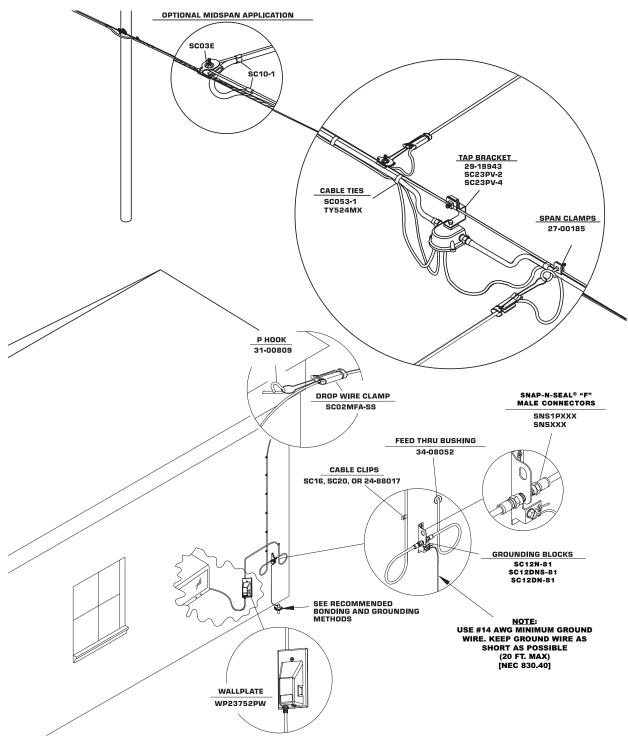
DIAMOND®/SACHS® PRODUC	PAGES 2-6	
	Broadband Drop System	3
DROP HARDWARE		PAGES 7-20
	Drop Wire Clamps Span Clamps Clamps, Conduit, Pipe Clamps Brackets Hooks, Rings & Screw Fixtures Clips & Clamps Drive Rings & Tool	9-10 11 12-13 14-15 16-18
CONSTRUCTION HARDWARE	:	PAGES 21-25
	Lashed Cable Supports Clamps & J Hooks Hangers & Brackets Aerial Cable Damper.	23 24
BONDING & GROUNDING HA	RDWARE	PAGES 26-35
	Bonding Clamps	
FASTENING HARDWARE & EL	LECTRICIAN'S SUPPLIES	PAGES 36-64
	Cable Ties Deltec® Cable Support System Cable Tie Installation Tools Hardware & Rough-In Products Wallplates Chemical Products Wire Pulling Lubricants	
HAND TOOLS		PAGES 65-70
	Terminal Wrenches, Scissors & Knives Pliers & Wrenches Screwdrivers Wiring Tools & Cable Cutters Electrician's Hand Tools & Accessories Drill Bits	
SIGNAL SECURITY		PAGES 71-72
	Trap Shields & Supports Trap Brackets	

INDEX

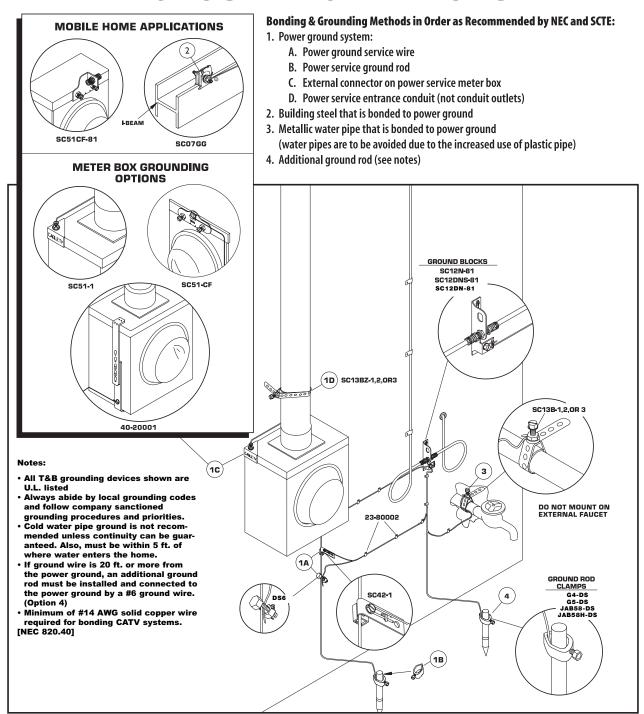
PAGES 73-76

BROADBAND DROP SYSTEM



Please note, these pictures depict a typical representation of only T&B products that may be used for grounding/bonding, as well as drop installation.

RECOMMENDED CATV BONDING & GROUNDING METHODS



Please note, these pictures depict a typical representation of only T&B products that may be used for grounding/bonding, as well as drop installation.

DOES YOUR HARDWARE PASS THE TEST OF TIME?

THE DIAMOND® DIFFERENCE

Diamond products stand the test of time. The unique, proprietary approach that we have to mechanical galvanizing, and the standards that we insist on for our raw materials, ensure that Diamond parts can withstand corrosive environments for decades, a factor that is important today since replacement costs are so high. The photographs below clearly demonstrate the Diamond Difference. Even after 672 hours under the same conditions, Diamond mechanically galvanized parts keep their integrity.

SALT SPRAY TEST RESULTS*

5% salt solution (as used in ASTM B117) is sprayed upon parts in a closed chamber until the first indication of red rust appears.

48 Hours First indication of Red Rust on competitor product.



336 Hours Bell Spec Standard



672 Hours
First Indication of Red Rust
on Diamond Product



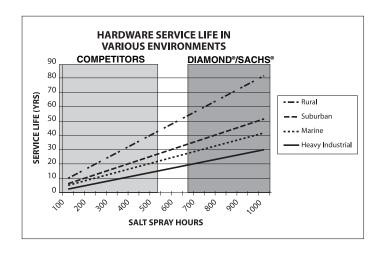
*Parts tested to ASTM B117 under laboratory conditions within Thomas & Betts certified testing facility

How Service Life in Hours* Equates to Service Life in Years in Different Environments

ENVIRONMENT	48 HOURS	336 HOURS	672 HOURS	850 HOURS
Rural	4.2 Years	30 Years	60 Years	75 Years
Suburban	2.2 Years	16 Years	32 Years	40 Years
Moderate Industrial	1.5 Years	11 Years	22 Years	28 Years
Heavy Industrial	11 Months	6.5 Years	13 Years	17 Years

^{*} Under test conditions

INFORMATION SOURCE: IRON AGE MAGAZINE (ZINC INSTITUTE) OCTOBER 1980 ISSUE



THE MECHANICAL GALVANIZING PROCESS

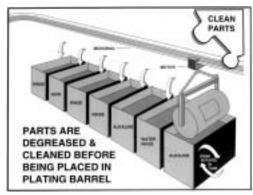


Fig 1

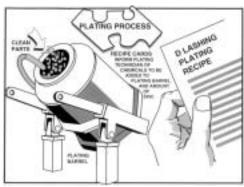


Fig 2

The Diamond® Difference

What is RED RUST?

Dictionary Definition:

Red Rust is the red or orange coating, which forms on steel surfaces, exposed to moisture and air.

Scientific Explanation:

Rust is the iron oxidation of steel.

Fact:

If exposed long enough to moisture and air, steel will wear away to nothing, without a protective coating.

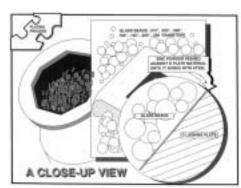


Fig 3

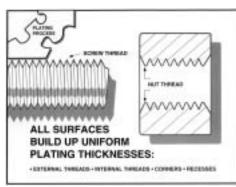


Fig 4

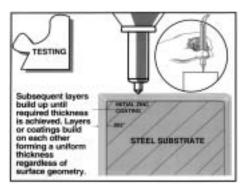


Fig 5

DIAMOND ADVANTAGE

We mechanically galvanize to ensure that Diamond products will stand the test of time.

- Mechanically galvanized parts have a superior resistance to corrosion.
- It is the most effective method for small parts.
- The process does not clog the threads of nuts and bolts, thus parts can be put together quickly and easily.
- Threaded parts do not 'gall' producing more accurate torque-tension relationships.
- Eliminates the problem of Hydrogen Embrittlement. Heat-treated parts do not detemper or weaken since the galvanizing process takes place at room temperature.

DIAMOND DIFFERENCE

We do not depend on the process of mechanical galvanizing alone to provide us with products that will stand the test of time.

- Raw materials are carefully selected and must meet or exceed the standards we have established over the years.
- How these materials are combined and prepared is unique to the Thomas & Betts' Diamond method of manufacture.
- Our emphasis is on quality control and process management.
- Every stage of the manufacturing and galvanizing process is controlled and monitored.
- To achieve the Diamond Difference no corners can be cut and no process steps excluded.

WHAT IS MECHANICAL GALVANIZING?

It is a plating process whereby zinc is mechanically deposited on properly prepared steel parts. A uniform coating thickness of zinc is applied by placing the parts in a rotating barrel with the correct recipe of water, glass beads and various chemicals. The impact of the glass beads on the steel parts deposits a layer of zinc onto the metal surfaces. Subsequent layers build up until the required thickness is achieved. The zinc deposited onto the metal surface may be considered a sacrificial coating. Over time this coating slowly reacts with the environment (moisture and air) and becomes mottled producing 'white rust'. The appearance of white rust means that the coating is being sacrificed to protect the underlying steel part.

MEETING YOUR SPECIFICATIONS

We ensure consistent performance and quality by adhering to the following industry standards and specifications used within the Telecommunications Industry.

Bell Core The Bell Operating Companies (RBOC's) borne of the AT&T divestiture were the first organizations to recognize the need for and to establish quality standards and specifications for pole line hardware in the USA. Bell Communications Research Inc. or 'Bellcore' specifications are acknowledged standards for pole line, drop and bonding/grounding hardware.

SCTE Society of Cable Telecommunications Engineers (SCTE) is the professional association for the Cable Television industry. SCTE provides training, certification and standards to the industry and is accredited by ANSI as the industry's body of record.

ANSI American National Standards Institute (ANSI) administers and coordinates U.S. standardization efforts through facilitation of consensus standards and conforming assessment systems. ANSI is the official United States representative to ISO and other international accreditation and standardization bodies.

ISO The International Organization for Standardization (ISO) reviews, inspects and approves manufacturer facilities and methods then awards quality certification. Facilities must continue to meet the certification requirements to maintain their ISO quality status. Thomas & Betts Communications plant is registered to ISO 9001-2000.

ASTM The American Standards for Testing and Materials (ASTM) organization in conjunction with manufacturers and industry associations has established internationally recognized quality standards. The organization specifies materials, procedures and methods to assure conformance to its standards.

UL Underwriter's Laboratories is an international safety standards organization, which has established testing criteria for electrical products to assure their safety for the end user.

CSA The Canadian Standards Association (CSA) has established standards and test criteria to assure satisfactory performance and function of products destined for use in Canada.

Thomas@Betts

Drop Wire Clamp CATV

Universal Messenger Drop Wire Clamp (Patented)



Coaxial Messenger Cable Drop Clamp SC02MFA-SS

Installation:

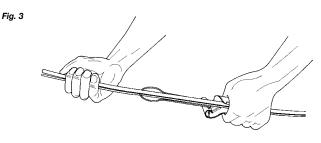
- Begin separation of the messenger wire from the cable using the end-edge of the SC02MFA-SS Drop Clamp.
- **Note**: Never use a knife or other sharp tool to separate messenger & cable.
- 2. Fit the cable and messenger wire into the SCO2MFA-SS Drop Clamp as shown, so that the Clamp Bail is between the two.
- 3. Grasp the separated end of the messenger and cable with one hand and grip the Clamp Body, as shown, with your other hand. Then, pull the SC02MFA-SS back, in a straight line, separating the length of messenger wire needed to make the wrap; about 15 to 18-inches.
- Pull the messenger wire around the center of the bearing surface as shown, toward the rear or drop-side of the Clamp.
- Note: If at the house end of the drop, this will be done while tensioning or "sagging" the drop.
- Serve the messenger wire through the "L" Slots and begin the wrap about the SC02MFA-SS body, as shown.
- 6. Continue the messenger wire wrap for two full turns
- Serve the messenger wire through the "L" Slot, as shown, to the drop-side of the SC02MFA-SS and cut the excess wire away, or ground it to the strand.
- Note: For drop cable with larger messenger wire, one wrap is sufficient. Serve the end of the wire around the end of the SC02MFA-SS and bring it back up the "L" Slots, then cut away the excess, or ground it to the strand.

- Permits cable to "float" free, fully protected from strain and chafing.
- Drop clamp for the suspension of a messengered drop cable between the pole, midspan and house.
- For use with series 59, 6, 6QS and 7 messengered cable
- Stainless steel bail wire and aluminum body.

CATALOG NUMBER	DESCRIPTION	INNER PACK	OUTER PACK
SC02MFA-SS	Universal Messenger Drop Wire Clamp	-	125



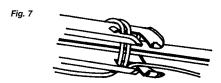












Drop Wire Clamp - Telephone

Drop Wire Clamps (Telephone)



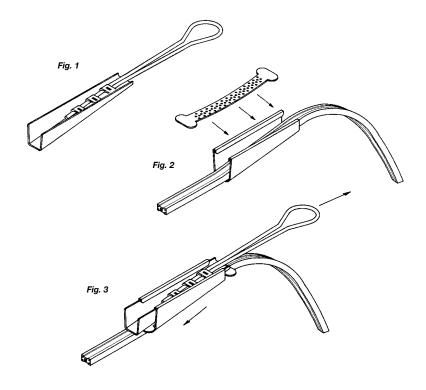
- Used to support both ends of telephone drop, at strand and building.
- Suitable for 1-2 pair .200" max. height and .410' max. width.
- 6 pair version: .300" max. height and .500" max. width.
- Stainless steel bailwire on all versions.
- Bell packaging available.

Ordering Information

CATALOG NUMBER	DESCRIPTION	MATERIAL	PAIR	SHIM Type	INNER PACK	OUTER PACK
23-44441	Drop Wire Clamp	Aluminum	1-2	serrated	-	500
23-44442	Drop Wire Clamp	Aluminum	1-2	plastic	-	500
23-44444	Drop Wire Clamp	Aluminum	1-2	serrated	25	500
23-44445	Drop Wire Clamp	Aluminum	1-2	serrated	2	250
23-44454	Drop Wire Clamp	Aluminum	1-2	serrated	25	500
23-82351	Drop Wire Clamp	Aluminum	6	dimpled	25	150
23-86651	Drop Wire Clamp	Stainless Steel	6	dimpled	50	300
23-88881	Drop Wire Clamp	Stainless Steel	1-2	serrated	25	500
23-88885	Drop Wire Clamp	Stainless Steel	1-2	serrated	2	250
23-88888	Drop Wire Clamp	Stainless Steel	1-2	serrated	25	500

Telephone Drop Wire Clamp Installation

- 1. Lay cable in shell.
- 2. Place shim on top of cable with raised embossings against cable.
- Insert wedge in shell (on top of shim) and pull to engage. (Small end of wedge should be initially engaged in track of large end of shell).
- Place bailwire on "B" drop wire hook (ram's horn) with wedge loose. Pull drop wire through clamp until proper sidewalk/alley clearance is achieved.
- 5. Grasp clamp (bailwire still on ram's horn) and pull tightly to secure.



Span Clamps

Q Span Clamp



- Provides drop wire take offs at mid-span
- Steel components mechanically galvanized ASTM B695

Ordering Information

CATALOG Number	DESCRIPTION	MATERIAL	CLAMP RANGE	PIGTAIL DIA	INNER PACK	OUTER Pack
27-00185	Q span clamp	Steel	1/4"-7/16"	1/4"	-	100

O Span Clamp



- Provides drop wire take offs at mid-span
- Steel components mechanically galvanized ASTM B695

Ordering Information

CATALOG NUMBER	DESCRIPTION	MATERIAL	CLAMP RANGE	PIGTAIL DIA	INNER PACK	OUTER PACK
27-00860	O span clamp	Plates - Aluminum Pigtail - Steel	1/4"-3/8"	3/8"	-	50

E Span Clamp



- Provides drop wire take offs at mid-span
- Steel components mechanically galvanized ASTM B695.

Ordering Information

	CATALOG NUMBER	DESCRIPTION	MATERIAL	CLAMP RANGE	PIGTAIL DIA	INNER PACK	OUTER Pack
_	27-00865	E span clamp	Steel	1/4"-7/16"	3/8"	5	100

C Span Clamp



- Provides drop wire take offs at mid-span
- Steel components mechanically galvanized ASTM B695

Ordering Information

CATALOG NUMBER	DESCRIPTION	MATERIAL	CLAMP RANGE	PIGTAIL DIA	INNER PACK	OUTER Pack
27-00869	C span clamp	Plates - Aluminum Hook - Steel	1/4"-3/8"	3/8"	-	50

Figure 8 Span Clamp



- Provides drop wire take offs at mid-span
- Steel components mechanically galvanized ASTM B695

CATALOG Number	DESCRIPTION	MATERIAL	CLAMP RANGE	PIGTAIL Dia	INNER Pack	OUTER PACK
28-09800	Fig 8 (.109134")	Plates - Aluminum	1/4"-7/16"	3/8"	-	50
		Hook - Steel				
28-09850	Fig 8 (.148"250")Plates - Aluminum	1/4"-7/16"	3/8"	-	25
		Hook - Steel				

Span Clamps

Econospan Span Clamp



- Multi directional clamp for messengered and non-messengered drop cable used for dead-end or mid-span application.
- Mechanically galvanized ASTM B695.

Ordering Information

CATALOG	DESCRIPTION	INNER	OUTER
NUMBER		PACK	PACK
SC03E	Clamp will accept 1/4" (6.6 MM) steel strand	-	100

1/4" Strand Span Clamp



- Span clamp used on steel strand, building riser to relieve stress on drop cable bend.
- Mechanically galvanized ASTM B695.

Ordering Information

CATALOG	DESCRIPTION	INNER	OUTER
NUMBER		Pack	PACK
SC03E-4E	1/4" steel strand application	-	75

Multi-Directional Span Clamp



- Multi-directional span clamp used for drop cables at mid-span location.
- Unique claw design locks in between steel strand lays to prevent rotation.
- Mechanically galvanized ASTM B695.

Ordering Information

CATALOG NUMBER	DESCRIPTION	HOOK LOAD CAPACITY	INNER PACK	OUTER PACK
SC03-1	Single pigtail hook for 1/4" steel strand	400 lbs	-	100

Figure 8 Ram's Horn Span Clamp



- Span clamp with a rams horn drop hook provides drop cable takeoffs at mid-span. Suitable for fig. 8 integrated messenger cable or steel strand.
- Mechanically galvanized ASTM B695.

CATALOG	DESCRIPTION	LOAD	INNER	OUTER
NUMBER		CAPACITY	PACK	PACK
SC08-1	For .109" to .188" messenger wire	700 lbs.	-	100

Clamps

One Hole Clamps



- Used to support cable, conduit or pipe.
- Mechanically galvanized steel ASTM B695.

Ordering Information

CATALOG NUMBER	DESCRIPTION	SIZE	PIPE OR CABLE SIZE	STOCK SIZE	HOLE DIA.	INNER PACK	OUTER Pack
24-80003	one hole clamp	L3	3/16"	.035" x 1/2"	7/32"	500	7500
24-80004	one hole clamp	L4	1/4"	.035" x 1/2"	7/32"	500	5000
24-80005	one hole clamp	L5	5/16"	.035" x 1/2"	7/32"	500	5000
24-80006	one hole clamp	L6	3/8"	.048" x 1/2"	7/32"	500	5000
24-80008	one hole clamp	L8	1/2"	.048" x 1/2"	7/32"	-	500
24-80009	one hole clamp	L9	9/16"	.048" x 1/2"	7/32"	-	500
24-80010	one hole clamp	L10	5/8"	.048" x 1/2"	7/32"	-	500
24-80012	one hole clamp	L12	3/4"	.062" x 11/16"	9/32"	-	500
24-80016	one hole clamp	L16	1"	.080" x 3/4"	9/32"	-	250
24-80018	one hole clamp	L18	1-1/8"	.080" x 3/4"	9/32"	-	250
24-80020	one hole clamp	L20	1-1/4"	.115" x 7/8"	9/32"	-	100

One Hole Offset Clamps



- Used to secure telephone cable runs.
- Offset provides a grip on multi-size cable.
- Mechanically galvanized steel ASTM B695.

Ordering Information

CATALOG NUMBER	CABLE SIZE	STOCK SIZE	HOLE DIA.	INNER PACK	OUTER Pack
23-80405	1/4" - 5/16"	.048" x 5/16"	9/64"	500	7500
23-80406	5/16" - 3/8"	.048" x 1/2"	7/32"	500	5000

Two Hole Clamps



- Used to support cable, conduit or pipe.
- Offset provides a grip on multi-size cable.
- Mechanically galvanized steel ASTM B695.

Ordering Information

CATALOG NUMBER	DESCRIPTION	SIZE	PIPE OR CABLE SIZE	STOCK SIZE	HOLE DIA.	INNER PACK	OUTER PACK
25-80100	two hole clamp	#10	5/8"	.048" x 1/2"	7/32"	-	500
25-80120	two hole clamp	#12	3/4"	.062" x 11/16"	9/32"	-	250
25-80140	two hole clamp	#14	7/8"	.062" x 11/16"	9/32"	-	250
25-80160	two hole clamp	#16	1"	.080" x 3/4"	9/32"	-	300
25-80200	two hole clamp	#20	1-1/4"	1/8" x 7/8"	9/32"	-	100
25-80260	two hole clamp	#26	1-5/8"	1/8" x 7/8"	9/32"	-	50
25-80300	two hole clamp	#30	1-7/8"	1/8" x 7/8"	9/32"	-	50
25-80360	two hole clamp	#36	2-1/4"	1/8" x 1"	11/32"	-	75
25-80400	two hole clamp	#40	2-1/2"	1/8" x 1"	11/32"	-	50

Additional products and sizes available from Thomas & Betts - contact customer service for more information.

