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### SALISBURY BY HONEYWELL LINE EQUIPMENT

Salisbury by Honeywell has been setting industry standards since 1855. For over 150 years, Salisbury by Honeywell has been the name an entire industry trusts to provide the finest safety products available. Salisbury by Honeywell pioneered the manufacturing of linemen's Rubber Protective Equipment in the early 1920's.

Back in the early 1900's, Salisbury was approached by a local utility in the Chicago area about general safety. The question raised was how to create a safer working environment for linemen working on energized lines. Salisbury worked with the local utility by taking garden hose and cutting them lengthwise in a way that would cover the lines. These hoses were then secured by electrical tape and this led to the Salisbury patent of line hose in 1924. Over the years, line hose has evolved into the high-quality SALCOR rubber product you have come to expect.

Today, Salisbury by Honeywell is the leader in Personal Electrical-Safety Protection. We know that lives depend on the quality of our products, Salisbury by Honeywell's production facilities are all ISO 9001:2008 registered and are equipped and staffed to manufacture products which conform to the highest possible standards. This has allowed Salisbury by Honeywell to become the world-wide leader in electrical safety equipment. Salisbury by Honeywell has three plants which manufacture Personal Protective Equipment, Hot Line Equipment, and SALVAR® Polymer Insulators. Salisbury by Honeywell produces its rubber products in its own plants using four methods of rubber manufacturing: Injection Molding, Compression/ Transfer Molding, Extruding and Dipping. Salisbury by Honeywell's dedication to quality has also been carried over to the manufacturing of Hot Line Tools and SALVAR Insulators. As a result, the name Salisbury by Honeywell on safety products is your assurance that you are using the finest equipment available for the job.







- P1855 Founded in Chicago by John B. Idson. First organization in the Mid-West serving as an independent rubber products dealer.
- 1871 After a complete loss in the great Chicago Fire, organization opens with a belting and hose line of products. Company becomes Salisbury & Cline.
- 1880 Company becomes W.H. Salisbury & Co.
- 1902 Established leather belt factory
- 1902 Linemen regularly use W.H. Salisbury & Co. garden hoses slit lengthwise and secured with electrical tape as personal protective equipment.
- 1904 W.H. Salisbury & Co. incorporates
- 1912 Organized electrical safety movement begins and creates Safety Departments and employs Safety Inspectors.
- 1915 First molded Rubber Insulating Blanket made by W.H. Salisbury & Co.
- 1919 A rubber mill was erected to manufacture molded and extruded rubber products.
- 1921 A local utility discusses lineman safety needs with W.H. Salisbury & Co. after a fatal accident occurs.
- 1922 Manufacturing of full utility line of products begins.
- 1922 W.H. Salisbury & Co. first perfects and begins to offer Rubber Insulating Line Hose.
- 1923 W.H. Salisbury & Co. first perfects and begins to offer Insulator Hoods.
- 1924 W.H. Salisbury & Co. patents Line Hose design
- 1926 W.H. Salisbury & Co. patents Insulator Hood design
- 1929 Rubber mill and belt factory were expanded and an adjoining building, including warehouse and offices, was constructed.
- 1929 W.H. Salisbury & Co. patents Insulating Stool
- 1932 W.H. Salisbury & Co. patents Rubber Insulating Sleeve design
- 1933 Began distributing industrial rubber goods as well as continuing manufacturing.
- 1941 W.H. Salisbury & Co. patents Leather Protectors for Lineman's' Rubber Gloves
- 1943 W.H. Salisbury & Co. patents Coupling for Linemen's Protective Devices
- 1948 Charleston, SC factory established manufacturing insulating gloves
- 1960 W.H. Salisbury & Co. patents Protective Device design
- 1960 Addison, IL plant opens in early 1960's
- 1962 W.H. Salisbury & Co. patents Protective Cover design
- 1972 Skokie, IL plant and offices open
- 1980 Grounding equipment, hot sticks and insulators are added to product line in the 1980's
- 1999 North Hand Protection and W.H. Salisbury & Co. hand protection merge under the Salisbury name
- 2001 Arc Flash Protection garments and equipment added to product line
- 2005 W.H. Salisbury & Co. patents Insulating Blanket design
- 2005 Company becomes Salisbury Electrical Safety, LLC
- 2006 Salisbury Electrical Safety, LLC patents Locking Clamp Assembly design
- 2006 Salisbury Electrical Safety, LLC patents Clamp Pin for Use by Electrician os Electrical Line workers
- 2007 Salisbury Electrical Safety, LLC patents Rubber Insulating Blanket & Method
- 2008 Salisbury Electrical Safety, LLC becomes Salisbury by Honeywell.
- Salisbury by Honeywell moves Chicago, IL manufacturing plant and Skokie, IL corporate offices to a new facility in Bolingbrook, IL

### SALISBURY BY HONEYWELL LINE EQUIPMENT



#### **Caution**

Salisbury by Honeywell Line Equipment should only be used by electrical workers who have been thoroughly trained in its correct and safe use. Training should be conducted in accordance with the employer's work procedures and standards.

### **Our Warranty**

Salisbury by Honeywell Line Equipment is warranted to be free from defects in materials and workmanship, and to meet the requirements of current ASTM standards at time of shipment. Our only obligation will be, at our option, to replace any portion proving defective or to refund the purchase price thereof. The buyer assumes all other risk, if any, such as the risk of any direct, indirect or consequential loss or damage arising out of the use of, or inability to use, these products.

THIS WA RRAN TY IS EX Clu SIVE and IN 1 IEU OF THE WA RRAN TIES OF MERCHANT ABILITY, FITNESS FOR PARTICULAR PURPOSE AND ALL OTHER WARRANTIES, EXPRESSED OR IMPHED, AND AND ALL OF SALISBUR Y.

| <b>ASTM Specifications</b> | for Salisbury | <b>Equipment</b> |
|----------------------------|---------------|------------------|
|----------------------------|---------------|------------------|

| ASTM D120      | s and Footwear  Standard Specification for Rubber Insulating Gloves  |
|----------------|--|
| ASTM D120      | Standard Specification for Rubber Insulating Sleeves   |
| ASTM F696      | Standard Specification for Leather Protectors for Rubber Insulating Gloves and Mittens                               |
| ASTM F496      | •  |
|                | Standard Specification for In-Service Care of Insulating Gloves and Sleeves  |
| ASTM F1116     | Standard Test Method for Determining Dielectric Strength of Dielectric Footwear                                      |
| ASTM F1117     | Standard Specification for Dielectric Footwear   |
|                | ket, Matting and Sheeting  |
| ASTM D 178     | Standard Specification for Rubber Insulating Matting   |
| ASTM D1048     | Standard Specification for Rubber Insulating Blankets  |
| ASTM F479      | Standard Specification for In-Service Care of Insulating Blankets  |
| ASTM F2320     | Standard Specification for Rubber Insulating Sheeting  |
| ASTM F1742     | Standard Specification for PVC Insulating Sheeting   |
| ASTM F2676     | Test Method for Determining the Protective Performance of an Arc Protective Blanket for Electric Arc Hazards         |
| Line Hose and  | Covers   |
| ASTM D1049     | Standard Specification for Rubber Insulating Covers  |
| ASTM D1050     | Standard Specification for Rubber Insulating Line Hose   |
| ASTM F478      | Standard Specification for In-Service care of Insulating Line Hose and Covers  |
| Hotstick Grour | ds and Bypass Jumpers  |
| ASTM F711      | Standard Specification for Fiberglass Reinforced Plastic (FRP) Rod and Tube used in Live Line Tools                  |
| ASTM F1825     | Standard Specification for Clampstick Type Live Line Tools   |
| ASTM F855      | Standard Specification for Temporary Protective Grounds to be used on De-energized Electric Power Lines & Equipmen   |
| ASTM F2321     | Standard Specification for Flexible Insulated Temporary By-Pass Jumpers  |
| ASTM F2249     | Standard Specification for In-Service Test Methods for Temporary Grounding Jumper Assemblies                         |
|                | Used on De-Energized Electric Power Lines & Equipment  |
| Plastic Equipm | •  |
| ASTM F712      | Standard Test Methods and Specifications for Electrically Insulating Plastic Guard Equipment for Protection of Worke |
| Inspection     |  |
| ASTM F1236     | Guide for Visual Inspection of Electrical Protective Rubber Products   |

