

# Safety Tools & Products

Safety Tools to 1000 VAC  
Insulation Products  
to 40,000 VAC



Certified Insulated Products



## Linesman Pliers



Code#	Length
10000	7 1/2" Standard
10003	8 1/2" Standard
10005	9 1/4" Premium
10006	9 1/4" Standard
10007	9 1/4" Standard w/ Crimper

- New England style, high leverage

## Needle Nose Pliers



Code#	Length	
10008	4"	
10010	6"	
10013	7 1/2"	
10014	7"	Bent Nose
10016	8"	

- Side cutting feature

## Flat Nose Pliers



Code#	Length
10020	6"

- Duck bill

## Water Pump Pliers



Code#	Length	Capacity	
10066	4"	1/2"	
10068	6"	3/8"	
10070	10"	1 1/2"	
10071	10"	1 1/2"	Box Joint
10073	12"	2"	
10075	12"	2"	Box Joint

- Positive locking design

## Slip Joint Pliers



Code#	Length
10050	8"
10052	10"

- Milled teeth & jaws

## Crimping Pliers



Code#	Length	Capacity	Other
10060	10"	#10-22 AWG	

- Wire cutter built into base
- For insulated and non-insulated terminals

## Cable Cutters



Code#	Length	Capacity
10040	9 1/2"	4/0 Alum, 2/0 Copper
10041*	10"	4/0 Alum, 2/0 Copper
10042	8"	2/0 Alum, 2/0 Copper

\* Easily slices up to 100-pair telephone cable

- High leverage

## Ratcheting Cable Cutter



Code#
10048

- Cuts copper communications cable up to 3" (76 mm) in diameter
- Compact, lightweight, weighs only 3 lbs. (1.13 kg)
- Easy to use, one-handed operation
- Release lever disengages ratchet, allowing blades to open even in mid-cut
- Safety latch locks blades in closed position for storage
- Features a rubber boot to lodge stationary handle against work surface to multiply manual effort

Note: This tool should never be used to cut steel or steel reinforced cable.

## Diagonal Cutting Pliers



Code#	Length
10028	4"
10030	6"
10033	7"
10034	8"

- Standard bevel cutting knives

## Plastic Pliers



Code#	Length
10039	7"

- Fiberglass

## Adjustable Wrenches



Code#	Length	Jaw Opening
10090	6"	3/4"
10092	8"	1 1/8"
10094	10"	1 1/4"
10096	12"	1 3/8"
10098	15"	1 7/8"

- **WARNING: Not 1000V Rated.**  
Does not meet ASTM standards for insulated tools.

Stripper & Crimping Pliers


Code#	Capacity	Length
10080	#10-22 AWG	8 1/4"
10081	#8-30 AWG	7"
10082	#10-28 AWG	6 1/2" V-notch
10084	#10-18 AWG Solid	6 1/2"
10085	#10-22 AWG	6 1/2" In-line
10087	#10-18 AWG	STRANDED






Hexagon Wrench

Code#	Size	Code#	Size
10123	1/16"	01050	1.5 mm
10124	1/8"	01051	2 mm
10125	3/32"	01052	2.5 mm
10126	1/4"	01053	3 mm
10127	5/16"	01054	4 mm
10128	3/8"	01055	5 mm
10129	7/16"	01056	6 mm
10130	1/2"	01057	7 mm
10131	5/8"	01058	8 mm
10132	3/4"	01059	9 mm
10134	7/8"	01060	10 mm
10136	1"	01061	12mm
10138	1 1/8"	01062	13mm
10140	1 1/4"	01063	14mm
10145	1 1/2"	01066	17mm
10146	1 3/4"	01067	19mm
10147	2"	01068	22mm
10148	2 1/4"	01069	24mm
10149	2 3/4"		



- Long arm

**Sets**

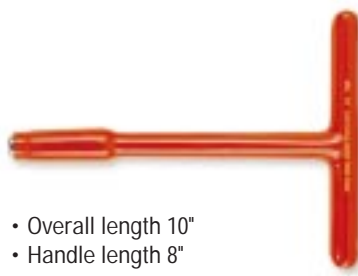
Code#	Pcs.	Sizes
10141	7	3/64", 1/32", 1/16", 1/8", 3/16", 1/4", 3/8", 1/2"
10142	10	1/16" thru 3/8", w/o 1/4" & 3/16"
10144	14	1/16" thru 1/2"

**Metric Sets**

Code#	Pcs.	Sizes
01042	9	1.5 mm thru 10 mm w/o 7 & 9 mm
01044	10	1.5 mm thru 10 mm w/o 9 mm
01064	10	1.5 mm thru 10 mm w/o 7 mm
01065	11	1.5 mm thru 10 mm
01046	13	1.5mm thru 13mm
01048	18	1.5mm thru 24mm

"T" Handle Hexagon Socket Wrench


Code#	Size
10150	3/8"
10152	7/16"
10154	1/2"
10156	5/8"
10158	3/4"
10160	7/8"
10162	1"
10164	1 1/8"
10165	1 1/4"
10166	1 1/2"
10167	1 3/4"



- Overall length 10"
- Handle length 8"

"T" Handle Hexagon Wrench


Code#	Size	Code#	Size
10105	3/32"	01070	2 mm
10106	1/16"	01071	2.5 mm
10107	1/8"	01072	3 mm
10108	3/16"	01073	4 mm
10109	1/4"	01074	5 mm
10110	5/16"	01075	6 mm
10111	3/8"	01076	7 mm
10112	1/2"	01077	8 mm
10114	5/8"	01078	9 mm
10116	3/4"	01079	10 mm
10117	7/8"		
10118	1"		
10119	1 1/8"		



- Heat treated for strength
- 6" length

Pipe Wrench

Code#	Size	Code#	Size	Code#	Size
01002	3/16"	00970	5 mm	00991	26 mm
01003	1/8"	00971	6 mm	00992	27 mm
01004	3/16"	00972	7 mm	00993	28 mm
01005	1/4"	00973	8 mm	00994	29 mm
01006	5/16"	00974	9 mm	00995	30 mm
01007	3/8"	00975	10 mm	00996	31 mm
01008	7/16"	00976	11 mm	00997	32 mm
01009	1/2"	00977	12 mm	00998	33 mm
01010	9/16"	00978	13 mm	00999	34 mm
01011	5/8"	00979	14 mm	01000	35 mm
01012	3/4"	00980	15 mm	01001	36 mm
01014	7/8"	00981	16 mm		
01016	1"	00982	17 mm		
01018	1 1/8"	00983	18 mm		
01020	1 1/4"	00984	19 mm		
01022	1 1/2"	00985	20 mm		
01024	1 3/4"	00986	21 mm		
01026	2"	00987	22 mm		
01028	2 1/4"	00988	23 mm		
01030	2 3/4"	00989	24 mm		
01032	3"	00990	25 mm		




Sets

Code#	Pcs.	Sizes
01090	8	2 thru 10 mm w/o 7 & 9mm
01092	10	2 thru 10mm
10120	8	1/8" thru 3/8"
10122	10	3/32" thru 3/8"
10101	10	1/8" thru 1/2"
10102	11	1/8" thru 3/8"
10103	12	3/32" thru 1/2"
10104	13	3/32" thru 3/8"

2" Plug Wrench

Code#	Length
10430	2"



- Remove and install screw plugs with raised "D" in fuse socket

1/2" Dr. Current Transformer Bar

Code#
10169



## Geared Style Box Wrenches



Code#	Size	Code#	Size
0442	5/16"	10478	8mm
10443	3/8"	10479	9mm
0444	7/16"	10481	11mm
0445	1/2"	10483	13mm
10446	9/16"	10484	14mm
10447	5/8"	10486	16mm
10448	11/16"	10487	17mm
10449	3/4"	10489	19mm
10450	13/16"	10491	21mm
10451	7/8"	10492	22mm
10452	15/16"	10494	24mm
10453	1"		

### Sets

Code#	Pcs	Sizes
10454	9	5/16" thru 13/16"
10455	10	3/16" thru 7/8"
10456	12	5/16" thru 1"
10498	11	8mm thru 24mm

## Connector Wrenches



Code#	Length	Size
10410	7"	3/8" x 7/16"
10411	8 3/8"	1/2" x 3/4"
10412	9 1/2"	3/4" x 7/8"

- Ratcheting
- Provides separation between the ratchet ends to eliminate accidental contacts on low voltage installations

## Ratcheting Wrenches



Code#	Size
10421	1/4"
10422	5/16"
10423	3/8"
10424	7/16"
10425	1/2"
10426	9/16"
10427	5/8"
10428	11/16"
10429	3/4"
10432	7/8"

- Metric and larger sizes available upon request

### Sets

Code#	Pcs.	Sizes
10431	9	1/4" thru 3/4"
10433	10	1/4" thru 5/8"

## Fuse Puller



Code#
10440

## Insulated Knife & Sheath



Code#	Blade
14299	Sickle
14300	Straight

- Fiberglass

## Torque Wrenches / Screwdrivers



### Wrenches

Code#	Range	Length	Drive
10173	30 - 150"#	10"	1/4"
10184	30 - 150"#	10"	3/8"
10185	150 - 750"#	15"	3/8"
10185S	15'# - 75'#	15"	3/8"
11184	50 - 250"#	13"	3/8"
10186	150 - 750"#	15"	1/2"
10187	30'# - 150'#	19"	1/2"



