memory capacity	500 traces
Data connectivity	USB A and USB B
Size (HxWxD) [mm]	250 x 125 x 75 (9.8 x 4.9 x 2.9 in.)
Weight	1 kg (2.2 lbs.)
Temperature	Operating: -18°C to 50°C , Storage: -40°C to 70°C
Batteries	2 x Li-Ion
Power supply (mains)	110 – 230 V AC
Power supply (unit)	9 - 24 V DC, 12 Watt
Operating time	8 hours (per Bellcore™ TR-NWT-001138)
Warranty	1 year

Kits

33-960-10 MM OTDR Kit	33-960-30 Quad OTDR Kit
MM OTDR with 850/1300nm	Quad OTDR with 850/1300/1310/1550nm
Ruggedized carrying case	Ruggedized carrying case
PC-Software	PC-Software
CD with manual and Quick Reference Guide	CD with manual and Quick Reference Guide
Wall charger	Wall charger
2 Li-Ion rechargeable batteries	2 Li-Ion rechargeable batteries
SC Adapter	1 SC and 1 FC Adapter
33-960-10MB	OTDR Kit with Tier 2 certification option and macro bend detection
33-960-30MB	

Ordering Information

Description	Cat. No.
200x and 400x video probe w/USB port	**33-960-VP**
Adapter for FC connectors	**33-961-10**
Adapter for SC connectors	**33-961-20**
Adapter for ST connectors	**33-961-30**
Adapter for E2000 connectors	**33-961-40**
Adapter for DIN 47256 connectors	**33-961-50**
Adapter for HMS-10/AG connectors	**33-961-60**
Cleaning Kit	**1912-00-1621**
Rechargeable battery	**33-960-BP**
Foldable USB Keyboard	**33-960-KB**

OTDR

FiberMASTER™ Fiber Optic Test Kit

Measure fiber optic power in milliwatts (mW) and decibel-milliwatts (dBm) to test and troubleshoot active LANs. Quickly measure cabling loss with the automatic calibration feature that stores reference power from any light source for quick dB loss calculations. Plus, the 1490nm wavelength measurement mode is perfect for troubleshooting emerging Fiber-To-The-Home cabling systems.

- ■ **Fiber Optic Power Meter & Light Source** — Four wavelength power meter for multimode and single mode testing, and 850nm multimode LED light source.

- ■ **Calibration Function** — Stores reference power level for quick dB loss measurements eliminating the need to manually calculate loss.

- ■ **Save Time and Money** — Power meter features 2.5mm universal and FC adapters, light source includes ST®, SC and FC adapters to test the most common interfaces.

- ■ **Ready for FTTx** — 1490nm measurement wavelength for use with nearly all single mode Fiber-To-The-Home applications.

- ■ **Designed for the Field** — Unique "docking" light source and easy three-button operation make this the perfect fiber tester for use in the field.

FiberMASTER™ Kit Includes:
- 33-926 Light source, 850nm LED with ST®, SC and FC adapters
- 33-927 Power meter, 4 wavelength with universal 2.5mm and fixed FC adapter
- 2x FC-SC 62.5um multimode cables
- 1 SC calibration coupler
- Carrying case
- English, Spanish, German, French, Portuguese, Italian and Chinese user's manual

Description	Cat. No.
850NM Fiber light source	**33-926**
Power meter only	**33-927**
Power meter with 850NM fiber light source (33-926 & 33-927)	**33-928**
Four wavelength MM/SM light source only	**33-929**
Power meter with four wavelength MM/SM light source (33-927 & 33-929)	**33-931**

CE

Power Meter Specifications

Wavelength	850, 1300/1310, 1490, 1550nm
Detector	InGaAs
Measurement Range	-60 to +3dBm
Accuracy	±5%
Display Resolution	.01
Connector	Universal 2.5mm w/FC adapter
Power Supply	AAA Alkaline Battery x 3
Operating Time	360 hours
Operating Temp	-10 to +60°C
Storage Temp	-25 to +70°C