### **CONTENTS**

| Applicators, SU SystemA-13    | Cross Arm Guards, PlasticC-7 | Line Guards, Hard Cover     |
|-------------------------------|------------------------------|-----------------------------|
| ASTM Chart, labeling E-2      | Flexible                     | Link Guards                 |
| -                             | Cut-Out CoversA-6,7          | Versa Guards                |
| Bags                          | Dead End Protectors          | Line Hose                   |
| Glove E-11                    | ConventionalA-6              | Bags X-3                    |
| Line Hose X-3                 | SU SystemA-9                 | Conventional StyleA-4,5     |
| Line & Pole Guards C-10       | Elbows, GroundingH-31        | SU System, Extd LipA-8      |
| Sleeve E-15                   | _                            |                             |
| Tool X-3                      | Ferrules, Cable G-9          | Magnetic Blanket Button B-9 |
| Bandages, CableX-4            | GroundingH-18                | Matting, Switchboard B-11   |
| Barrier, Insulating           | Jumper G-10                  | _                           |
| Barrier, Switch               | PlainH-19                    | Pins, Blanket Clamp B-8     |
| Blankets                      | Footwear F-3-6               | Pole Guards                 |
| Arc Suppression B-12          |                              | Pots, Compound X-4          |
| Eyelet B-3                    | Gloves                       | Roll-ups                    |
| Lo-Volt & Zip Style B-6       | High Voltage E-6, 7          | Blanket B-10                |
| Roll Blankets B-7             | Low Voltage E-5              | Sleeve E-15                 |
| Slotted B-4                   | Selection E-5                | _                           |
| Switchboard/URD B-11          | Rubber Insulating E-5-7      | Saddle, InsulatingX-4       |
| w/out EyeletsB-5              | Glove Dust E-18              | Silicone Spray E-18         |
| Boots F-3-6                   | Glove Inflators E-4          | Sleeves, Insulating E-12-14 |
| Brushes, CleaningH-23         | Glove Liners E-16            | <b>Spiking Tool</b> l-12    |
| Buckets, ToolX-3              | Glove Protectors             | Straps                      |
| Buttons,                      | Leather, Primary E-8-10      | Dead End ProtectorA-6,7     |
| BlanketB-9                    | Mitten E-10                  | Sleeve E-15                 |
| Sleeve E-15                   | Work E-17                    | Ty Straps B-9               |
|                               | Salpol E-17                  | Static Discharge Stick 1-8  |
| Cable,                        | Grounding                    | Substation Cover            |
| Jumper G-9                    | CableH-17                    |                             |
| GroundingH-17                 | ClampsH-4-20                 | Tagging DeviceA-14          |
| Cable End CapsA-12            | ClustersH-26-31              | Tool Holders                |
| Canister, Blanket B-10        | Pole Mounted BarsH-21        |                             |
| Clamps, Grounding             | Sets, JumperH-3              | Voltage DetectorK-3-4       |
| Ball & Socket SystemH-14,15   |                              |                             |
| "C"H-5-9                      | Harness, Sleeve E-15         |                             |
| Cable PenetratingH-16         | <b>Hook,</b> Belt X-5        |                             |
| CutoutH-16                    | Hot Sticks                   |                             |
| Duck BillH-4                  | Clampsticks I-4              |                             |
| Flats, Angles & RoundsH-12,13 | Sleeve Splice I-7            |                             |
| Hanger StudsH-20              | StorageI-9                   |                             |
| Pressure TerminalH-11         | Switch Stick I-5-7           |                             |
| StringingH-16                 | Universal Fittings I-10,11   |                             |
| Substation BusesH-10          | Universal Switch Stick I-5,7 |                             |
| <b>Cleaners</b> E-18          | _                            |                             |
| Covers                        | nstant InsulationD-6         |                             |
| BushingD-3                    | Insulators, SALVAR®          |                             |
| Conductor, plastic            | Dead End/Suspension J-4,5    |                             |
| Conventional, pinA-6,7        | Jumpers, GroundingH-3        |                             |
| Elbow                         | Jumpers, Insulated           |                             |
| InsulatorA-10,11              | Cables G-9                   |                             |
| Lightning ArresterA-12        | Clamps G-4-7                 |                             |
| Meter TerminalA-14            | Connector Link               |                             |
| Pole bracketC-11              | Parking Stand                |                             |
| SpadeA-14                     | Stirrup Clamp                |                             |
| StingerD-5                    | Sure-Lok® G-4                |                             |
| SU System Post & PinA-10,11   |                              |                             |

### **CONTENTS**



A. LINE HOSE & COVERS



**B. BLANKETS** 



**C. PLASTIC GUARDS & COVERS** 



**D. OUTAGE PROTECTION** 



**E. GLOVES & SLEEVES** 



F. DIELECTRIC BOOTS



**G. INSULATED JUMPERS** 



H. GROUNDING EQUIPMENT



I. HOT STICKS & TOOLS



J. INSULATORS



**K. VOLTAGE DETECTORS** 



X. ACCESSORIES



# LINE HOSE & COVERS

### FAQ

Q: What is SALCOR® Rubber and why does Salisbury use it to make their line hose products?

A: SALCOR Rubber is a TYPE II rubber that remains flexible in cold weather and is resistant to ozone and UV rays. Salisbury's exclusive SALCOR Rubber is the preferred material for line hose and other insulating products because it easily withstands the elements and does not lose its flexibility or insulating properties.

### **HISTORY**

### Leading the industry with over ninety years of Research and Development

Filed: United States Patent Office, December 21, 1922 Serial No 605,340

"To all whom it may concern: Be it known that I, Moses B. Salisbury, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented an Improved Protective Insulating Sleeve, of which the following is a specification. . .'

This application, one of hundreds filed in the US Patent Office for Salisbury, proved to be the most effective device for protecting linemen from accidental contact with energized lines, and is still regarded as indispensable to the electrical industry today.

With over ninety years of research and development on linemen's protective equipment, Salisbury offers the most comprehensive line of protection up to 69 kV in the industry.

### **NOTE**

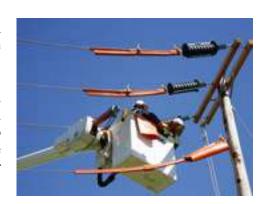
All Salisbury Covers and Protective Equipment are designed for personal protection only. They are not to be used for mechanical protection.

### **INSULATING LINE HOSE AND COVERS**

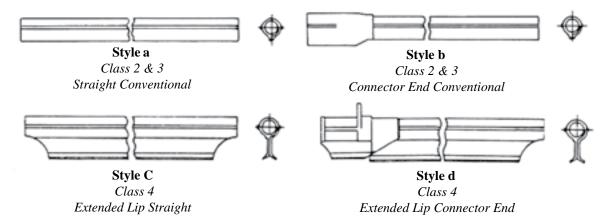
### LINE HOSE SELECTION CHART

The connector, formed at one end, receives and overlaps the end of an adjoining hose for a distance of 6.5" (165mm).

Use the chart below to determine the maximum conductor diameter recommended for use with each size line hose. For ease of installation and to minimize the potential of flashover through the overlapping lips, line hose is always sized larger than the maximum conductor diameter.



Salisbury Line Hose is available in four ASTM D1050 styles, as shown below:



| Line Hose Size Selector Chart    |                   |                          |         |  |         |            |                         |                          |
|----------------------------------|-------------------|--------------------------|---------|--|---------|------------|-------------------------|--------------------------|
| I.D. of<br>Line Hose<br>in. (mm) | 4/0<br>.46 ( 12 ) | 266,800<br>.609 ( 15.5 ) | 336,400 | uctors and D<br>477,000<br>.793 ( 20 ) | 556,500 | ` 79́5,000 | 954,000<br>1.126 ( 29 ) | 1,351,500<br>1.34 ( 35 ) |
| 1 ( 25 )                         | 20kV Conv         | rentional                |         |  |         |            |                         |                          |
| 1 1/4 ( 31 )                     | 20kV Conv         | rentional                |         |  |         |            |                         |                          |
| 1 1/2 ( 38 )                     | 30kV Conv         | rentional                |         |  |         |            |                         |                          |
| 1 1/2 ( 38 )                     | 40kV SU S         | System                   |         |  |         |            |                         |                          |
| 2 (51)                           | 30kV Conv         | rentional                |         |  |         |            |                         |                          |
| 2 (51)                           | 40kV SU S         | System                   |         |  |         |            |                         |                          |
| 2 1/2 ( 64 )                     | 30kV Conv         | rentional                |         |  |         |            |                         |                          |
| 2 1/2 ( 64 )                     | 40kV SU S         | System                   |         |  |         |            |                         |                          |
|                                  |                   |                          |         |  |         |            |                         |                          |

### LINE HOSE & CONNECTORS

### **CONVENTIONAL SYSTEM**

Conventional Style line Hose is available in orange Type II SALCOR®. SALCOR remains flexible even in cold weather and it is not damaged by ozone or ultraviolet rays. Each line hose has Salisbury's RIB-GRIP Locking System. The straight or connector end style is available in three sizes: 1" and 1.25" I.D. rated at 17kV, Class 2 and 1.5" I.D. rated at 26.5kV, Class 3.

Straight style SalCOR hose is also available in 2" or 2.5" L.D. rated at Class 3.