### Screwdrivers

Code#	Range	Length
10174	1 - 30"oz	6 1/2"
10175	2 - 36"oz	6 1/2"
10176	2 - 100"oz	6 1/2"

10177 1/4" Hex to 1/4" Sq. Dr. Adapter

## Reversible Ratchet



Code#	Drive	Length
10178	1/4"	6"
10180	3/8"	7"
10182	1/2"	10"
10470	3/4"	24"

- Raised lever allows reversing while wearing gloves
- Extensions bars are required

## Extension Bars



Code#	Drive	Length
10168	1/2"	20"
10189	1/4"	2"
10191	1/4"	6"
10188	3/8"	3"
10190	3/8"	6"
10192	3/8"	12"
10193	1/2"	2 1/2"
10194	1/2"	5"
10196	1/2"	10"

## Breaker Bar



Code#	Drive	Length
10197	3/8"	9"
10198	1/2"	12"

Hexagon Sockets



1/4" Drive

Standard Depth		Deep Depth	
Code#	Size	Code#	Size
10200	3/16"	10220	3/8"
10201	1/4"	10222	7/16"
10202	5/16"	10224	1/2"
10204	7/16"	10226	9/16"
10206	1/2"	10228	5/8"
10208	9/16"	10230	11/16"
10210	5/8"	10232	3/4"
10212	11/16"	10233	13/16"
10214	3/4"	10234	7/8"
10216	13/16"	10267	1 1/2"
10217	15/16"		
10218	7/8"		
10221	1"		

1/2" Drive

Standard Depth		Deep Depth	
Code#	Size	Code#	Size
10240	3/8"	10270	3/8"
10242	7/16"	10272	7/16"
10244	1/2"	10274	1/2"
10246	9/16"	10276	9/16"
10248	5/8"	10278	5/8"
10250	11/16"	10280	11/16"
10252	3/4"	10282	3/4"
10254	13/16"	10284	13/16"
10256	7/8"	10286	7/8"
10258	15/16"	10288	15/16"
10260	1"	10290	1"
10262	1 1/16"	10292	1 1/16"
10264	1 1/8"	10294	1 1/8"
10266	1 1/4"	10295	1 1/4"
10268	1 3/8"		
10269	1 1/2"		

Other ranges available, see Price Sheet for details.

Code#	Drive	Range	Depth
01100-01126	1/4"	3/32" - 9/16"	STD
01140-01157	1/4"	4mm-13mm	STD
01167-01182	3/8"	7mm-22mm	STD
01266-01282	3/8"	6mm-22mm	DEEP
01192-01214	1/2"	10mm-32mm	STD

Male Hexagon Adapter



Sets

Code#	Pcs.	Drive	Sizes
01241	6	1/4"	1/8" - 5/16"
01261	4	3/8"	1/4", 5/16", 3/8", 7/16"
01262	7	3/8"	1/8" - 1/2", w/o 5/32" & 1/32"
01263	9	3/8"	1/8" - 1/2"
01230	8	1/2"	1/4" - 3/4"
01301	7	4mm	10mm

3/8" Dr. - 2 1/4" Length

Code#	Size "
01294	4mm
01295	5mm
01296	6mm
01297	7mm
01298	8mm
01299	9mm
01300	10mm

1/4" Dr. - 2" Length

Code#	Size
01231	1/8"
01232	5/32"
01234	3/16"
01236	7/32"
01238	1/4"
01240	5/16"

1/4" Dr. - 2 1/2" Length

Code#	Size
01244	1/8"
01246	5/32"
01248	3/16"
01250	7/32"
01252	1/4"
01254	5/16"
01256	3/8"
01258	7/16"
01260	1/2"

1/2" Dr. - 2 1/4" Length

Code#	Size
01218	1/4"
01219	3/16"
01220	3/8"
01222	7/16"
01224	1/2"
01226	9/16"
01228	5/8"
01229	3/4"

4" length add "L" to Code# (1/2" Dr. only)

Socket & Ratchet Sets



Code#	Pcs.	Description
01130	11	1/4" Dr. 6 Pt. Socket Set, 1/2" thru 3/4"
01131	11	1/4" Dr. Ratchet, 2" Ext., Sockets 1/2" thru 3/4"
01132	12	1/4" Dr. Ratchet, 2" Ext., Sockets 3/8" thru 1/2"
01138	17	1/4" Dr. Ratchet, 2" Ext., Sockets 3/16" thru 9/16", Male Hex Bits 1/8" thru 5/16"
01160	14	1/4" Dr. Ratchet, 2" Ext., Sockets 4mm thru 12mm
01188	15	3/8" Dr. Ratchet, 3" Ext., Sockets 10mm thru 22mm
01190	13	3/8" Dr. Deep Metric Socket Set 10mm thru 22mm
01215	17	1/2" Dr. Ratchet, 5" Ext., Sockets 10mm thru 32mm
01216	15	1/2" Dr. Socket Set, 10mm thru 32mm
01283	13	3/8" Dr. Ratchet, 3" Ext., Sockets 10mm thru 19mm & 22mm
01284	19	3/8" Dr. Ratchet, 3" Ext., Sockets 6mm thru 22mm
10179	12	1/4" Dr. Ratchet, 2" Ext., Sockets 3/8" thru 1/2"
10181	9	3/8" Dr. Ratchet, 3" Ext., Sockets 3/8" thru 3/4"
10183	14	1/2" Dr. Ratchet, 5" Ext., Sockets 3/8" thru 1" & Breaker Bar
10199	12	3/8" Dr. Ratchet, 3" Ext., 8" "T" Handle, Sockets 3/8" thru 1 1/4", Male Hex Bits 1/8" thru 3/4"
10219	10	3/8" Dr. Sockets 3/8" thru 1"
10238	9	3/8" Dr. Ratchet, 3" Ext., Deep Sockets 3/8" thru 3/4"
10239	12	3/8" Dr. Ratchet, 3" & 6" Ext., Sockets 3/8" thru 1"
11198	25	1/2" Dr. Ratchet, 5" Ext., 8" "T" Handle, Sockets 3/8" thru 1 1/4", Male Hex Bits 1/8" thru 3/4"
11199	11	3/8" Dr. Ratchet, 3" & 6" Ext., Sockets 3/8" thru 1 1/4"
11200	11	3/8" Dr. Ratchet, 3" & 6" Ext., Deep Sockets 3/8" thru 1 1/4"
11215	10	3/8" Dr. Metric Socket Set, 10mm thru 19mm

Substation Roll



Code#	Description
13432	Composite Sub-Station Tool Roll #13352 & Roll #13360
13433	Composite Sub-Station Tool Roll #13353 & Roll #13360

# Screwdrivers, Switchboard Matting, Accessory Tools

## Switchboard Corrugated Matting

- ASTM D178-93 Type 1 Insulating—Non-Oil Resistant

Switchboard matting is rubber matting designed for electrical insulation, as a floor covering to prevent shock around high voltage electrical apparatus, fuse boxes, switchgear, control panels, and heavy machinery. It meets and exceeds current ASTM, ANSI, (plus IEC Division of ANSI, Tech. Committee-78) specifications for this material. In addition, OSHA requirement's intent to eliminate the electrical hazards of high voltage shock in the workplace is abundantly clear. CIP switchboard matting is designed specifically for this purpose. IT IS NOT DESIGNED TO BE USED AS A "HOT" RAIL BLANKET. ALSO, MATTING WITH PUNCTURES OR CRACKS SHOULD NOT BE PLACED IN SERVICE.



Code#	Dielectric Test Voltage	Thickness	Size	Class	Max. Use Voltage
20531	20,000	3/16"	36" x 12"	1	7,500
20532	20,000	3/16"	36" x 24"	1	7,500
20533	20,000	3/16"	36" x 36"	1	7,500
20534	20,000	3/16"	36" x 48"	1	7,500
20541	30,000	1/4"	36" x 12"	2	17,000
20542	30,000	1/4"	36" x 24"	2	17,000
20543	30,000	1/4"	36" x 36"	2	17,000
20544	30,000	1/4"	36" x 48"	2	17,000
20551	40,000	3/8"	36" x 12"	3	26,500
20552	40,000	3/8"	36" x 24"	3	26,500
20553	40,000	3/8"	36" x 36"	3	26,500
20554	40,000	3/8"	36" x 48"	3	26,500

## Composite Nut Starter



- Fiberglass composite (non-conductive) shaft
- Magnetic on opposite end to help retrieve fasteners

Code#	Description	Length	Capacity
00563	Composite Nut Starter	7"	4-40 (2.5mm) to 3/16" (8mm)

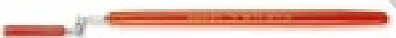
## Insulated Inspection Mirror



Code#  
14301  
14303

- 14" long with 2 1/4" adjustable mirror
- 15" long with 3 1/4" adjustable mirror