Tap Brackets

Tap Brackets



- Used to secure tap to strand.
- One piece steel snap-on version mechanically galvanized ASTM B695 for 1/4" strand only.
- Standard tap bracket and extension bracket are aluminum. Both have 1/4" to 3/8" strand clamping range.
- Square hole in standard aluminum tap bracket mounts Diamond trap sleeve brackets. ("W" brackets).

Ordering Information

CATALOG NUMBER	DESCRIPTION	CLEARANCE BETWEEN STRAND & TAP	LOAD CAPACITY (LBS) (MINIMAL DEFLECTION)	INNER PACK	OUTER PACK
29-19941	Steel snap-on tap bracket	2-1/2"	40	-	25
29-19943	Aluminum tap bracket (standard)	2-1/2"	30	-	25
29-19944	Aluminum extension bracket	3" to 9"	25	-	25

Tap Bracket with Common Ground



- Tap bracket used to secure a tap to the steel strand and provide a means to bond up to eight messengered drop cables.
- Firm and positive grip with no rotation or sliding on steel strand.
- Mechanically galvanized ASTM B695.

Ordering Information

CATALOG NUMBER	DESCRIPTION	INNER PACK	OUTER PACK
SC23CGS-2	2" horiz. mounting with 4 common grounds	-	32
SC23CGS-4	4" horiz. mounting with 8 common grounds	-	32

Tap Bracket Vertical Mount



- Tap bracket used to secure a tap to the steel strand.
- Firm and positive grip with no rotation or sliding on steel strand.
- Stopper at multi-tap attachment prevents part rotation.
- Mechanically galvanized ASTM B695.

Ordering Information

CATALOG NUMBER	DESCRIPTION	INNER PACK	OUTER PACK
SC23PV-2	2" vertical mount (fig. 8 application)	-	32
SC23PV-4	4" vertical mount (fig. 8 application)	-	32

Tap Bracket Horizontal Mount



- Tap bracket used to secure a tap to the steel strand.
- Firm and positive grip with no rotation or sliding on steel strand.
- Stopper at multi-tap attachment.
- Mechanically galvanized ASTM B695.

CATALOG NUMBER	DESCRIPTION	INNER Pack	OUTER PACK
SC23PS-2	2" horizontal mount	-	32
SC23PS-4	4" horizontal mount	-	32

Brackets

Drop Wire Bracket



- Mechanically galvanized steel ASTM B695.
- Mast capacity 2-1/2" to 3" diameter.

Ordering Information

CATALOG	DESCRIPTION	INNER	OUTER
NUMBER		Pack	Pack
40-00540	Drop wire bracket	-	50

House Bracket



- Multi-dwelling drop cable bracket.
- Attach to building with drive screws or wood screws (1/4" dia.).
- Attach insulator in 7/16" dia. mounting hole.
- Mechanically galvanized steel ASTM B695.

Ordering Information

CATALOG	DESCRIPTION	INNER	OUTER
NUMBER		PACK	PACK
40-00200	House bracket 1-3/4" wide x 3-1/2" high x 3" horizontal leg.	-	50

Corner Wall Bracket



- Corner wall bracket used to dead-end a messenger drop cable or a steel strand at the building.
- Mechanically galvanized ASTM B695.

CATALOG NUMBER	DESCRIPTION	INNER PACK	OUTER Pack
SC53-1	For steel strand MDU riser	-	50
SC53-2	For messengered drop cable with .051" to .072"	-	50
	steel messenger wire		

Hooks

Drop Wire Hook (Ram's Horn)



Ordering Information

• Mechanically galvanized ASTM B695.

CATALOG	DESCRIPTION	INNER	OUTER
NUMBER		PACK	PACK
30-01732	Ram's Horn type drop wire hook	50	600

"OMNI" House Hook



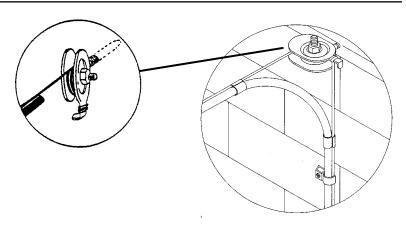
• Omni house hook used to dead-end a messengered drop cable at the house.

• Used to attach bail wire type drop wire clamp to building.

- Retainer provides a 1" diameter wrap to messenger steel wire keeping the messenger intact for bonding at the ground block.
- Mechanically galvanized ASTM B695.

Ordering Information

CATALOG	DESCRIPTION	INNER	OUTER
NUMBER		PACK	PACK
SC26-1	Omni directional single retainer	-	100



"P" House Hook



- Used to secure coaxial cable drop installations at the building.
- Accepts bailwire dropwire clamps, wire grips or messenger wraps.
- Mechanically galvanized steel ASTM B695.

Ordering Information

CATALOG NUMBER	DESCRIPTION	OVERALL LENGTH	INNER Pack	OUTER PACK
31-00809	Regular house hook	3-3/4"	-	200
31-10809	Long house hook	4-1/2"	-	200

Dead End Strap



 Dead-end strap made of high quality G90 pre-galvanized steel used to dead-end a drop cable at the house service mast.

CATALOG NUMBER	DESCRIPTION	INNER Pack	OUTER PACK
SC11-1	From 1" to 4" diameter mast	-	100



Rings & Screw Fixtures

Bridle Rings



- Used to support cable runs and electrical wiring.
- Mechanically galvanized steel ASTM B695.

Ordering Information

CATALOG NUMBER	DESCRIPTION	STYLE	EYE Dia.	THREAD Size	MAX. LOAD	INNER Pack	OUTER PACK
31-00810	Wood Screw Bridle Ring	Α	1-5/8"	#14	75 lbs.	-	100
31-00812	Wood Screw Bridle Ring	С	1-1/4"	#14	75 lbs.	-	100
31-00816	Wood Screw Bridle Ring	F	3"	#18	75 lbs.	-	100
31-00819	Wood Screw Bridle Ring	G	7/8"	#10	50 lbs.	25	100
31-00821	Machine Screw Bridle Ring	K	3/4"	#10-24	50 lbs.	100	1000
31-00823	Machine Screw Bridle Ring	М	1-1/4"	#10-24	50 lbs.	-	100
31-00827	Machine Screw Bridle Ring	R	1-5/8"	#10-24	50 lbs.	-	100

Insulated Screw Eye



- Used to support and protect drop wire runs from abrasion.
- Porcelain ring has a 9/32" diagonal opening.
- Shank mechanically galvanized ASTM B695.

Ordering Information

CATALOG NUMBER	DESCRIPTION	EYE SIZE	OVERALL LENGTH	SHANK LENGTH	THREAD SIZE	INNER Pack	OUTER PACK
32-00830	Insulated screw eye	5/8"S	2-7/8"	1-1/4"	#10	-	100
32-00831	Insulated screw eye	5/8"L	3-3/4"	2-1/8"	#10	-	100
32-00832	Insulated screw eye	1"S	3-7/8"	1-3/4"	#14	-	100

Angle Screw Fixture



- Used to support and insulate telephone drop wire runs.
- Attach specified porcelain knob (not supplied) and secure with nut.
- Mechanically galvanized steel ASTM B695.

Ordering Information

		WOOD	SHANK	MACHINE	INSULATOR	₹	
CATALOG		SCREW	DIA.	THREAD	SHANK	INNER	OUTER
NUMBER	DESCRIPTION	DIA.	LENGTH	LENGTH	LENGTH	PACK	PACK
33-00840	Angle screw fixture	5/16" (18)	9/32" x 2-1/4"	1"	1-1/2"	-	100

Drive Screw



- Used to secure attachments to wooden surfaces.
- 3/8" square head
- Screw has pilot point and fetter thread.
- Mechanically galvanized ASTM B695.

CATALOG NUMBER	DESCRIPTION	SIZE	INNER Pack	OUTER PACK
28-03006	Drive screw	1/4" x 2-1/2"	50	1200
28-00013	Drive screw	3/8" x 4"	50	500

Cable Clips & Ties

"S" Cable Clip Telephone



Aluminum "S" clip to be secured with lineman's pliers.

• Ribs provide positive grip on drop wire.

Ordering Information					
CATALOG NUMBER	DESCRIPTION	MAX. CABLE SIZE	INNER Pack	OUTER PACK	
23-80366	1-2 pr. "S" clip	.160" x .300"	25	500	
23-80262	6 pr. "S" clip	.300" x .500"	-	500	

"S" Cable Clip Coaxial



• Used to prevent separation of two cables or a messenger steel wire from a drop cable.

• Used to secure telephone drip loop to "B" drop wire hook (Ram's horn).

Ordering Information

CATALOG	DESCRIPTION	INNER	OUTER
NUMBER		PACK	PACK
SC10-1	Made of soft aluminum for easy finger forming Accepts up to Series 7 cable	-	500

Dual Cable Clip



- Secures dual coaxial cable and telephone six pair cable runs.
- Mechanically galvanized steel ASTM B695.

Ordering Information

CATALOG NUMBER	DESCRIPTION	INNER Pack	OUTER PACK
22-12121	Dual Cable Clip Series 6	500	5000
22-12127	Dual Cable Clip Series 7	500	5000

Cable Tie



0.750 0 0

- Reusable strap with integral buckle made of malleable aluminum, corrosion resistant, used to support drop cables on the strand, pedestal, lock box and along the wall.
- No sharp edges to cut hands or damage cable.

Ordering Information

CATALOG Number	DESCRIPTION	INNER Pack	OUTER PACK
SC053-1	7" long, 1/4" band	-	50
SC053-2	10" long, 1/4" band	-	50

Note: See pages 36-46 Fastening Hardware section for additional T&B cable ties.

Cable Clips & Clamps

"E" Drop Wire Clamp





- Used to secure telephone drop wire cable runs
- Mechanically galvanized ASTM B695.
- Transverse ribs grip cable to prevent abrasion.

Ordering Information

CATALOG NUMBER	DESCRIPTION	INNER PACK	OUTER PACK
23-80361	"E" DWC one pair, steel	50	2000
23-80370	"E" DWC two pair, steel	50	2000
23-83361	"E" DWC six pair, steel	50	2000
40-80365	"E" DWC, coax, aluminum (no ribs)	-	500

"U" Cable Clip

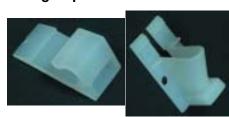


 Pre-formed aluminum cable clip used to secure drop cables and ground wires to either wood or masonry surfaces using self-tapping screws.

Ordering Information

CATALOG NUMBER	DESCRIPTION	INNER PACK	OUTER PACK
SC19-1	U cable clip - 6mm	500	10000
SC20-1	For Series 6 cable	500	10000
SC21-1	For #12 or #14 AWG ground wire	500	10000
SC22-1	U cable clip 10mm	400	8000

Siding Clips





- Secures coaxial cable runs to aluminum, vinyl or steel siding.
- High density UV stabilized outdoor polypropylene.
- Available in natural (clear) or black.

Ordering Information

CATALOG NUMBER	DESCRIPTION	INNER PACK	OUTER PACK
12-01501	Horizontal / Black TVCG-1	100	1000
12-01401	Horizontal / Natural TVCG-1	100	1000
12-01502	Vertical / Black TVCG-2	100	1000
12-01402	Vertical / Natural TVCG-2	100	1000

Feed Thru Bushing

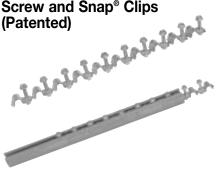


- Protects coaxial cable entry into subscriber's building.
- Available in black or natural (clear).
- High density UV stabilized outdoor polypropylene.

CATALOG NUMBER	DESCRIPTION	COLOR	CABLE SIZE	INNER Pack	OUTER PACK
34-08052	Feed thru bushing	Black	Series 6, 6Q	100	1000
34-08053	Feed thru bushing	Natural	Series 6, 6Q	100	1000

Cable Clips

Screw and Snap® Clips



- Used to secure coaxial cable and ground wire runs to wood, masonry, stucco, brick or concrete.
- For concrete or brick drill .138" pilot hole. Screw will cut threads in hole.
- Convenient strips of ten clips snap off after installation.
- Cable size stamped on clips (aluminum).
- Screw hardened and treated for 500 hour salt spray resistance. ASTM B117.
- Plastic plugs secure screws to strip and prevent torquing.
- Handy holder included in every 30 strip carton.

Ordering Information

CATALOG NUMBER	DESCRIPTION	SCREW SIZE	CABLE SIZE	INNER PACK	OUTER PACK
24-88013	Screw & snap clips	#8 x 3/4"	Series 6	30	300
24-88014	Screw & snap clips	#8 x 3/4"	Series 59	30	300
24-88016	Screw & snap clips	#8 x 3/4"	10-14 AWG	30	300
24-88017	Screw & snap clips	#8 x 3/4"	Series 6Q	30	300
24-88026	Screw & snap clips	#8 x 3/4"	Series 7	30	300
24-88027	Screw & snap clips	#8 x 3/4"	Series 11	30	300

SAXXIT® Cable Clip



• "Galvalume" steel cable clip used on concrete, mortar, stucco or wood with a PRE-INSERTED SELF-TAPPING SCREW or a DRIVE PIN.

Ordering Information

CATALOG NUMBER	DESCRIPTION	INNER PACK	OUTER PACK
SC16-19	For 6 mm cable with no. 8 x 1" screw	250	5000
	1/4" hex head indented "Phillips"		
SC16-26	For 7 mm cable with no. 8 x 1" screw	250	5000
	1/4" hex head indented "Phillips"		
SC16P-26BLACK	Same as above, painted black	250	5000
SC16P-26WHITE	Same as above, painted white	250	5000
SC16-3Q	For 8 mm cable with no. 8 x 1" screw	250	5000
	1/4" hex head indented "Phillips"		
SC16-411	For 10 mm cable with no. 8 x 1" screw 1/4"	250	5000
	hex head indented "Phillips"		
SC16DP-19	For 6 mm cable with a 1" drive pin	250	5000
SC16DP-26	For 7 mm cable with a 1" drive pin	250	5000
SC16DP-3Q	For 8 mm cable with a 1" drive pin	250	5000

SAXXON® Cable Clip



• "Galvalume" steel cable clip usedon wood, stucco or mortar with a 1" hardened PRE-INSERTED NAIL.

Ordering Information

CATALOG NUMBER	DESCRIPTION	INNER PACK	OUTER PACK
SC18-19	For 6 mm cable	500	10000
SC18-26	For 7 mm cable	500	10000
SC18P-26WHITE	Same as above, painted white	500	10000
SC18P-26BLACK	Same as above, painted black	500	10000
SC18-3Q	For 8 mm cable	500	10000
SC18L-19	For 6 mm cable with 1.625" hardened nail	500	10000
SC18L-26	For 7 mm cable with 1.625" hardened nail	500	10000
SC18L-3Q	For 8 mm cable with 1.625" hardened nail	500	10000

Thomas@Betts

Drive Rings & Wire Loops

Drive Rings



- Used to support cable runs and electrical wiring.
- Mechanically galvanized steel ASTM B695.

Ordering Information

CATALOG NUMBER	DESCRIPTION	EYE SIZE	MAX. LOAD (LBS)	INNER PACK	OUTER PACK
30-00801	Drive Ring	1/2"	50	50	2500
30-00804	Drive Ring	5/8"	75	25	1000
30-00805	Drive Ring	7/8"	100	25	500
30-00807	Drive Ring	1-1/4"	125	25	250
30-01804	Long Drive Ring	5/8"	75	25	1000
30-01805*	Long Drive Ring	7/8"L	100	25	500
30-01807*	Long Drive Ring	1-1/4"L	125	25	500

^{*} THESE SIZES HAVE LONGER NAILS FOR GREATER LOAD CARRYING CAPACITY.

BELL PACKAGING AVAILABLE.

Drive Rings



- Drive ring used for guiding cables.
- May be used at the pole or at the house.
- Double crimped loop on concrete nail facilitates installation.
- Mechanically galvanized ASTM B695.

Ordering Information

CATALOG	DESCRIPTION	INNER	OUTER
NUMBER		PACK	PACK
SC17-1	5/8" ring with 2-1/4" concrete nail	-	250

Wire Loops Wire Loop Drive Pins



- Used to attach drop wire runs to masonry with wire loop drive pins.
- Wire loops mechanically galvanized steel ASTM B695.
- Wire loop drive pins zinc plated steel ASTM B633.

CATALOG NUMBER	DESCRIPTION	INNER Pack	OUTER Pack
15-00120	Wire Loop 1/2"	100	1000
15-00121	Wire Loop 5/8"	100	1500
15-00122	Wire Loop 7/8"	100	1000
15-00123	Wire Loop 1-1/4"	100	1000
15-10101	Wire loop drive pin 1-1/2" long	100	1500
15-10102	Wire loop drive pin 1-3/4" long	100	1500

Drive Pins & Tools

Drive Pins



- Used to secure clamps to masonry surface.
- Zinc plated steel ASTM B633.

Ordering Information

CATALOG NUMBER	DESCRIPTION	INNER PACK	OUTER PACK
15-10040	1/4" head x 1/2" long, drive pin metal washer	100	1500
15-10041	1/4" head x 3/4" long, drive pin metal washer	100	1500
15-10042	1/4" head x 1" long, drive pin metal washer	100	1500
15-10043	1/4" head x 1-1/4" long, drive pin metal washer	100	1500
15-10044	1/4" head x 1-1/2" long, drive pin metal washer	100	1500
15-10045	1/4" head x 2" long, drive pin metal washer	100	1000
15-10046	1/4" head x 2-1/2" long, drive pin metal washer	100	1500

WARNING: Do not use in powder actuated tools.

BELL PACKAGING AVAILABLE.

Hammer Drive Tool



- Used to install drive pins in masonry.
- Tapered barrel retains drive pin washer prior to installation.
- Vinyl guard protects installers hand.
- Black oxide finish on heat treated steel barrel.

CATALOG	DESCRIPTION	INNER	OUTER
NUMBER		Pack	PACK
15-11111	Hammer drive tool	1	25

Lashed Cable Supports

Lashed Cable Supports



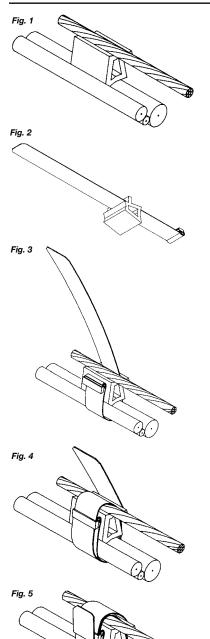
Installation

- 1. Measure diameter or circumference of bundle (Fig. 1).
- 2. Use table to determine strap length.
- 3. Thread strap through spacer slot (Fig. 2).
- 4. Wrap strap around bundle (strand, spacer, cables) then through buckle twice, pulling each wrap tight. (Fig. 3).
- Strap end should be doubled under itself (about 1.5") before making final pass through buckle. Trim off excess (Fig. 4).
- 6. Bend doubled thickness over top of buckle to prevent unravelling (Fig. 5).

Note: In cable TV installation straps should not be too tight, they may restrict cable movement during contraction and expansion and possibly damage cable.

- Used to strap coaxial and telephone cable to strand.
- Available in 430 stainless steel or special zinc alloy in 3/4" width.
- Edges are processed to remove raised and projecting metal. Edges are smooth and free from burrs.

	<u>NUMBER</u>			BUNDLE	INNER	OUTER
ZINC	STAINLESS STEEL	LENGTH	DIA.	CIRCUMFERENCE	PACK	PACK
34-08911	34-08912	10"	1.2"	3.8"	-	500
34-08921	34-08922	16"	2"	6.3"	-	500
34-08931	34-08932	22"	3"	9.4"	-	300
34-08941	34-08942	28"	4"	12.6"	-	300
34-08951	34-08952	34"	5"	15.7"	-	300





Lashed Cable Supports

Lashed Cable Support Kit



- Used to strap coaxial or telephone cable to strand.
- Kit contains 100 ft. 430 stainless steel strapping & 75 steel buckles.
- Kit makes 75 straps 16" average length.
- Cut to desired length & secure to buckle.

Ordering Information

CATALOG NUMBER	DESCRIPTION	INNER Pack	OUTER PACK
34-00890	3/4" wide stainless steel strap and 75 buckles	1	10

Plastic Cable Spacer



- High density outdoor polyethylene with U.V. inhibitors.
- Bell type.
- Provides separation between aerial cable and messenger.

Ordering Information

CATALOG NUMBER	DESCRIPTION	INNER Pack	OUTER PACK
34-08850	1/2" Spacer	100	1000
34-08875	3/4" Spacer	-	1000

NOTE: SEE PAGE 49 FOR INFORMATION ON DELTEC® CABLE SPACERS AND THE DELTEC® CABLE SUPPORT SYSTEM

Support Strap



- Reusable support strap with integral buckle made of malleable aluminum fire retardant. Used to bundle telephone, coaxial and fiber cable at the steel strand.
- Safe to use, no sharp edges to cut hands or cables.

Ordering Information

CATALOG NUMBER	DESCRIPTION	INNER PACK	OUTER PACK
SC05-1	10" long, 3/4" band	-	500
SC06-1	16" long, 3/4" band	-	500

EACH WRAP OF STRAP WILL SUPPORT 125 LBS OF STATIC LOAD (2 WRAPS = 250 LBS, ETC.).

Clamps & J Hooks

Lashing Clamps



Ordering Information

• 1/4" - 7/16" clamp range.

CATALOG NUMBER	DESCRIPTION	INNER Pack	OUTER PACK
26-09010	D Lashing clamp	-	100
26-09020	E Lashing clamp	-	100

Crossover Clamp



- Used at intersection of two 1/4" strands to prevent abrasion.
- Mechanically galvanized ASTM B695.