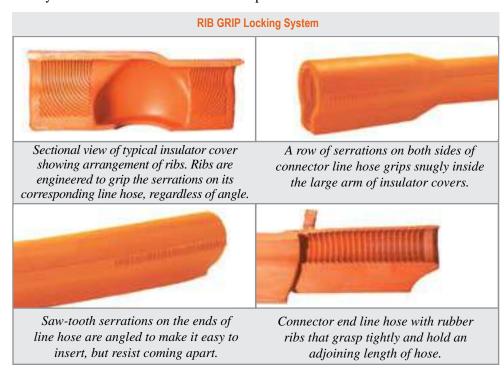
**Conventional line Hose Connectors** are made from Type II orange SALCOR and can be used on 1", 1.25", or 1.5" I.D. conventional line hose. To connect 2" and 2.5" I.D. conventional line hose, use the SU System Connector.

### The tightest grip in the industry.

The self-locking lip, Salisbury patented, prevents line hose from coming off the conductor after an installation is complete. Often, as a lineman is working on an installation and making adjustments, the angle of connection shifts, causing line hose and covers to separate. To prevent this, Salisbury developed an ingenious solution for ensuring that any two protective devices would hold together yet still be easy for a lineman to assemble and take apart.



**RIb gRIP**® construction takes advantage of rubber's natural tendency to grip and tighten its grip through compression. By creating curving rib configurations slit at a specific angle, two pieces easily slip together but resist coming apart. To quickly disengage the lineman needs only to compress the rubber on either side.



### **LINE HOSE & CONNECTORS**

### **CONVENTIONAL SYSTEM**

| Cat. No.     | ASTM Class        | Туре | Dimensions I.D. x Length in. ( mm ) | Weight ea.<br>lbs. ( kgs ) |
|--------------|-------------------|------|-------------------------------------|----------------------------|
| SALCOR® S    | traight Line Hose |      |                                     |                            |
| OR100-3      | 2                 | II   | 1" x 3' ( 25 x 915 )                | 3 ( 1.4 )                  |
| OR100-45     | 2                 | II   | 1" x 4.5' ( 25 x 1372 )             | 4 ( 1.8 )                  |
| OR100-6      | 2                 | II   | 1" x 6' ( 25 x 1820 )               | 5.5 ( 2.5 )                |
| OR125-3      | 2                 | II   | 1.25" x 3' ( 31.5 x 915 )           | 4 ( 1.8 )                  |
| OR125-45     | 2                 | II   | 1.25" x 4.5' ( 31.5 x 1372 )        | 6 ( 2.7 )                  |
| OR125-6      | 2                 | II   | 1.25" x 6' ( 31.5 x 1820 )          | 7.5 ( 3.4 )                |
| OR150-3      | 3                 | II   | 1.5" x 3' ( 40 x 915 )              | 5 ( 2.3 )                  |
| OR150-45     | 3                 | II   | 1.5" x 4.5' ( 40 x 1372 )           | 7 ( 3.2 )                  |
| OR150-6      | 3                 | II   | 1.5" x 6' ( 40 x 1820 )             | 9.5 ( 4.3 )                |
| OR200-3      | 3                 | II   | 2" x 3' ( 50 x 915 )                | 5.5 ( 2.5 )                |
| OR200-45     | 3                 | II   | 2" x 4.5' ( 50 x 1372 )             | 8 ( 3.6 )                  |
| OR200-6      | 3                 | II   | 2" x 6' ( 50 x 1820 )               | 11 ( 5.0 )                 |
| OR250-3      | 3                 | II   | 2.5" x 3' ( 63 x 915 )              | 7 ( 3.2 )                  |
| OR250-45     | 3                 | II   | 2.5" x 4.5' ( 63 x 1372 )           | 10.5 ( 4.8 )               |
| OR250-6      | 3                 | II   | 2.5" x 6' ( 63 x 1820 )             | 14 ( 6.4 )                 |
| SALCOR Co    | nnector End Line  | Hose |                                     |                            |
| OR100-3C     | 2                 | II   | 1" x 3' ( 25 x 915 )                | 3.5 ( 1.6 )                |
| OR100-45C    | 2                 | II   | 1" x 4.5' ( 25 x 1372 )             | 5 ( 2.3 )                  |
| OR100-6C     | 2                 | II   | 1" x 6' ( 25 x 1820 )               | 6.5 ( 2.9 )                |
| OR125-3C     | 2                 | II   | 1.25" x 3' ( 31.5 x 915 )           | 4.5 ( 2.0 )                |
| OR125-45C    | 2                 | II   | 1.25" x 4.5' ( 31.5 x 1372 )        | 6.5 ( 2.9 )                |
| OR125-6C     | 2                 | II   | 1.25" x 6' ( 31.5 x 1820 )          | 9 ( 4.1 )                  |
| OR150-3C     | 3                 | II   | 1.5" x 3' ( 40 x 915 )              | 6 ( 2.7 )                  |
| OR150-45C    | 3                 | II   | 1.5" x 4.5' ( 40 x 1372 )           | 8 ( 3.6 )                  |
| OR150-6C     | 3                 | II   | 1.5" x 6' ( 40 x 1820 )             | 9 ( 4.1 )                  |
| Line Hose Co | onnectors         |      |                                     |                            |
| ORC100       | 2                 | II   | 1" x 12" ( 25.4 x 305 )             | 2.5 ( 1.1 )                |
| ORC125       | 2                 | II   | 1.25" x 12" ( 32 x 305 )            | 3.5 ( 1.6 )                |
| ORC150       | 3                 | II   | 1.5" x 12" ( 38 x 305 )             | 3 ( 1.4 )                  |

All Line Hose complies with current ASTM D1050 specifications.





### **PROTECTORS & COVERS**

### **CONVENTIONAL SYSTEM**

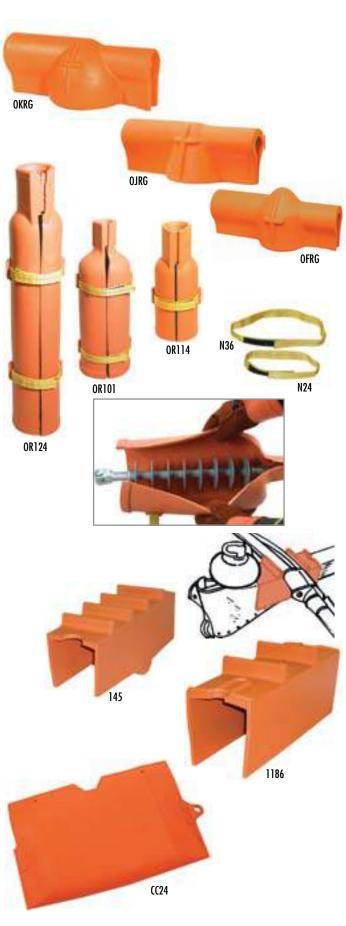
**Insulator Covers**, in orange, weather resistant Type II SALCOR®, are used with conventional line hose to cover pin-type insulators. All covers feature RIB-GRIP construction to lock to the underside of the insulators. The large diameter arm overlaps the small arm of the adjoining cover on double arm constructions which provides complete insulation at the joint regardless of the varying distance between pins.

dead End Protectors cover 4.25" and 6" bells or polymer insulators with a skirt diameter of less than 6". The protectors are made from orange Type II SALCOR with RIB-GRIP construction. OR101 has outer ribs that allow it to be used with 2" and 2.5" I.D. Conventional Line Hose when using the UC2 connector. The smaller OR114 may also be used to cover transformer bushings up to 4.75" in diameter. OR124 can cover polymer insulators up to 4.75" in diameter and 25" overall length including hardware. Replacement Straps are available.

To work on live lines safely, conductors encased in a line hose should never be placed directly on a cross arm. **Cross arm Covers** reduce electrical stresses on line hose or jumpers. Cross Arm Covers fit standard cross arm pin spacing and each unit has interior ribs to minimize shifting on the arm.

Flexible **Cutout Covers** can be used for overhead cutouts as well as for underground pad-mount applications. Cutout Covers comply with the current ASTM D1049 (ASTM Specifications for Rubber Insulating Covers) specifications.



