

**B**

**Wire Installation**





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

Fish Tapes

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

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

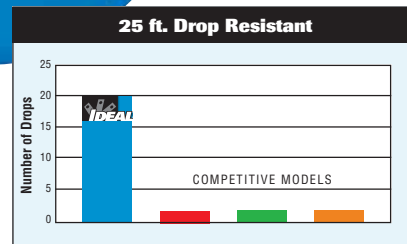
**Tuff-Grip™ Handle**  
Large, comfortable ergonomically-designed, grasp from the top or side. Allows for use with gloves.

**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**

## Why IDEAL?

### Tuff-Grip™ Pro 25 ft. Drop Resistant Test

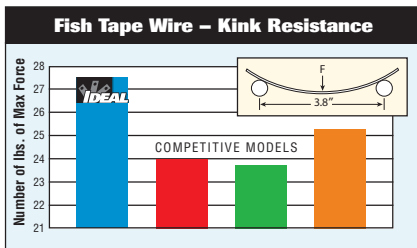


#### Drop Test

Fish tape samples were subjected to a 25 ft. drop onto concrete. All samples were new and dropped side by side, under the same conditions, and at the same time. After each drop the samples were examined for structural damage.

**Importance:** Strong, durable, long lasting

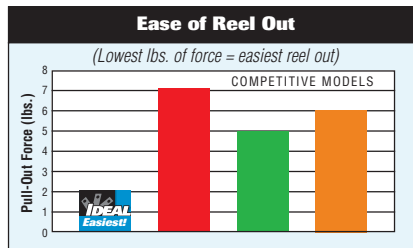
Visit [www.idealindustries.com](http://www.idealindustries.com), click the Fish Tape link and watch our Drop Test video today!



#### Kink Resistance Test (Blued Steel)

The test was performed by supporting the sample at two points (3.8 in. apart) and then exerting a force centrally between the two points. The maximum force that the wire would exert upon 1 in. of deflection was recorded.

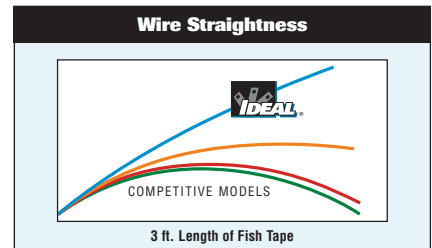
**Importance:** The better a tape resists kinking the longer it will serve you. Kinked tape is almost impossible to push through conduit. Kink resistance tape makes your job easier.



#### Ease of Reel-Out Test (Blued Steel)

This test was performed by connecting a force gage to the hook of the wire and then pulling out the wire at a slow pace for about 10 ft. The fish tape case was held by a person. Three measurements were taken and the average appears.

**Importance:** An easy reel out allows you to finish the job faster without straining your body.



#### Wire Straightness Test (Blued Steel)

This test was performed by placing each sample of wire on a table such that it was touching two pins that were 3 ft. apart. (A straight edge connected the two pins.) Each sample was pressed toward the straight edge and then slowly released until the wire came to rest at an equilibrium state. The maximum distance from the wire to the straight edge was recorded.

**Importance:** The straighter the steel as it pays out of the fish tape case the further and easier it will push down conduits.

# Wire Installation

## Fish Tape Cases

### 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™

- 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

- 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
- Ultrahard nylon jacket adds slipperiness, protects cables and the 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