Used to secure lashing wire terminations.Mechanically galvanized ASTM B695.

Ordering Information

CATALOG	DESCRIPTION	INNER	OUTER
NUMBER		PACK	PACK
29-09970	Crossover clamp	-	25

Figure 8 Three Bolt Suspension Clamp



- Used to secure figure 8 cable to pole.
- Center hole accommodates 1/2" or 5/8" dia. machine bolt.
- Clamp plates aluminum alloy.
- Steel bolts mechanically galvanized ASTM B695.
- Eliminates need to strip messenger.

Ordering Information

CATALOG NUMBER	DESCRIPTION	MESSENGER SIZE RANGE	INNER PACK	OUTER PACK
28-09610	Figure 8 three bolt suspension clamp	.109"134"	-	25
28-09615	Figure 8 three bolt suspension clamp	.148"250"	-	20

Figure 8 Tangent Support Clamps & J Hook



- Used to secure figure 8 cable to pole.
- Clamp plates and J hook aluminum alloy.
- Eliminates need to strip messenger.

Ordering Information

CATALOG Number	DESCRIPTION	THRU BOLT HOLE SIZE	MESSENGER SIZE RANGE	INNER Pack	OUTER PACK
28-09500	Tangent support clamp	5/8"	.148"250"	-	25
28-09600	Tangent support clamp	1/2"	.109"134"	-	25
28-19651	Tangent support clamp	5/8"	.109"134"	-	25

J Hooks



CATALOG NUMBER		THRU BOLT HOLE SIZE		INNER Pack	OUTER PACK
45-9000	3 J Hook 5" LG. (T-960-5) 5/8"	_	-	50

Hangers & Brackets

Fiber Optic Rack Hanger



- Secures F.O. storage devices (snow shoes) to strand.
- For 1/4" 7/16" strand.
- Aluminum bracket.
- Steel ASTM B695 clamp plates.

Ordering Information

	CATALOG NUMBER	DESCRIPTION	INNER PACK	OUTER PACK
2	29-19945	Fiber optic rack hanger	-	25

Dead-End Bracket



- Dead-end bracket used to apply tension to steel strand building riser and to provide a means to dead-end a guy strand.
- Mechanically galvanized ASTM B695.
- 1,000 lb. load capacity.

Ordering Information

CATALOG NUMBER	DESCRIPTION	INNER PACK	OUTER PACK
SC44-1	5/16" diameter hook with 2-3/4" tension adjustment	-	25

Drive Hook



- Used to support bail-type drop wire clamps to poles.
- Galvanized to ASTM A153 or B695.
- · Fetter drive threads.

Ordering Information

CATALOG NUMBER	DESCRIPTION	INNER Pack	OUTER PACK
40-43007	7/16" diameter x 4-3/4" long	-	100
40-43008	5/16" diameter x 3-1/2" long	-	200

Square Washers



- Supports bolt head or nut of machine bolt.
- Mechanically galvanized ASTM B695.

CATALOG NUMBER	DESCRIPTION	INNER Pack	OUTER PACK
28-03004	5/8" bolt size x 2-1/4" square x 3/16" thickness	-	100
28-03005	3/4" bolt size x 2-1/4" square x 3/16" thickness	-	100

Aerial Cable Damper

Aerial Cable Damper



Aerial Cable Damper (A.C.D.) Installation

- 1. Select proper size cable guard for application.
- 2. Place guard on cable over horizontal slots in Aerial Cable Damper.
- Insert lashed cable supports thround horizontal slots. Use two wraps and secure by bending end over top of buckle. Allow 1/4" clearance between cable and top of Aerial Cable Damper. Aerial Cable Damper must be allowed to swing free with the wind.
- Position lashing clamps inside lashed cable supports and secure. Lashing clamps will restrict longitudinal movement to cable area protected by cable guards.
- Placement The number of Aerial Cable
 Damper's varies with the length of cable span
 and terrain. The following is recommended as a
 quide for maximum effectiveness.

Level Ground – Locate at span's center for 125-170 ft. spans (Fig. 1). On spans 170-300 ft. Locate two Aerial Cable Damper's each one fourth the total span length from either pole. (Fig. 2)

Steep Grade – Locate one tenth total span length from pole at lower level on 125-170 ft. spans. (Fig 3). On spans 170-300 ft. two Aerial Cable Damper's are required. Locate one at one fourth the total span length from lower pole. Locate second Aerial Cable Damper halfway between first Aerial Cable Damper and uphill pole. (Fig. 4).

Note: When installing on Fig. 8 cable

- 1. Aerial Cable Damper should be secured to exposed strand.
- 2. Aerial Cable Damper will have limited dampening effective in extreme high wind conditions.

- Aluminum alloy
- Designed to use the force of wind to aerodynamically reduce oscillation of cable.
- Supplied with special heavy duty lashed cable supports and "D" lashing clamps to secure to strand.
- · Assembly instructions provided.

CATALOG	DESCRIPTION	INNER	OUTER
NUMBER		Pack	Pack
28-80001	Aerial cable damper	-	5

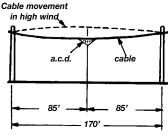


Fig. 1 - Level ground - 125'-170' spans

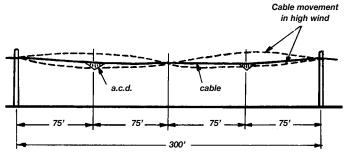


Fig. 2 - Level ground - 170'-300' spans

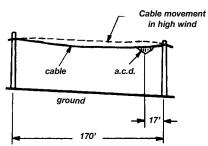
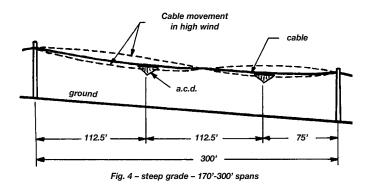


Fig. 3 - steep grade - 125'-170' spans



Thomas & Betts

Bonding Clamps

Bonding Connector for Meter Pan (Patented)

CATV Applications



Bonding Connector for Meter Pan SC51-1

- 1. The tip of the stainless steel mounting screw is shaped to remove the paint at the point of contact, thus ensuring positive metal-to-metal contact with the top of the meter panel. (Always ensure that the bonding surface is cleaned of excess paint or rust before mounting the SC51-1 connector.) For heavily corrosive or marine environments. use of "RTV" silicone sealer is recommended at the contact point, between the screw tip and the top of the meter pan.
- 2. Back the bolt and nut from the connector enough to allow it to mount on one of the corner folds of the metal meter pan back corners.
- 3. Install the connector with the bottom edges gripping on the bottom fold of the fixed top cover of the metal meter pan. Under no circumstances is the bonding connector to be mounted on the front cover or any movable part of the metal meter pan. Tighten the bolt securely by applying sufficient torque (20 inch pound) to ensure a firm and positive connection on the metal meter pan.
- 4. Remove one inch of insulation from copper ground wire, use caution to avoid scoring or damaging ground wire. Insert grounding wire between washer and grounding nut. Wrap ground wire clockwise between washer and ground nut. Insure that slot in grounding washer is aligned with ground wire. Tighten grounding nut with SC50-1 tool to secure ground wire. Do not over tighten. Double check that the grounding bolt is still firmly tight on the metal meter pan enclosure. If not, tighten it one quarter

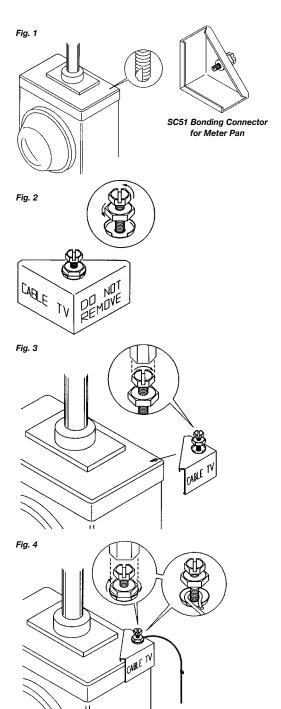
Recommended for usage when no other approved grounding electrode is accessible.

- · Meter pan connector designed to provide a bonding connection between the metallic frame of a meter pan and a copper ground wire.
- Its unique design allows a fixed and positive mechanical contact without interfering with the opening of the meter pan front cover.
- Tighten screws to 20 in. lbs. torque.





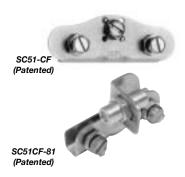
CATALOG NUMBER	DESCRIPTION	INNER Pack	OUTER PACK
SC51-1	For #10/12/14 AWG copper ground wire made	-	100
	of mech. galv. steel B695 yellow chromate		



Bonding Clamps

Bonding Connector for Meter Pan

CATV Applications



- Meter pan connector designed to provide a bonding connection between the metallic frame of a meter pan and a copper ground wire.
- Its unique design allows a fixed and positive mechanical contact without interfering with the opening
 of the meter pan front cover.
- Tighten screws to 20 in. lbs. torque.



Ordering Information

CATALOG NUMBER	DESCRIPTION	INNER Pack	OUTER PACK
SC51-CF	For #10/12/14 AWG copper ground wire, made	-	100
	of stainless steel		
SC51CF-81	No ground wire required	-	100

Telephone Applications



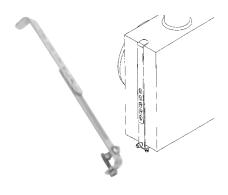


SC51CF-85

Ordering Information

•			
CATALOG NUMBER	DESCRIPTION	INNER Pack	OUTER PACK
SC51-2	For #6 AWG copper ground wire made of mech. galv. steel B695 yellow chromate	-	100
SC51-1BE	For #6-10 AWG copper ground wire	-	100
SC51CF-85	For #6-10 AWG copper ground wire	-	100

Meter Box Ground Clamp (Patented)



- Provides a convenient, quick installation of a reliable ground or bond for drops.
- 2 adjustable sizes: 6-1/2" to 10-1/2", 11-1/2" to 15-1/2".
- Stainless steel bolts, screw and washer.
- Mechanically galvanized ASTM B695.
- UL Listed
- Will not restrict cover operation.
- Tighten screws to 20 in. lbs. torque.



CATALOG NUMBER	DESCRIPTION	CLAMP RANGE	INNER Pack	OUTER PACK
40-20000	Meter box ground clamp (S), #12-16 AWG	6.5-10.5"	-	50
40-20001	Meter box ground clamp (L), #12-16 AWG	11.5-15.5"	-	50
40-20002	Meter box ground clamp (S), #10-6 AWG	6.5-10.5"	1	5
40-20003	Meter box ground clamp (L), #10-6 AWG	11.5-15.5"	1	5

Ground Blocks

Grounding Block



• Made of Z600 galvanized steel and yellow chromated.



Ordering Information

CATALOG NUMBER	DESCRIPTION	INNER Pack	OUTER PACK
SC12N-81	Complete with regular F81 connector	-	150
SC12N81-1G	Complete with 1 GHz F81 connector	-	150
SC12N81-25	Same as SC12N-81 with two mounting screws	-	150

Grounding Block



• Made of Z600 galvanized steel and yellow chromated.



Ordering Information

SC12DNS-81 Complete with regular F81 connector - 100	CATALOG NUMBER	DESCRIPTION	INNER Pack	OUTER Pack
	SC12DNS-81	Complete with regular F81 connector	-	100
SC12DNS81-25 Same as SC12DNS081 with two mounting screws - 100	SC12DNS81-25	Same as SC12DNS081 with two mounting screen	ews -	100

SERIES ALSO AVAILABLE WITH TWO F81 TYPE CONNECTORS. SPECIFY SHORT OR LONG BARREL. GROUNDING BLOCK AVAILABLE WITH 1 GHZ F81 TYPE CONNECTOR UPON REQUEST.

Grounding Bracket



- Grounding bracket permits upgrading number of drops by mounting 2, 3 or 4 way splitters simply by using the SC09 splitter ring nut for mounting.
- Made of Z600 galvanized steel and yellow chromated.



Ordering Information

CATALOG NUMBER	DESCRIPTION	INNER Pack	OUTER PACK
SC46DN	Accepts up to #10 AWG ground wire	-	100
SC46DN-25	Same as above with two mounting screws	-	100

Splitter Ring Nut



• Splitter ring nut especially designed for converting the SC12DN grounding blocks to accept splitters.

CATALOG	DESCRIPTION	INNER	OUTER
NUMBER		Pack	PACK
SC09-1	Made of brass, nickel plated, .172" height	250	5000

Grounding Clamps

Span Clamp



- Span clamp for steel messengered drop cable bonding applications. Unique locking design prevents rotation on steel strand.
- Mechanically galvanized ASTM B695.

Ordering Information

CATALOG NUMBER	DESCRIPTION	INNER Pack	OUTER PACK
SC03E-2G	For two steel messenger wires .051" to .072"	-	75
	diameter used on 1/4" (6.6m) steel strand		

"I" Beam Grounding Clamp



- Grounding clamp used to bond a solid or stranded copper wire to steel structure.
- Mechanically galvanized ASTM B695.

Ordering Information

CATALOG NUMBER	DESCRIPTION	INNER PACK	OUTER PACK
SC07GG	Up to #10 AWG copper ground wire	-	125
SC07GG-185	Up to #6 AWG copper ground wire	-	100

"B" Ground Wire Clamp



- Used to secure #6 AWG to #12 AWG ground wire runs.
- Mechanically galvanized ASTM B695.
- 7/32" hole diameter.
- 3/8" wide x 9/16" long.

Ordering Information

CATALOG NUMBER	DESCRIPTION	GROUND WIRE RANGE	INNER PACK	OUTER PACK
23-80002	"B" ground wire clamp	#12 (.081") to #6 AWG (.162")	500	5000

Ground Connector



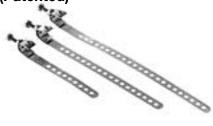
- Ground connector used to connect various size copper ground conductors with a firm mechanical contact.
- Made of pure copper with brass fastener.



CATALOG	DESCRIPTION	INNER	OUTER
NUMBER		Pack	PACK
SC42-1	Connects #4 or #6 AWG to #10 AWG copper ground wire	150	1800

Grounding Straps, Clips & Screws

Copper Ground Strap (Patented)



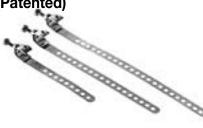
 Ground strap used to provide a fixed and permanent connection between a copper water pipe to a copper ground wire.

Ordering Information

_			
CATALOG NUMBER	DESCRIPTION	INNER PACK	OUTER PACK
SC13B-1	Small strap, fits 1/2" to 1" dia. pipe to #10/12/14 AWG copper ground wire	-	150
SC13B-2	Medium strap fits 1/2" to 2-1/4" dia. pipe to #10/12/14A copper ground wire	.WG-	200
SC13B-3	Large strap, fits 1/2" to 3" dia. pipe to #10/12/14 AWG copper ground wire	-	150

MADE OF PURE COPPER (ASTM B152-110). BRASS FASTENERS (ASTM B16-360 AND B134-260).

Galvanized Ground Strap (Patented)



 Ground strap used to provide a fixed and permanent connection between a galvanized steel pipe and a copper ground wire.

Ordering Information

CATALOG NUMBER	DESCRIPTION	INNER PACK	OUTER PACK
SC13BZ-1	Small strap, fits 1/2" to 1" dia. pipe to #10/12/14 AWG copper ground wire	-	150
SC13BZ-2	Medium strap fits 1/2" to 2-1/4" dia. pipe to #10/12/14 a copper ground wire	AWG-	200
SC13BZ-3	Large strap, fits 1/2" to 3" dia. pipe to #10/12/14 AWG copper ground wire	-	150

MADE OF G90 GALVANIZED STEEL THAT MEETS SALT TEST ASTM B117. FASTENERS ARE MADE OF BRASS, NICKEL PLATED (ASTM B16-360 AND B134-260) TO CREATE A NEUTRAL FOR GALVANIZED TO COPPER CONNECTION.

"U" Cable Clip

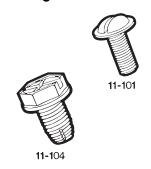


 Preformed aluminum cable clip used to secure ground wire to either wood or masonry surfaces using self-tapping screws.

Ordering Information

CATAL		INNER	OUTER
NUMB		PACK	PACK
SC21	1 For #12 or #14 AWG copper ground wire.	500	10000

Grounding Screws



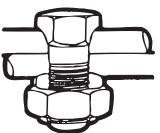
- Color-coded green
- Size 10-32 x 3/8, fits tapped screw hole in most boxes
- Cat. No. 11-104 taps its own threads

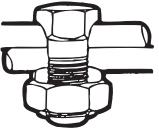
CATALOG NUMBER	DESCRIPTION	INNER PACK	OUTER PACK
11-101	Washer Head Screws	-	1000
11-104	Hex/Phillips/Slotted Head Self-Tapping	-	1000

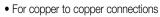


Mechanical - Split Bolt Connectors

High Strength Split Bolt Connectors



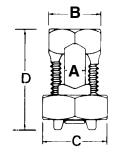




- High strength corrosion resistant copper alloy for use in bonding applications
- Highly resistant to corrosion and seasonal cracking
- Hex design nut of high strength corrosion-resistant bronze alloy
- Pressure bar is copper
- UL and CSA listed

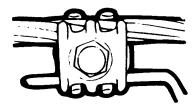


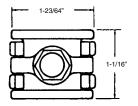
CATALOG NUMBER	SIZE	DIM A	ENSIONS B	(IN) C	D	INNER PACK	OUTER PACK
DS8	#8	0.146	0.413	0.562	0.854	100	800
DS6	#6	0.165	0.413	0.625	0.906	100	800
DS4	#4	0.209	0.453	0.688	0.984	100	800
DS2	#2	0.309	0.615	0.875	1.240	100	400

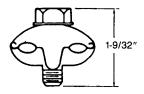


Mechanical - Parallel Groove Connectors

Type K - Jumper Clamps







- For all combinations of aluminum, copper and steel conductors
- Cast of high strength bronze alloy CDA836
- Furnished with silicon bronze bolt and lockwasher—lockwasher minimizes loosening of installed clamp
- Parallel groove design; no need to remove bolt for installation
- Only one size for all requirements from No. 8 solid copper to 1/0 ACSR or 2/0 copper



CATALOG NUMBER	DESCRIPTION	INNER PACK	OUTER PACK
KUL-DS	Bonds 1/4" and 5/16" strand to #6 AWG	100	600
	copper ground wire		

NOTE: K1-DS, K2-DS AND K3-DS STYLE BONDING CLAMPS ARE ALSO AVAILABLE. CONTACT THOMAS & BETTS CUSTOMER SERVICE TEAM FOR MORE INFORMATION.

Mechanical - Vise Type Connectors

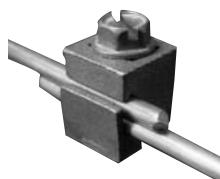
ViperLock™





ViseLock™





Lock it and leave it! With Thomas & Betts' tin plated bronze connector featuring insulation piercing teeth. Its unique design ensures positive ground between figure 8 cable and ground wire.

Design Features

- Teeth easily pierce the messenger insulation of figure 8 cable to create a superior electrical connection
- Increased bolt strength due to a full thread engagement design
- High pressure torque ratio assures a low electrical resistance connection
- · Fast and easy to install without cross-threading
- Vibration resistant
- Makes a permanent connection

Specifications

- Bellcore approved
- Silicon Bronze connector materials (CDA956000) for higher yield strength
- Superior electrical performance
- Messenger diameters of .146"-.312"
- Ground conductor range of .146"-.312"

Focus Applications

- Figure 8 cable to ground connections
- Connect #6 to #6 ground wire

Ordering Information

CATALOG NUMBER	WIRE DIA Messenger	WIRE DIAMETER MESSENGER GROUND TAP			
VL167P	.146"312"	.146"312"	50	400	

Get a grip! With Thomas & Betts' bronze vise type connectors. The ViseLock™ connector is available in a variety of sizes for conductors from #10 SOL. to 4/0 STR.

Design Features

- Full thread high-pressure engagement design ensures superior electrical connection
- Fast and easy installation with common hand tools even on live circuits
- V-Groove design provides easy conductor alignment
- Vibration resistant
- Helps to reduce your inventory by accepting a wide range of conductor sizes

Specifications

- Bellcore approved
- Silicon Bronze material (CDA956000) for higher yield strength
- Stainless Steel hardware on large sizes
- Superior electrical performance

Focus Applications

- Distribution loads
- Service bonding
- Tap connections
- Ground connections
- Grounding capability with a variety of strut, channel applications and cable trays

Ordering Information

CATALOG	2 CON	2 CONDUCTORS WIRE RANGE*						
NUMBER	MAX	MIN	DECIMAL (INCH)	PACK	PACK			
VGC68	#6 SOL	#10 SOL	.162101	50	250			
VGC68SH	#6 SOL	#10 SOL	.162101	50	250			
VGC44	#4 STR	#8 SOL	.232128	50	250			
VGC23	#2 SOL	#6 SOL	.286162	50	250			
VGC12	#2 STR	#5 SOL	.320181	50	250			
VGC2010†	1/0 STR	#4 SOL	.390204	50	250			
VGC3020†	2/0 STR	#3 SOL	.438229	25	125			
VGC4040†	4/0 STR	#1 SOL	.552289	25	125			

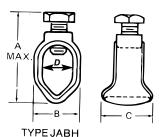
^{*} WIRE RANGE INDICATES EACH CONNECTOR'S ABILITY TO ACCOMMODATE TWO WIRES OF THE SAME SIZE SHOWN IN THE "MAX" OR "MIN" COLUMNS.