Light Source Specifications

Wavelength	850, 1300, 1310, 1550nm laser diode
Output Power	-6 to -7 dBm Typical
Stability	.05dB after 15min, 0.1dB over 8 hrs
Connector	2.5mm w/ST®, SC, FC adapters
Power Supply	AAA Alkaline Battery x 3
Operating Time	40 hours
Operating Temp	-10 to +60°C
Storage Temp	-25 to +70°C

33-929

Fiber Optic Tester

1-800-435-0705 for Customer Service

Fiber Inspection Microscope

- 100X magnification for viewing multimode connectors

- Includes 2.5mm connector "Universal Adapter" for FC, ST® and SC style connectors

- Oblique illumination provides excellent view of ferrule cleanliness and core condition

- Rugged, rubberized metal housing, precision glass optics and a built-in laser safety filter

- White LED illumination delivers 100,000 hours bulb life

- Optional 200X Conversion Eyepiece threads on for viewing finish/polish of singlemode connectors

Description	Cat. No.
Fiber Inspection Microscope w/carrying case	**45-332**
1.25mm Connector Adapter	**45-334**
MTRJ-Style Connector Adapter	**45-335**
200X Conversion Eyepiece for Singlemode Connectors	**45-336**

Note: ST® is a registered trademark of AT&T.

Visual Fault Finder

Laser light source used to locate breaks, faulty splices and crimps

- 2.5mm Universal Adapter for all ST®, SC and FC connectors

- Useful over a distance of 5km (3 miles)

- Two AA batteries provide over 30 hours of continuous use

- Slim, pocket-sized tool in rugged solid aluminum body

- Nylon carrying case with belt loop included

Description	Cat. No.
Visual Fault Finder	**VFF5**

Note: ST® is a registered trademark of AT&T.

Stripmaster® Ribbon Fiber Jacket Strippers

- Removes jacket from Ribbon Fiber without damage to the Kevlar® strength member of the Ribbon Fiber

Note: Frame and blade-set sold separately.

Description	Cat. No.
Stripmaster® Wire Stripper Frame only	**L-5620**
Blade-set for use with Corning Plenum and Riser Ribbon Fiber Cable	**LB-1152**
Blade-set for use with Corning "Fanout" Ribbon Cable	**LB-1153**

Note: Kevlar® is a registered trademark of DuPont.

MiniLite-Strip™ Optical Fiber Stripper

- Small strip notch engineered and precision-ground to strip 900 micron or 250 micron buffer coatings from 125 micron fiber

- Larger round strip notch machined to remove the 3mm outer jacket

- Strip notches pre-set and locked, no field adjustment necessary

Description	Cat. No.
MiniLite-Strip™ Optical Fiber Stripper	**45-352**

Lite-Strip™ Optical Fiber Stripper

V-notch blades strip a wide range of outer cable jacket. Precision-ground, replaceable knife-type blades strip tight buffer tube insulations (900μm). Also strips mechanically strippable coatings from 250 microns to 900 microns.

- Replaceable precision-ground blades cleanly strip buffer coatings

- New funneled hole makes cable insertion easier

- Improved spring mounting returns handles to original position after every application

- One-step, 900 micron stripping hole provides broader stripping range

- Extra durable to withstand normal drops without requiring tool realignment

- New gauge color makes fiber and hole identification easier

- Improved comfort-grip handles for an easier, more comfortable stripping process
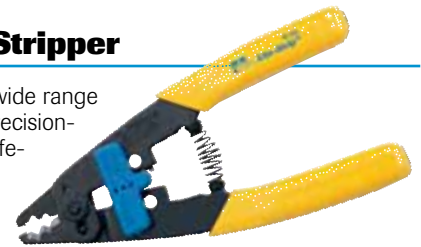
Description	Fiber Sizes	Cat. No.
Lite-Strip™ Optical Fiber Stripper (900μm/250μm)	125μm, 140μm	**45-350**