## Blued-Steel™ Fish Tapes

- High column strength for longer runs
- Non-oily finish resists rust

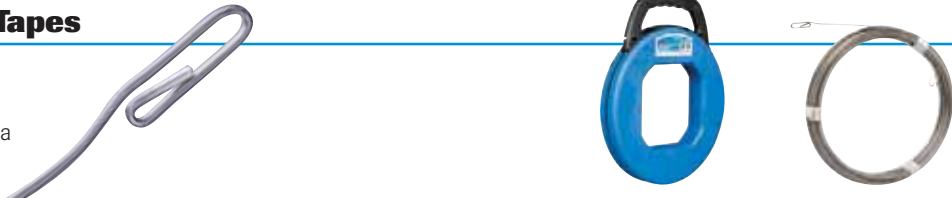


Length (ft.)	Width & Thickness	Case Diameter	End Type	Tuff-Grip™ Pro	Rapid-Pak®	Thumb-Winder™	Replacement Tapes
<b>Blued Steel™</b>							
25	1/8 in. x .045 in.	7 in.	Formed hook	–	–	31-012	–
50	1/8 in. x .045 in.	7 in.	Formed hook	–	–	31-010	–
50	1/8 in. x .060 in.	9 in.	Formed hook	31-033**	–	–	–
60	1/8 in. x .060 in.	12 in.	Formed hook	31-055	–	–	31-035
100	1/8 in. x .060 in.	12 in.	Formed hook	–	31-081†	–	31-036
120	1/8 in. x .060 in.	12 in.	Formed hook	31-056	–	–	31-036
200	1/8 in. x .060 in.	12 in.	Formed hook	–	31-098†	–	31-038
240	1/8 in. x .060 in.	12 in.	Formed hook	31-057	–	–	31-038
500	1/8 in. x .060 in.	None	Formed hook	–	–	–	31-3380
700	1/8 in. x .060 in.	None	Formed hook	–	–	–	31-3379
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.	12 in.	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

†16 in. diameter Rapid-Pak® Case  
 \*\*9 in. diameter Tuff-Grip™ Pro Case

## Stainless Steel Fish Tapes

- Won't rust or corrode in humid environments
- Stainless steel design provides a smooth pay-out

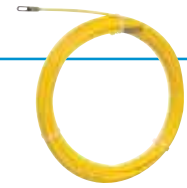


Length (ft.)	Width & Thickness	Case Diameter	End Type	Tuff-Grip™ Pro	Replacement Tapes
<b>Stainless Steel</b>					
120	1/8 in. x .060 in.	12 in.	Formed hook	31-066	31-073
240	1/8 in. x .060 in.	12 in.	Formed hook	31-067	31-074

# Wire Installation

## S-Class® Fish Tape

- Non-conductive tape for use around live circuits
- Structural glass core gives you a more durable fiberglass tape

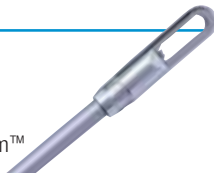


Length (ft.)	Width & Thickness	Case Diameter	End Type	Tuff-Grip™ Pro	Rapid-Pak®	Replacement Tapes
<b>S-Class® Nylon Jacketed Fiberglass</b>						
50	3/16 in. diameter	12 in.	Leader	31-060	31-187†	31-150
50	3/16 in. diameter	12 in.	Eyelet	31-062	31-190†	31-160
100	3/16 in. diameter	12 in.	Leader	31-061	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
300	3/16 in. diameter	None	Eyelet	–	–	31-2138

\*16 in. diameter Tuff-Grip™ Case †16 in. diameter Rapid-Pak® Case

## Zoom™ Fish Tapes

- Great for hard to navigate piping 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
<b>Zoom™ Nylon Jacketed Stainless Steel</b>					
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

\*16 in. diameter Tuff-Grip™ Case

## Volt-Guard™ Fish Tapes

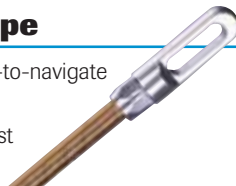
- Non-conductive up to 1000V
- Elliptical design gives the Volt-Guard™ greater pushing power



Length (ft.)	Width & Thickness	Case Diameter	End Type	Tuff-Grip™ Pro	Replacement Tapes
<b>Fiberglass</b>					
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
<b>Gold-Fish® Brass Plated Steel Coil</b>					
25	3/16 in. diameter	None	Eyelet	–	31-140
50	3/16 in. diameter	12 in.	Eyelet	31-144	31-141
100	3/16 in. diameter	None	Eyelet	–	31-142

## 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.

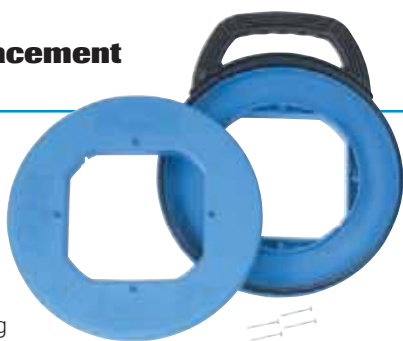


Description	Cat. No.
Field Application Kit includes: Crimpmaster™ Crimp Tool frame, die set, S-Class® eyelets (2), S-Class® leaders (2), Zoom™ eyelets (2) & instant adhesive	<b>31-156</b>
Die Set Kit* includes: eyelets (2), leaders (2) & instant adhesive	<b>31-164</b>
Replacement eyelets (4) for S-Class®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

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

## Fish Tape Replacement Cases

- Durable impact-resistant case
- Easy-to-install replacement tapes
- Full-perimeter handle band helps prolong life by keeping more dirt and moisture out
- Large, ergonomically designed handle allows for a comfortable grasp from the top or side, and for use with gloves