†STAINLESS STEEL HARDWARE



Mechanical - Ground Rod Clamps & Accessories

Type JAB Ground Rod Clamps



- Cast of high strength corrosion resistant copper alloy CDA955
- Hex head
- Long bearing surface of clamp on ground wire secures ground connection
- U.L. Listed for direct burial

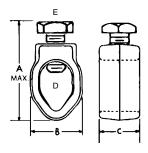




Ordering Information

	DIMENSIONS (II	N.)	
A	A		
			DVC
		в с	PKG D QTY
, , , , , , , , , , , , , , , , , , , ,		15/16" 63/64"	11/16" 100
			19/32" 50
6	A A (MAX.) X. MIN. SOCKET (2) (MM2) SCREW 6 5.2 1-1932 4 8.3 1-27/32	A A GE (MAX.) (MAX.) SCREW X. MIN. SOCKET HEX THREAD 12) (MM2) SCREW BOLT SIZE 6 5.2 1-1932 2-332 7/16"-14UNC	A A GE (MAX.) (MAX.) SCREW X. MIN. SOCKET HEX THREAD I2) (MM2) SCREW BOLT SIZE B C 6 5.2 1-19/32 2-3/32 7/16"-14UNC 15/16" 63/64"

Type G Ground Rod Clamps



- A dependable ground connection offered at a substantial saving
- Cast of high strength corrosion-resistant copper alloy CDA955
- Hex head bolts
- Simplified compact design will make a lasting, trouble-free connection
- U.L. Listed for direct burial



					DIMENSIONS (IN)								
CATALOG NUMBER	NOMINA ROD DI (IN)			WIRE R	ANGE MAX. (MM²)	MIN. (MM²)	A (MAX) BOLT	SCREW THREAD SIZE	В	С	D	E	PKG QTY
G4-DS		12.7	2 str.	10 sol.	33.6	5.2	-	3/8"-16UNC	49/64"	21/32"	33/64"	1/2"	100
G5-DS	5/8	15.8	2 str.	10 sol.	33.6	5.2	-	3/8"-16UNC	29/32"	19/32"	21/32"	1/2"	50

Mechanical - Grounding Connectors & Clamps

Die Cast Zinc Water Pipe Clamp





• Made of die cast zinc alloy with zinc plated screws





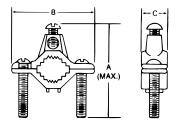
Ordering Information

CATALOG	WATER Pipe	CONDUCTOR RANGE		PKG
NUMBER	SIZE	MAX.	MIN.	QTY
BJ-1-DS	1/2"-1"	#2 str.	#10 sol.	250

Cast Bronze Water Pipe Ground Clamp



- For connecting grounding conductor to water pipe or copper tube
- Cast of high strength, highly conductive copper alloy
- Screws plated for corrosion resistance
- UL listed







Ordering Information

CATALOG	WATER PIPE		OUCTOR NGE	DI	MENSIONS (IN.)		PKG
NUMBER	SIZE	MAX.	MIN.	Α	`B´	С	QTY
J-DS	1/2 to 1	2 str.	10 sol.	2-3/4	2-11/32 2	23/32	100

Trailer Ground Clamp



- 7/16" tin plated hex head bolt installs with terminal wrench or crescent wrench. Square head bolt allows clamp to be installed with pliers.
- Ground wire hole access from four directions minimizes having to bend ground wire.
- Designed so ground wire may be installed on clamp prior to mounting the clamp on metal frame, reducing installation time.
- Beam and ground wire connection can be separately tightened without disconnect integrity of ground circuit.
- High strength copper alloy CDA956 (91% nominal) providing greater conductivity, durability and excellent corrosion resistant characteristics without reliance on plating.
- High strength anchoring bolt penetrates paint.



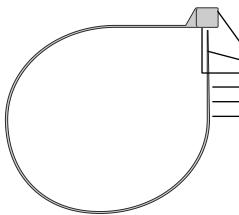
Ordering Information

CATALOG NUMBER	BOLT TYPE	UNIT QTY	STD PKG			
TGC-DS	Square Head - 15/16"-18UNC Bolt	25	100			
TGCH-DS	Slotted Set Screw - 5/16"-24UNF	25	25			
N D						

Note: Bolts are electro-galvanized. Blade-type ground wire screw is tin-plated.

Ty-Rap® - Cable Ties

TY-RAP® CABLE TIES



Ty-Rap® Cable Tie Features

- Low-profile head, good looks—won't snag
- Easy to install, won't slip, mechanic's grip
- Non-magnetic stainless steel lock, maintains right tension
- Infinitely adjustable design, always the "right" size
- Smooth molded body, less stress-sensitive than notched type ties
- Ribbed and stippled back, won't slip on bundle
- Registered as Standard 1565
- Qualified under OPC 23190

Ty-Rap® cable ties give you these important features and benefits.

- Smooth body design with smooth rounded edges and uniform cross sections. They have no notches, thereby reducing stress areas that can weaken the tie, causing brittle breakage especially in cold and dry conditions. The smooth design also avoids damage to cable insulation.
- Stainless steel locking device in the head. This means they are infinitely adjustable within their bundle range. You get the right bundle tightness every time. Other brands of cable ties have teeth (notches) along the body that mate with a ratchet-type pawl in the head. This design offers no adjustment between the teeth which means they can be too tight or too loose on the bundle. In addition, the notched design may cause brittle breakage and cause damage to cable insulation.



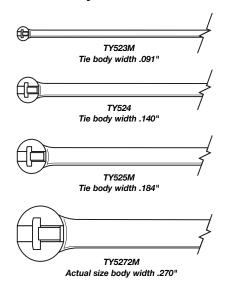
How to Order Color-Coded Ty-Rap® Ties and Accessories

COLOR	SUFFIX NO.	
Black (outdoor)	Χ	
Brown	1	
Red	2	
Orange	3	
Yellow	4	
Green	5	
Blue	6	
Purple	7	
Gray	8	
White	9	

NATURAL NYLON IS STANDARD. FOR COLORED TY-RAP® TIES, ADD THE ABOVE SUFFIX NUMBERS TO CATALOG NUMBERS. EXAMPLE: TY25M-2 WOULD BE RED TY25M. (CONSULT CUSTOMER SERVICE FOR ORDERING INFORMATION.)

Standard Cable Ties

Standard Nylon 6/6 Cable ties





Ordering Information

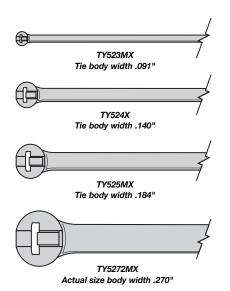
CATALOG NUMBER	BULK PKG CATALOG NUMBER	BODY WIDTH (IN)	LENGTH (IN)	MAXIMUM Wire Bundle Dia (in)	MILITARY STANDARD PART NO.	TENSILE STRENGTH (LBS)	UNIT QTY	STD PKG	BULK PKG QTY
TY523M	TY23M	.091	3.62	.625	MS3367-4	18	100	1000	1000
TY52315M	TYB2315M	.091	7.00	1.500	_	18	100	500	1000
TY5232M	TY232M	.091	8.00	2.000	_	18	100	500	1000
TY5234M	TY234M	.091	14.00	4.000	_	18	100	500	1000
TY524M	TY24M	.140	5.50	1.125	MS3367-5	30	100	1000	1000
TY5242M	TY242M	.140	8.19	2.000	_	30	100	500	1000
TY526M	TY26M	.140	11.10	3.000	_	30	100	500	1000
TY5244M	TY244M	.140	14.50	4.000	_	30	100	500	1000
TY525M	TY25M	.184	7.31	1.750	MS3367-1	50	100	1000	1000
TY5253M	TY253M	.184	11.40	3.000	MS3367-7	50	100	1000	1000
TY528M	TY28M	.184	14.20	4.000	MS3367-2	50	100	500	1000
TY5272M†	TY272M†	.270	8.75	2.000	_	120	50	250	500
TY527M†	TY27M†	.270	13.40	3.500	MS3367-3	120	50	500	500
TY5275M	TY275M	.270	18.00	5.000	_	120	50	500	500
TY5277M	TY277M	.270	24.30	7.000	_	120	50	500	500
TY529M	TY29M	.301	30.00	9.000	MS3367-6	120	50	500	500
TY53510M†	-	.320	35.00	10.000	_	175	25	250	_
TY54513M†	-	.320	45.00	13.000	_	175	25	250	_

CABLE TIES MADE FROM NATURAL NYLON 6/6 ARE EXCELLENT PERFORMERS IN MOST APPLICATIONS. NYLON 6/6 IS RECOMMENDED FOR USE IN TEMPERATURES RANGING FROM 185°F TO -40°F.

[†] RECOGNIZED MODELS.

Nylon Cable Ties

Nylon 6/6 Weather Resistant



The MX series cable ties are recommended for outdoor use. The addition of carbon black provides good ultraviolet resistance and prolongs the useful life of the cable tie.





Ordering Information

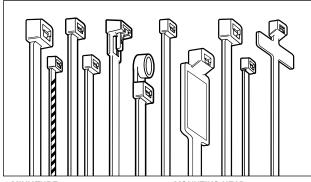
CATALOG NUMBER	BULK PKG Catalog Number	BODY WIDTH (IN)	LENGTH (IN)	MAXIMUM WIRE BUNDLE DIA (IN)	MILITARY STANDARD PART NO.	TENSILE STRENGTH (LBS)	UNIT QTY	STD PKG	BULK PKG QTY
TY523MX	TY23MX	.091	3.62	.625	MS3367-4	18	100	1000	1000
TY52315MX	TYB2315MX	.091	7.00	1.500	_	18	100	500	1000
TY5232MX	TY232MX	.091	8.00	2.000	_	18	100	500	1000
TY5234MX	TY234MX	.091	14.00	4.000	_	18	100	500	1000
TY524MX	TY24MX	.140	5.50	1.125	MS3367-5	30	100	1000	1000
TY5242MX	TY242MX	.140	8.19	2.000	_	30	100	500	1000
TY526MX	TY26MX	.140	11.10	3.000	_	30	100	500	1000
TY5244MX	TY244MX	.140	14.50	4.000	_	30	100	500	1000
TY525MX	TY25MX	.184	7.31	1.750	MS3367-1	50	100	1000	1000
TY5253MX	TY253MX	.184	11.40	3.000	MS3367-7	50	100	500	1000
TY528MX	TY28MX	.184	14.20	4.000	MS3367-2	50	100	500	1000
TY5272MX†	TY272MX	.270	8.75	2.000	_	120	50	250	500
TY527MX†	*TY27MX	.270	13.40	3.500	MS3367-3	120	50	500	500
TY5275MX	TY275MX	.270	18.00	5.000	_	120	50	500	500
TY5277MX	TY277MX	.270	24.30	7.000	_	120	50	500	500
TY529MX	*TY29MX	.301	30.00	9.000	MS3367-6	120	50	500	500
TY53510MX†	_	.320	35.00	10.000	_	175	25	250	_
TY54513MX†	-	.320	45.00	13.000	_	175	25	250	_

* FOR MILITARY COMPLIANCE OF WEATHER RESISTANT BLACK 120 LBS. TIES, REPLACE SUFFIX X WITH O (IE. TY27M-0).

 $[\]dagger$ Not $\ ^{\P}$ Listed or Recognized Models.

Catamount Cable Ties - Overview

CATAMOUNT® CABLE TIES

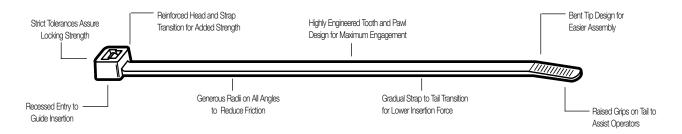


- MINIATURE
- HEAVY DUTY
- INTERMEDIATE
- EXTRA HEAVY DUTY • STANDARD
- RELEASABLE TIES
- MOUNTING HEAD
- STRIPED TIES
- RESTRICTED BUNDLE
- IDENTIFICATION TIES
- MIL-SPEC TIES

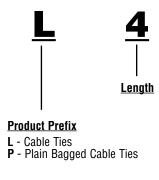
Catamount Cable Ties are available in lengths from 4" to our exclusive 48" strap. Cable Ties will satisfy bundling requirements from 1/16" to 15" and loop tensile strengths from 18 to 175 pounds.

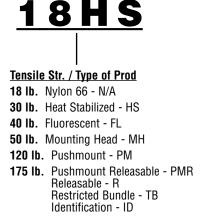
Where applicable, Catamount Cable Ties are UL Recognized, Mil-Spec Approved and/or QPL Listed.

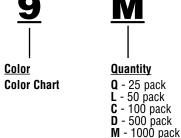
State-of-the-art robotic and raw material handling equipment assures product and material integrity throughout the manufacturing process. Overall quality is achieved through statistical analysis and quality driven operator objectives. Catamount has attained Mil-Spec I-45208 quality ratings from a number of equipment manufacturers.



Part Number Construction







Quantity **Q** - 25 pack **L** - 50 pack **C** - 100 pack **D** - 500 pack

Miniature Cable Ties

Miniature Series 18





STANDARD CATALOG	BULK CATALOG			BUND DIA		LEN	GTH	WII	OTH		LOOP ISILE	STD	BULK PKG
NUMBER	NUMBER	MATERIAL	COLOR	INCH	(MM)	INCH	(MM)	INCH	(MM)	LB	(KG)	PKG	QTY
L-4-18HS-0-C	L-4-18HS-0-M	Heat	Black	1/16- 5/8	(2-16)	4.0	(102)	.100	(3)	18	(8.2)	100	1000
		Stabilized Nylon											
L-4-18-0-C	L-4-18-0-M	Nylon	Black	1/16- 5/8	(2-16)	4.0	(102)	.100	(3)	18	(8.2)	100	1000
L-4-18-9-C	L-4-18-9-M	Nylon	Natural	1/16- 5/8	(2-16)	4.0	(102)	.100	(3)	18	(8.2)	100	1000
P-4-18-1-C		Nylon Colors	Brown	1/16- 5/8	(2-16)	4.0	(102)	.100	(3)	18	(8.2)	100	-
P-4-18-2-C		Nylon Colors	Red	1/16- 5/8	(2-16)	4.0	(102)	.100	(3)	18	(8.2)	100	-
P-4-18-3-C		Nylon Colors	Orange	1/16- 5/8	(2-16)	4.0	(102)	.100	(3)	18	(8.2)	100	-
P-4-18-4-C		Nylon Colors	Yellow	1/16- 5/8	(2-16)	4.0	(102)	.100	(3)	18	(8.2)	100	-
P-4-18-5-C		Nylon Colors	Green	1/16- 5/8	(2-16)	4.0	(102)	.100	(3)	18	(8.2)	100	-
P-4-18-6-C		Nylon Colors	Blue	1/16- 5/8	(2-16)	4.0	(102)	.100	(3)	18	(8.2)	100	-
P-4-18-7-C		Nylon Colors	Purple	1/16- 5/8	(2-16)	4.0	(102)	.100	(3)	18	(8.2)	100	-
P-4-18-8-C		Nylon Colors	Gray	1/16- 5/8	(2-16)	4.0	(102)	.100	(3)	18	(8.2)	100	-
L-6-18-0-C	L-6-18-0-M	Nylon	Black	1-1/16- 1-1/2	(2 - 38)	6.4	(163)	.100	(3)	18	(8.2)	100	1000
L-6-18-9-C	L-6-18-9-M	Nylon	Natural	1-1/16- 1-1/2	(2 - 38)	6.4	(163)	.100	(3)	18	(8.2)	100	1000
L-8-18-0-C	L-8-18-0-M	Nylon	Black	1/16- 2	(2 - 51)	8.0	(202)	.100	(3)	18	(8.2)	100	1000
L-8-18-9-C	L-8-18-9-M	Nylon	Natural	1/16- 2	(2 - 51)	8.0	(202)	.100	(3)	18	(8.2)	100	1000
P-4-18-0-Q		Nylon	Black	1/16- 5/8	(2-16)	4.0	(102)	.100	(3)	18	(8.2)	-	25

[•] Use QC-100, L-200,L-400, L-400C, OR ERG-299 Installation Tools.

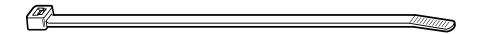
^{• &}quot;P" INDICATES UNLABELLED BAG. UNLABELLED BAGS ARE SUBJECT TO MINIMUM ORDER QUANTITIES.

^{• &}quot;L" INDICATES LABELLED BAG.

^{• &}quot;FL" AFTER THE TENSILE RATING PART OF CAT. # DESIGNATES FLUORESCENT COLOR. I.E. L-4-18-FL-20-M. CONSULT CUSTOMER SERVICE FOR AVAILABILITY AND COLORS.

Intermediate Cable Ties

Intermediate Series 30





Ordering Information

STANDARD CATALOG	BULK CATALOG			BUNI Di		LEN	CTU	\A/II	DTH		LOOP NSILE	STD	BULK PKG
NUMBER	NUMBER	MATERIAL	COLOR	INCH	(MM)	INCH	(MM)	INCH	(MM)	LB	(KG)	PKG	QTY
L-5-30HS-0-C	L-5-30HS-0-M	Heat Stabilized	Black	1/16 - 1-1/4	(2 - 32)	5.6	(145)	.130	(3)	30	(13.6)	100	1000
		Nylon											
L-5-30-0-C	L-5-30-0-M	Nylon	Black	1/16 - 1-1/4	(2 - 32)	5.6	(145)	.130	(3)	30	(13.6)	100	1000
L-5-30-9-C	L-5-30-9-M	Nylon	Natural	1/16 - 1-1/4	(2 - 32)	5.6	(145)	.130	(3)	30	(13.6)	100	1000
P-5-30-1-C	P-5-30-1-M	Nylon Colors	Brown	1/16 - 1-1/4	(2 - 32)	5.6	(145)	.130	(3)	30	(13.6)	100	3000
P-5-30-2-C	P-5-30-2-M	Nylon Colors	Red	1/16 - 1-1/4	(2 - 32)	5.6	(145)	.130	(3)	30	(13.6)	100	3000
P-5-30-3-C	P-5-30-3-M	Nylon Colors	Orange	1/16 - 1-1/4	(2 - 32)	5.6	(145)	.130	(3)	30	(13.6)	100	3000
P-5-30-4-C	P-5-30-4-M	Nylon Colors	Yellow	1/16 - 1-1/4	(2 - 32)	5.6	(145)	.130	(3)	30	(13.6)	100	3000
P-5-30-5-C	P-5-30-5-M	Nylon Colors	Green	1/16 - 1-1/4	(2 - 32)	5.6	(145)	.130	(3)	30	(13.6)	100	3000
P-5-30-6-C	P-5-30-6-M	Nylon Colors	Blue	1/16 - 1-1/4	(2 - 32)	5.6	(145)	.130	(3)	30	(13.6)	100	3000
P-5-30-8-C	P-5-30-8-M	Nylon Colors	Gray	1/16 - 1-1/4	(2 - 32)	5.6	(145)	.130	(3)	30	(13.6)	100	3000
L-8-40HS-0-C	L-8-40HS-0-M	Heat Stabilized	Black	1/16-2	(2-51)	8.5	(215)	.130	(3)	40	(18.2)	100	1000
		Nylon											
L-8-40-0-C	L-8-40-0-M	Nylon	Black	1/16-2	(2-51)	8.5	(215)	.130	(3)	40	(18.2)	100	1000
L-8-40-9-C	L-8-40-9-M	Nylon	Natural	1/16-2	(2-51)	8.5	(215)	.130	(3)	40	(18.2)	100	1000
P-8-40-1-C	P-8-40-1-M	Nylon Colors	Brown	1/16-2	(2-51)	8.5	(215)	.130	(3)	40	(18.2)	100	3000
P-8-40-2-C	P-8-40-2-M	Nylon Colors	Red	1/16-2	(2-51)	8.5	(215)	.130	(3)	40	(18.2)	100	3000
P-8-40-3-C	P-8-40-3-M	Nylon Colors	Orange	1/16-2	(2-51)	8.5	(215)	.130	(3)	40	(18.2)	100	3000
P-8-40-4-C	P-8-40-4-M	Nylon Colors	Yellow	1/16-2	(2-51)	8.5	(215)	.130	(3)	40	(18.2)	100	3000
P-8-40-5-C	P-8-40-5-M	Nylon Colors	Green	1/16-2	(2-51)	8.5	(215)	.130	(3)	40	(18.2)	100	3000
P-8-40-6-C	P-8-40-6-M	Nylon Colors	Blue	1/16-2	(2-51)	8.5	(215)	.130	(3)	40	(18.2)	100	3000
P-8-40-7-C	P-8-40-7-M	Nylon Colors	Purple	1/16-2	(2-51)	8.5	(215)	.130	(3)	40	(18.2)	100	3000
P-8-40-8-C	P-8-40-8-M	Nylon Colors	Gray	1/16-2	(2-51)	8.5	(215)	.130	(3)	40	(18.2)	100	3000
L-11-40-0-C	L-11-40-0-D	Nylon	Black	1/16-3	(2-76)	11.5	(282)	.146	(4)	40	(18.2)	100	500
L-11-40-9-C	L-11-40-9-D	Nylon	Natural	1/16-3	(2-76)	11.5	(282)	.146	(4)	40	(18.2)	100	500
L-14-40-0-C	L-14-40-0-D	Nylon	Black	1/16-4	(2-102)	14.5	(358)	.146	(4)	40	(18.2)	100	500
L-14-40-9-C	L-14-40-9-D	Nylon	Natural	1/16-4	(2-102)	14.5	(358)	.146	(4)	40	(18.2)	100	500

[•] Use QC-100, L-200, L-400, L-400C, or ERG-299 Installation Tools.

CONSULT CUSTOMER SERVICE FOR AVAILABILITY AND COLORS.

^{• &}quot;P" INDICATES UNLABELLED BAG.

^{• &}quot;L" INDICATES LABELLED BAG.