## Insulated Adjustable Magnetic Retrieving Tool



Code#  
14302

- 18" handle

## European Style Drivers



Slotted SD		Phillips SD	
Code#	Size	Code#	Size
13070	3/32" X 3"	13080	#0 x 2 1/2"
13072	1/16" X 4"	13082	#1 x 3"
13074	3/16" X 5"	13084	#2 x 4"
13076	1/4" X 6"	13086	#3 x 6"
13077	5/16" x 7"		
13078	3/8" x 8"		

### Metric Nutdrivers

Code#	Size
05300	5.5mm
05305	6mm
05310	7mm
05315	8mm
05320	9mm
05325	10mm
05330	11mm
05335	12mm
05340	13mm

### Voltage Tester

Code#  
13088

### Screwdriver Sets

Code#	Pcs.	Sizes
13090	8	3/32" x 3", 1/16" x 4", 3/16" x 5", 1/4" x 6", #0 x 2 1/2", #1 x 3", #2 x 4", Voltage Tester

## Metric Nut Drivers



Code#	Description	Size	Length
05300	Metric Nut Driver	5.5mm	125mm
05305	Metric Nut Driver	6mm	125mm
05310	Metric Nut Driver	7mm	125mm
05315	Metric Nut Driver	8mm	125mm
05320	Metric Nut Driver	9mm	125mm
05325	Metric Nut Driver	10mm	125mm
05330	Metric Nut Driver	11mm	125mm
05335	Metric Nut Driver	12mm	125mm
05340	Metric Nut Driver	13mm	125mm

### Nutdriver Sets

Code#	Pcs.	Sizes
05370	9	5.5mm thru 13mm

## Offset Screwdriver



- Torx see Code #00590 thru #00603 in Price Sheet

Slotted		Phillips	
Code#	Size	Code#	Size
00564	2-4 x 3"	00578	#1 x 4 1/4"
00566	4-6 x 3"	00580	#2 x 5 1/2"
00568	6-8 x 4 1/4"	00582	#3 x 6"
00570	8-10 x 4 1/4"		
00572	10-12 x 5"		
00574	12-14 x 6"		
00576	14-16 x 6"		

# COMPOSITE TOOLS

Leading Edge Technology

Manufactured from braided, military grade fiberglass composite over a tough polymer core, Composite Tools combine the latest in space age materials technology with traditional heat treated steel tips in a unique family of products ideal for the safety-minded professional tool user.



- Inherent safety—the insulating properties are built into the tool, not coated onto it
- Lightweight
- Better balanced
- Exceeds ASME torque standards
- Exceeds the strength of the proper fastener
- One year warranty

## COMPOSITE SCREWDRIVERS

Slotted Tip	
Code#	Size
00813	1/8" x 3"
00814	1/8" x 6"
00820	1/4" x 7"
00822	3/16" x 4 1/2"
00823	5/16" x 7"
00844	3/16" x 5"
00846	3/16" x 6"
00847	1/2" x 4 1/2"
00848	1/4" x 6"
00849	3/16" x 6"
00850	3/8" x 7"

- Cushion grip
- Slotted electrician's tip
- Phillips tip
- Robertson tip

Phillips Tip		Robertson Tip	
Code#	Size	Code#	Size
00851	#0 x 3"	00860	#0 x 3"
00852	#1 x 5"	00861	#0 x 6"
00853	#0 x 6"	00862	#1 x 5"
00856	#2 x 4 1/2"	00864	#2 x 4 1/2"
00858	#2 x 7"	00866	#2 x 6"
00859	#3 x 6"	00868	#3 x 7"
00952	#1 x 3"		

Screwdriver Sets		
Code#	Pcs.	Sizes
00871	6	#1, #2, 1/8" x 3", 3/16" x 6", 1/4" x 6", 5/16" x 6"
00869	8	#1, #2, 1/8" x 3", 1/8" x 6", 3/16" x 6", 1/4" x 6", 5/16" x 6", 3/8" x 7"
00870	11	#1, #2, #3, 1/8" x 3", 1/8" x 6", 3/16" x 5", 3/16" x 6", 1/4" x 4 1/2", 1/4" x 6", 5/16" x 6", 3/8" x 7"
00872	5	#2, #3, 3/16" x 6", 1/4" x 6", 3/8" x 7"

## COMPOSITE HOLDING SCREWDRIVERS & NUT STARTERS

Holding SD			
Code#	Size	Length	Type
00560	3/16"	6"	Slotted
00562	#2	6"	Phillips

Nut Starter	
Code#	Capacity
00563	4-40 (2.5mm) to 3/8" (8mm)

- Convenient twist-tip design for one-hand use
- Fiberglass composite (non-conductive) shaft
- Magnetic on opposite end to help retrieve fasteners

## BIT HOLDER EXTENSION BAR FOR CORDLESS DRILL

Code#
00812

- 5" Length
- Accommodates most standard 1/4" hex bits

## COMPOSITE NUT DRIVERS

3" Length		6" Length	
Code#	Size	Code#	Size
00880	3/16"	00891	3/16"
00881	1/32"	00892	1/32"
00882	1/8"	00893	1/8"
00883	5/32"	00894	5/32"
00884	3/16"	00895	3/16"
00885	11/32"	00896	11/32"
00886	3/8"	00897	3/8"
00887	7/16"	00898	7/16"
00888	1/2"	00899	1/2"
00889	5/8"	00900	5/8"
00890	3/4"	00901	3/4"

- Cushion grip
- Hollow hexagon shaft
- 3" and 6" shaft lengths

Sets			
3" Code#	6" Code#	Pcs.	Sizes
00920	00925	7	3/16", 1/4", 5/16", 11/32", 3/8", 7/16", 1/2"
00921	00926	8	3/16", 1/4", 5/32", 3/16", 11/32", 3/8", 7/16", 1/2"
00922	00927	9	3/16", 1/32", 1/4", 5/32", 5/16", 11/32", 3/8", 7/16", 1/2"
00923	00928	10	3/16", 1/32", 1/4", 5/32", 5/16", 11/32", 3/8", 7/16", 1/2", 9/16"

## COMPOSITE MALE HEXAGON DRIVERS

3" Length		6" Length	
Code#	Size	Code#	Size
00620	5/32"	00640	5/32"
00621	3/16"	00641	3/16"
00622	1/8"	00642	1/8"
00623	1/4"	00643	1/4"
00633	00653	4	3/16", 1/4", 5/16", 3/8"
00634	00654	6	5/32", 3/16", 1/32", 1/4", 5/16", 3/8"
00625	3/16"	00645	3/16"
00627	3/8"	00647	3/8"

Sets			
3" Code#	6" Code#	Pcs.	Sizes
00633	00653	4	3/16", 1/4", 5/16", 3/8"
00634	00654	6	5/32", 3/16", 1/32", 1/4", 5/16", 3/8"

## COMPOSITE HAND DRIVER

Code#	Drive	Length
00810	1/4"	3"
00811	1/4"	6"

- Accommodates 1/4" Sq. Dr. Sockets

## COMPOSITE MAGNETIC BIT TIP SYSTEM

Code#	Bits
10460	3/16" and 1/4" Flat, #1 and #2 Phillips
10461	3/16" and 1/4" Flat, #1 and #2 Robertson

- Accommodates most standard 1/4" hex bits
- Powerful magnet (800 grams) securely holds bits in place
- Can also be used as a 1/4" nut driver
- Convenient see-through handle stores eight standard bits

Box End & Open End Wrenches



• Long style

Box End Wrenches

Standard		Metric	
Code#	Size	Code#	Size
10340	1/4"	01402	6 mm
10342	5/16"	01404	7mm
10344	3/8"	01406	8 mm
10346	7/16"	01408	9 mm
10348	1/2"	01410	10 mm
10350	9/16"	01412	11 mm
10352	5/8"	01414	12 mm
10354	11/16"	01416	13 mm
10356	3/4"	01418	14 mm
10358	13/16"	01420	15 mm
10360	7/8"	01421	16 mm
10362	15/16"	01422	17 mm
10364	1"	01423	18 mm
10366	1 1/16"	01424	19 mm
10368	1 1/8"	01425	20 mm
10370	1 1/4"	01426	21 mm
10373	1 3/8"	01427	22 mm
10374	1 1/2"	01428	23 mm
10376	1 5/8"	01429	24 mm
		01430	25 mm
		01431	26 mm
		01432	27 mm
		01433	28 mm
		01434	29 mm
		01435	30 mm
		01436	32 mm

Box End Sets

Code#	Pcs.	Sizes
10372	11	1/4" thru 7/8"
01438	11	10mm thru 27mm
10371	8	3/8" thru 13/16"
10375	10	1/4" thru 13/16"
10377	13	1/4" thru 1"

Open End Wrenches

Standard		Metric	
Code#	Size	Code#	Size
10300	1/4"	01302	6 mm
10302	5/16"	01304	7mm
10304	3/8"	01306	8 mm
10306	7/16"	01308	9 mm
10308	1/2"	01310	10 mm
10310	9/16"	01312	11 mm
10312	5/8"	01314	12 mm
10314	11/16"	01316	13 mm
10316	3/4"	01318	14 mm
10318	13/16"	01320	15 mm
10320	7/8"	01321	16 mm
10322	15/16"	01322	17 mm
10324	1"	01323	18 mm
10326	1 1/16"	01324	19 mm
10328	1 1/8"	01325	20 mm
10330	1 1/4"	01326	21 mm
10337	1 3/8"	01327	22 mm
10338	1 1/2"	01328	23 mm
10339	1 5/8"	01329	24 mm
		01330	25 mm
		01331	26 mm
		01332	27 mm
		01333	28 mm
		01334	29 mm
		01335	30 mm
		01336	32 mm

Open End Sets

Code#	Pcs.	Sizes
10332	11	1/4" thru 7/8"
01338	11	10mm thru 27mm
10331	8	3/8" thru 13/16"
10336	10	1/4" thru 13/16"
10335	13	1/4" thru 1"

Basic Electrician's Roll (9 pcs.)