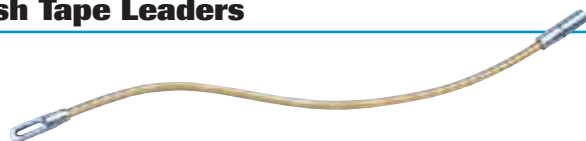
*Screws sold separately, case requires four LA-4218.*

Description	Cat. No.
12 in. Tuff-Grip™ Pro Replacement Case	<b>K-8985</b>
Replacement Screws	<b>LA-4218</b>

### 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.

## Fish Tape Leaders

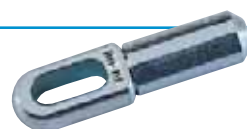


- Guides fish tape around bends in conduit
- Handles up to six 10 AWG bare wires
- Pulls up to 500 lbs.

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

## Fish Tape Swivel Ball

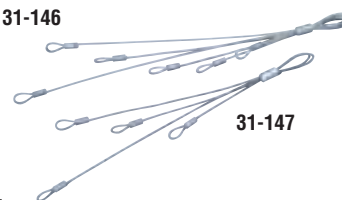
- Swivels to prevent wires from twisting during pull
- Designed for use on 1/8 in. steel or stainless steel tape
- Eyelet holds up to four 10 AWG bare wires



Description	Cat. No.
Fish Tape Swivel Ball	<b>31-085</b>

## Multi-Wire Pulling Leaders

- Pulls multiple wires at one time **31-146**
- 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

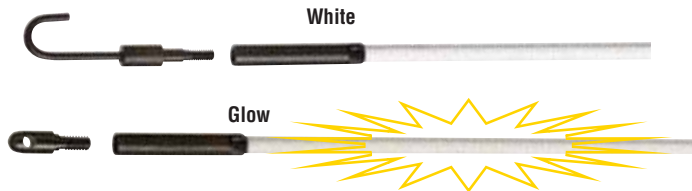


Description	Cat. No.
Multi-Wire Pulling Leader – 6-loop	<b>31-146</b>
Multi-Wire Pulling Leader – 4-loop	<b>31-147</b>

# Wire Installation

## 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



### Tuff-Rod™ Regular Flex

- 1/4 in. white fiberglass
- Extra stiffness for added control when maneuvering wires

### 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)	<b>31-611</b>
24 ft. kit with fixed bullet nose and threaded bullet nose (4 ea. 6 ft. sections)	<b>31-612</b>
12 pack of 1/4 in. x 4 ft. Regular Flex Replacement Rods	<b>31-643</b>
12 pack of 1/4 in. x 6 ft. Regular Flex Replacement Rods	<b>31-644</b>

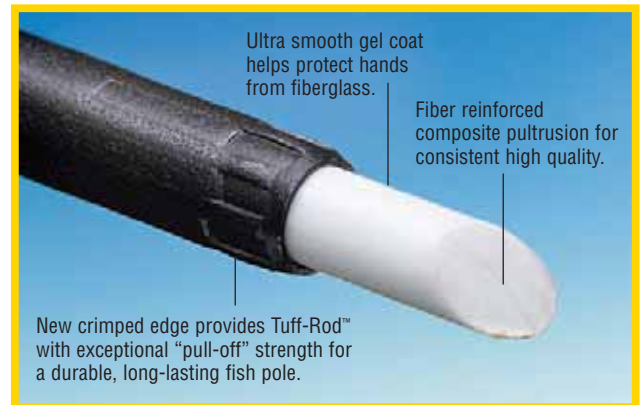
Description	Cat. No.
12 ft. kit with fixed bullet nose and threaded J hook (3 ea. 4 ft. sections)	<b>31-631</b>
30 ft. kit with fixed bullet nose and threaded bullet nose (5 ea. 6 ft. sections)	<b>31-633</b>
12 pack of 3/16 in. x 4 ft. Extra Flex Glow Replacement Rods	<b>31-647</b>
12 pack of 3/16 in.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