^{• &}quot;FL" AFTER THE TENSILE RATING PART OF CAT. # DESIGNATES FLUORESCENT COLOR. I.E. L-4-18-FL-20-M.

Standard Cable Ties

Standard Series 50







Ordering Information

STANDARD BULK CATALOG CATALOG			BUNDLE DIA LENGTH				MIN LOOP WIDTH TENSILE				STD	BULK PKG	
NUMBER	NUMBER	MATERIAL	COLOR	INCH	(MM)	INCH	(MM)	INCH	(MM)	LB	(KG)	PKG	QTY
L-5-50HS-0-C	L-5-50HS-0-M	Heat Stabilized Nylon	Black	1/16-1	(2-25)	5.5	(140)	.187	(5)	50	(22.7)	100	1000
L-5-50-0-C	L-5-50-0-M	Nylon	Black	1/16-1	(2-25)	5.5	(140)	.187	(5)	50	(22.7)	100	1000
L-5-50-9-C	L-5-50-9-M	Nylon	Natural	1/16-1	(2-25)	5.5	(140)	.187	(5)	50	(22.7)	100	1000
L-7-50HS-0-C	L-7-50HS-0-M	Heat Stabilized Nylon	Black	1/16-1 3/4	(2-44)	7.5	(193)	.187	(5)	50	(22.7)	100	1000
L-7-50-0-C	L-7-50-0-M	Nylon	Black	1/16-1-3/4	(2-44)	7.5	(193)	.187	(5)	50	(22.7)	100	1000
L-7-50-9-C	L-7-50-9-M	Nylon	Natural	1/16-1-3/4	(2-44)	7.5	(193)	.187	(5)	50	(22.7)	100	1000
P-7-50-2-C		Nylon Colors	Red	1/16-1-3/4	(2-44)	7.5	(193)	.187	(5)	50	(22.7)	100	3000
P-7-50-3-C		Nylon Colors	Orange	1/16-1-3/4	(2-44)	7.5	(193)	.187	(5)	50	(22.7)	100	3000
P-7-50-4-C		Nylon Colors	Yellow	1/16-1-3/4	(2-44)	7.5	(193)	.187	(5)	50	(22.7)	100	3000
P-7-50-5-C		Nylon Colors	Green	1/16-1-3/4	(2-44)	7.5	(193)	.187	(5)	50	(22.7)	100	3000
P-7-50-6-C		Nylon Colors	Blue	1/16-1-3/4	(2-44)	7.5	(193)	.187	(5)	50	(22.7)	100	3000
P-7-50-7-C		Nylon Colors	Purple	1/16-1-3/4	(2-44)	7.5	(193)	.187	(5)	50	(22.7)	100	3000
P-7-50-8-C		Nylon Colors	Gray	1/16-1-3/4	(2-44)	7.5	(193)	.187	(5)	50	(22.7)	100	3000
L-11-50HS-0-0	CL-11-50HS-0-D	Heat Stabilized Nylon	Black	1/16-3	(2-76)	11.1	(282)	.187	(5)	50	(22.7)	100	500
L-11-50-0-C	L-11-50-0-D	Nylon	Black	1/16-3	(2-76)	11.1	(282)	.187	(5)	50	(22.7)	100	500
L-11-50-9-C	L-11-50-9-D	Nylon	Natural	1/16-3	(2-76)	11.1	(282)	.187	(5)	50	(22.7)	100	500
P-11-50-2-C		Nylon	Red	1/16-3	(2-76)	11.1	(282)	.187	(5)	50	(22.7)	100	-
L-14-50HS-0-0	CL-14-50HS-0-D	Heat Stabilized Nylon	Black	1/16-4	(2-102)	14.1	(358)	.187	(5)	50	(22.7)	100	500
L-14-50-0-C	L-14-50-0-D	Nylon	Black	1/16-4	(2-102)	14.1	(358)	.187	(5)	50	(22.7)	100	500
L-14-50-9-C	L-14-50-9-D	Nylon	Natural	1/16-4	(2-102)	14.1	(358)	.187	(5)	50	(22.7)	100	500
P-14-50-2-C		Nylon	Red	1/16-4	(2-102)	14.1	(358)	.187	(5)	50	(22.7)	100	-
P-14-50-6-C		Nylon	Blue	1/16-4	(2-102)	14.1	(358)	.187	(5)	50	(22.7)	100	-
P-7-50-0-Q		Nylon	Black	1/16-1-3/4	(2-44)	7.5	(193)	.187	(5)	50	(22.7)	25	-
P-11-50-0-Q		Nylon	Black	1/16 - 3	(2-76)	11.1	(282)	.187	(5)	50	(22.7)	25	-
P-14-50-0-Q		Nylon	Black	1/16 - 4	(2-102)	14.1	(358)	.187	(5)	50	(22.7)	25	_

[•] Use QC-100, L-200, L-400, L-400C, or ERG-299 Installation Tools.

CONSULT CUSTOMER SERVICE FOR AVAILABILITY AND COLORS.

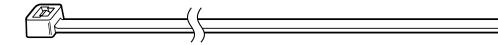
^{• &}quot;P" INDICATES UNLABELLED BAG.

^{• &}quot;L" INDICATES LABELLED BAG.

^{• &}quot;FL" AFTER THE TENSILE RATING PART OF CAT. # DESIGNATES FLUORESCENT COLOR. I.E. L-4-18-FL-20-M.

Heavy Duty Cable Ties

Heavy Duty Series 120





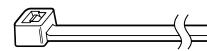
Ordering Information

STANDARD CATALOG		BUN D	IDLE IA	I FN	GTH	WIF	OTH		LOOP NSILE	STD	
NUMBER	MATERIAL	COLOR	INCH	(MM)	INCH	(MM)	INCH	(MM)	LB	(KG)	PKG
L-8-120HS-0-C	Heat Stabilized Nylon	Black	3/16-2	(5-51)	8.0	(202)	.300	(8)	120	(54.4)	100
L-8-120-0-C	Nylon	Black	3/16-2	(5-51)	8.0	(202)	.300	(8)	120	(54.4)	100
L-8-120-9-C	Nylon	Natural	3/16-2	(5-51)	8.0	(202)	.300	(8)	120	(54.4)	100
L-11-120-0-C	Nylon	Black	3/16-3	(5-76)	11.1	(282)	.300	(8)	120	(54.4)	100
L-11-120-9-C	Nylon	Natural	3/16-3	(5-76)	11.1	(282)	.300	(8)	120	(54.4)	100
L-14-120HS-0-C	Heat Stabilized Nylon	Black	3/16-4	(5-102)	14.2	(363)	.300	(8)	120	(54.4)	100
L-14-120-0-C	Nylon	Black	3/16-4	(5-102)	14.2	(363)	.300	(8)	120	(54.4)	100
L-14-120-9-C	Nylon	Natural	3/16-4	(5-102)	14.2	(363)	.300	(8)	120	(54.4)	100
P-14-120-2-C	Nylon Colors	Red	3/16-4	(5-102)	14.2	(363)	.300	(8)	120	(54.4)	100
P-14-120-5-C	Nylon Colors	Green	3/16-4	(5-102)	14.2	(363)	.300	(8)	120	(54.4)	100
L-18-120HS-0-L	Heat Stabilized Nylon	Black	3/16-4-7/8	(5-124)	18.0	(457)	.300	(8)	120	(54.4)	50
L-18-120-0-L	Nylon	Black	3/16-4-7/8	(5-124)	18.0	(457)	.300	(8)	120	(54.4)	50
L-18-120-9-L	Nylon	Natural	3/16-4-7/8	(5-124)	18.0	(457)	.300	(8)	120	(54.4)	50
L-24-120HS-0-L	Heat Stabilized Nylon	Black	3/16-7	(5-178)	24.2	(616)	.300	(8)	120	(54.4)	50
L-24-120-0-L	Nylon	Black	3/16-7	(5-178)	24.2	(616)	.300	(8)	120	(54.4)	50
L-24-120-9-L	Nylon	Natural	3/16-7	(5-178)	24.2	(616)	.300	(8)	120	(54.4)	50
L-28-120-0-L	Nylon	Black	3/16-9	(5-230)	28.0	(816)	.300	(8)	120	(54.4)	50
L-28-120-9-L	Nylon	Natural	3/16-9	(5-230)	28.0	(816)	.300	(8)	120	(54.4)	50

Use L-300 or ERG-297 Installation Tool.

CONSULT CUSTOMER SERVICE FOR AVAILABILITY AND COLORS.

Extra Heavy Duty Series 175





Ordering Information

STANDARD CATALOG			BUNDLE Dia length					OTH	LOOP NSILE	STD	
NUMBER	MATERIAL	COLOR	INCH	(MM)	INCH	(MM)	INCH	(MM)	LB	(KG)	PKG
L-24-175-0-L	Nylon	Black	3/16-7.2	(5-184)	24.0	(612)	.345	(9)	175	(79.3)	50
L-24-175-9-L	Nylon	Natural	3/16-7.2	(5-184)	24.0	(612)	.345	(9)	175	(79.3)	50
L-34-175-9-L	Nylon	Natural	3/16-10	(5-254)	34.0	(864)	.345	(9)	175	(79.3)	50
L-36-175-0-L	Nylon	Black	2-3/4-10-3/4	(70-273)	36.0	(914)	.345	(9)	175	(79.3)	50
L-36-175-9-L	Nylon	Natural	2-3/4-10-3/4	(70-273)	36.0	(914)	.345	(9)	175	(79.3)	50
L-41-175-0-L	Nylon	Black	3/16-12	(5-305)	41.0	(1032)	.345	(9)	175	(79.3)	50
L-41-175-8-L	Nylon	Gray	3/16-12	(5-305)	41.0	(1032)	.345	(9)	175	(79.3)	50
L-48-175-0-L	Nylon	Black	3/16-15	(5-375)	48.0	(1216)	.345	(9)	175	(79.3)	50
L-48-175-8-L	Nylon	Gray	3/16-15	(5-375)	48.0	(1216)	.345	(9)	175	(79.3)	50

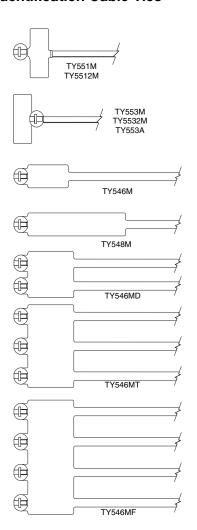
- Use L-300 or ERG-297 Installation Tool.
- "P" INDICATES UNLABELLED BAG.
- "L" INDICATES LABELLED BAG.

Consult Customer Service for availability and colors.

Thomas@Betts

Identification Cable Ties

Identification Cable Ties



Self-locking Ty-Rap® identification ties are available in both single and multiple configurations. They may be marked with the special Thomas & Betts black or red marking pen which produces a permanent legend, or they can be heat stamped. Because the ties serve the dual purpose of tying and identifying, you will achieve extra economies. They can be applied with the standard Ty-Rap® tying tools used for regular ties.

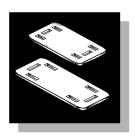


CATALOG NUMBER	BULK PKG Catalog Number	BODY WIDTH (IN)	LENGTH (IN)	MAXIMUM WIRE BUNDLE DIA (IN)	MILITARY Standard Part no.	MARKING PAD SIZE (IN)S W X H	TENSILE TRENGTH (LBS)	UNIT QTY	STD PKG	BULK PKG QTY
TY551M	TY51M	.091	3.60	.625	MS3368-5	1 x .313	18	50	500	500
TY5512M	TY512M	.091	8.30	2	_	1 x .313	18	100	500	1000
TY553M	TY53M	.091	4.00	.625	_	.813 x .359	18	50	500	500
TY5532M	TY532M	.091	8.40	2	_	.813 x .359	18	100	500	1000
TY546M	TY46M	.184	7.25	1.75	MS3368-1	5 x .875	50	100	500	1000
TY548M	TY48M	.184	14.2	4	MS3368-2	5 x 2.125	50	100	500	1000
TY546MD	TY46MD	.184	7.25	1.75	MS3368-3	1.172 x 1	50	50	250	500
TY546MT	TY46MT	.184	7.25	1.75	MS3368-4	1.210 x 1	50	100	500	500
_	TY46MF	.184	7.25	1.75	_	2.48 x 1	50	_	_	500

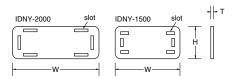
FASTENING HARDWARE & ELECTRICIAN'S SUPPLIES

Identification Cable Ties

Identification Tags



- Two tags for marking bundles to 9" diameters.
- Run ties through opposing mounting holes lengthwise or across the height of tags.
- IDNY-1500 accepts ties to 50 pound tensile; IDNY-2000 accepts ties to 120 pound tensile.
- Stocked in 6/6 Natural Nylon.
- UL Flammability 94 V-2.
- Non-Conductive, Non-Corrosive; resistant to fuels, lubricants and most chemicals.



Ordering Information

BULK CATALOG	HE	H I <u>GHT</u>	<u>WI</u>	W <u>DTH</u>	THIC	T <u>KNESS</u>	SL <u>HE</u> l	OT GHT	SL <u>Wi</u> E	OT OTH	STD	BULK PKG
NUMBER	INCH	(MM)	INCH	(MM)	INCH	(MM)	INCH	(MM)	INCH	(MM)	PKG	QTY
IDNY-1500-9-M	.745	(18.92)	1.500	(38.08)	.015	(.381)	.090	(2.29)	.200	(5.08)	-	1000
IDNY-2000-9-M	.745	(18.92)	2.000	(50.78)	.025	(.653)	.113	(2.87)	.336	(8.53)	-	1000
Tolerance ±	.015	(.381)	.030	(.762)	.005	(.127)	-	.010	(.254)	-	-	_

[•] MATTE FINISH FOR SHARP LEGENDS.

CONSULT CUSTOMER SERVICE FOR AVAILABILITY AND COLORS.

Identification Ties

• Plate Dimensions: .312 x .973

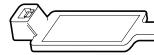


Ordering Information

STANDARD	BULK									MIN	LOOP		BULK
CATALOG	CATALOG				BUNDLE DIA			WIE	WIDTH TENSILE		NSILE	STD	PKG
NUMBER	NUMBER	MATERIAL	COLOR	INCH	(MM)	INCH	(MM)	INCH	(MM)	LB	(KG)	PKG	QTY
L-4-18ID-9-C	L-4-18ID-9-M	Nylon	Natural	3/4	(19)	4.0	(102)	.100	(2.54)	18	(8.2)	100	1000

[•] Use QC-100, L-200 or L-400 Installation Tool.

CONSULT CUSTOMER SERVICE FOR AVAILABILITY AND COLORS.





• Plate Dimensions: 1.081 x .522

Ordering Information

STANDARD	BULK									MIN	LOOP		BULK
CATALOG	CATALOG MATERIAL COLOR			BUNDLE DIA			LENGTH WIDT			TEN	NSILE	STD	PKG
NUMBER	NUMBER	MATERIAL	COLOR	INCH	(MM)	INCH	(MM)	INCH	(MM)	LB	(KG)	PKG	QTY
L-7-50ID-9-C	L-7-50ID-9-M	Nylon	Natural	1 3/4	(44)	7.875	(200)	.183	(4.65)	50	(22.7)	100	1000

[•] USE QC-100, L-200 OR L-400 INSTALLATION TOOL

CONSULT CUSTOMER SERVICE FOR AVAILABILITY AND COLORS.

Marking Pens



Ordering Information

١	CATALOG NUMBER	DESCRIPTION	STD PKG
	WT163M-1	Black Marking Pen	1
	WT163M-3	Red Marking Pen	1

Thomas@Betts

Cable Ties for Special Applications

Cable Ties for Special Applications

Natural nylon cable ties are excellent performers in most applications. However, to answer your cable tying needs in more severe environments, Thomas & Betts also offers ties in a variety of special materials. These materials, which are available to meet your specific performance requirements, are displayed below and include our stainless steel ties. The ties are available in a range of lengths and tensile strength ratings. Typical harsh applications might include resistance to chemicals or radiation, extremely low or high temperatures, flammability, etc. By matching the appropriate material to your application, you are assured of the highest quality and dependability, at the lowest cost. For example, if your application is in an extremely cold environment, three materials will answer your need: Tefzel*, Nylon 12 and stainless steel. If you also require high tensile strength, then stainless steel is your best choice. Where high strength is not required, Nylon 12 might be your choice as it is the least costly. Whatever your application, Thomas & Betts has the tie for your needs.

This information is based on data provided by the manufacturers of the specific materials listed and is provided only as a general guide. No specific recommendation is intended. As each application may vary, testing should be conducted by the user in the intended environment.

For more information: Contact customer service.

Available Materials	5 = Most Suitable 1 = Least Suitable		Suitable	
ENVIRONMENT	STANDARD NYLON TY- SERIES	WEATHER RESISTANT NYLON TY-X SERIES	FIRE RETARDANT NYLON TY-FR SERIES	STAINLESS STEEL DIAMOND/SACHS SC053 SERIES
Ultraviolet Resistance	1	4	1	5
Radiation	1	1	1	5
Low Temperature	3	3	2	5
High Temperature	3	3	3	5
Flammability	3	3	4	5
Chemical Resistance		Thomas & Bett		

^{*} REGISTERED DUPONT TRADEMARK

FOR ADDITIONAL CABLE TYING PRODUCTS REFER TO T&B CATALOGS GM11/GM8

Flame Retardant Ties





Ordering Information

CATALOG NUMBER	BODY WIDTH (IN)	LENGTH (IN)	MAXIMUM WIRE BUNDLE DIA (IN)	MARKING PAI Size (IN) W X H) Tensile Strength	BULK PKG QTY
TY23MFR	.091	3.62	.625	_	18	1000
TY24MFR	.140	5.50	1.125	_	40	1000
TY25MFR	.184	7.31	1.75	_	50	1000
TY28MFR	.184	14.20	4.00	_	50	1000
TY272MFR†	.301	8.00	2.00	_	120	500
TY27MFR	.301	13.20	3.50		120	500
TY53MFR	.091	4.00	.625	.813 x .359	18	500

This material meets U.L. 94V-O flammability rating.

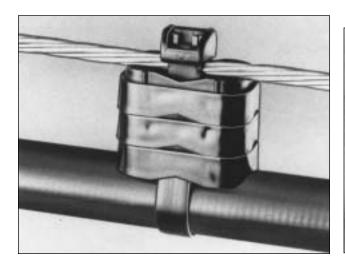


[†] NOT
RECOGNIZED MODEL.

Cable Support System

THE DELTEC® CABLE SUPPORT SYSTEM

Provides a strong, long-life and cost saving method of securing communication cables







The Deltee® cable support is a smooth, black, UV and weather resistant Delrin® strap secured with a self-locking head. The locking device is made of corrosion-resistant silicon bronze for long life.

Using Deltec® zinc-plated steel base or hanger accessories, communications cable can be secured to all types of surfaces.

The Deltec® Cable Support System is a user-friendly product designed to provide ease and flexibility in fastening communications cables to messenger strand. It is equally well suited for copper conductor cable, coaxial cable, fiber optic cable and inner duct in aerial applications.

The Deltec® system answers your aerial cable needs with innovative design and state of the art materials. This system includes weather-resistant Delrin® cable straps, marine grade locking devices, and base hanger accessories for specific applications where mounting is required.

Deltec® cable straps are available in standard lengths of 10, 13.5, 16 and 27 inches, and in convenient 50 foot reels where specific lengths need to be established by the installer in the field. Additional "standard" lengths can be established for applications where higher volumes prevail.

Advantages of the Deltec® System Include:

- · Proven years of service.
- No sharp edges craft friendly! Cable friendly!
- Ease of installation one wrap, no re-treading of re-strap.
- Lowers installation costs.
- High tensile strength after fastening.
- Total flexibility in lengths when using reel.
- Stackable spacers accommodate all cable sizes no need to stock multiple sizes of individual height spacers.
- Spacer designed to retain strap on each side and cradle the cable, providing restricted movement of spacer and preventing damage to cable.
- In situations where multiple cables are supported, the T&B TCP360 stackable spacer may be rotated 90 degrees and installed similar to a single cable, yet provide the same restricting features (unlike those commonly used today).
- Month and year of manufacture stamped into strap material.

Quick, Easy Installation

- Position spacers, as required, between strand and cable or between cables.
- Hold head of DELTEC® strap at top of strand; thread tail through spacer, around cable, up through other side of spacer and into other side of the head
- 3. Pull until snug, or use tool WT3D to pull strap up tight and cut tail flush with head.

SPECIFICATIONS	
Strap and body	Dupont DELRIN®. Offers superior resistance to sunlight, moisture, and
Locking Device	salt environments. Marine grade corrosion-resistant silicon bronze.
Installation Range	-30°F to 150°F.
Minimum Tensile Strength	250 lbs. minimum.
Outdoor Life	Designed to last a minimum of 20 years
Continuous Load	20 pounds

Cable Support System

Strap with Double-Locking Head





Locking Heads



Kits



Installing Tool



Ordering Information

CATALOG NUMBER	DESCRIPTION	INNER Pack	OUTER Pack
CSS-100	Cable strap w/ head, 10.0" long. Order by strap	50	50
CSS-135	Cable strap w/ head, 13.5" long. Order by strap	50	50
CSS-160	Cable strap w/ head, 16.0" long. Order by strap	50	50
CSS-270	Cable strap w/ head, 27.0" long. Order by strap	25	25

50 Foot Reel of Strap

CATALOG	DESCRIPTION	INNER	OUTER
NUMBER		PACK	PACK
CSS-50R	Reel of strap replaces many metal straps Ten reels per carton. Order by reel.	10	10

Ordering Information

CATALOG	DESCRIPTION	INNER	OUTER
NUMBER		PACK	PACK
CSS-LH	Molded acetal w/ marine grade silicon bronze locking device. Used with 50' reel of strap. Order by head.	*25	500

^{*} Мінімим 500.