- 9" Linesman Pliers
- 7 1/2" Diagonal Cutting Pliers
- 7" Needle Nose Pliers
- Combination Stripper & Crimper
- #2 x 6 Square (Robertson) Screwdriver\*
- 3/16" x 6" Slotted Screwdriver\*
- 1/4" x 6" Slotted Screwdriver\*
- # 1 x 3 Phillips Screwdriver\*
- # 2 x 4 Phillips Screwdriver\*

Code#

\* 13302 Composite Tools

Meter Reader (Routeman) Roll (10 pcs.)



- 8" Needle Nose Pliers
- 3/16" x 6" Slotted Screwdriver\*
- 1/4" x 6" Slotted Screwdriver\*
- # 1 x 3 Phillips Screwdriver\*
- # 2 x 8 Phillips Screwdriver\*
- Fuse Puller
- Plug Wrench
- 5/16" Nut Driver\*
- 3/8" Nut Driver\*
- 1/2" Nut Driver\*

Code#

\* 13393 w/ Composite Tools 3" Nut Drivers  
 \* 13394 w/ Composite Tools 6" Nut Drivers

Meter Service Roll (12 pcs.)



- 9" Linesman Pliers
- 7 1/2" Diagonal Cutting Pliers
- 8" Needle Nose Pliers
- 1/8" x 3" Slotted Screwdriver\*
- #2 x 6 Square (Robertson) Screwdriver\*
- 3/16" x 6" Slotted Screwdriver\*
- 1/4" x 6" Slotted Screwdriver\*
- Fuse Puller
- Plug Wrench
- 5/16" Nut Driver\*
- 3/8" Nut Driver\*
- 1/2" Nut Driver\*

Code#

\* 13383 w/ Composite Tools 3" Nut Drivers  
 \* 13384 w/ Composite Tools 6" Nut Drivers



**Nut Screwdriver Roll (11 pcs.)**



- 1/8" x 3" Slotted Screwdriver\*
- #2 x 6 Square (Robertson) Screwdriver\*
- 3/16" x 6" Slotted Screwdriver\*
- 1/4" x 6" Slotted Screwdriver\*
- 3/16" Nut Driver\*
- 7/32" Nut Driver\*
- 1/4" Nut Driver\*
- 9/32" Nut Driver\*
- 5/16" Nut Driver\*
- 11/32" Nut Driver\*
- 3/8" Nut Driver\*

**Code#**

- \* 13352 w/ Composite Tools 3" Nut Drivers
- \* 13353 w/ Composite Tools 6" Nut Drivers

**Gas Service Roll (11 pcs.)**



- 7" Linesman Pliers
- 7 1/2" Diagonal Cutting Pliers
- 8" Needle Nose Pliers
- 1/8" x 3" Slotted Screwdriver\*
- 3/16" x 5" Slotted Screwdriver\*
- 1/4" x 6" Slotted Screwdriver\*
- Fuse Puller
- Plug Wrench
- 5/16" Nut Driver\*
- 3/8" Nut Driver\*
- 1/2" Nut Driver\*

**Code#**

- \* 13372 w/ Composite Tools 3" Nut Drivers
- \* 13373 w/ Composite Tools 6" Nut Drivers

**Tool Roll (7 pcs.)**



- 9" Linesman Pliers
- 7 1/2" Diagonal Cutting Pliers
- 6" Needle Nose Pliers
- Combination Stripper & Crimper
- Fuse Puller
- Crimper
- Plastic Pliers

**Code#**

13360

**Telecommunications Tool Roll (16 pcs.)**



- 9" Linesman Pliers
- 6" Needle Nose Pliers
- 8" Slip Joint Pliers
- 3/16" x 5" Elect. Slotted Screwdriver w/Cushion Grip\*
- 1/4" x 4 1/2" Slotted Screwdriver w/Cushion Grip\*
- 5/16" x 6" Slotted Screwdriver w/Cushion Grip\*
- 3/8" x 7" Slotted Screwdriver w/Cushion Grip\*
- # 2 x 4 Phillips Screwdriver w/Cushion Grip\*
- 3/8" Reversible Ratchet
- 3/8" Reversible Torque Wrench 30-150"#
- 3/8" Drive 3" Extension
- 3/8", 7/16", 1/2", 9/16" Hex Sockets 3/8" Drive STD Depth
- 5/8" Hex Socket 3/8" Drive Deep Depth

**Code#**

\* 13442 Composite Tools

**Substation Roll (18 pcs.)**

**Code#**

- 13432 Composite Tools—Consists of #13352 or #13353 and #13360
- 13433 Composite Tools—Consists of #13353 and #13360

**Belt Pouches**



**13202 Meter Service Pouch**

- Composite Knife
- 1/8" x 4" Slotted Composite Screwdriver
- 1/4" x 6" Slotted Composite Screwdriver
- 5/16" x 6" Slotted Composite Screwdriver
- #2 x 4" Phillips Composite Screwdriver
- Wire Stripper
- 7 1/2" Diagonal Cutter
- 10" Water Pump Pliers
- \* 8" Adjustable Wrench
- 9" Linesman Pliers
- 6" Needle Nose
- Slotted Composite Holding Screwdriver
- 3/8" x 3" Composite Hex Nut Driver
- 1/2" x 3" Composite Hex Nut Driver
- 5/8" x 3" Composite Hex Nut Driver

**13204 Electrician's Service Pouch**

- Composite Knife
- 1/8" x 4" Slot. Composite Screwdriver
- 3/16" x 5" Slot. Composite Screwdriver
- 1/4" x 6" Slot. Composite Screwdriver
- #2 x 4" Phillips Composite Screwdriver
- Wire Stripper
- 7 1/2" Diagonal Cutter
- 10" Water Pump Pliers
- Fuse Puller
- 9" Linesman Pliers
- 6" Needle Nose
- 3/16" x 3" Composite Hex Nut Driver
- 1/4" x 3" Composite Hex Nut Driver
- 5/16" x 3" Composite Hex Nut Driver
- 3/8" x 3" Composite Hex Nut Driver

\* Flashlight and tape not included

\* 8" Adjustable Wrench not insulated per ASTM F1505 Standard—insulated against grounding only

**Tool Boxes**

**All Sets Contain:**

- 9" Linesman Pliers
- 7½" Diagonal Cutting Pliers
- 7" Needle Nose Pliers
- Voltage Tester
- ⅛" x 3" Slotted Screwdriver\*
- ⅜" x 5" Slotted Screwdriver\*
- ¼" x 6" Slotted Screwdriver\*
- # 1 x 5 Phillips Screwdriver\*
- # 2 x 4 Phillips Screwdriver\*

**Additional Contents:**

Deluxe Electrician's Tool Box	Std. Maintenance Tool Box	Deluxe Maintenance Tool Box
½" Reversible Ratchet 5" Extension ½" Drive 10" Extension ½" Drive Hex Sockets: ⅜", 7/16", ½", 9/16", 5/8", 11/16", ¾"	½" Drive 8" "T" Handle Hex Sockets: ⅜", 7/16", ½", 9/16", 5/8", 11/16", ¾" Open End Wrench: ⅜", 7/16", ½", 9/16", 5/8", 11/16", ¾"	½" Reversible Ratchet 5" Extension ½" Drive Hex Sockets: ⅜", 7/16", ½", 9/16", 5/8", 11/16", ¾" Open End Wrench: ⅜", 7/16", ½", 9/16", 5/8", 11/16", ¾"
Code#	Code#	Code#
* 13411 w/ Composite Tools * 13413 w/ Composite Tools Tool Box Style	* 13401 w/ Composite Tools * 13403 w/ Composite Tools Tool Box Style	* 13421 w/ Composite Tools * 13423 w/ Composite Tools Tool Box Style



Deluxe Maintenance Tool Box Shown

**Insulated Tool Sets**

- 9" Linesman Pliers
- 6" Diagonal Cutting Pliers
- 6" Needle Nose Pliers
- Crimper
- 8" Slip Joint
- 10" Water Pump Pliers
- ⅜" x 5" Cushion Grip Elect. Slotted Screwdriver\*
- ¼" x 6" Cushion Grip Slotted Screwdriver\*
- ¼" x 4½" Cushion Grip Slotted Screwdriver\*
- ⅝" x 6" Cushion Grip Slotted Screwdriver\*
- # 1 x 5 Cushion Grip Phillips Screwdriver\*
- # 2 x 4 Cushion Grip Phillips Screwdriver\*
- ⅜", ¼", 5/16", 3/8" Hex Wrench
- ¼", 5/16", 3/8", 7/16", ½" Cushion Grip Hex Nut Driver (3" Shaft)\*