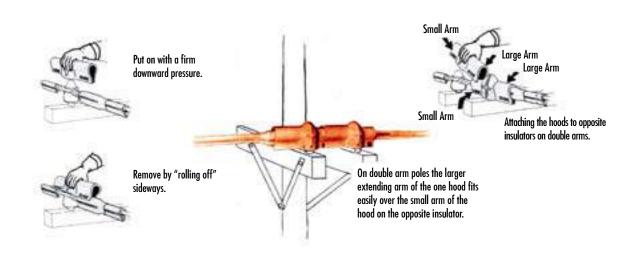


### **PROTECTORS & COVERS**

### **CONVENTIONAL SYSTEM**

| Cat. No.        | Class      |                     | ription<br>mm)        | Overall Dimensions in ( mm )              | Weight ea.<br>lbs. ( kgs ) |
|-----------------|------------|---------------------|-----------------------|---|----------------------------|
|                 |            | for u               | se with               |   |                            |
| INSULATO        | R COVERS   | Insulator Class     | Line Hose Size        |   |                            |
| OFRG            | 2          | 55-1/2/3            | 1" (25.4)             | 14.5" x 5" ( 368 x 127 )                  | 5 ( 2.3 )                  |
| OJRG            | 2          | 55-4                | 1" ( 25.4 )           | 16" x 6.5" ( 406 x 165 )                  | 6 ( 2.7 )                  |
| OKRG            | 3          | 55-5                | 1.25", 1.5" ( 32 , 38 | 8) 16" x 8" ( 406 x 203 )                 | 7 (3.2)                    |
|                 |            | for u               | se with               |   |                            |
| DEAD EN         | D PROTECTO | RS Bell Size        | Line Hose Size        |   |                            |
| OR101           | 2          | 2-6"( 152.4 )       | 1" ( 25.4 )           | 6.5" x 23" ( 165 x 584 )                  | 10 (4.6)                   |
| OR114           | 3          | 1-4.25" ( 108 )     | 1.5" ( 38 )           | 4.75" x 14" ( 121 x 356 )                 | 4 ( 1.8 )                  |
| OR124           | 3          | 2-4.25" ( 108 )     | 15" ( 38 )            | 4.75" x 29" ( 121 x 737 )                 | 7.5 ( 3.4 )                |
|                 |            |                     |                       |   |                            |
| <b>CROSS AF</b> | RM COVERS  | Use on Cro          | ss Arms up to         |   |                            |
| 145             | 2          | 4" x 4.5" (         | ( 102 x 114 )         | 14.5" x 4.63" x 4.15" ( 368 x 117 x 105 ) | 3 ( 1.4 )                  |
| 1186            | 4          | 5.5" x 6"           | ( 140 x 152 )         | 17.0" x 6.0" x 5.5" ( 432 x 152 x 140 )   | 5 ( 2.3 )                  |
| ситоит          | COVERS     |                     |                       |   |                            |
| CC24            | 2          |                     |                       | 24" x 15" x 3.5" ( 600 x 376 x 88 )       | 5 ( 2.3 )                  |
| CC30            | 4          |                     |                       | 30" x 20" x 7" ( 750 x 500 x 175 )        | 10 ( 4.5 )                 |
| REPLACE         | MENT STRAP | S                   |                       |   |                            |
| N24             |            | For 114 8           | & 124 Series          | .75 x 30 ( 18 x 588 )                     | 2 oz. ( 56.7 g )           |
| N36             |            | For 10 <sup>2</sup> | 1 Series              | .75 x 36 ( 18 x 882 )                     | 2 oz. ( 56.7 g )           |

All covers comply with current ASTM D1049 specifications.



### **EXTENDED LIP SU SYSTEM**

The **Extended lip Su System** is the only complete flexible cover-up available for use on voltages through 34.5kV. Extremely versatile, it may be installed by hand, wearing rubber insulating gloves, from an insulated aerial device or platform, or with hot sticks using the SU applicators.

Manufactured from superior SALCOR® Type II elastomer, it is resistant to the effects of ozone and ultraviolet deterioration. It remains flexible even at sub-zero temperatures.

Salisbury's RIB GRIP® construction securely interlocks with its corresponding covers and connectors. Tapered lips facilitate easy starting on the conductors. The contour cut ends accommodate the skirts of pin type insulators and permit the hose to cover the line snug to a saddle or clamp.

Available as **Straight line Hose** or with a Connector End for easier connection of line hose and covers. A lifting eye is molded on the connector end for removal with hot sticks. Line hose is also available with the #2323 Shot Gun Eye Assembly. Just add a suffix of "E" to the catalog number to order the #2323 Shot Gun Assembly installed on the hose or order the #2323 separately.

Su System Connectors are made from orange SALCOR Type II. RIB-GRIP construction is used to ensure a strong lock to the straight lengths of SU System Line Hose and covers. The uC2 is used to connect Extended Lip Hose to PTHL and LRG Insulator Covers, OR134 Dead End Protectors, and 2" (51mm) and 2.5" (64mm) SU System and Conventional Line Hose.



SU150-45



| Cat. No. | Dimensions I.D. | in. ( mm )<br>Length | Weight ea.<br>lbs. ( kgs ) |
|----------|-----------------|----------------------|----------------------------|

| STRAIGHT LINE HOSE Class 4, Type II |               |               |             |  |  |  |  |
|-------------------------------------|---------------|---------------|-------------|--|--|--|--|
| SU150-3                             | 1.5" ( 38 )   | 3' ( 915 )    | 6 ( 2.7 )   |  |  |  |  |
| SU150-45                            | 1.5" ( 38 )   | 4.5' ( 1372 ) | 8.5 ( 3.8 ) |  |  |  |  |
| SU150-6                             | 1.5" ( 38 )   | 6' ( 1829 )   | 12 ( 5.4 )  |  |  |  |  |
|                                     |               |               |             |  |  |  |  |
| SU200-3                             | 2" ( 51 )     | 3' ( 915 )    | 6 ( 2.7 )   |  |  |  |  |
| SU200-45                            | 2" ( 51 )     | 4.5' ( 1372 ) | 10 ( 4.5 )  |  |  |  |  |
| SU200-6                             | 2" ( 51 )     | 6' ( 1829 )   | 14 ( 6.4 )  |  |  |  |  |
|                                     |               |               |             |  |  |  |  |
| SU250-3                             | 2.5" ( 63.5 ) | 3' ( 915 )    | 7 (3.2)     |  |  |  |  |

| CONNECTOR | END LINE HOSE | Class 4, Type II |            |
|-----------|---------------|------------------|------------|
| SU150-3C  | 1.5" ( 38 )   | 3' ( 915 )       | 7 ( 3.2 )  |
| SU150-45C | 1.5" ( 38 )   | 4.5' ( 1372 )    | 9 (4.1)    |
| SU150-6C  | 1.5" ( 38 )   | 6' ( 1829 )      | 12 ( 5.4 ) |

4.5' (1372)

6' (1829)

11 (5.0)

15 (6.8)

2.5" (63.5)

2.5" (63.5)

### SU SYSTEM CONNECTORS Class 4, Type II ASTM D1049

|     | Length x Height             | Use w/ Line Hose I.D.       |  |
|-----|-----------------------------|-----------------------------|--|
| UC  | 10.5" x 6" ( 263 x 150 )    | 1.5" ( 40 ) 2 ( .9 )        |  |
| UC2 | 10.5" x 7.75" ( 263 x 194 ) | 2"&2.5" ( 51&64 ) 3 ( 1.4 ) |  |

Add Suffix "E" to Catalog Number to order with #2323 Shot Gun Eye Assembly (see page A-13).

SU250-45

SU250-6

Insulating Line Hose and Covers.

Complies with current ASTM D1050 specifications.

### DEAD END PROTECTORS

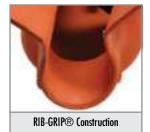
### **EXTENDED LIP SU SYSTEM**

dead End Protectors quickly cover dead end bells or polymer insulators providing complete electrical protection for Class 3 and Class 4 applications.

Easily installed and removed from an insulated platform or aerial device with rubber gloves or SU System Applicators.

All styles have RIB-GRIP® construction to interlock with 1.5" (38mm) I.D. line hose. The Class 3 U106 and U110 must be used with Connector End style line hose or separate Line Hose Connectors. OR134, Class 4, accepts Straight Line Hose. The outer ribs interlock with 2" and 2.5" I.D. line hose when the UC2 SU System Connector is used.







Fits Bell Size



Color Weight ea

U110

Dimensions in ( mm )

| Oat. 110.                  | Class / Type                   | in. ( mm )  | I.D. body                            | Overall Length                     | 00101  | lbs. ( kgs ) |
|----------------------------|--------------------------------|---|--------------------------------------|------------------------------------|--------|--------------|
| DEAD EN                    | D PROTECTORS                   |   |                                      |                                    |        |              |
| OR134<br>Add Suffix "E" to | 4 / II<br>Catalog Number to or | 3-4.25 ( 108 )<br>der with # <b>2323 Sh</b> ot Gu | 5 ( 127 )<br>ın Eye Assembly (see    | 37 ( 940 )<br>page A-1 <b>3)</b> . | Orange | 13 (6)       |
| U106                       | 3 / II                         | 2-6 ( 152 )                                       | 7 ( 178 )                            | 28.5 ( 724 )                       | Black  | 6 ( 2.7 )    |
| U110<br>Add Suffix "E" to  | 3 / II<br>Catalog Number to or | 2-10 ( 254 )<br>der with #2340 Shot Gu            | 10.5 ( 267 )<br>un Eye Assembly (see | 28.5 ( 724 )<br>page A-13).        | Black  | 10 ( 4.5 )   |

All Protectors comply with current ASTM D1049 specifications.

### **INSULATOR COVERS**

### **EXTENDED LIP SU SYSTEM**

The **uH Pin-Type Cover** covers insulators up to ANSI standard C29.5 Class 5. The sides are cut to be used on small insulators without resting on the crossarm. When covering a 7" diameter insulator on a double arm construction, the ends of the cover will meet flush on 10.5" pin centers.