Ordering Information

CATALOG NUMBER	DESCRIPTION	INNER PACK	OUTER PACK
CSS-5K	Kit - 5 reels of strap, 150 locking heads. Order by kit.	1	1
CSS-10K	Kit - 10 reels of strap, 300 locking heads. Order by kit.	1	1

CATALOG NUMBER	DESCRIPTION	INNER PACK	OUTER PACK
WT3D	For tightening and cutting Deltec® strap.	1	1
	Easy to use, cuts tail flush.		

FASTENING HARDWARE & ELECTRICIAN'S SUPPLIES

Cable Support System

Modular, Stackable Cable Spacers

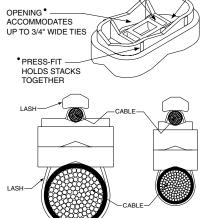


• One spacer for any cable size

SMALL OPENING • ACCOMMODATES

UP TO .300" WIDE TIES

- Stackable for any desired spacing
- Less inventory only one catalog number
- Made of weather-resistant polypropylene
- 1/2" high



- LARGE OPENING ACCOMMODATES UP TO 3/4" WIDE TIES

 Recommended use with DELTEC[®] Cable Supports, CSS135, CSS270 or CSS50R and CSSLH or TY27MX and TY29MX TY-RAP[®] Cable Ties.

Notes:

- Thread B or C Lash Support or Deltec® Cable Supports through spacer as shown to secure spacer in place.
- 2. If using C Lash Cable Support tuck cut end of lasher into spacer for safety.

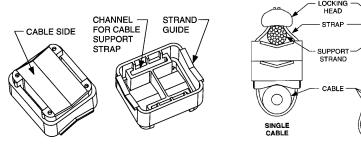
Ordering Information

CATALOG	DESCRIPTION	INNER	OUTER
NUMBER		PACK	PACK
TCP360	Modular, stackable cable spacers	100	500

Stackable Spacer for Coaxial Cable



Designed to specifically meet the requirements of coaxial cable, the CSS-360 is lightweight, yet able
to withstand the harsh outside plant environment. It is manufactured of durable polypropylene.



CATALOG	DESCRIPTION	INNER	OUTER
NUMBER		PACK	PACK
CSS-360	Stackable spacer for coaxial cable	250	500



FASTENING HARDWARE & ELECTRICIAN'S SUPPLIES

Use to easily route drop wires along distribution cables, poles and cable support strand.

Cable Support System

Drop Wire Support



Ordering Information

CATALOG NUMBER	MATERIALS	INNER Pack	OUTER PACK
CSS-DWS	Nylon coated steel. order by each.	25	250

Steel Base and Hanger





Ordering Information

CATALOG NUMBER	DESCRIPTION	INNER Pack	OUTER PACK
CSS-B	Zinc-plated steel base for vertical runs. Order by each.	50	500
CSS-H	Zinc-plated steel hanger for horizontal runs.	50	500
	Order by each.		

Mounting Base Nylon



Ordering Information

CATALOG NUMBER	DESCRIPTION	MOUNTING METHOD	WIDTH (IN.)	LENGTH (IN.)	INNER PACK	OUTER PACK
TC5355	Nylon Mounting Base*	#8 screw	.750	1.125	25	250
TC5356	Nylon Mounting Base*	#10 screw	.750	1.125	25	250
TC5357	Nylon Mounting Base*	1/4 screw	.750	1.125	25	250

^{*} ORDER BY EACH.

Mounting Base for Masonry and Brick Surfaces Nylon



This base features a specially designed head which is range-taking. Just one size can accommodate virtually all of your cable-to-masonry clamping needs.

- Quick, easy installation without adhesives or epoxies
- Provides a quick, easy means of attaching cable and wires to masonry surfaces
- Installs simply by tapping it into a drilled hole (3/8")
- It's immediately ready to accept a DELTEC® strap and wire bundle, no tedious surface preparation, no waiting for adhesives to set
- Provides quick, dependable mechanical installation
- Replaces a variety of anchors, clamps, screws, and adhesives
- Designed for both indoor and outdoor applications made of a special impact and ultraviolet resistant black nylon.

CATALOG NUMBER	DESCRIPTION	HOLE SIZE IN MASONRY	MAX. TIE WIDTH ACCOM.		OUTER PACK
TC5359	Nylon mounting base for masonry	3/8"	.500	50	500
	and brick surfaces				



Ty-Gun® Cable Tie Tool

Ty-Gun®





Ty-Gun® Cable Tie Tool Attaches Cables Quickly Without Leaving Your Hand In Knots.

- A wider insertion gap means easier tie insertion.
- 360° rotable nose allows the Ty-Gun® tool to be used in any position.
- Quick tension-adjustment wheel is located towards the front for easy access and fast changes.
- Adjustable handle span fits large and small hands.
- Anti-recoil mechanism reduces vibration shock.
- Weighs only 8.5 ounces, with a well-balanced center of gravity.
- · User friendly, smooth grip surface, with no sharp edges.

Break-Through Ergonomic Design Dramatically Relieves Stress And Strain.

Thomas & Bett's Ty-Gun® cable tie tool is designed to reduce hand and wrist muscle fatigue while securing cable ties with just the right amount of tension. Plus, its unique anti-recoil mechanism virtually eliminates the shock associated with other cable tie installing tools.

The Ty-Gun® tool is a major advancement in cable tie installation: an ergonomic hand tool that gets the job done quickly and easily while substantially reducing the risks of carpal tunnel syndrome and other cumulative trauma disorders.

Lighter Weight And Adjustable Handle Span Help Reduce Fatigue.

The advanced material design of the Ty-Gun® tool delivers a lighter weight of just 8.5 ounces, far less than most steel tools. Plus, the Ty-Gun® tool's impact-resistant construction offers improved strength and a smoother fit and feel than conventional tools.

The exclusive adjustable handle span of almost one-half inch means a more comfortable grip for every size hand of both men and women. The Ty-Gun® tool's well-balanced center of gravity makes it rest easily in the operator's hand. And it requires a low handle force to secure cable ties with the right amount of tension, from 18 to 120 pounds.

Quick Tension Adjustment Mechanism Saves Time And Energy.

Cable tie tension can be quickly adjusted in less than a second with just a half turn of the Ty-Gun® tool's tension setting wheel, conveniently located toward the front of the tool for easier access. (Most tools on the market take a full 8 to 10 seconds to adjust.) And the ingenious design and integrity of materials ensure durability.

Locked-Tension Mechanism Reduces Recoil Vibrations.

The Ty-Gun® tool's tension mechanism virtually eliminates the shock of unwanted recoil.

The Ty-Gun® Nose Rotates 360° For The Most Comfortable Operating Position.

The fully-rotating front of the Ty-Gun® tool means operators can always hold the tool in the most comfortable position, regardless of the angle or position of the cable ties. This extra versatility reduces the strain and injuries associated with making repetitive motions in unnatural positions.

Thoroughly Tested For Performance, Tie After Tie.

Field testing proves that the Ty-Gun® tool provides accurate tension and cleanly cuts off cable ties with an easy trigger action, even after 100,000 applications. And the rotatable nose and tension wheel have the durability you count on from Thomas & Betts.

For Maximum Performance, Select Thomas & Betts Ty-Rap®, Ty-Fast®, and One-Piece Cable Ties.

Together, Ty-Rap®, Ty-Fast®, and One-Piece cable ties offer the most complete package of cable ties and accessories in the market. The ideal match for the new Ty-Gun® tool.

CATALOG NUMBER	COLOR	TIE BODY WIDTH	STD QTY
ERG299	Black Handle	18-50 lbs, .094184	1
ERG297	Red Handle	50-120 lbs, .184301	1

Installation Tools

Installing Tool





Two motions complete the tying

Installation with WT1-TB and WT2-TB tools.

Lightweight, hand-operated cable tying tools install cable ties up to .301 inch wide and .080 inch thick. Made of high-impact plastic and steel to withstand shock and rough handling, they are symmetrical in design for use by both left-hand and right-hand operators.

They cinch up the tie with a squeeze action, and cut away the excess tail when twisted 180 degrees. A specially designed pawl cuts away the tail if the tension limit is exceeded, thereby preventing the cable tie from being over tightened. Ideally suited to spot-tying applications.



 With tie in hand-squeeze to tension. Insert cable tie into cable tie head, then squeeze tool to proper tension.



 Release trigger pressure slightly, twist 1/2 turn-then squeeze trigger to clip off the non-wrapping portion of the cable tie.

Ordering Information

CATALOG NUMBER	DESCRIPTION	BODY WIDTH (IN)	WEIGHT EACH	STD QTY
WT1-TB	Ty-Rap® Installing Tool	.094 thru .184	1-1/4 oz.	10
WT2-TB	Ty-Rap® Installing Tool	.184301	1-1/4 oz.	10

Deltec® Cable Tie Installing Tool



CATALOG NUMBER	DESCRIPTION	BODY WIDTH (IN)	WEIGHT	INNER PACK	OUTER PACK
WT3D	Installs self-locking Ty-Rap® cable ties, Thomas & Betts 2-piece lashing ties & Deltec \$.184 thru .500 Strap	8 oz.	1	1

FASTENING HARDWARE & ELECTRICIAN'S SUPPLIES

Hardware & Rough-In Products - Anchors

Plastic Anchors Plastic Anchor Kits



- Used to anchor sheet metal or wood screws in masonry, cinder block or brick.
- Weather resistant UV inhibitor outdoor plastic.

Ordering Information

CATALOG NUMBER	DESCRIPTION	ANCHOR SIZE	SCREW SIZE	DRILL DIA.	INNER PACK	OUTER PACK
12-08210	Plastic anchor only	#1 x 7/8" L	#6, 8, 10	3/16"	100	1500
12-08220	Plastic anchor only	#2 x 1"L	#10, 12	1/4"	100	1500
12-08230	Plastic anchor only	#3 x 1-1/4"L	#14, 16	5/16"	50	750
12-58210	Drill Bit incl. in kit*	#1 x 7/8"L	#8	3/16"	1	10
12-58220	Drill Bit incl. in kit*	#2 x 1"L	#10	1/4"	1	24
12-58221	Drill Bit incl. in kit*	#2 x 1"L	#12	1/4"	1	24

^{*} KIT INCLUDES ANCHORS, SCREWS AND 4" DRILL BIT.

"Wally" Hollow Wall Anchor



• Permanent anchor for fastening to plaster, plywood, wallboard, glass, metal or marble

Ordering Information

CATALOG NUMBER	SIZE	LENGTH	FOR WALL THICKNESS	DRILL Size	STD CTN
53-841	4-S	1-1/2	Up to 5/8"	1/4	100
53-842	4-L	1-15/16	5/8" to 1-1/4"	1/4	100
53-861	6-S	2-1/4	Up to 5/8"	3/8	50
53-862	6-L	2-3/4	5/8" to 1-1/4"	3/8	50
53-881	8-S	2-1/4	Up to 5/8"	15/32	50
53-882	8-L	2-3/4	5/8" to 1-1/4"	15/32	50

Toggle Bolts



- "Spring-Wing" type, zinc plated
- Bolts are threaded full length
- Available with mushroom head on seven most popular sizes

CATALOG NUMBER	MUSHROOM HEAD	SIZE	DRILL HOLE	STD CTN
52-500	52-600	1/8 (6-32) x 2	3/8	50
52-502	52-602	1/8 (6-32) x 3	3/8	50
52-504	52-604	1/8 (6-32) x 4	3/8	50
52-520		3/16 (10-24) x 2	9/16	50
52-522	52-622	3/16 (10-24) x 3	9/16	50
52-524	52-624	3/16 (10-24) x 4	9/16	50
52-530		1/4-20 x 2	3/4	50
52-532	52-632	1/4-20 x 3	3/4	50
52-534	52-634	1/4-20 x 4	3/4	50
52-536		1/4-20 x 5	3/4	50
52-538		1/4-20 x 6	3/4	50
52-548		3/8-16 x 3	1	50
52-550		3/8-16 x 4	1	50
52-552		3/8-16 x 5	1	50
52-554		3/8-16 x 6	1	50

FASTENING HARDWARE & ELECTRICIAN'S SUPPLIES

Hardware & Rough-In Products - Anchors

Red-Cap® Screw Anchors



• Superior holding power in solid masonry or conrete block

Ordering Information

	CATALOG		FOR TAPE SCREW	DRILL*	STD	
	NUMBER	SIZE	SIZE	LENGTH	HOLE	CTN
	50-210	#8 x 7/8"	6, 7 or 8	1" to 1-1/4"	3/16"	1000
	50-230	#12 x 1"	9, 10 or 12	1" to 1-1/4	1/4"	1000
	50-250	#16 x 1-3/8"	14 or 16, 1/4" Lag Screw	1-1/4" to 1-1/2"	5/16"	500
Ī	Bulk					
	50-219	#8 x 7/8"	6, 7 or 8	1" to 1-1/4"	3/16"	10000
	50-239	#12 x 1"	9, 10 or 12	1" to 1-1/4"	1/4"	10000
	50-259	#16 x 1-3/8"	14 or 16, 1/4" Lag Screw	1-1/4" to 1-1/2	5/16"	10000

^{*} WHEN IMPACT HAMMER DRILL IS USED, DOWNSIZE DRILL HOLE 1/32".

Note: For maximum holding power, select screw length 1/4" longer than anchor.

Red-Cap® Anchor Kits



• Red Cap Anchors, screws, and drill bit in reusable plastic kit box

Ordering Information

CATALOG NUMBER	DESCRIPTION	STD CTN		
51-208	(100) #8 Anchors (100) 6 x 1" Panhead Screws (1) 3/16" Carbide Tip Drill Bit	12		
51-212	(100) #12 Anchors (100) 10 x 1" Combination Slot/Phillips Head Screws (1) 1/4" Carbide Tip Drill Bit	12		
51-212HX	(100) #12 Anchors (100) 10 x 1" Hex-Slotted Screws (10) 1/4" Carbide Tip Drill Bit	12		
51-216	(50) #16 Anchors (50) 14 x 1-1/2" Panhead Screws (1) 5/16" Carbide Tip Drill Bit	12		

Now with combination SLOT/Phillips screws.

"Economy" Plastic Screw Anchor



"Economy" Screw **Anchor Kits**



Ordering Information

CATALOG NUMBER	SIZE	FOR TAPPING Size	SCREWS LENGTH	DRILL* HOLE	STD CTN
50-404	#12 x 1"	10 to 12	1"	1/4"	1000

^{*} When impact hammer drill is used, downsize drill hole o".

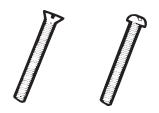
Ordering Information

CATALOG NUMBER	DESCRIPTION	STD CTN
51-404*	(100) #12 x 1" Screw Anchor	12
	(100) 10 x 1" Slot/Phillips Head Screws	
	(1) 1/4" Carbide Tip Drill Bit	
51-404HX	(100) #12 x 1" Screw Anchor	12
	(100) 10 x 1" Hex-Slotted Screws	
* Now with Stot/F	(1) 1/4" Carbide Tip Drill Bit	

Thomas@Betts

Hardware & Rough-In Products - Machine Bolts & Nuts

Machine Bolts



- Steel, zinc plated
- Accurate, uniform threads
- Round heads standard; flat heads available in some sizes

Ordering Information

CATALOG NU ROUND HEAD	MBER FLAT HEAD	SIZE	STD CTN
54-521	54-621	6-32 x 1/2"	1000
54-522	54-622	6-32 x 3/4"	1000
54-523	54-623	6-32 x 1"	1000
54-524	54-624	6-32 x 1-1/4"	1000
54-525	54-625H	6-32 x 1-1/2"	1000
54-526	54-626	6-32 x 2"	1000
54-527	54-627	6-32 x 2-1/2"	1000
54-541P		8-32 x 1/2"	1000
54-542P	54-642	8-32 x 3/4"	1000
54-543P	54-643	8-32 x 1"	1000
54-544		8-32 x 1-1/4"	1000
54-545P	54-645H	8-32 x 1-1/2"	1000
54-546P	54-646	8-32 x 2"	1000
54-547		8-32 x 2-1/2"	500
54-548		8-32 x 3"	500
54-551		10-24 x 1/2"	1000
54-552		10-24 x 3/4"	1000
54-553		10-24 x 1"	1000
54-554		10-24 x 1-1/4"	1000
54-555		10-24 x 1-1/2"	1000
54-556		10-24 x 2"	500
54-561		10-32 x 1/2"	1000
54-562		10-32 x 3/4"	1000
54-563P		10-32 x 1"	1000
54-564		10-32 x 1-1/4"	1000
54-565		10-32 x 1-1/2"	1000
54-566		10-32 x 2"	500
54-570P		1/4-20 x 3/8"	1000
54-571P		1/4-20 x 1/2"	1000
54-572P		1/4-20 x 3/4"	500
54-573P		1/4-20 x 1"	500
54-574		1/4-20 x 1-1/4"	500
54-575		1/4-20 x 1-1/2"	1000
54-576		1/4-20 x 2"	500
54-577		1/4-20 x 2-1/2"	250
54-578		1/4-20 x 3"	250

Hexagon Nuts



- For use with machine bolts
- Finest quality steel, zinc plated

Ordering Information

CATALOG NUMBER	SIZE	STD CTN
55-004P	6-32	1000
55-005P	8-32	1000
55-006P	10-24	1000
55-007P	10-32	1000
55-008P	1/4-20	1000
55-010	5/16-18	1000
55-012	3/8-16	1000

Thomas@Betts

Hardware & Rough-In Products - Screws

Self-Piercing Screws



- For fastening to sheet metal up to .040* (25 gauge)
- Eliminates pre-drilled holes
- 1/4" Hex Washer head, slotted; fits 54-090 Magnetic Driver

Ordering Information

CATALOG NUMBER	SIZE	STD CTN
54-001	7 x 1/2"	1000
54-002	8 x 1/2"	1000
54-003	8 x 3/4"	1000
54-004P	10 x 1/2"	1000
54-005P	10 x 3/4"	1000
54-006P	10 x 1"	1000
54-007P	10 x 1-1/4"	1000
54-008P	10 x 1-1/2"	1000
54-009P	10 x 2"	1000

Self-Drilling Screws



- Drill their own hole and form mating threads
- #8 screws fasten combined material thickness up to 332"
- #10 screws fasten combined material thickness up to 1/4"
- Hex Washer Head (no slot)
- 1/4" hex head fits 54-090 Magnetic Driver
- 5/16" hex head fits 54-091 Magnetic Driver

Ordering Information

CATALOG NUMBER	SIZE	HEAD Size	POINT NO.	STD CTN
54-300P	8 x 1/2"	1/4"	2	1000
54-301	8 x 3/4"	1/4"	2	1000
54-302P	10 x 5/8"	5/16"	3	1000
54-303P	10 x 1"	5/16"	3	1000
54-304	12-14 x 3/4"	5/16"	3	1000

Magnetic Drivers



- For driving self-piercing and self-drilling hex head screws
- Fits power screwdriver and electric drill chucks
- Strong permanent magnet holds screw in position

Ordering Information

CATALOG NUMBER	SIZE	STD CTN
54-091	5/16" x 1-5/8" Hex-head Magnetic Driver	12
54-090	1/4" x 1-5/8" Hex-head Magnetic Driver	12

Self-Tapping Screw



• Hardened steel self-tapping screw zinc plated ASTM B633.