**Code#**

- \* 13407 Composite Tools
- \* 13409 Composite Tools w/ 6" Nut Drivers



## Deluxe Telecommunications Toolbox



1/8" x 3" Slotted Screwdriver  
 3/16" x 5" Slotted Screwdriver  
 1/4" x 6" Slotted Screwdriver  
 # 1 x 5 Phillips Screwdriver  
 # 2 x 4 Phillips Screwdriver  
 9" Linesman Pliers  
 8" Needle Nose Pliers  
 7 1/2" Diagonal Cutting Pliers  
 3/8" Drive Reversible Ratchet  
 3/8" Drive 3" Extension  
 3/8" Drive 6" Extension  
 30" - 150" # Torque Wrench  
 3/8" Drive Deep Sockets 3/8" thru 1 3/16"  
 Box Wrenches 3/8" thru 1 3/16"  
 Mini Flashlight

### Code#

13449 "Briefcase" Style  
 13447 Toolbox Style (shown in #16026 below)

## The Hot Box®



## The Hot Box®

1/8" x 3" Slotted Screwdriver  
 #2 x 6" Square (Robertson) Screwdriver  
 3/16" x 6" Slotted Screwdriver Cushion Grip\*  
 1/4" x 6" Slotted Screwdriver Cushion Grip\*  
 5/16" x 6" Slotted Screwdriver Cushion Grip\*  
 # 2 x 4" Phillips Screwdriver Cushion Grip\*  
 # 2 x 7" Phillips Screwdriver Cushion Grip\*  
 9" Linesman's Pliers  
 8" Needle Nose Pliers  
 7 1/2" Diagonal Cutting Pliers  
 9 1/2" Cable Cutters  
 10" Water Pump Pliers  
 Combination Stripper/Crimper  
 14 pcs. 1/16" - 1/2" Allen Hex Wrench Set  
 3/8" Drive Reversible Ratchet  
 3/8" Drive 3" Extension  
 3/8" Drive 6" Extension  
 10 pcs. 5/16" - 7/8" 3/8" Dr. Hex Socket Set  
 11 pcs. 1/4" - 7/8" Box End Wrench Set  
 3/16" x 6" Nut Driver Cushion Grip\*  
 1/4" x 6" Nut Driver Cushion Grip\*  
 5/16" x 6" Nut Driver Cushion Grip\*  
 1 1/32" x 6" Nut Driver Cushion Grip\*  
 3/8" x 6" Nut Driver Cushion Grip\*  
 7/16" x 6" Nut Driver Cushion Grip\*  
 1/2" x 6" Nut Driver Cushion Grip\*  
 30" - 150" # Torque Wrench°

### Code#

\* 16027 Composite Tools  
 °° 16029 Composite Tools w/ Torque Wrench

M16027 w/ Metric Sockets, Nut Drivers, and Box Wrenches  
 M16029 w/ Torque Wrench, Metric Sockets, Nut Drivers, and Box Wrenches

16051 w/ 1/2" Drive Ratchet, Sockets, and Extensions  
 16052 w/ 1/2" Drive Torque Wrench, 1/2" Drive Ratchet, Sockets, and Extensions

M16051 w/ 1/2" Drive Metric Sockets, Nut Drivers, and Box Wrenches  
 M16052 w/ 1/2" Drive Torque Wrench, Metric Sockets, Nut Drivers, and Box Wrenches

# Insulating Blankets and Accessories, Glove Accessories

## 7.5 KV PVC Insulating Roll



- Meets ASTM F1742-96 Standard
- Transparent, tested @ 10 KV
- Cut amount needed, discard when finished

Code#	Description	Size
20307	7.5 KV Insulating Roll	4' x 50'
20309	7.5 KV Insulating Roll	4' x 25'
20312	Wood Container for Roll	
20302	4' x 50' Kit (Roll and Container)	
20317	4' x 25' Kit (Roll and Container)	

## Electrical Insulating Protective Shielding

- Type 2 Insulating—Flame, Oil, and Ozone Resistant

Electrical insulating rubber shielding is engineered to protect personnel, equipment, and work areas from electrical hazards up to 26,500 volts. The shielding is flame, oil, ozone, and puncture resistant, remains flexible to -60° F, and will not melt. CIP's insulating shielding is available in convenient "safety yellow" rolls, and is 100% tested to meet ASTM standards.



Code#	Size	Max Use Voltage
20332	36" x 25'	1,000
20333	36" x 25'	7,500
20335	36" x 36"	26,500

## Type I Insulating Blankets and Accessories

- Meets ASTM D1048-98 Standard



Code#	Description
20304	36" x 36" Class "0" Type I (1000V Max.) Blanket
20305	36" x 36" Class "2" Type I (20,000V Max.) Blanket
20310	Blanket Canister
20300	36" x 36" Class "2" Blanket Kit (Blanket, Clamps, & Canister)
20301	36" x 36" Class "0" Blanket Kit (Blanket, Clamps, & Canister)
20320	Blanket Clamps (set of 2)
20299	Magnetic Blanket Button

## Sleeves



- With bag, straps & fasteners

Code#	Class	Max. Volts	Size
21080	0	1,000	Reg
21082	0	1,000	Large
21084	0	1,000	X-Large
21090	2	20,000	Reg
21092	2	20,000	Large
21094	2	20,000	X-Large

Code#	Description
21096	Sleeve Fasteners, 6 / bag
21097	Sleeve Straps Regular, w/ buttons
21098	Sleeve Straps Extra Large, w/ buttons
22300	Replacement Sleeve Bag

## Glove Inflator



Code#  
51200

Proper safety calls for frequent on-the-job inspection of equipment for mechanical damage. Inflators offer a quick, easy way to do a complete and thorough visual inspection of rubber gloves.

## Glove Cleaner



Code#  
20336

Liquid cleaner is ideal for cleaning rubber protective equipment. This concentrated, water-based detergent soap is formulated with special grease cutters. It is highly effective in removing oil, grease, and dirt from all types of rubber equipment such as linemen's gloves, sleeves, blankets, etc.

- 1 gallon liquid cleaner

## Talc



Code#	Description
51202	1 Gal. Container
51204	Case 12-8 fl. oz. bottles

For maximum on-the-job comfort, this cooling powder absorbs moisture and perspiration while minimizing friction inside rubber insulating gloves and sleeves. It also acts as a lubricant to keep equipment from sticking. Talc does not harm the skin or reduce dielectric values of the equipment.

## Glove Liners, Pair

- Knit Cotton

Code#	Size
51210	10"
51212	14"

## Safety Rescue Hook

Code#	Width	Length
32514	12	9'



## Arc Suppression Blankets



Code#	Size
20340	4' x 5'
20342	4' x 8'
20342	5' x 8'

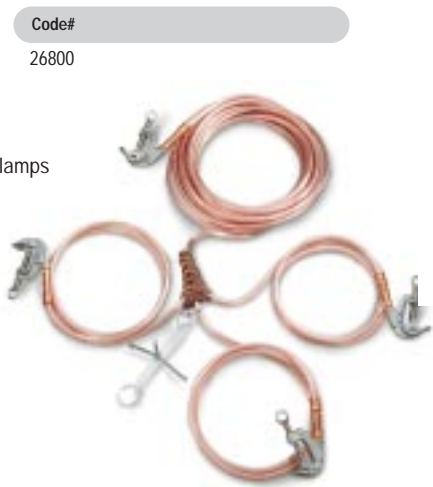
Kits	
Code#	Description
20343	4' x 5' Arc Blanket Kit
20344	5' x 8' Arc Blanket Kit

Arc Suppression Blankets are built with the latest fabric technologies to provide a passive barrier from peripheral arc blasts. Ideal for confined spaces such as underground vaults, the blanket will reduce the effects of an arc blast occurring beyond the primary work area. An ideal complement to personal protective apparel, the Arc Suppression Blanket, when properly used, will reduce the extent of the worker's exposure during an open arc event.

Constructed with a multilayer design, including Dupont® Kevlar®, the blanket is designed to deflect the energy of the arc blast. The blanket is fitted with strong Kevlar® straps with carabiners developed specifically for this application.

## Grounding Sets

- 21 kA 15 cycles
- ASTM Grade 5
- Set includes:
  - four-way connector w/ sleeves
  - four 1½" smooth jaw clamps w/ sleeves
  - double hanger stud
  - contact stud
  - 34' 1/0 Cu cable
  - four pair ferrules



Code#
26800



Grounding Clusters are used to make it easy for a single line worker to apply multiple grounding jumpers. All clusters have the option of a ground lead by using the extra connection point included on each cluster.



# Insulating Gloves

## Insulating Gloves

Even though you are using insulated tools, you must still wear the required gloves. The gloves protect the hands and wrist.

Employees working in areas where there are potential electrical hazards shall be provided with, and shall use, electrical protective equipment that is appropriate for the specific parts of the body to be protected and for the work to be performed.