### Accessory Kits

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



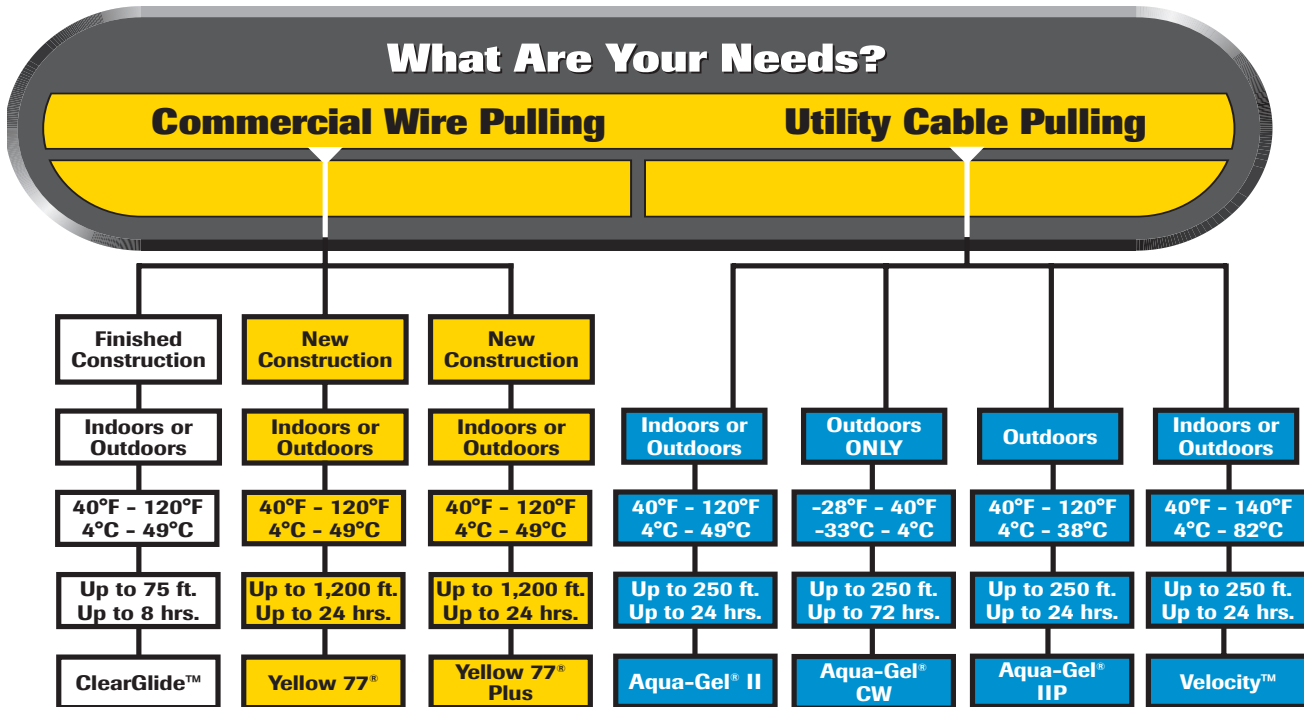
Description	Cat. No.
3/16 in. Accessory kit	<b>31-651</b>
1/4 in. Accessory kit	<b>31-652</b>





## Select-a-Lubricant

Lubricants



## Wire Pulling Lubricant Selection Guide



	ClearGlide™ Wire Pulling Lubricant	Yellow 77® Wire Pulling Lubricant	Yellow 77® Plus Wire Pulling Lubricant	Aqua-Gel® II Cable Pulling Lubricant	Aqua-Gel® CW Cable Pulling Lubricant	Aqua-Gel® IIP Cable 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*	.17	.08	.16	.11	.07	.11	.14
Safe Storage Temperature Range	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 Falex Corporation, an independent testing agency specializing in tribology tests, using the Falex-ISC On Disk Tribometer System machine with the ASTM G99 modified method.

## 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

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



## 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

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





## 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 range – 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



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



## Velocity™ Wire Pulling Lubricant

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



Description	Cat. No.
1-qt. Squeeze bottle	31-276
1-gal. Bucket	31-277
5-gal. Bucket	31-278
5-gal. Bucket – 36 Buckets/pallet	31-278BP
55-gal. Drum	31-279
1-qt. Bag (12 bags/bucket)	31-282
1/2-gal. Bag (6 bags/bucket)	31-283



## 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
- Pulls with several bends
- Rough, old or dirty conduits
- High temperatures
- High percent conduit fill

## Selection & Application Guides

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

Web Based Selection & Application Guide:  
<http://ideal.sdfiles.com/#select>



1-800-435-0705 for Customer Service

## 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

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



## Aqua-Gel® II Cable Pulling Lubricant

- Polymer-based formula provides maximum tension reduction in high-stress electrical and communications 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

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



### 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



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

### Bender Putter

- Steel shaft with rubber grip and conduit bender-shaped head
- Includes velour pouch to protect head



Description	Cat. No.
Bender Putter	<b>74-999</b>

### 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	Qty.	Cat. No.
IDEAL Wipes™, 12 in. x 9 in.	82/can	<b>38-500</b>

### 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



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

### Twist-a-Nut™ Conduit Deburring Tool



- 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)