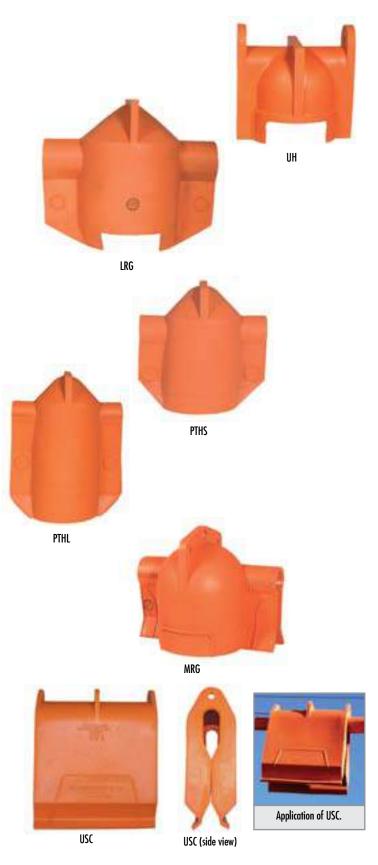
The IRg Su System Pin-Type Cover fits insulators 10.5" (267mm) in diameter and is used with 2.5" (64mm) Class 4 Extended Lip SU System Line Hose. Always use clamp pins to secure the device into position. Pinning rings have been placed on the cover's arms to prevent separation.

Post-Type Insulator Covers interlock with 1.5" (38mm) Class 4 Extended Lip SU System or Conventional Line Hose. The PTHS for insulators up to 12" (305mm) and the PTHI for insulators up to 16" (406mm) in height. The PTHI cover also has external ribs on the ears which secures 2.5" (64mm) I.D. line hose. Always use clamp pins to secure the device into position.

The Class 4 mRg universal Cover covers pin-type insulators through 8.5" (216mm) diameter and 13.8kV post-type insulators. A trim bead permits use on both 35kV and 15kV crossarm construction.

The uSC Stirrup Cover is a lightweight cover that can be installed using rubber gloves or a hot stick. The USC also feature RIB-GRIP construction and is meant to be used with Extended Lip SU Systems or Conventional Line Hose.

All covers are made from orange SALCOR® and feature RIB-GRIP® Construction. They can be installed with a hot stick or rubber gloves. All covers comply with ASTM D1049 specifications.



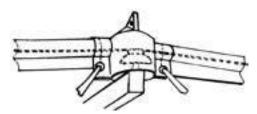
### **INSULATOR COVERS**

### **EXTENDED LIP SU SYSTEM**

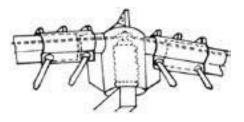


| Cat    |                      |                         | Fits Insul.                | For Use w/ Insul. Class   | Overall Dimens | · /           | Weight ea.   |
|--------|----------------------|-------------------------|----------------------------|---------------------------|----------------|---------------|--------------|
| No.    | Class / Type         | in ( mm ) Ma            | x Dia in (mm)              |                           | I.D. body      | Height        | lbs. ( kgs ) |
|        |                      |                         |                            |                           |                |               |              |
| PIN    | TYPE Insulato        | or Covers               |                            |                           |                |               |              |
| LRC    | <b>3</b> 4/II        | 2.5 ( 63 )              | 10.5 ( 263 )               | 55-6                      | 12 ( 305 )     | 16 ( 400 )    | 8 ( 3.6 )    |
| MR     | G 4/II               | 1.5-2.5 ( 40-63 )       | 8.5 ( 213 )                | Pin Type 55-5             | 9 ( 221 )      | 12.25 ( 306 ) | 7 (3.2)      |
|        |                      |                         |                            | Post Type 13.2kV F Neck   |                |               |              |
|        |                      |                         |                            | Post Type 13.2kV C Neck   |                |               |              |
| Add Su | ıffix "E" to Catalog | Number to order with #2 | 2359 Shot Gun Eye <i>l</i> | Assembly (see page A-13). |                |               |              |
|        | _                    |                         | •                          | ,                         |                |               |              |
| UH     | 3 / II               | 1.5 ( 40 )              | 7 ( 175 )                  | 55-1, 2, 3, 4, 5          | 7.5 ( 184 )    | 12 ( 300 )    | 6 ( 4.4 )    |
|        |                      |                         |                            |                           |                |               |              |
| POS    | ST TYPE Insula       | ator Covers             |                            |                           |                |               |              |
| PTH    | <b>IL</b> 4/II       | 1.5-2.5 ( 40-63 )       | 6.5 ( 163 )                | 57-2                      | 7 ( 172 )      | 16 ( 400 )    | 8 ( 3.6 )    |
| PTH    | <b>IS</b> 4/II       | 1.5 ( 40 )              | 7 ( 175 )                  | 57-2                      | 7.5 ( 184 )    | 12 ( 300 )    | 4 ( 1.8 )    |
|        |                      |                         |                            |                           |                |               |              |
| Stir   | rup Cover            |                         |                            |                           |                |               |              |
| USO    | C 4/II               | 1.5 ( 40 )              |                            |                           | 14 ( 263 )     | 15.5 ( 388 )  | 5 ( 2.3 )    |

All Covers comply with current ASTM D1049 specifications.



Pin Type Insulator Cover - LRG or MRG Line Hose is inserted in the ears of the cover.



Post Type Insulator Cover PTHL 2.5" (64mm) Line Hose held in place with UC2 Connector.

### **CABLE END CAPS & ARRESTER COVERS**

Cable End Caps are applied with rubber gloves. They are used on high voltage distribution cable ends found in vaults, cubicles and substations when cable remains energized during work. Cable End Caps are made from Type II orange SALCOR®.

Self-securing Cable End Caps for Underground Distribution are rated at 20kV, and have a minimum wall thickness of .25". They keep moisture and contamination off trimmed cable ends. The self-securing slot keeps the cable locked safely inside the end cap. These Cable End Caps are applied with rubber gloves.

**lightning arrester Covers** are made from Type II orange SALCOR. The slot allows the cap to fit directly over the energized lightning arrestor and the line connection. Lightning Arrester Covers can be applied with rubber gloves or a hot stick.

**Clear Cable Covers** are made from clear PVC round or oval tube. Each cover has a grip all handle attachment for installation with an insulated grip all hotstick.

Clear PvC Stress Cone Cover has a grip all attachment that allows this cover to be installed with an insulated grip all hotstick. The inspection window can be opened for testing with a voltage sensor.



| Cat. No. | ASTM<br>Class | Туре        | Dimensions in. ( mm )<br>I.D. x Length | For use w/ Cable Size | Weight ea.<br>lbs. ( kgs ) |
|----------|---------------|-------------|--|-----------------------|----------------------------|
| SELF-SI  | ECURING C     | ABLE END CA | APS                                    |                       |                            |
| 117      | 2             | II          | 1.38" x 10" ( 35 x 254 )               | #4/0 to 500 MCM       | .50 ( .23 )                |
| 173      | 2             | II          | .81" x 6" ( 21 x 152 )                 | #4 to #4/0 AWG        | .25 ( .1 )                 |
| 177      | 2             | II          | 2.25" x 12" ( 57 x 305 )               | 350 to 750 MCM        | .75 ( .35 )                |
| 178      | 2             | II          | 3.19" x 16" ( 81 x 406 )               | 800 to 1000 MCM       | 1.5 ( .7 )                 |
| LIGHTN   | ING ARRES     | TER COVERS  | 6                                      |                       |                            |
| 536A     | 4             | II          | 4.5 x 15 ( 113 x 375 )                 | -                     | 3 ( 1.4 )                  |
| 636A     | 4             | II          | 5.5 x 22 ( 138 x 550 )                 | -                     | 5 ( 2.3 )                  |
|          | 1 .1          |             | .6                                     |                       |                            |

| These Covers comply with current ASTM D1049 | specitications. |
|---|-----------------|
|---|-----------------|

| Cat. No.     | Description          | ASTM F712<br>Class / Rating kV | Dimensions<br>Length in. / I.D. in. / O.D. in. | Weight<br>lbs. ( kgs ) |
|--------------|----------------------|--------------------------------|--|------------------------|
| CLEAR CABLE  | COVERS               |                                |  |                        |
| 14200032P    | 2" ▲ PVC Cable Cover | 2 / 14.6                       | 20 / 2 / 2.38                                  | 1.5 ( 0.68 )           |
| 14200033P    | 3" ▲ PVC Cable Cover | 2 / 14.6                       | 20 / 3 / 3.38                                  | 3.2 ( 1.45 )           |
| 14200034P    | 4" ▲ PVC Cable Cover | 2 / 14.6                       | 20 / 4 / 4.38                                  | 4.3 ( 1.95 )           |
| 14200036P    | 6" ▲ PVC Cable Cover | 2 / 14.6                       | 20 / 6 / 6.5                                   | 5.3 ( 2.41 )           |
| CLEAR PVC ST | RESS CONE COVER      |                                |  |                        |
| 14200011     | -                    | 2 / 14.6                       | 13 / 3 / 3.5                                   | 3 ( 1.36 )             |

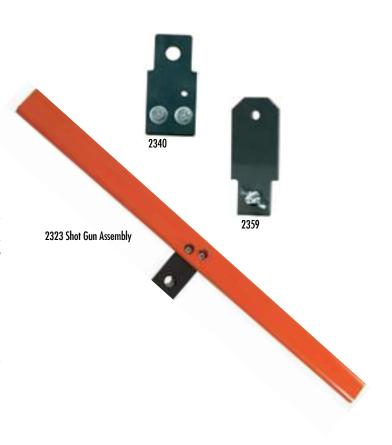
14200011

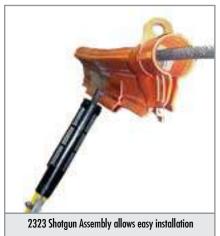
### **SU SYSTEM APPLICATORS**

The Extended Lip SU System may be installed by using rubber gloves or hot sticks on distribution voltages up to 34.5kV.