Class 00 High Dexterity Gloves



Class 0 and Class 00 Glove Kit



Class 2 Glove Kit

Size	Length	Class	Description	Glove	+ Protector	+ Glove Bag	= Kit
7	11"	00	Low Voltage (500 V Max)	51296	51290	22100	52296
8	11"	00	Low Voltage (500 V Max)	51298	51291	22100	52298
8½	11"	00	Low Voltage (500 V Max)	51299	51291	22100	52299
9	11"	00	Low Voltage (500 V Max)	51300	51292	22100	52300
9½	11"	00	Low Voltage (500 V Max)	51301	51293	22100	52301
10	11"	00	Low Voltage (500 V Max)	51302	51293	22100	52302
10½	11"	00	Low Voltage (500 V Max)	51303	51294	22100	52303
11	11"	00	Low Voltage (500 V Max)	51304	51294	22100	52304
11½	11"	00	Low Voltage (500 V Max)	51305	51295	22100	52305
12	11"	00	Low Voltage (500 V Max)	51306	51295	22100	52306
7	11"	0	Low Voltage (1000 V Max)	51110	50301	22100	51100
8	11"	0	Low Voltage (1000 V Max)	51111	50302	22100	51101
8½	11"	0	Low Voltage (1000 V Max)	51112	50303	22100	51102
9	11"	0	Low Voltage (1000 V Max)	51113	50303	22100	51103
9½	11"	0	Low Voltage (1000 V Max)	51114	50305	22100	51104
10	11"	0	Low Voltage (1000 V Max)	51115	50305	22100	51105
10½	11"	0	Low Voltage (1000 V Max)	51116	50307	22100	51106
11	11"	0	Low Voltage (1000 V Max)	51117	50307	22100	51107
11½	11"	0	Low Voltage (1000 V Max)	51118	50309	22100	51108
12	11"	0	Low Voltage (1000 V Max)	51119	50309	22100	51109
8	14"	2	High Voltage (20 KV Max)	20160	20001	22200	20171
8½	14"	2	High Voltage (20 KV Max)	20161	20003	22200	20172
9	14"	2	High Voltage (20 KV Max)	20163	20003	22200	20173
9½	14"	2	High Voltage (20 KV Max)	20164	20005	22200	20174
10	14"	2	High Voltage (20 KV Max)	20165	20005	22200	20175
10½	14"	2	High Voltage (20 KV Max)	20166	20007	22200	20176
11	14"	2	High Voltage (20 KV Max)	20167	20007	22200	20177
11½	14"	2	High Voltage (20 KV Max)	20168	20009	22200	20178
12	14"	2	High Voltage (20 KV Max)	20169	20009	22200	20179

Employees shall use insulated tools and/or handling equipment when working inside the limited approach boundary of live parts where tools or handling equipment might make accidental contact.

### Approach Boundaries to Live Parts for Shock Protection

Nominal System Voltage Range Phase to Phase	Exposed Movable Conductor	Exposed Fixed Circuit Part	Restricted Approach Boundary Incl. Inadvertent Movement	Prohibited Approach Boundary
0 to 50	Not Specified	Not Specified	Not Specified	Not Specified
51 to 300	10 ft 0 in	3 ft 6 in	Avoid Contact	Avoid Contact
301 to 750	10 ft 0 in	3 ft 6 in	1 ft 0 in	0 ft 1 in
751 to 15 kV	10 ft 0 in	5 ft 0 in	2 ft 2 in	0 ft 7 in
15.1 kV to 36 kV	10 ft 0 in	6 ft 0 in	2 ft 7 in	0 ft 10 in
36.1 kV to 46 kV	10 ft 0 in	8 ft 0 in	2 ft 9 in	1 ft 5 in
46.1 kV to 72.5 kV	10 ft 0 in	8 ft 0 in	3 ft 3 in	2 ft 1 in
72.6 kV to 121 kV	10 ft 8 in	8 ft 0 in	3 ft 2 in	2 ft 8 in
138 kV to 145 kV	10 ft 0 in	10 ft 0 in	3 ft 7 in	3 ft 1 in
161 kV to 169 kV	11 ft 8 in	11 ft 8 in	4 ft 0 in	3 ft 6 in
230 kV to 242 kV	13 ft 0 in	13 ft 0 in	5 ft 3 in	4 ft 9 in
243 kV to 362 kV	15 ft 4 in	15 ft 4 in	8 ft 6 in	8 ft 0 in
500 kV to 550 kV	19 ft 0 in	10 ft 0 in	11 ft 3 in	10 ft 9 in
765 kV to 800 kV	23 ft 9 in	23 ft 9 in	14 ft 11 in	14 ft 5 in

Only qualified persons may work on electric circuit parts or equipment that have not been de-energized using proper procedures. Such persons shall be capable of working safely on energized circuits and shall be familiar with the proper use of special precautionary techniques, personal protective equipment, insulating and shielding equipment, and insulated tools.

# Insulating Gloves, Dielectric Boots

## Insulating Gloves

Size	Length	Class	Description	Glove	+ Protector	+ Glove Bag	= Kit
7	14"	00	Low Voltage (500 V Max)	51307	51318	22200	51325
8	14"	00	Low Voltage (500 V Max)	51308	51319	22200	51326
8½	14"	00	Low Voltage (500 V Max)	51309	51320	22200	51327
9	14"	00	Low Voltage (500 V Max)	51310	51320	22200	51328
9½	14"	00	Low Voltage (500 V Max)	51311	51321	22200	51329
10	14"	00	Low Voltage (500 V Max)	51312	51321	22200	51330
10½	14"	00	Low Voltage (500 V Max)	51313	51322	22200	51331
11	14"	00	Low Voltage (500 V Max)	51314	51322	22200	51332
11½	14"	00	Low Voltage (500 V Max)	51315	51323	22200	51333
12	14"	00	Low Voltage (500 V Max)	51316	51323	22200	51334
7	14"	0	Low Voltage (1000 V Max)	51120	51130	22200	51137
8	14"	0	Low Voltage (1000 V Max)	51121	51131	22200	51138
8½	14"	0	Low Voltage (1000 V Max)	51122	51132	22200	51139
9	14"	0	Low Voltage (1000 V Max)	51123	51132	22200	51140
9½	14"	0	Low Voltage (1000 V Max)	51124	51133	22200	51141
10	14"	0	Low Voltage (1000 V Max)	51125	51133	22200	51142
10½	14"	0	Low Voltage (1000 V Max)	51126	51134	22200	51143
11	14"	0	Low Voltage (1000 V Max)	51127	51134	22200	51144
11½	14"	0	Low Voltage (1000 V Max)	51128	51135	22200	51145
12	14"	0	Low Voltage (1000 V Max)	51129	51135	22200	51146
8	14"	1	High Voltage (10 KV Max)	20140	20001	22200	20150
8½	14"	1	High Voltage (10 KV Max)	20141	20001	22200	20151
9	14"	1	High Voltage (10 KV Max)	20142	20003	22200	20152
9½	14"	1	High Voltage (10 KV Max)	20143	20003	22200	20153
10	14"	1	High Voltage (10 KV Max)	20144	20005	22200	20154
10½	14"	1	High Voltage (10 KV Max)	20145	20005	22200	20155
11	14"	1	High Voltage (10 KV Max)	20146	20007	22200	20156
11½	14"	1	High Voltage (10 KV Max)	20147	20007	22200	20157
12	14"	1	High Voltage (10 KV Max)	20148	20009	22200	20158

Please order the proper size.



In order to determine the proper size for Class 0 and 00 insulating gloves, use a tape measure to find the circumference of your hand around the palm.

For example, 8" means your Class 0 and 00 glove size is 8. For Class 2 gloves add ½ size to allow for dexterity. For example 8" means your Class 2 glove size is 8½.

In mid-1995, we started putting serial numbers on all our gloves and sleeves which indicate the month and year they were manufactured. It works like this. The following number — which was on a pair of sleeves — indicates they were manufactured in March 2001:

C at the beginning tells us manufacturing took place in the third month. A is Jan., B is Feb., C is March, etc.

**C400661JA**

Two letters on the end indicate the last two digits of the year of manufacture. A is 1, B is 2, C is 3, etc.

Number in the middle is from the dip ticket for the product.

## Dielectric Boots

Size	Deep Heel Overshoe	17" Full Cut Overshoe	14" Super Dielectric Boot
5	21580		
6	21582		
7	21584	21407	21507
8	21586	21408	21508
9	21588	21409	21509
10	21590	21410	21510
11	21592	21411	21511
12	21594	21412	21512
13	21595	21413	21513
14	21596	21414	21514
15	21597	21415	21515
16	21598	21416	21516
17	21599	21417	21517



Dielectric Deep Heel Overshoes provide extra safety when climbing ladders and poles where the deep heel cavity can lock onto the rungs. These boots and overshoes are made from an ozone resistant yellow rubber that's 100% waterproof. The construction is hand-layered in full-cut patterns to fit over work boots. The fabric lining makes them easy to get on and off. The sole is an anti-skid bar tread. All of these overshoes meet ANSI Z41 requirements and have been tested to 20,000 volts.