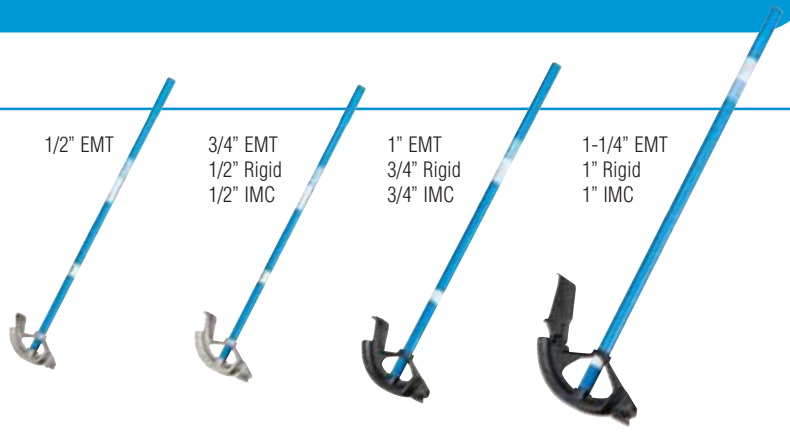


Description	Cat. No.
Conduit Deburring Tool, slotted tip	<b>35-083</b>
Conduit Deburring Tool - head only, slotted tip	<b>35-096</b>
Conduit Deburring Tool, square tip	<b>35-075</b>
Conduit Deburring Tool - head only, #2 square tip	<b>35-098</b>
Replacement Blades (2/pack)	<b>35-097</b>

# Wire Installation

## 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



## Ductile Iron

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



### 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

### 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

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



### 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

### 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

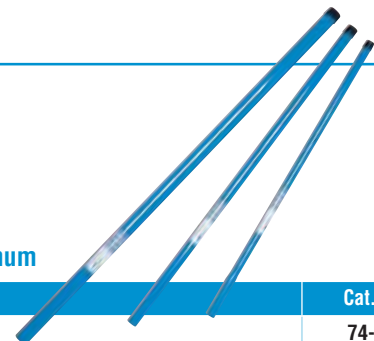
- Rugged, steel construction for long-term durability
- Baked-on blue enamel finish resists corrosion and enhances visibility
- Convenient bending guide for offset bends

### 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



## 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

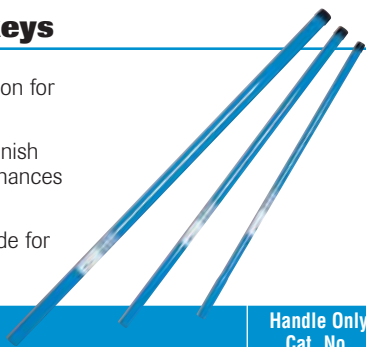


- High-strength ductile iron construction
- Grooved internal hook helps prevent conduit from slipping
- Lifetime replacement guarantee

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



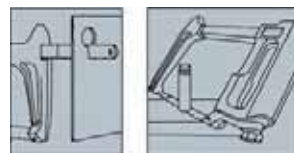
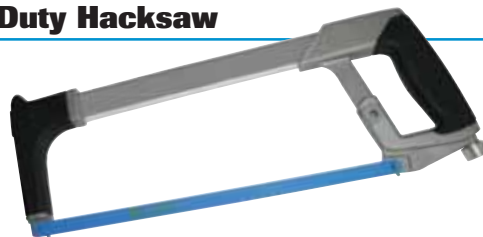
Conduit Type and Size	Handle Only Cat. No.
1/2 in. EMT	74-019
3/4 in. EMT, 1/2 in. Rigid & 1/2 in. IMC	74-019
1 in. EMT, 3/4 in. Rigid & 3/4 in. IMC	74-020
1-1/4 in. EMT, 1 in. Rigid & 1 in. IMC	74-021

## 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



## 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

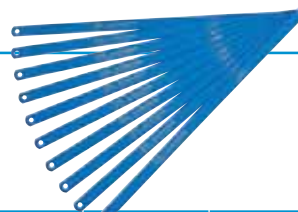


- Angled handle for easier cutting
- Blade can easily be adjusted for flush cutting
- Easy tensioning wing-nut keeps blades tight for straighter cuts
- Cushioned ergonomic grip for performance and comfort
- Includes 12 in. x 24T bi-metal blade

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

# Wire Installation

## 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



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

## 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



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

## 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



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

## 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.	<b>31-347</b>

## 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



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

† Eye splice on working end.

## 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

### Foam Carriers

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

## 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

### Line Packages

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