The Shot Gun Eye Assembly for the SU System equipment may be purchased separately for installation on the appropriate cover-up device.

The addition of these eye assemblies enable all SU System equipment to be easily handled with a standard shotgun stick.







| Cat. No. | Description                                 | For Use w/<br>Hot Stick Style | Weight ea.<br>lbs. ( kgs ) |
|----------|---|-------------------------------|----------------------------|
| 2323     | Shot Gun Eye Assembly for SU Hose / OR134   | Shot Gun                      | 1 ( .4 )                   |
| 2340     | Eye Assembly for SU System D.E. Protectors  | Shot Gun                      | .5 ( .2 )                  |
| 2359     | Eye Assembly for SU System Insulator Covers | Shot Gun                      | .5 ( .2 )                  |

### SPECIAL EQUIPMENT



The Td Tagging device, made from molded orange SALCOR®, is used to tag opened disconnect switches. It allows "Hold" cards to be placed on the circuit and fits over the heads of 1-1/4" (32 mm) and 1-1/2" (38 mm) switch sticks.

The TH111 meter Terminal Cover is used to avoid accidental contact with energized parts on 100 and 200 Amp single phase meter sockets. Made of orange SALCOR.

### THE SALISBURY ADVANTAGE

Spade Covers are easily installed to provide temporary insulation when working in padmount transformers and other electrical apparatus. If spade covers are securely held in place, they may be left on spades or connectors indefinitely for front end protection. The larger SC5, SC6, or SC6G are also used to cover primary elbows as well as the larger and longer multiple lead primary and secondary fittings and lugs used in underground enclosures and vaults. Molded from flexible SALCOR, they have excellent aging and weathering characteristics. The opening at the top end of the slot holds the cover on to the terminal. Wide lips extending along the slot provide additional protection over the connection.



| Cat. No. | <b>Description / Dimensions</b> | Weight ea.   |
|----------|---------------------------------|--------------|
|          | in. ( mm )                      | lbs. ( kgs ) |

### **TAGGING DEVICE**

TD 7.25 ( 184 ) long slot: 2.13 x .63 (5 4 x 16 ) .25 ( .1 ) cup: 2.5 x 1.75 ( 64 x 44 )

#### **METER TERMINAL COVER**

TH111  $3 \times 3.5 \times 1.5 (76 \times 89 \times 38)$ 1.6oz. ( .05 )

### SPADE COVER - CLASS 2, TYPE II, ASTM D1049

| SC4  | 2.75 x 4.4 x 10.75 ( 70 x 112 x 273 ), 1 (25.4) Lip Extension | 1.4 ( .5 ) |
|------|---|------------|
| SC5  | 3 x 6 x 10 ( 76 x 152 x 254 ), 2 (51) Lip Extension           | 2 ( .9 )   |
| SC6  | 3 x 6 x 10 ( 76 x 152 x 254 ), 1.25 (32) Lip Extension        | 1.4 ( .5 ) |
| SC6G | 3 x 6 x 10 ( 76 x 152 x 254 ), 1.25 (32) Lip Extension        | 1.4 ( .5 ) |



## **BLANKETS**

### FAQ

How often do I need to test blankets?

A: Blankets issued for service need to be tested once a year. See ASTM D479 8.1 for testing requirements.

### **SALISBURY EXCLUSIVE**

Only Salisbury formulates compounds, mixes, molds and tests blankets in our own ISO 9000:2008 registered facilities.

### NOTE

### **General Care & Inspection of Salisbury Rubber Goods**

Type I natural (non-ozone resistant) and Type II SalCOR® synthetic rubber (resistant to ozone) both provide electrical workers with the highest level of electrical insulating protection. However, in order to maintain this level of protection and ensure long life, it is essential that rubber goods are properly cared for. Before each use, rubber goods should be visually inspected for holes, embedded wires, rips or tears, ozone cutting, UV checking and signs of chemical deterioration. For additional information, refer to ASTM F1236, standard guide for visual inspection of electrical protective rubber products.

### **INSULATING BLANKETS**

### **EYELET STYLE**

### THE SALISBURY ADVANTAGE

### **HIgH QualITy**

Salisbury's Type II SalCOR® blankets are of the highest quality available today. They will hold their color and flexibility, and will maintain physical properties and dielectric strength, required by ASTM standard, in the field longer than any other blanket on the market.

### **OzOnE RESISTanT**

The Orange SALCOR is manufactured from a well researched blend of prime EPDM, which is naturally resistant to Ozone. This blend of Prime EPDM offers superb flexibility; similar to that of a Type I natural rubber blanket. This ensures the Salisbury Type II SALCOR blanket will pass the ASTM D 1048 Ozone Tests both, Method A and Method B.



Eyelet Style Insulating blankets were designed to be easily secured in place by using blanket pins, Snap Buttons or Ty-Straps (available on page B-9) Eyelet blankets are flexible and feature a reinforced beaded edge and eyelets for added strength and tear-resistance.

Our **zip-On Style** (**zip**) features one-inch wide strips of hook and pile double stitched to the blanket with nylon thread, so installation and removal is safe and fast.



| Cat.<br>No. | Eyelets/<br>Style | ASTM Class | Type | Size<br>in. ( mm )    | Color  | Weight ea.<br>Ibs. ( kgs) |
|-------------|-------------------|------------|------|-----------------------|--------|---------------------------|
| 12          | 28                | 2          | II   | 22 x 22 ( 559 x 559 ) | Black  | 3 ( 1.4 )                 |
| 13          | 28                | 4          | II   | 22 x 22 ( 559 x 559 ) | Orange | 3 (1.4)                   |
| 13-10       | 10                | 4          | II   | 22 x 22 ( 559 x 559 ) | Orange | 3 ( 1.4 )                 |
| 400E        | 6                 | 2          | II   | 27 x 36 ( 686 x 914 ) | Black  | 6 (2.3)                   |
| 1000E       | 6                 | 4          | II   | 27 x 36 ( 686 x 914 ) | Orange | 6 ( 2.3 )                 |
| 1001E       | 6                 | 4          | II   | 27 x 36 ( 686 x 914 ) | Black  | 6 ( 2.3 )                 |
| 300E        | 6                 | 2          | l    | 36 x 36 ( 914 x 914 ) | Black  | 8 ( 3.6 )                 |
| 900E        | 6                 | 4          | II   | 36 x 36 ( 914 x 914 ) | Orange | 8 ( 3.6 )                 |
| 901E        | 6                 | 4          | II   | 36 x 36 ( 914 x 914 ) | Black  | 8 ( 3.6 )                 |
| 1500        | 28                | 2          | II   | 36 x 36 ( 914 x 914 ) | Black  | 8 ( 3.6 )                 |
| 1700        | 28                | 4          | II   | 36 x 36 ( 914 x 914 ) | Orange | 8 ( 3.6 )                 |
| ZIP-ON STYI | LE                |            |      |                       |        |                           |
| 183OS       | Zip               | 4          | II   | 18x36 ( 457x914 )     | Orange | 3.5 ( 1.6 )               |
| 900EV       | Zip               | 4          | II   | 36x36 ( 914x914 )     | Orange | 8.5 ( 3.9 )               |
| 1000EV      | Zip               | 4          | II   | 27x36 ( 686x914 )     | Orange | 8.1 ( 3.7 )               |

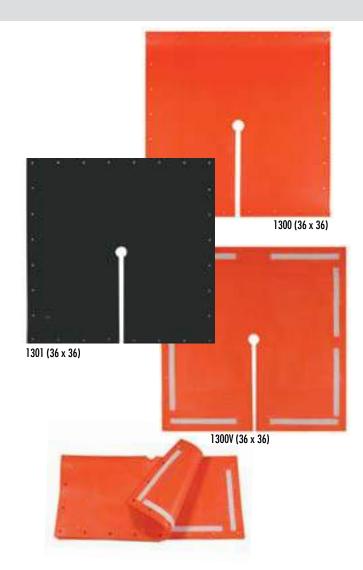
### **INSULATING BLANKETS**

### **SLOTTED STYLE**

**Slotted Style Insulating blankets** are made of Type II SALCOR® rubber and designed for increased versatility and flexibility in special cover-up situations. Use for covering ridge pins, cross arms with insulators or any place a wire, pin or projection interferes with proper placement of other cover-up devices.