Fiber Optic Tools

DualScribe™ Double-Ended Fiber Optic Scribes

- Three professional quality blade styles to choose from to meet your specific needs – Ruby, Sapphire, Carbide
- Color-coded handles for quick, easy identification
  Red – Ruby
  Blue – Sapphire
  Black – Carbide
- 30° single bevel – DualScribe™ reversible blade doubles tool life
- Soft non-slip grip provides precise control during scribing
- Clear safety cap protects the blades from damage when not in use

Description	Handle Color	Cat. No.
Ruby Blade Fiber Optic Scribe	Red	45-357
Sapphire Blade Fiber Optic Scribe	Blue	45-358
Carbide Blade Fiber Optic Scribe	Black	45-359

Serrated Cutter (For Kevlar®) with Breaker Notch

- Two-Step process significantly increases the life of this rugged tool
- Superior quality high-carbon stainless steel with molybdenum and vanadium provides the super-hard edges needed to stand up to the demands of today's market
- Textured cushioned-grip handles
- Value-priced for contractors, cable assembly houses, fiber installers/technicians and tool kits

Description	Cat. No.
Serrated Cutter w/Breaker Notch (Patent pending)	45-344

Note: Kevlar® is a registered trademark of DuPont.

Split-Tip Fiber Optic Swabs

- Split-tip design cleans fiber easier and more efficiently than other methods
- Tube/handle is pre-loaded with 99% isopropyl alcohol
- A single swab can be used for many cleanings or until the alcohol is gone
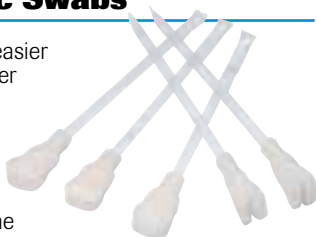
Description	Qty.	Cat. No.
Split-Tip Fiber Optic Swabs	Bag of 20	45-360

Plastic Polishing Fixture

- Universal fitting accepts all ST®, SC and FC connectors with 2.5mm ferrules
- Economically priced
- Grooved face for polishing efficiency
- Precision tool used by manufacturers, contractors and in tool kits
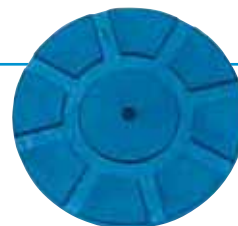
Description	Cat. No.
Plastic Polishing Fixture	45-342

Note: ST® is a registered trademark of AT&T.

Stainless Steel Polishing Fixture for Optical Fiber ST® and SC Type Connectors

Produces polished fiber optic ST® and SC type connectors for optimum connector performance.

- Precision-machined, stainless-steel disk provides accurate polishing angle for desired end face finish
- Stainless-steel hardness maintains long life and resists uneven wear
- Stepped surface reduces drag and friction for easier polishing

Description	Cat. No.
Polishing Fixture for Optical Fiber ST/ST® Type Connectors	45-341

Note: ST® is a registered trademark of AT&T.

Polishing Films for Fiber Optic Connectors

- For optimum connector polishing results, we recommend a three-step procedure using 0.5µm, 3µm and 12µm 3 in. x 6 in. aluminum oxide polishing films
- Lot-to-lot consistency in our films means repeatable connector finishes on ceramic, stainless steel, plastic and composite ferrules
- A single sheet will typically yield 10 to 20 connectors when using the recommended 3-step procedure
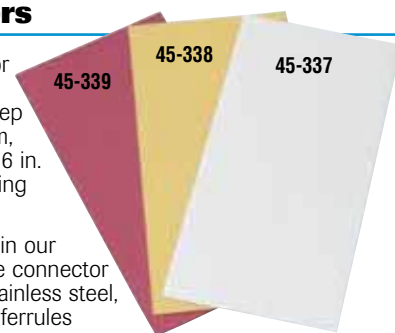
Description	Color	Qty.	Cat. No.
0.5µm, 3" x 5", Aluminum Oxide	Ivory	20 films/sleeve	45-337
3.0µm, 3" x 5", Aluminum Oxide	Lt. Yellow	20 films/sleeve	45-338
12µm, 3" x 5", Aluminum Oxide	Lt. Red	20 films/sleeve	45-339

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DATACOMM/NETWORKS