The 14" Super Dielectric Boot offers a high level of protection from electrical shock to utility workers, electric contractors, and others working dangerously close to electrical hazards. These boots meet ASTM F1117 requirements, and have been tested to 15,000 volts AC and 45,000 volts DC. The boots are completely waterproof and resistant to ozone. The tough fabric lining makes the fit comfortable and easy to take on and off.

## Hot Sticks

Code#	Description	Length
40090	External Rod Clampstick	6'- 8"
42150	Universal Switching Stick	1 1/2" x 8'
49935	Fiberglass Hot Switch Stick	1 1/2" x 8"



40090



42150



49935

## Tubular PVC Storage Container

- sized for tools 12" shorter than tube
- weather tight
- kit includes two mounting brackets, four steel bolts

Code#	Length	Inner Dia.
41690	9'	6"

## Voltage Detector Kit

Voltage Detectors are used to verify live or de-energized conductors. These testers may be used with rubber insulating gloves or hot sticks with a splined universal end fitting. Each tester has a 4.5 volt transistor amplifier with an audio/visual indicator. It is recommended that the tester be moved closer to the conductor until warning is indicated, or the unit touches a conductor, apparatus, or test point. Test the unit on a nearby conductor to get verification of "dead". Each kit includes a 240V - 230kV Tester, Case, Shotgun Adapter, and three "C" batteries.

Code#

43560

## Socket Clamps

Code#	ASTM Grade	Continuous Current Rating	Strain Relief?
21190	5	400	Yes
21277	5	400	No



The Ball and Socket Grounding System allows for variable angle accessibility. This system is compact and lightweight. There are fixed grounding points on the socket clamp. The socket clamp is made from a bronze. The socket size is 1", with a threaded bore boss of 3/8"-11 UNC. An integral cable support with strain relief is included.

## Ball Studs

Code#	Description
21191	Ball Stud Short
21192	Ball Stud Long
21228	Offset NEMA Pad
21236	Cover for Ball Stud



The Ball Stud, short and long, and the Offset Nema Pad Ball Stud are made from a copper alloy, tin-plated. They each have a 1" diameter ball. The long and short ball Stud have a 1/2"-13 UNC x 2" thread and a recommended installation torque of 300" lbs. The short stud is used conventionally, the long stud can also be used as the grounding point for "C" or duckbill clamps that have a jaw width of 2 1/2" or less. The Offset Nema Pad ball Stud has the standard Nema bolt hole spacing.

The Ball Stud Cover allows for multiple angle application when installed using a clampstick.





# ELECTRICAL ARC FLASH PROTECTION

## Arc Protection Clothing Requirements

- An employee must wear flame-resistant (FR) clothing to work around energized parts.
- To evaluate FR clothing materials in order to measure the heat transferred through the fabric, two values are calculated: arc-thermal performance value (ATPV) and heat attenuation factor (HAF).
- ATPV is the minimum energy causing the predicted onset of second-degree burns.
- HAF is the percentage of total energy of the arc that the fabric prevents from passing through.
- Heavier or layers of FR fabrics give higher ATP values.
- Clothing shall cover potentially exposed areas as completely as possible.
- Layering of non-FR clothing under an outer shell of FR fabric can give a false sense of security. If the outer layer should break open, the inner clothing could ignite.
- Always do a hazard assessment

For arc hazard assessment software, see our website at [www.insulatedtools.com/arc\\_software.html](http://www.insulatedtools.com/arc_software.html)

## Acceptable FR Fabrics

- INDURA® 100% Cotton is flame resistant for the useful life of the garment. A treatment is used that fixes the flame retardant inside the cotton fibers and allows the clothing to breathe.
- Meta aramid (NOMEX®) is blended with 5% para aramid fibers (kevlar) to yield NOMEX® fabrics.
- PBI kevlar (60%) and PBI (40%) are blended to produce the fabric known as PBI.

**Prohibited fabrics and fibers when used alone: acetate, nylon, polyester, and rayon.**

## Flash Protection Arc Shields & Accessories

- Permanent anti-fog coating
- Light green tint
- For use with flame-resistant clothing



Code#	52510	52509	52512	52505	52513	52546
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### Arc Shields

Code#	Description	cal/cm <sup>2</sup>
52510	Arc Shield with Hard Hat	10
52511	Arc Shield only	10
52508	Arc Shield/Hard Hat/ Storage Bag	10
52506	Arc Shield/Hard Hat/ Storage Bag/Back Pack	10
52507	Arc Shield/Hard Hat/Back Pack	10
52500	Arc Shield/Hard Hat/ Storage Bag/Tool Back Bag	10
52501	Arc Shield/Hard Hat/Tool Back Pack	10

### Accessories

Code#	Description	cal/cm <sup>2</sup>
52502	Replacement Lens	10
52503	Hard Hat Adapter	
52504	11 cal Flash Protection Glove	
52505	50 cal Flash Protection Glove	
52509	Arc Shield Storage Bag	
52512	Flash Protection Hot Pack®	
52513	Flash/ToolHot Pack®	
52545	NOMEX® Detachable Hood	5.6
52546	INDURA® Detachable Hood	11
52540	Safety Helmet Class E	
52542	Safety Glasses	



## Sample Flash Apparel ATP Values (cal/cm<sup>2</sup>)

### Fabrics

Single Layer FR Cotton 7.5 oz. weave	6.0
Single Layer FR Cotton 9.8 oz. weave	11
Single Layer Aramid 4.5 oz. weave	4.6
Single Layer Aramid 6.0 oz. weave	5.6
Single Layer Aramid 7.5 oz. weave	7.0
6.0 oz. Aramid over 10 FR Cotton	31.0
7.0 oz. Polybenzimidazole Para Aramid Aluminized weave	20.4
6.0 oz. Aluminized Polybenzimidazole Blend Knit over 6.0 oz. FR Cotton Flannel	55.4
Single Layer INDURA ULTRA SOFT® Material 13 oz. weave	20
9 oz. INDURA ULTRA SOFT® over 7 oz. INDURA ULTRA SOFT®	31
9 oz. INDURA ULTRA SOFT® over 12 oz. INDURA ULTRA SOFT®	40
12 oz. INDURA ULTRA SOFT® over 12 oz. INDURA ULTRA SOFT®	50
6.8 oz. TUFFWELD® 700 Fabric with Inner Layer of Q9 and NOMEX® CALDURA® Lining	50
INDURA ULTRA SOFT® over 2 Layers of 7 oz. INDURA ULTRA SOFT® over 12 oz. INDURA ULTRA SOFT®	100
TUFFWELD® 1000 Fabric with Inner Layers of Q9 Fabric and NOXEX® CALDURA® Lining	50

### Shields

Clear U/V Face Shield	1.2
<b>NOT RECOMMENDED</b>	
Gold Reflective U/V Face Shield	7.33
Arc Shield	10.0

## ARC PROTECTION CLOTHING (FR) AND KITS

### Electrical Arc Hood



- The Flash Arc Hood incorporates UV- and IR-absorbing window providing protection up to 100 cal/cm<sup>2</sup>. Past generations of gold reflective faceshields only provided up to 7.33 cal/cm<sup>2</sup> of protection, and the typical clear faceshield only 1.2 cal/cm<sup>2</sup>.
- The green tint window is coated with a permanent anti-fog inner surface. Code #52509 Storage Bag Available for Hood
- Arc Hoods are supplied with Hard Hat Adapter and Safety Helmet.

Code#	Description	cal/cm <sup>2</sup>
52515	Flash Protection Arc Hood	20
52517	Replacement Window	20
52685	Flash Arc Hood	31
52686	Replacement Window	31
52687	Flash Arc Hood	50
52688	Replacement Window	50
52689	Flash Arc Hood	100
52699	Replacement Window	100

### Flash Protection Clothing (FR)

Ultra Soft INDURA<sup>®</sup> fabric weight 9.8 oz., ATPV 11 cal/cm<sup>2</sup>

NOMEX<sup>®</sup> fabric weight 6.0 oz., ATPV 5.6 cal/cm<sup>2</sup>

	Navy Blue Parka		Navy Blue Lab Coat		Navy Blue Coveralls		Navy Blue Overalls	
	INDURA <sup>®</sup>	NOMEX <sup>®</sup>	INDURA <sup>®</sup>	NOMEX <sup>®</sup>	INDURA <sup>®</sup>	NOMEX <sup>®</sup>	INDURA <sup>®</sup>	NOMEX <sup>®</sup>
Small	52550	52620	52650	52635	52580	52590	52560	52660
Medium	52552	52622	52651	52636	52582	52592	52562	52662
Large	52554	52624	52652	52637	52584	52594	52564	52664
X-Large	52556	52626	52653	52638	52586	52595	52566	52666
XX-Large	52557	52628	52654	52639	52587	52596	52568	52668
XXX-Large	52558	52630	52655	52640	52588	52597	52570	52670
XXXX-Large	52559	52632	52656	52641	52589	52598	52572	52672

### Flash Jackets and Pants

Flash Jacket is approximately waist length and must be worn in combination with Flash Pants.