Three sizes are available with reinforced beaded edges and reinforced eyelets which can be secured with blanket pins, Snap Buttons or Tystraps (available on Page 9). Our 36"(914mm) slotted blanket is also available with 2" (51mm) or 4.5"(114mm) center holes and with hook and pile (Zip Style). Our 46"(1168mm) slotted blanket features extra thickness at the end of the slot for added strength.

Our **zip-On Style** (**zip**) features one-inch wide strips of hook and pile double stitched to the blanket with nylon thread, so installation and removal is safe and fast.



| Cat.<br>No. | Eyelets   | ASTM Class | Туре | Size<br>in. ( mm )    | Color  | Weight ea.<br>lbs. ( kgs ) |
|-------------|-----------|------------|------|-----------------------|--------|----------------------------|
| 14          | 28        | 2          | Ш    | 22 x 22 ( 559 x 559 ) | Black  | 2.5 ( 1.1 )                |
| 15          | 28        | 4          | II   | 22 x 22 ( 559 x 559 ) | Orange | 2.5 ( 1.1)                 |
| 15-1        | 28        | 4          | II   | 22 x 22 ( 559 x 559 ) | Black  | 2.5 ( 1.1 )                |
| 1100        | 28        | 2          | II   | 36 x 36 ( 914 x 914 ) | Black  | 7 (3.2)                    |
| 1300        | 28        | 4          | II   | 36 x 36 ( 914 x 914 ) | Orange | 7 (3.2)                    |
| 1301        | 28        | 4          | II   | 36 x 36 ( 914 x 914 ) | Black  | 7 (3.2)                    |
| 1302        | 2" hole   | 4          | II   | 36 x 36 ( 914 x 914 ) | Orange | 7 (3.2)                    |
| 1304        | 4.5" hole | 4          | II   | 36 x 36 ( 914 x 914 ) | Orange | 7 (3.2)                    |
| ZIP-ON S    | STYLE     |            |      |                       |        |                            |
| 1300V       | Zip       | 4          | II   | 36x36 ( 914x914 )     | Orange | 7 (3.2)                    |

### **INSULATING BLANKETS**

### WITHOUT EYELETS

### THE SALISBURY ADVANTAGE

### **COnSISTEnCy**

The Salisbury blanket is manufactured from materials that are precisely measured in an automated weighing system to ensure batch-to-batch consistency.

#### valuE

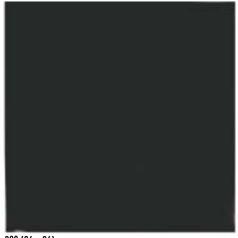
SALCOR® blankets will last longer and provide maximum value and protection. Not all rubber blankets are manufactured equally. Ask for the best, ask for Salisbury's rubber insulating blankets.

Salisbury Insulating blankets without Eyelets are available in Class 2 and Class 4 in two types of material: Type I natural rubber, and Type II SALCOR, which is a highly flexible, corona-resistant polymer with excellent aging and weathering qualities.

Salisbury insulating blankets feature a reinforced beaded edge for added strength and tear-resistance.



186 (18 x 36)



300 (36 x 36)

| Cat. No. | ASTM Class | Туре | Size<br>in. ( mm )    | Color  | Weight ea.<br>lbs. ( kgs ) |
|----------|------------|------|-----------------------|--------|----------------------------|
| 186      | 4          | II   | 18 x 36 ( 457 x 914 ) | Orange | 3.5 ( 7.7 )                |
| 300      | 2          | I    | 36 x 36 ( 914 x 914 ) | Black  | 8 ( 3.6 )                  |



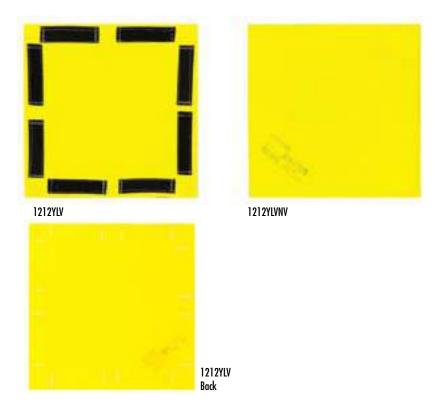
### **LOW VOLTAGE BLANKETS**

### WITH & WITHOUT HOOK AND PILE

### low voltage Insulating blankets are made of Type II SALCOR® rubber. Insulating blankets are available with or without hook and

available with or without hook and pile (Zip) or Plain style, as noted in the chart below.

Covering energized equipment is easier than ever using Salisbury's Zip-On blankets. Our zip-On Style (zip) features one-inch wide strips of hook and pile double stitched to the blanket with nylon thread, so installation and removal is safe and fast. Zip-On blankets can be manufactured to fit special requirements. Contact your Salisbury representative for more information.



| Cat.<br>No. | Style | ASTM Class | Туре | Size<br>in. ( mm ) | Color  | Weight ea.<br>lbs. ( kgs ) |
|-------------|-------|------------|------|--------------------|--------|----------------------------|
| 1212YLV     | Zip   | 0          | II   | 12x12 ( 305x305 )  | Yellow | 1 ( .45 )                  |
| 1212YLVNV   | Plain | 0          | II   | 12x12 ( 305x305 )  | Yellow | 1 ( .45 )                  |
| 1236YLV     | Zip   | 0          | II   | 12x36 ( 305x914 )  | Yellow | 1.5 ( .48 )                |
| 1236YLVNV   | Plain | 0          | II   | 12x36 ( 305x914)   | Yellow | 1.5 ( .48 )                |
| 1818YLV     | Zip   | 0          | II   | 18x18 ( 457x457 )  | Yellow | 1.1 ( .48 )                |
| 1818YLVNV   | Plain | 0          | II   | 18x18 ( 457x457 )  | Yellow | 1.1 ( .48 )                |
| 1836YLV     | Zip   | 0          | II   | 18x36 ( 457x914 )  | Yellow | 1.5 ( .68 )                |
| 1836YLVNV   | Plain | 0          | II   | 18x36 ( 457x914 )  | Yellow | 1.5 ( .68 )                |
| 3636YLV     | Zip   | 0          | II   | 36x36 ( 914x914 )  | Yellow | 2.2 ( 1.0 )                |
| 3636YLVNV   | Plain | 0          | П    | 36x36 ( 914x914 )  | Yellow | 2.2 ( 1.0 )                |
|             |       |            |      |                    |        |                            |



### ROLL BLANKETS & INSULATING APRONS

Salisbury has gone to great lengths to protect workers from low voltage electrical hazards, by now offering insulating roll blankets and insulating aprons. Salisbury's insulating Roll blankets and Insulating aprons are made from a high strength fabric reinforced Type II rubber in unique colors making it easy to identify and highly visible in the work area. Salisbury's insulating Type II rubber Roll Blankets and Insulating Aprons, meet ASTM F2320 standards.

Salisbury's **Roll blanket** line includes a Class 1 (7,500v) Clear PvC material that permits complete visibility, yet provides the necessary insulating properties meeting ASTM F1742 standards.



The Roll blankets can be easily custom-cut to fit each application at the job site. This minimizes the number of different low voltage blankets sizes and shapes that would otherwise need to be carries from job to job. Each blanket comes in a convenient 36" wide roll. 30 feet in length.



All classes of Roll Blankets are easy to cut, and flexible to -40°F/C. Highly puncture and tear resistant, each class of blanket is also flame (self-extinguishing), oil, and ozone resistant.

The **Insulating apron** includes two Nomex (R) webbed bib straps and two Nomex waist straps with nonmetallic buckles. All the straps are attached with reinforced stitching and Nomex thread. The insulating apron has straps that can be buckled around the back and around the neck which gives wearers a comfortable and supportive fit. The straps are adjustable so that one size will fit most wearers. The apron measures 42" from the top of the bib and has a full width of 30" to wrap around the front of most workers. Use these aprons where there is a possibility of accidental contact with energized equipment or lines. These products are not intended for purposeful contact with energized equipment.

| Cat.<br>No.       | ASTM Class | Туре | Size<br>feet ( m )   | Color           | Weight ea.<br>lbs. (kgs) |
|-------------------|------------|------|----------------------|-----------------|--------------------------|
| <b>ROLL BLANK</b> | ETS        |      |                      |                 |                          |
| RLB00             | 00         | II   | 3' x 30' ( .9 x 9 )  | Brown           | 20 (9)                   |
| RLB0              | 0          | II   | 3' x 30' ( .9 x 9 )  | Yellow          | 26 ( 11.8 )              |
| RLB1              | 1          | II   | 3' x 30' ( .9 x 9 )  | Yellow / Orange | 36 ( 16.4 )              |
| RLBPVC1           | 1          | -    | 3' x 30' ( .9 x 9 )  | Clear           | 36 ( 16.4 )              |
| RLBPVC1-48        | 3 1        | -    | 4' x 30' ( 1.2 x 9 ) | Clear           | 48 ( 21.7 )              |
| INSULATING A      | APRONS     |      |                      |                 |                          |
| APR00             | 00         | II   | One Size Fits Most   | Brown           | 1.95 ( .88 )             |
| APR0              | 0          | II   | One Size Fits Most   | Yellow          | 2.53 ( 1.15 )            |
| APR1              | 1          | II   | One Size Fits Most   | Yellow / Orange | 3.5 ( 1.59 )             |
|                   |            |      |                      |                 |                          |

### **BLANKET ACCESSORIES**

### **CLAMP PINS**

In addition to other uses in the utility industry, **blanket Clamp Pins** can be effectively used to hold insulating blankets and rubber cover-up in place. Springs are used for tension while extra holes in the body of the pin are used to grip conductors and prevent line hose from sliding.