CATALOG NUMBER	DESCRIPTION	SIZE	INNER PACK	OUTER PACK
17-00001	Slotted 3/8" Hex head self-tapping screw	10/12 x 3/4"	100	1000
17-00003	Slotted 3/8" Hex head self-tapping screw	10/12 x 1-1/2"	100	1000
17-00012	Phillips 1/4" hex head self-tapping screw	#8 x 1"	100	1000

Hardware & Rough-In Products - Tapping Screws

Slotted Tapping Screws



- For fastening to wood or sheet metal
- Best screw for use with plastic screw anchors
- Large "Pan-Head" eliminates need for a washer in many applications
- Zinc plated steel

Ordering Information

CATALOG NUMBER	SIZE	STD CTN
54-121	6 x 1/2"	1000
54-122P	6 x 3/4"	1000
54-123P	6 x 1"	1000
54-124P	6 x 1-1/4"	1000
54-141	8 x 1/2"	1000
54-142P	8 x 3/4"	1000
54-143P	8 x 1"	1000
54-144	8 x 1-1/4"	1000
54-145P	8 x 1-1/2"	1000
54-151	10 x 1/2"	1000
54-152P	10 x 3/4"	1000
54-153P	10 x 1"	1000
54-154	10 x 1-1/4"	1000
54-155P	10 x 1-1/2"	1000
54-156	10 x 2"	1000
54-161	12 x 1/2"	1000
54-162P	12 x 3/4"	1000
54-163P	12 x 1"	500
54-164	12 x 1-1/4"	500
54-165P	12 x 1-1/2"	500
54-166	12 x 2"	500

Slotted Tapping Screws Tapered Point



- Indented hex washer slotted type head
- One 1/4" hex driver accommodates all sizes
- Sharp tapered point

Ordering Information

CATALOG NUMBER	SIZE	STD CTN
54-100Z	7 x 1/2"	500
54-141ZP	8 x 1/2"	500
54-142ZP	8 x 3/4"	500
54-143Z	8 x 1"	-
54-151ZP	10 x 1/2"	500
54-152ZP	10 x 3/4"	500
54-153Z	10 x 1"	500

Tapping Screws Pan Head Square Drive





- Drive fastener locks onto the square drive bit
- Used in difficult to apply locations
- Used in mobile home and aluminum building products

Ordering Information

Ordering information		
CATALOG Number	DESCRIPTION (DIAMETER, LENGTH)	STD CTN
54-841	8 x 1/2"	500
54-842	8 x 3/4"	100
54-843P	8 x 1"	500
54-844	8 x 1-1/4"	500
54-845	8 x 1-1/2"	-
54-851P	10 x 1/2"	500
54-852P	10 x 3/4"	500
54-853P	10 x 1"	500
54-854P	10 x 1-1/4"	-
54-855P	10 x 1-1/2"	500
54-856	10 x 2"	500
54-861	12 x 1/2"	500
54-862P	12 x 3/4"	500
54-863	12 x 1"	500
54-864	12 x 1-1/4"	500
54-866	10 x 2"	-

Thomas Betts

Hardware & Rough-In Products - Screws

Drywall Screws



- For use in up to "12 Gauge" steel
- Phillips bugle head steel black coated designed to penetrate drywall and drilling hole in metal studs up to 12 gauge thick

Ordering Information

Ordering information			
CATALOG NUMBER	DIAMETER Thread	LENGTH	STD CTN
Framing Style			
54-00SD	6	1	100
54-01SD	6	1-1/4	100
54-02SD	6	1-5/8	100
54-03SD	6	1-7/8	100
54-04SD	8	2-5/8	100
54-05SD	8	3	100
54-10SD	6	1	1000
54-11SD	6	1-1/4	1000
54-12SD	6	1-5/8	1000
54-13SD	6	1-7/8	1000
54-14SD	8	2-5/8	1000
54-15SD	8	3	1000
Self-Drilling & Piercing			
54-00DW	6	1	100
54-01DW	6	1-1/4	100
54-02DW	6	1-5/8	100
54-03DW	6	2	100
54-04DW	6	2-1/4	100
54-05DW	8	2-1/2	100
54-06DW	8	3	100
54-10DW	6	1	1000
54-11DW	6	1-1/4	1000
54-12DW	6	1-5/8	1000
54-13DW	6	2	1000
54-14DW	6	2-1/4	1000
54-15DW	8	2-1/2	1000
54-16DW	8	3	1000

Wall Plate Screws

- Oval head screws 3/8" long; 6-32 thread
- Brown and ivory colored nylon screws eliminates static shocks
- Steel screws have variety of head finishes to match specified decor
- Screws are packaged in clear, reclosable plastic tube
- 55-660 kit contains one tube of each screw in a reusable plastic kit box

CATALOG NUMBER	SIZE	STD CTN	STD CTN
55-660	K-60 Kit (600 Screws)		
Individual Tubes			
55-611	Ivory Nylon Screws	-	100
55-612	Ivory (Painted) Screws		
55-613	Bright Nickel Screws	-	100
55-614	Brass Plated Screws	-	100
55-615	Brown Nylon Screws	100	100
55-616	Bronze Plated Screws	-	100



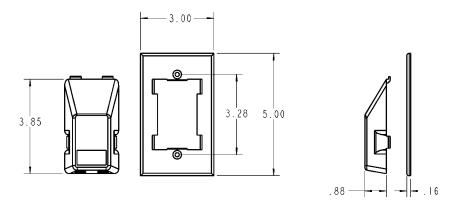
Easy Access Wall Plate

Multi-Purpose Easy Access Wall Plate



Design Advantages

- Two piece design that allows easy access without removing screws.
- Sized for direct mounting of a Viewsonic[™] directional coupler while maintaining [in wall] bend radius
 of the cable.
- Cover knockouts also allows installation of one piece Cable to "F" Female or "F" Female splice connectors for single or dual cable applications.
- Available as beige or white color.
- Includes two mounting screws and user-affixed label set.
- Dimensions: 3" width x 5" height. Protrudes 1-1/6" from wall surface.
- Offers added protection to the drop installation in applications using close to wall furniture and entertainment centers.
- Faceplate accepts mud ring while maintaining flush installations against wall.



CATALOG NUMBER	DESCRIPTION	INNER PACK	OUTER PACK
WP23752PW	Wallplate White	25	100
WP23752PB	Wallplate Beige	25	100



Chemical Products



Ordering Information

CATALOG NUMBER	DESCRIPTION	STD CTN
15-DCCNF	Electrical Contact Cleaner	12
15-301TB	Penetrating Oil	12
15-RTS	Clear RTV Silicone Adhesive/Sealant	12
15-300	Moisture Displacing Lubricant	12

Electrical Contact Cleaner

Volume: 15 oz. Residue: None Evaporation Rate: Fast Flash Point: None Odor: Ethereal

A combination of cleaning solvents that are designed to remove oxidation, carbon, grease, oil, dirt, and corrosion deposits on electrical and electronic equipment. Cleans and penetrates surface pores leaving a clean, dry surface. Eliminates noise caused by dirt and dust.

Warning: Avoid breathing vapor or spray mist. Over exposure can cause drowsiness, nausea, or unconsciousness. Do not spray in eyes or mouth. Avoid contact with skin, eyes and clothing. May attack some types of plastics or rubber. Pretest on small area before using.

Penetrating Oil

Environmentally safe propellant.

Volume: 13 oz. Density: 7.10 lbs. gal. Flash Point: 140°F Kauri Butanol Value: 32-35 % Non-Volatile: 22%

Boiling Pt Range: 350° - 500° F Vapor Pressure: 1.0 MM(Hg) Propellant: Propane Quickly cuts through dirt and scale to displace moisture and release corroded or rusted parts. For freeing fasteners, nuts, bolts, studs, pins, valves, pipe couplings, machine parts, etc. saving time and labor. Excellent for salt water corrosion and leaves an anti-rust film. Safe for use on metals, alloys, rubber and most painted surfaces.

Warning: Keep away from heat, sparks, and flame.

Note: Data given is for liquid portion of package, does not include propellant.

RTV Silicone Adhesive/Sealant

Volume: 7.25 oz.

Curing Time: A 1/16" to 1/8" bead dries in 1 hour, cures in 24 hours, and reaches

optimal strength in 7 days.

Flash Point: 212°F Odor: slightly medicinal Use RTV Silicone Adhesive/Sealant for sealing, bonding, caulking, insulating and weatherproofing. When applied it reacts with moisture in the air and cures to a rubber-like product. RTV will adhere to clean metal, glass, most types of wood, silicone resin, vulcanized silicone rubber, ceramic, natural and synthetic fiber as well as many painted and plastic surfaces.

Moisture Displacing Lubricant

Volume: 12 oz. % Volatile: 18% Density: 6.66 lbs. gall. Flash Point: 105°F min.

Boiling Point Range: 300° - 390° F Vapor Pressure: 2.0mm (Hg) Kauri Butanol Value: 35-36 Propellant: Propane Can prevent up to 80% of all electrical failures caused by moisture in switches, relays, motor controls, electrical or electronic equipment. It inhibits corrosion, lubricates and penetrates, inhibits leakage and arching, restores surface resistance and dielectric values. Reduces potential of electrical and electronic failures due to high humidity and salt air. Protects shelf items from corrosive attack during storage. Lubricates without leaving gummy residue. Coverage: 4,000-5,000 sq. ft./gallon. Viscosity: 25-30 @ 72° F.

Warning: Contains petroleum distillates. As with other petroleum distillates these may cause rubber to swell. Keep away from heat, sparks and flame.

Note: Data shown is for liquid portion. does not include propellant.



Chemical Products

Duct Seal



- Can be painted immediately after application
- Gray color
- No unpleasant odor
- +20°F to 212°F workable temperature range
- -40°F to 250°F service temperature range
- Contains no asbestos



Ordering Information

CATALOG NUMBER	DESCRIPTION	STD CTN
DX-1	1 lb. slug	50
DX-5	5—1 lb. slugs	10
DX-5S	5 lb. slug	10

U.L. CLASSIFIED R13335

Wire Bristle Brush



- For removing oxides from conductor surfaces
- Easy grip handle with glove guard to prevent rubber glove puncture
- Long life brushes can be rotated and are replaceable
- Handle and guard coated with durable nonconductive plastic

CATALOG NUMBER	DESCRIPTION	STD CTN
WWB1	Complete brush with handle	6
WRB1	Wire element only, pair	30

Wire Pulling Lubricants

Wire Pulling Lubricant Semi-Synthetic Base



Technical Information

- 1. pH:7.9
- Coefficient of Friction (wet and dry residue) sliding wet—0.07 sliding dry—0.08
- 3. Color: yellow
- 4. Weight per gallon: 8.26 lbs.
- 5. Freezing Point: +25°F (-4°C)
- 6. High Temperature Stability: 200°F (93°C)
- 7. Non-toxic, nonstaining, contains no silicones

Note: Additional test data available upon request.

- Preferred semi-synthetic base formulation
- Retains lubricating properties and will not separate up to 200°F
- Will not separate after freezing
- Superior adherence to cable
- Recommended for use on all commonly used wire and cable including high voltage cable and all U.L. listed conduits
- Dries to slick, waxy film
- Non-toxic, no silicones, non-staining, easy clean up



Ordering Information

CATALOG NUMBER	DESCRIPTION	STD CTN
15-230	1 Quart	12
15-231	1 Gallon	4
15-232	5 Gallon	1
15-233	55 Gallon	1
15-235	Fast Draw 14 oz. aerosol can	12
15-236	Squeeze Bottle, one quart	12

SUITABLE FOR USE WITH WIRE OR CABLE INSULATED WITH RUBBER (R, RH, ETC.), NEOPRENE, NYLON AND PVC PLASTICS (T,TW, THW THHN, ETC.), HYPALON*, HIGH DENSITY POLYETHYLENE AND CROSS LINKED POLYETHLENE (XLP). NOT RECOMMENDED FOR USE ON ASBESTOS OR LOW DENSITY POLYETHYLENE INSULATED CABLES. COMPATIBLE WITH SEMICONDUCTING JACKETS PRESENT ON HIGH VOLTAGE CABLE. MEETS THE REQUIREMENTS OF ICFA STANDARDS:

ICEA #S-61-402/NEMA Pub. #WC5

ICEA #S-66-524/NEMA Pub. #WC7.

U.L. FILE E-43782

*HYPALON IS A REGISTERED TRADEMARK OF E.I. DUPONT.

FOR 24 HOUR SAFETY AND MSDS REQUIREMENTS, CALL CHEMTREC AT 800-424-9300.

Cold Weather Wire Pulling Lubricant - Semi-Synthetic Base



Technical Information

- 1. pH:8.5
- Coefficient of Friction (wet and dry residue) sliding wet—0.08 sliding dry—0.09
- 3. Color: yellow
- 4. Weight per gallon: 8.65 specific gravity 1.04
- 5. Freezing Point: -20°F (-30°C)
- 6. High Temperature Stability: 200°F (93°C)
- 7. Non-toxic, nonstaining, contains no silicones

- Preferred semi-synthetic base formulation
- Retains lubricating properties and will not separate down to -20°F/-30°C
- Will not separate after freezing
- Superior adherence to cable
- Recommended for use on all commonly used wire and cable including high voltage cable
- Dries to a soft smooth film
- Non-toxic, no silicones, non-staining, easy clean up
- For use in all seasons



Ordering Information

CATALOG NUMBER	DESCRIPTION	STD CTN
15-630CW	1 Quart	12
15-631CW	1 Gallon	4
15-632CW	5 Gallon	1
15-633CW	50 Gallon	1
15-636CW	Squeeze Bottle, one quart	12

ALL-WEATHER COMPOUND DESIGNED TO BE USED BELOW FREEZING TEMPERATURE. PROVIDES ALL THE PROPERTIES NECESSARY TO MAINTAIN A FREE FLOWING LUBRICATED SURFACE.



Wire Pulling Lubricants

WireSlick™ Wire and Cable Pulling Lubricant



Technical Information

- 1. pH:8.2
- 2. Coefficient of Friction (wet and dry residue) sliding wet—0.11 sliding dry—0.17
- 3. Color: orange
- 4. Weight per gallon: 10 lbs.
- 5. Freezing Point: +20°F (-7°C)
- 6. High Temperature Stability: 200°F (93°C)
- Non-toxic, nonstaining, contains no silicones Note: Additional test data available upon request.

WireSlick wire and cable pulling lubricant represents the latest in polymer technology. An economical formulation, WireSlick lubricant polymer base provides extremely good thermal stability and a lower freezing point (20° F) than clay, soap or wax base formulations.

- Polymer base formulation
- Universally compatible with all types of wire and cable
- Widely used by power and telephone utilities
- Economical lubricant



Ordering Information

CATALOG NUMBER	DESCRIPTION	STD CTN
15-636	1 quart squeeze bottle	12
15-631	1 gallon pail	4
15-632	5 gallon bucket	1
15-633	55 gallon drum	1

WIRESLICKTM LUBRICANT IS RECOMMENDED FOR USE WITH WIRE OR CABLE INSULATED WITH RUBBER (R, RH, ETC.), NEOPRENE; NYLON AND PVC PLASTICS (T, TW, THW, THHN, ETC.); HYPALON*; HIGH DENSITY POLYETHYLENE AND CROSS LINKED POLYETHYLENE (XLP). IT IS ALSO COMPATIBLE WITH HIGH VOLTAGE CABLE HAVING SEMI-CONDUCTING JACKETS.

WireSlick $^{\mathsf{TM}}$ Lubricant has been tested and passes the requirements of ICEA Standards:

ICEA #S-61-402/NEMA Pub. #WC5.

ICEA #S-66-524/NEMA Pub. #WC7.

- * HYPALON IS A REGISTERED TRADEMARK OF E.I. DUPONT.
- * For 24 hour safety and MSDS requirements, call Chemtrec 800-424-9300.
- U.L. FILE E-43782

Wire Pulling Lubricant Aerosol



For use on rubber, neoprene, nylon, PVC, HDPE, XLP, and lead covered wire and cable-in steel, aluminum and other approved conduits. Protects insulation with a super thick non-drying film that makes it easy to pull wires through conduit.

- Wax base that is gentle on the hands
- Non-toxic, non-staining and easy to clean up
- · Environmentally safe

Ordering Information

CATALOG NUMBER	DESCRIPTION	STD CTN
15-235	Wax-based wire pulling lubricant	12

WARNING: DO NOT USE ON HIGH VOLTAGE CONDUCTOR HAVING AN EXPOSED SEMI-CONDUCTIVE JACKET. AS WITH OTHER WAX BASE COMPOUNDS, SUCH USAGE MAY RESULT IN LOSS OF ELECTRICAL SHIELDING AND INSULATION FAILURE. FOR THIS APPLICATION USE WIRESLICK™ POLYMER BASE WIRE AND CABLE PULLING LUBRICANT FROM T&B.



Wire Pulling Lubricants

Utility Grade Cable Pulling Lubricant



Technical Information

- 1. pH:8.5
- Coefficient of Friction (wet and dry residue) sliding wet—0.08 sliding dry—0.09
- 3. Color: clear
- 4. Weight per gallon: 8.25 Specific Gravity 0.990
- 5. Freezing point: 32°F (0°C)
- 6. High temperature stability: 200°F (93°C)

T&B Utility grade cable pulling lubricant can be used by electric utilities and telecommunications companies. This utility grade polymer base provides extremely good thermal stability and is recommended for use with wire or cable insulated with rubber (R, RH etc.), neoprene, nylon and PVC plastics (T, TW, THW, THHN, etc.); Hypalon*; high density polyethylene and cross linked polyethylene (XLP). It is also compatible with high voltage cable having semi-conducting jackets.

ICEA #S-61-402/NEMA Pub. #WC5 ICEA #S-66-524/NEMA Pub. #WC7

- Polymer base formulation
- Universally compatible with all types of wire and cable
- Widely used by power and telephone utilities
- Economical lubricant
- Non-toxic, no silicones, non-staining



CATALOG NUMBER	DESCRIPTION	STD CTN
15-636UT	1 quart squeeze bottle	12
15-631UT	1 gallon pail	4
15-632UT	5 gallon bucket	1
15-633UT	50 gallon drum	1

T&B HAND TOOLS

Terminal Wrenches, Snips & Knives

Universal Terminal Wrench



Ordering Information

CATALOG NUMBER	DESCRIPTION	STD PACK
SC50-1	Universal 3/8" - 7/16" terminal wrench	1

Snips



This drop forged, high carbon cutlery is constructed of top-grade steel. It contains nickel plated, ground hardened power lock screws to assure reliable performance.

Ordering Information

CATALOG	DESCRIPTION	UNIT	STD
NUMBER		QTY	Pack
18-EES	Scissors	1	6

Utility Knife



Utility knives are designed with industrial grade housing. Three reversible blades make the tool handy for multiple jobs. Positive locking system insures safety.

Ordering Information

CATALOG NUMBER	DESCRIPTION	UNIT QTY	STD PACK
18-UTK	Utility Knife	1	1
18-UTB*	Blades for 18-UTK	10	10

^{*}Order blades in carton quantities or in multiples of cartons.

Deluxe Pocket Knives



- Heavy duty cutlery blades
- Solid brass linings won't rust
- Screwdriver blade included in both models, locks open

Ordering Information

CATALOG NUMBER	DESCRIPTION	UNIT QTY	STD PACK
18-247	With spear blade	6	6
18-248	With hook blade	6	6

Tape Measures



Heat treated blades allow a maximum standout of over 7 feet. Larger numbers provide the easiest reading blade in the industry. Constructed with important extras such as three rivet steel reinforced end hooks and 16" and 17.2" stud marks. Features such as baked on epoxy, chromeplated ABS case, and heavy duty spring and blade system insure long life.

CATALOG NUMBER	DESCRIPTION	UNIT QTY	STD PKG
18-125TB	1 in. x 25 ft.	1	1
18-416	3/4 in. x 16 ft.	1	1
18-412	3/4 in. x 12 ft.	1	1
18-210	1/2 in. x 10 ft.	1	6

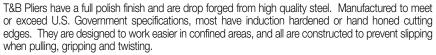
T&B

Pliers & Wrenches

UNIT

STD

Pliers & Wrenches



Quality forged alloy steel gives wrenches maximum strength and durability. Steel jaws allow for accuracy and metallic plating resists corrosion. Designed with thumb reliefs and tension springs to allow easier adjustment and improved control. Equipped with the textured grips, contoured for comfort



18-DP8



18-AP8



18-LP9





18-TG5





18-AW6D

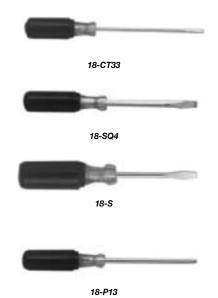
CATALOG

NUMBER	DESCRIPTION	QTY	PACK
Pliers and Wire	e Cutters		
18-DP8	8" Diagonal Pliers	1	1
18-AP8	8" Angled Pliers	1	1
18-LP9	9" Lineman's Pliers	1	1
18-LPT9	9" Lineman's Pliers with Fishtape Puller	1	1
Long Nose Plie	ers		
18-LN6	6" Long Nose Pliers with Cutter	1	1
18-LN7	7" Long Nose Pliers with Cutter	1	1
18-LN8	8" Long Nose Pliers with Cutter	1	1
18-LNS8	8-LNS8 8" Long Nose Pliers with Skinner Hole and Cutter		1
Tongue and Gr	oove Pliers		
18-TG5	5" Tongue and Groove Pliers	1	1
18-TG10	10" Tongue and Groove Pliers	1	1
End Nipper			
18-EN7	7" End Nipper	1	1
Adjustable Wre	enches		
18-AW6D	6" Adjustable Wrench, Cushion Grip	1	1
18-AW8D	8" Adjustable Wrench, Cushion Grip	1	1
18-AW10D	10" Adjustable Wrench, Cushion Grip	1	1
18-AW12D	12" Adjustable Wrench, Cushion Grip	1	1

T&B HAND TOOLS

Screwdrivers

Screwdrivers



High quality steel construction and plated shafts offer reliable durability. Shafts have integral wings for positive high torque anchor. All shafts meet or exceed ANSI specifications for fit, hardness and torque. Screwdrivers are equipped with large, cushion gripped handles designed to provide a better ergonomic fit. Handles are oil, gas and water resistant.

Ordering Information

CATALOG NUMBER			STD Pack
Cabinet Tip S	crewdrivers		
18-CT63	3/16 Tip Width, 6 in. Shank	1	1
18-CT64	1/4 Tip Width, 6 in. Shank		1
Square Shank	c Screwdrivers		
18-SQ4	Square 4 in. Shank		1
Round Shank	Screwdrivers		
18-RS4	Round 4 in. Shank		1
Phillips Screv	vdrivers		
18-P13	1 Pt. Phillips 3 in. Shank	1	1
18-P24	2 Pt. Phillips 4 in. Shank	1	1
	•	•	

Screwdriver 6-Pack



18-SCP6

This set features six of our most popular screwdrivers. Makes a great starter utility kit. The 6-pack includes:

• 18-P13	1 pt x 3" Phillips
• 18-P24	2 pt x 4" Phillips
• 18-CT63	3/16" x 6" Cabinet Tip
• 18-CT64	1/4" x 6" Cabinet Tip
• 18-RS4	4" Round Shank
• 18-SQ4	4" Square Shank

CATALOG NUMBER	DESCRIPTION	STD Pack
18-SCP6	Screwdriver 6-pack	1

Wiring Tools & Cutters

Wiring Tool





T&B wiring tools are created for the professional. All products are manufactured from top quality materials to assure durability and a long usable life.

Ordering Information

CATALOG NUMBER	DESCRIPTION	WIRE RANGE	WEIGHT EACH	STD PACK
18-800	Big 7 Wiring Tool**	#16-6 solid, #18-8 stranded	55.25	6
18-850	Little 7 Wiring Tool*	#16-6 solid, #18-8 stranded	58.33	6
18-850S	Little 7 Wiring Tool**	#16-6 solid, #18-8 stranded	58.33	6

^{**}WITHOUT SPRING

Cable Cutter



T&B Cable Cutters are designed to cut 4/0 aluminum and up to 2/0 soft copper. They have a full polish finish and are drop forged from high quality 1055 steel. All Cable Cutters are manufactured to meet or exceed government specifications.