	20 cal/cm <sup>2</sup>		31 cal/cm <sup>2</sup>		50 cal/cm <sup>2</sup>		100 cal/cm <sup>2</sup>	
	Coat	Coverall	Jackets	Pants	Jackets	Pants	Jackets	Pants
Medium	52520	52771	52679	53679	52690	53690	52749	53749
Large	52521	52772	52680	53680	52691	53691	52750	53750
X-Large	52522	52773	52681	53681	52692	53692	52751	53751
XX-Large	52523	52774	52682	53682	52693	53693	52752	53752
XXX-Large	52524	52775	52683	53683	52694	53694	52753	53753
XXXX-Large	52525	52776	52684	53684	52695	53695	52754	53754
XXXXX-Large	52526	52777	52697	53685	52696	53696	52755	53755

INDURA<sup>®</sup> is a registered trademark of Westex, Inc.  
 NOMEX<sup>®</sup> is a DuPont registered trademark for aramid fiber.  
 TuffWeld<sup>®</sup> is a registered trademark of Southern Mills, Inc.

### Clothing Sizes\* (All Styles)

Sizes	Jacket		Bib-Overall Pants	
	Normal Size	Finish Size	Waist Size	
Medium	38" - 40"	48"	32" - 34"	
Large	42" - 44"	52"	36" - 38"	
X Large	46" - 48"	56"	40" - 42"	
2X Large	50" - 52"	60"	44" - 46"	
3X Large	54" - 56"	64"	48" - 50"	
4X Large	58" - 60"	68"	52" - 54"	
5X Large	62" - 64"	72"	56" - 58"	

#### Typical Protective Clothing Systems

Hazard Risk Category	Clothing Description (Number of layers given in parentheses)	Total weight (oz / yd <sup>2</sup> )	ATPV or Egr Rating or PPE cal/cm <sup>2</sup>
0	Untreated Cotton (1)	4.5 — 7	N/A
1	FR Shirt and FR Pants (1)	4.5 — 8	5
2	Cotton underwear plus FR shirt and FR pants (2)	9 — 12	8
3	Cotton underwear plus FR shirt and FR pants plus FR coverall (3)	16 — 20	25
4	Cotton underwear plus FR shirt and FR pants plus double layer switching coat and pants (4)	24 — 30	40

\*Notes: Because the clothing is worn outside of the user's street clothes, take into consideration the size and weight of the clothes the user will be wearing (Example: warm winter jackets, etc). Jacket is approximately waist length.

\*ATPV is defined in the ASTM P S 58 standard arc test method for flame resistant (FR) fabrics as the incident energy that would just cause the onset of a second degree burn (1.2 cal/cm<sup>2</sup>). Egr is reported according to ASTM P S58 and is defined as the highest incident energy which did not cause FR fabric breakopen and did not exceed the second-degree burn criteria. Egr is reported when ATPV cannot be measured due to FR fabric breakopen.

## ARC PROTECTION CLOTHING (FR) AND KITS

### Arc Protection Kits



Code #52800  
10 cal/cm<sup>2</sup> Arc Protection Kit  
Hazard Risk Category 2



Code #52811  
20 cal/cm<sup>2</sup> Arc Protection Kit  
Hazard Risk Category 2\*



Code #52706  
50 cal/cm<sup>2</sup> Arc Protection Kit  
Hazard Risk Category 4



Code #52546  
Detachable Hood

Specify parka / coat / jacket and glove sizes when ordering kits. (See Pages 16–17 for gloves.)

Anti-Fog Arc Shield	52511 (10 cal/cm <sup>2</sup> )	52511 (10 cal/cm <sup>2</sup> )	52511 (10 cal/cm <sup>2</sup> )	52511 (10 cal/cm <sup>2</sup> )
Safety Glasses	52542	52542	52542	52542
Flame Retardant Parka	11 cal/cm <sup>2</sup> Ultra Soft INDURA®	11 cal/cm <sup>2</sup> Ultra Soft INDURA®	5.6 cal/cm <sup>2</sup> NOMEX®	5.6 cal/cm <sup>2</sup> NOMEX®
Insulating Gloves	1,000V Class 0	20,000V Class 2	1,000V Class 0	20,000V Class 2
Appropriate Glove Protectors	Class 0	Class 2	Class 0	Class 2
Glove Bag	22100	22200	22100	22200
Safety Helmet	52540	52540	52540	52540
Flash Apparel Bag	52599	52599	52599	52599
Complete Kit Code #	<b>52800</b>	<b>52801</b>	<b>52802</b>	<b>52803</b>
Kit Without Gloves Code #	<b>52804</b>	<b>52804</b>	<b>52805</b>	<b>52805</b>
Anti-Fog Arc Shield	52511 (10 cal/cm <sup>2</sup> )	52511 (10 cal/cm <sup>2</sup> )	52511 (10 cal/cm <sup>2</sup> )	52511 (10 cal/cm <sup>2</sup> )
Safety Glasses	52542	52542	52542	52542
Flame Retardant Lab Coat	11 cal/cm <sup>2</sup> Ultra Soft INDURA®	11 cal/cm <sup>2</sup> Ultra Soft INDURA®	5.6 cal/cm <sup>2</sup> NOMEX®	5.6 cal/cm <sup>2</sup> NOMEX®
Insulating Gloves	1,000V Class 0	20,000V Class 2	1,000V Class 0	20,000V Class 2
Appropriate Glove Protectors	Class 0	Class 2	Class 0	Class 2
Glove Bag	22100	22200	22100	22200
Safety Helmet	52540	52540	52540	52540
Flash Apparel Bag	52599	52599	52599	52599
Flame Retardant Hood	52546	52546	52545	52545
Complete Kit Code #	<b>52806</b>	<b>52807</b>	<b>52820</b>	<b>52822</b>
Kit Without Gloves Code #	<b>52808</b>	<b>52808</b>	<b>52824</b>	<b>52824</b>
Anti-Fog Arc Shield	52511 (10 cal/cm <sup>2</sup> )	52511 (10 cal/cm <sup>2</sup> )	52511 (10 cal/cm <sup>2</sup> )	52511 (10 cal/cm <sup>2</sup> )
Safety Glasses	52542	52542	52542	52542
Flame Retardant Coverall	11 cal/cm <sup>2</sup> Ultra Soft INDURA®	11 cal/cm <sup>2</sup> Ultra Soft INDURA®	5.6 cal/cm <sup>2</sup> NOMEX®	5.6 cal/cm <sup>2</sup> NOMEX®
Insulating Gloves	1,000V Class 0	20,000V Class 2	1,000V Class 0	20,000V Class 2
Appropriate Glove Protectors	Class 0	Class 2	Class 0	Class 2
Glove Bag	22100	22200	22100	22200
Safety Helmet	52540	52540	52540	52540
Flash Apparel Bag	52599	52599	52599	52599
Flame Retardant Hood	52546	52546	52545	52545
Complete Kit Code #	<b>52830</b>	<b>52832</b>	<b>52836</b>	<b>52838</b>
Kit Without Gloves Code #	<b>52834</b>	<b>52834</b>	<b>52840</b>	<b>52840</b>
Electrical Arc Hood	52515 (20 cal/cm <sup>2</sup> )	52515 (20 cal/cm <sup>2</sup> )	52685 (31 cal/cm <sup>2</sup> )	52685 (31 cal/cm <sup>2</sup> )
Safety Glasses	52542	52542	52542	52542
Flash Jacket & Pants	20 cal/cm <sup>2</sup> Coat Only	20 cal/cm <sup>2</sup> Coat Only	31 cal/cm <sup>2</sup> Jacket & Pants	31 cal/cm <sup>2</sup> Jacket & Pants
Insulating Gloves	1,000V Class 0	20,000V Class 2	1000V Class 0	20,000V Class 2
Appropriate Glove Protectors	Class 0	Class 2	Class 0	Class 2
Glove Bag	22100	22200	22100	22200
Safety Helmet	52540	52540	52540	52540
Flash Apparel Bag	52599	52599	52599	52599
Complete Kit Code #	<b>52810</b>	<b>52811</b>	<b>52701</b>	<b>52703</b>
Kit Without Gloves Code #	<b>52814</b>	<b>52814</b>	<b>52702</b>	<b>52702</b>
Electrical Arc Hood	52687 (50 cal/cm <sup>2</sup> )	52687 (50 cal/cm <sup>2</sup> )	52689 (100 cal/cm <sup>2</sup> )	52689 (100 cal/cm <sup>2</sup> )
Safety Glasses	52542	52542	52542	52542
Flash Jacket & Pants	50 cal/cm <sup>2</sup>	50 cal/cm <sup>2</sup>	100 cal/cm <sup>2</sup>	100 cal/cm <sup>2</sup>
Insulating Gloves	1000V Class 0	20,000V Class 2	1000V Class 0	20,000V Class 2
Appropriate Glove Protectors	Class 0	Class 2	Class 0	Class 2
Glove Bag	22100	22200	22100	22200
Safety Helmet	52540	52540	52540	52540
Flash Apparel Bag	52599	52599	52599	52599
Complete Kit Code #	<b>52705</b>	<b>52706</b>	<b>52709</b>	<b>52710</b>
Kit Without Gloves Code #	<b>52707</b>	<b>52707</b>	<b>52711</b>	<b>52711</b>

*If the incident energy level is known, the worker knows the type or protective equipment and tools to wear/use while servicing the equipment.*



# Electro Safe<sup>®</sup>



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