CATALOG NUMBER	DESCRIPTION	UNIT QTY	STD PKG
18-CC9	Cable Cutter	1	5

^{**} WITH SPRING

T&B HAND TOOLS

Electrician's Hand Tools & Accessories

Electrician's Hand Tools

T&B offers a wide variety of specialty tools used most commonly by electricians. All T&B tools are designed for the professional. Single purpose and combination function designs are included. All products are manufactured from top quality materials to assure durability and a long usable life.

Professional Electrician's Tool Set



18-PCH1

10-piece combination tool set in black leather pouch. Set includes:

• 18-PB9 l	eather Tool	Pouch with Belt
------------	-------------	-----------------

• 18-SQ6 6" Square Shank Screwdriver

• 18-CT63 3/16" Cabinet Tip Screwdriver, 6" Shank

18-RS4
4" Round Shank Screwdriver
18-P24
2 pt. Phillips Screwdriver, 4" Shank

• 18-800 Wire Stripping Tool

18-LP9
18-AW8D
18-AW8D
18-125TB
1" x 25 ft. Tape Measure

18-TG10
 10" Tongue and Groove Pliers
 18-LN7
 7" Long Nose Pliers with Cutter

Ordering Information

CATALOG NUMBER	DESCRIPTION	STD PACK
18-PCH1	10-piece combination tool set	1

Leather Pouches





Ordering Information

CATALOG NUMBER	DESCRIPTION	UNIT QTY	STD PKG
18-PL6	6 Pocket	1	5
18-PL9	9 Pocket	1	5
18-PB9	9 Pocket Pouch and Belt Set	1	6

Canvas Tool Bags



Durable bag made of heavy duty 16 oz. #10 cotton canvas with naugahyde bottom and rivet fastened top grain leather handles. Includes a large inside pocket and a rigid 12 guage recessed steel frame.

CATALOG NUMBER	DESCRIPTION	UNIT QTY	STD PKG
18-CB16	16"L x 14"D	1	10
18-CB18	18"L x 16"D	1	10

Drill Bits

T&B

T&B Drill Bits include the finest quality carbide tip bits for drilling in all types of masonry. Jobbers length High Speed twist drills are made of top quality high speed steel.

Masonry Drill Bits

• Carbide tip drills stay sharp longer; easily resharpened on pedestal or bench type grinder



Ordering Information

CATALOG NUMBER	NOMINAL DIAMETER	DRILL LENGTH	SHANK DIAMETER	STD CTN
56-103	3/16"	3"	3/16"	6
56-104	1/4"	4"	13/64"	6
56-105	5/16"	4"	1/4"	6
56-106	3/8"	4"	1/4"	6
56-108	1/2"	6'	3/8"	6

High Speed Twist Drills

• For general purpose drilling of steel, wood, or plastic.



Ordering Information

CATALOG NUMBER	DIAMETER	LENGTH	LENGTH OF TWIST	STD CTN
57-000	1/16"	1-7/8"	7/8"	10
57-001	5/64"	2"	1"	10
57-002	3/32"	2-1/4"	1-1/4"	10
57-003	7/64"	2-5/8"	1-1/2"	10
57-004	1/8"	2-3/4"	1-5/8"	10
57-005	9/64"	2-7/8"	1-3/4"	10
57-006	5/32"	3-1/8"	2"	10
57-007	11/64"	3-1/4"	2-1/3"	10
57-008	3/16"	3-1/2"	2-5/16"	10
57-009	13/64"	3-5/8"	7/16"	10
57-010	7/32"	3-3/4"	2-1/2"	10
57-011	15/64"	3-7/8"	2-5/8"	10
57-012	1/4"	4"	2-3/4"	10
57-013	17/64"	4-1/8"	2-7/8"	3
57-016	5/16"	4-1/2"	3-3/16"	3
57-020	3/8"	5"	3-5/8"	6
57-053	7/16"	5-1/2"	4-1/16"	3
57-057	1/2"	6"	4-1/2"	3

High Speed Drill Set

CATALOG NUMBER	DESCRIPTION	STD CTN
57-091	15 piece set, 1/16" to 1/2" by 32nds	1

¹⁵ PIECE DRILL SET IN HANDY METAL STORAGE CASE

Trap Shields & Supports

Trap Shield Security Tube Assembly



Trap shield is used to protect and secure notch filter type traps against tampering by unauthorized persons.

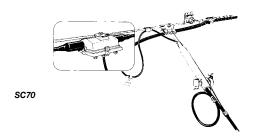
- To be attached to the strand with an integral bail to reduce the chances of either ice loading or squirrel damage.
- Accommodates up to four standard traps for graduated security.
- Equipped with multiple view holes to allow easy visual identification without the need to remove the traps.
- Made of aluminum tube.

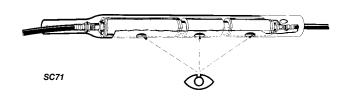
Ordering Information

CATALOG NUMBER	DESCRIPTION	INNER PACK	OUTER PACK
SC70-13	13" long	-	16
SC70-16	16" long	-	16

WHEN ORDERING, SPECIFY TYPE AND NUMBER OF FILTERS BEING SECURED TO DETERMINE TOTAL TUBE LENGTH.

Application





Strand Hanger Support Bracket



- Used in mid-span or next to tap application.
- In high risk theft areas, makes it more difficult to tamper with the traps.
- Support up to 4 trap shields (up to 16 traps).
- Mechanically galvanized ASTM B695.

Ordering Information

CATALOG		INNER	OUTER
NUMBER	DESCRIPTION	PACK	PACK
SC73-1F	Strand hanger support bracket	-	32
SC73-3F	Strand hanger support bracket	-	24

CAN ALSO BE SUPPLIED WITH A COATED TOP SHIELD ALUMINUM BRACKET.

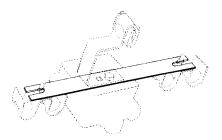
Security Tool



CATALOG NUMBER	DESCRIPTION	INNER Pack	OUTER PACK
SC80T	Accepts standard 7/16" hex	-	10

Trap Brackets

Tap/Trap Bracket

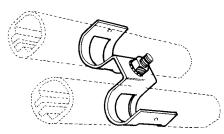


- Designed to mount a tap and up to eight traps or trap sleeves to strand.
- Attaches to Diamond® aluminum tap bracket square hole.
- Mechanically galvanized steel ASTM B695.
- No mounting hardware supplied.

Ordering Information

CATALOG	DESCRIPTION	INNER	OUTER
NUMBER		PACK	Pack
29-90920	Tap/trap bracket	25	250

Trap "W" Brackets



- Used with tap/trap bracket to mount traps (small "W" bracket) or trap sleeves (large "W" bracket).
- Large "W" bracket accepts trap sleeves 7/8" to 1-1/8" diameter.
- Small "W" bracket accepts standard traps (13/16" dia.).
- Mechanically galvanized steel ASTM B695.
- Carriage bolt & nut supplied.

CATALOG NUMBER	DESCRIPTION	INNER Pack	OUTER PACK
29-90900	Large "W" bracket	-	25
29-90910	Small "W" bracket	-	25

CATALOG NUMBER	PAGE NUMBER	CATALOG NUMBER	PAGE NUMBER	CATALOG NUMBER	PAGE NUMBER
11-101		18-LN6		28-09500	
11-104		18-LN7		28-09600	
12-01401		18-LN8		28-09610	
12-01402 12-01501		18-LNS8 18-LP9		28-09615 28-09800	
12-01502		18-LPT9		28-09850	
12-08210		18-P13		28-19651	
12-08220		18-P24		28-80001	
12-08230		18-PB9		29-09970	23
12-58210		18-PCH1		29-19941	
12-58220		18-PL6		29-19943	
12-58221		18-PL9	•••••••••••••••••••••••••••••••••••••••	29-19944 29-19945	
15-00120 15-00121		18-RS4 18-SCP6		29-19945	-
15-00122		18-SQ4		29-90910	
15-00123		18-TG10		29-90920	
15-10040		18-TG5		30-00801	
15-10041		18-UTB		30-00804	
15-10042		18-UTK		30-00805	
15-10043		22-12121		30-00807	•••••••••••••••••••••••••••••••••••••••
15-10044		22-12127		30-01732	
15-10045		23-44441		30-01804	
15-10046		23-44442		30-01805	
15-10101 15-10102		23-44444 23-44445		30-01807	
15-10102		23-44454		31-00809 31-00810	
15-230		23-80002		31-00812	
15-231		23-80262		31-00816	
15-232		23-80361		31-00819	
15-233		23-80366		31-00821	
15-235	62	23-80370	17	31-00823	15
15-235		23-80405		31-00827	
15-236		23-80406		31-10809	
15-300		23-82351		32-00830	
15-301TB		23-83361		32-00831	
15-630CW		23-86651 23-88881		32-00832 33-00840	
15-631CW		23-88885		34-00890	
15-631UT		23-88888		34-08052	
15-632		24-80003		34-08053	
15-632CW		24-80004		34-08850	
15-632UT	64	24-80005	11	34-08875	22
15-633		24-80006	11	34-08911	21
15-633CW		24-80008		34-08912	
15-633UT		24-80009		34-08921	
15-636		24-80010		34-08922	······
15-636CW		24-80012		34-08931	
15-636UT 15-DCCNF		24-80016 24-80018		34-08932 34-08941	
15-PTS		24-80020		34-08942	-
16-EN7		24-88013		34-08951	
17-00001		24-88014		34-08952	
17-00003		24-88016	18	40-00200	
17-00012	56	24-88017	18	40-00540	13
18-125TB	65	24-88026	18	40-20000	27
18-210		24-88027		40-20001	
18-247		25-80100		40-20002	
18-248		25-80120		40-20003	
18-412		25-80140		40-43007	
18-416 18-800		25-80160		40-43008	
18-850		25-80200 25-80260		40-80365 45-90003	
18-850S		25-80300		50-210	
18-AP8		25-80360		50-219	
18-AW10D		25-80400		50-230	
18-AW12D		26-09010		50-239	
18-AW6D	66	26-09020	23	50-250	
18-AW8D		27-00185		50-259	
18-CB16		27-00860		50-404	
18-CB18		27-00865		51-208	
18-CC9		27-00869		51-212	
18-CT63 18-CT64		28-00013 28-00305		51-212HX 51-216	
18-DP8		28-03004		51-404	
10DI 0	65	28-03006		51-404HX	

ATALOG NUMBER	PAGE NUMBER	CATALOG NUMBER	PAGE NUMBER	CATALOG NUMBER	PAGE NUMB
-155P		54-14SD		54-851P	
2-500	53	54-151		54-852P	
2-502		54-151ZP		54-853P	
2-504		54-152P		54-854P	
2-520		54-152ZP		54-855P	
2-522		54-153P		54-856	
2-524		54-153Z		54-861	
2-530		54-154		54-862P	
2-532		54-156		54-863	
2-534		54-15DW		54-864	
2-536		54-15SD		54-866	
2-538		54-161	•••••••••••••••••••••••••••••••••••••••	55-004P	
2-548		54-162P		55-005P	
2-550		54-163P		55-006P	
2-552		54-164		55-007P	
2-554		54-165P		55-008P	
2-600		54-166		55-010	
2-602	53	54-16DW	58	55-012	
?-604	53	54-300P	56	55-611	
?-622	53	54-301		55-612	
-624	53	54-302P	56	55-613	
-632		54-303P	56	55-614	
-634		54-304		55-615	
-841	53	54-521		55-616	
-842		54-522		55-660	
-861		54-523		56-103	
-862		54-524		56-104	
-881		54-525		56-105	
-882		54-526		56-106	
-002 -001		54-527		56-108	
-001 -002		54-541P		57-000	
-002 -003		54-542P		57-000	
-004P		54-543P		57-002	
-005P		54-544		57-003	
-006P		54-545P		57-004	
-007P		54-546P		57-005	
-008P		54-547		57-006	
-009P		54-548		57-007	
-00DW		54-551		57-008	
-00SD		54-552		57-009	
-01DW		54-553		57-010	
-01SD		54-554		57-011	
-02DW	58	54-555		57-012	
-02SD		54-556		57-013	
-03DW	58	54-561	55	57-016	
-03SD	58	54-562	55	57-020	
-04DW	58	54-563P	55	57-053	
-04SD	58	54-564		57-057	
-05DW		54-565		57-091	
-05SD		54-566		BJ-1-DS	
-06DW		54-570P		CSS-100	
-090		54-571P		CSS-10K	
-091		54-572P		CSS-135	
-100Z		54-573P		CSS-160	
-10DW		54-574		CSS-270	
-10SD		54-575		CSS-360	
-11DW		54-576		CSS-50R	
-11SD		54-577		CSS-5K	
-113D -121		54-578		CSS-B	
-121 -122P		54-621		CSS-DWS	
		54-622		CSS-H	
-123P					
-124P		54-623		CSS-LH	
-12DW		54-624		DS2	
-12SD		54-625H		DS4	
-13DW		54-626		DS6	
-13SD		54-627		DS8	
-141		54-642		DX-1	
-141ZP		54-643		DX-5	
-142P	57	54-645H	55	DX-5S	
-142ZP	57	54-646	55	ERG297	
-143P		54-841		ERG299	
-143Z		54-842		G4-DS	
-144		54-843P		G5-DS	
-145P		54-844		IDNY-1500-9-M	
	58	54-845		IDNY-2000-9-M	

ATALOG NUMBER	PAGE NUMBER	CATALOG NUMBER	PAGE NUMBER	CATALOG NUMBER	PAGE NUMB
AB12H-DS		L-7-50-9-C		SC03E	
AB58H-DS	34	L-7-50-9-M		SC03E-2G	
-DS		L-7-50HS-0-C		SC03E-4E	
1-DS		L-7-50HS-0-M		SC05-1	
2-DS		L-7-50ID-9-C		SC053-1	
3-DS		L-7-50ID-9-M		SC053-2	
JL-DS		L-8-120-0-C		SC06-1	
11-120-0-C		L-8-120-9-C		SC07GG	
11-120-9-C		L-8-120HS-0-C		SC07GG-185	
11-40-0-C		L-8-18-0-C		SC08-1	
11-40-0-D		L-8-18-0-M		SC09-1	
11-40-9-C		L-8-18-9-C	40	SC10-1	
I 1-40-9-D	41	L-8-18-9-M	40	SC11-1	
I 1-50-0-C	42	L-8-40-0-C	41	SC12DNS-81	
1-50-0-D	42	L-8-40-0-M	41	SC12DNS81-25	
I 1-50-9-C	42	L-8-40-9-C	41	SC12N-81	
I 1-50-9-D	42	L-8-40-9-M	41	SC12N81-1G	
1-50HS-0-C	42	L-8-40HS-0-C		SC12N81-25	
1-50HS-0-D		L-8-40HS-0-M		SC13B-1	
4-120-0-C		P-11-50-0-Q		SC13B-2	
4-120-9-C		P-11-50-2-C		SC13B-3	
4-120HS-0-C		P-14-120-2-C		SC13BZ-1	
14-40-0-C		P-14-120-5-C		SC13BZ-2	
4-40-0-D		P-14-120-5-C P-14-50-0-Q		SC13BZ-3	
4-40-9-C		P-14-50-0-Q P-14-50-2-C		SC16-19	
4-40-9-D		P-14-50-2-C P-14-50-6-C		SC16-19 SC16-26	
4-50-0-C		P-4-18-0-Q P-4-18-1-C		SC16-3Q	
4-50-0-D				SC16-411	
4-50-9-C		P-4-18-2-C		SC16DP-19	
4-50-9-D		P-4-18-3-C		SC16DP-26	
4-50HS-0-C		P-4-18-4-C		SC16DP-3Q	
4-50HS-0-D		P-4-18-5-C		SC16P-26BLACK	
8-120-0-L		P-4-18-6-C		SC16P-26WHITE	
8-120-9-L	43	P-4-18-7-C	40	SC17-1	
8-120HS-0-L	43	P-4-18-8-C	40	SC18-19	
24-120-0-L	43	P-5-30-1-C	41	SC18-26	
24-120-9-L	43	P-5-30-1-M	41	SC18-3Q	
24-120-HS-0-L	43	P-5-30-2-C	41	SC18L-19	
24-175-0-L	43	P-5-30-2-M	41	SC18L-26	
24-175-9-L	43	P-5-30-3-C	41	SC18P-26BL+A178ACK	
28-120-0-L		P-5-30-3-M		SC18P-26WHITE	
28-120-9-L	43	P-5-30-4-C	41	SC19-1	
34-175-9-L		P-5-30-4-M		SC20-1	
36-175-0-L		P-5-30-5-C		SC21-1	
6-175-9-L		P-5-30-5-M		SC21-1	
I1-175-0-L		P-5-30-6-C		SC22-1	
		P-5-30-6-M		SC23CGS-2	
I-18-0-C		P-5-30-8-C		SC23CGS-4	
I-18-0-0		P-5-30-8-M		SC23PS-2	
	•	P-7-50-0-Q			
-18-9-C			······	SC23PS-4	
-18-9-M		P-7-50-2-C		SC23PV-2	
-18HS-0-C		P-7-50-3-C		SC23PV-4	
-18HS-0-M		P-7-50-4-C		SC26-1	
-18ID-9-C		P-7-50-5-C		SC42-1	
-18ID-9-M		P-7-50-6-C		SC44-1	
8-175-0-L		P-7-50-7-C		SC46DN	
8-175-8-L		P-7-50-8-C		SC46DN-25	
-30-0-C		P-8-40-1-C		SC50-1	
-30-0-M		P-8-40-1-M		SC51-1	
i-30-9-C		P-8-40-2-C		SC51-1BE	
i-30-9-M		P-8-40-2-M		SC51-2	
i-30HS-0-C	41	P-8-40-3-C		SC51-CF	
i-30HS-0-M		P-8-40-3-M		SC51CF-81	
5-50-0-C	42	P-8-40-4-C	41	SC51CF-85	
5-50-0-M		P-8-40-4-M		SC53-1	
5-50-9-C		P-8-40-5-C		SC53-2	
5-50-9-M		P-8-40-5-M		SC70-13	
5-50HS-0-C		P-8-40-6-C		SC70-16	
5-50HS-0-M		P-8-40-6-M		SC73-1F	
5-18-0-C		P-8-40-7-C		SC73-3F	
5-18-0-0 3-18-0-M		P-8-40-7-M		SC80T	
6-18-9-C		P-8-40-8-C		TC5355	
6-18-9-M		P-8-40-8-M		TC5356	
/ HILLILL:	42	CLAINWEY CC	7	TC5357	

CATALOG NUMBER	PAGE NUMBER	CATALOG NUMBER	PAGE NUMB
CP360	40	TY528MX	
GC-DS		TY529M	
GCH-DS		TY529MX	
Y232M		TY532M	
Y232MX	38	TY53510M	
Y234M	37	TY53510MX	
Y234MX	38	TY53M	
Y23M		TY53MFR	
· 	•		
Y23MFR		TY54513M	
Y23MX		TY54513MX	
Y242M	37	TY546M	
Y242MX	38	TY546MD	
Y244M	37	TY546MT	
Y244MX		TY548M	
Y24M		TY5512M	
Y24MFR	46	TY551M	
Y24MX	38	TY5532M	
Y253M	37	TY553M	
Y253MX		TYB2315M	
Y25M		TYB2315MX	
Y25MFR		VGC12	
Y25MX	38	VGC2010	
Y26M	.37	VGC23	
Y26MX	•••••••••••••••••••••••••••••••••••••••	VGC3020	
Y272M		VGC4040	
Y272MFR		VGC44	
Y272MX	38	VGC68	
Y275M	37	VGC68SH	
Y275MX		VL167P	
Y277M	•	WP23752PB	
Y277MX	38	WP23752PW	
Y27M	37	WRB1	
Y27MFR		WT163M-1	
Y27MX		WT163M-3	
Y28M	•	WT1-TB	
Y28MFR	46	WT2-TB	
Y28MX	38	WT3D	
Y29M	37	WT3D	
Y29MX	•••••••••••••••••••••••••••••••••••••••	WWB1	
		VVVD1	
Y46M			
Y46MD	44		
Y46MF	44		
Y46MT	44		
Y48M	44		
Y512M			
· • · - · · · · · · · · · · · · · · · · · · ·			
Y51M			
Y52315M	37		
Y52315MX	38		
Y5232M			
· • — • — · · · · · · · · · · · · · · ·			
	37		
	37		
	37		
	37		
Y5234MX	37 38		
Y5234MX Y523M	37 38 37		
Y5234MX Y523M Y523MX			
Y5234MX Y523M Y523MX Y5242M			
Y5234MXY523MY523MXY5242MY5242MY5242MX			
Y5234MXY523MY523MXY5242MY5242MY5242MX			
Y5234MX Y523M Y523MX Y5242M Y5242MX Y5244M			
Y5234MX Y523M. Y523MX. Y5242M Y5242MX. Y5244MX			
Y5234MX Y523M Y523MX. Y5242M Y5242MX Y5244MX Y5244MX Y5244MX			
Y5234MX			
Y5234MX Y523M Y523MX Y5242M Y5242M Y5244MX Y5244MX Y524M Y524MX Y5253M Y5253M Y5253M Y5256M Y5256M Y526MX Y526MX Y5272MX Y5272MX Y5272MX Y5272MX Y5275M Y5275M Y5275M Y5277MX Y5277MX			
Y5234M. Y5234WX. Y5234WX. Y523M. Y523M. Y5242M. Y5242M. Y5244M. Y5244M. Y5244MX. Y5244M. Y5253M. Y5253M. Y5250M. Y52575M. Y5275M. Y5277M. Y5277M. Y5277M. Y52757M. Y52757M. Y5277M. Y5277M. Y5277M. Y5277M. Y5277M.	37 38 38 37 38 38 37 38 38 37 38 38 37 38 38 37 38 38 37 38 37 38 38 37 38 38 37 38 38 37 38 38 37		