### THE SALISBURY ADVANTAGE

### Improved!

The Salisbury 21 blanket pin is more functional than ever. The new 21 pin has been improved to make it the most versatile pin on the market. Although the 21 pin always opened to accommodate just about any width needed, it has now been redesigned to open to a full 5 1/2 inches. That's the widest of any standard plastic pin in the industry. To accommodate application using a hot stick, the ends of the pin have been tapered to fit into the end of any brand clampstick. This allows the same 21 pin to be installed in line with the stick. For applications where a 90 degree angle of application and removal is necessary, the time proven HS21 pin fills the bill. Look for the new 21 pin to be supplied with your next pin order.

Blanket pins are made of fiberglass reinforced nylon or sliver-free hardwoods. Most pins have molded rubber tips to increase slip resistance.





YN20





| Cat. No.   | Description                  | Length<br>in. ( mm ) | Jaw Opening in. ( mm ) | Weight ea.<br>lbs. ( kgs ) |
|------------|------------------------------|----------------------|------------------------|----------------------------|
|            |                              | 0 = (0(0)            |                        |                            |
| 20         | Wood w/ pin boots            | 8.5 ( 216 )          | 4.75 ( 121 )           | .33 ( .15 )                |
| 25         | Wood w/o pin boots           | 7 ( 178 )            | 1.6 ( 41 )             | .25 ( .11 )                |
| 26         | Wood w/ pin boots            | 10 ( 254 )           | 7 ( 178 )              | .5 ( .23 )                 |
| YN20       | Wood w/ Sure grip            | 8.5 ( 216 )          | 4.75 ( 121 )           | .33 ( .15 )                |
|            |                              |                      |                        |                            |
| HS21       | Nylon w/ pin boots           | 9.5 ( 241 )          | 5 ( 127 )              | .37 ( .17 )                |
| 21         | Nylon w/ pin boots           | 9.5 ( 241 )          | 5 ( 127 )              | .37 ( .17 )                |
| Optionally | y applied with Shotgun Stick |                      |                        |                            |

### **BLANKET ACCESSORIES**

### **FASTENERS**

blanket buttons are designed to secure eyelet-style insulating blankets. The b1 button, made of yellow plastic, snaps through the eyelet with thumb pressure on the large head. The bright orange polystyrene b23 twoway buttons are inserted into the eyelets for use with a shotgun clamp stick or standardduty switch stick.

magnetic blanket buttons are designed for use in eyelets of insulating blankets when covering energized portions in hard-to-cover areas like pad mounts, cubicles, switchboards and substations. Four permanent floating magnets are mounted between nickel-plated steel plates. May be applied manually, wearing rubber gloves, or with a shot-gun stick.

**Ty-Straps** are 14" (356mm) and 30" (762mm) long and made of 1 1/2" (38mm) wide strips of rubber with hook and pile fasteners affixed to each end. The worker simply wraps the Ty-Strap around the positioned blanket and presses the hook and pile ends together. Contact your local Salisbury representative for custom length Ty-Straps.



| Cat. No. | Description                   | Weight ea. Ibs. ( kgs ) |
|----------|-------------------------------|-------------------------|
| B1       | Snap-Button, Orange           | 1 oz. ( .03 )           |
| B23      | Two-Way Button, Orange        | 1 oz. ( .03 )           |
| MB6      | Magnetic Blanket Button       | 7 oz. ( .2 )            |
| TY14     | Ty-Straps, 14" ( 356mm ) long | 2 oz. ( .06 )           |
| TY30     | Ty-Straps, 30" ( 762mm ) long | 4 oz. ( .12 )           |

### **BLANKET ACCESSORIES**

### **STORAGE**

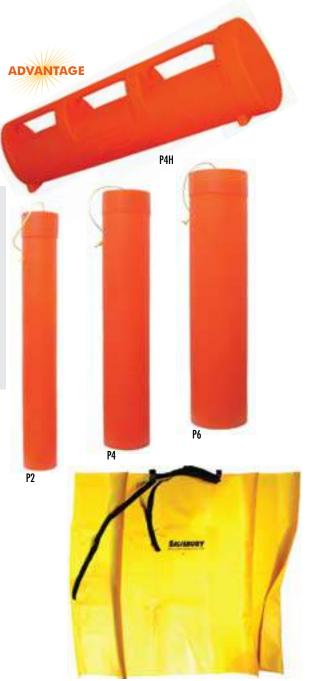
blanket Canisters - molded in bright orange, hiimpact polyethylene-protect insulating blankets when not in use. A tight-fitting cap is secured to the canister with polypropylene rope.

### THE SALISBURY ADVANTAGE

Salisbury's New P4H Blanket Canister revolutionizes the way you'll store your blankets. The new canister has a sturdier construction than the original P4, with integrated feet to keep the canister from rolling while being transported by truck or stored at the workplace. The new ergonomic handle runs the entire length of the canister, making lifting and carrying up to four 36 x 36" blankets much easier. Slots are provided within the canister to allow it to be secured in buckets or on trucks.

blanket Roll ups provide a safe and convenient means for protecting blankets from damage while in transport or storage. Ruggedly constructed of 18 oz. vinyl with side flaps to confine the blankets into position and prevent damage to the edges. Two heavy 33" web straps with buckles close the roll-up, and includes a web carrying handle.

STORAGE TIPS: When more than one blanket is stored, the most convenient method of loading is to roll and insert each blanket into the canister independently. A single blanket can then be removed without removing the others. For maximum useful life, never fold, crease or compress insulating blankets while in storage.



| Cat. No. | Description     | Fits Blanket<br>Max Size in.( mm ) | Dimensions in. ( mm )   | Capacity     | Weight ea.<br>lbs. ( kgs ) |
|----------|-----------------|------------------------------------|-------------------------|--------------|----------------------------|
| P2       | Canister        | 36 ( 914 )                         | 5 x 37 ( 127 x 940 )    | 1-2 blankets | 2(.9)                      |
| P3       | Canister        | 36 ( 914 )                         | 6 x 37 ( 152 x 940 )    | 1-3 blankets | 3 ( 1.4 )                  |
| P4       | Canister        | 36 ( 914 )                         | 7 x 37 ( 178 x 940 )    | 1-4 blankets | 3.5 ( 1.6 )                |
| P4H      | Canister        | 36 ( 914 )                         | 7 x 37 ( 178 x 940 )    | 1-4 blankets | 3.5 ( 1.6 )                |
| P6       | Canister        | 36 ( 914 )                         | 9 x 37 ( 229 x 940 )    | 1-6 blankets | 5 ( 2.3 )                  |
| P3-47    | Canister        | 46 ( 1168 )                        | 6 x 47 ( 152 x 1194 )   | 1-2 blankets | 4 ( 1.8 )                  |
|          |                 |                                    |                         |              |                            |
| 22       | Roll-up (vinyl) | 22 ( 559 )                         | 56 x 42 ( 1651 x 1067 ) | 1-4 blankets | 1.5 ( .68 )                |
| 36       | Roll-up (vinyl) | 36 ( 914 ) or 46 ( 1168 )          | 67 x 55 ( 1702 x 1397 ) | 1-4 blankets | 2.5 ( 1.1 )                |
| 46       | Roll-up (vinyl) | 36 ( 914 ) or 46 ( 1168 )          | 70 x 55 ( 1778 x 1397 ) | 1-4 blankets | 4 ( 1.8 )                  |

### SWITCHBOARD MATTING

**Switchboard matting** is permanently placed in front of switchgear, motor control centers and other high voltage apparatus to provide personal protection for workers. It is also used when tending take-up and pay out reels and when adding or replacing conductors. Made from high quality Type II material, Class 2 matting is 1/4" (6.4mm) thick and is tested to 20kV, and Class 4 matting is 1/2" thick and tested to 40kV. Both Classes of matting comply with ASTM D178, Class 2 and Class 4 specifications. The corrugated surface acts as a safety tread while reducing the possibility of metal particles becoming embedded. Class 2 Switchboard matting is available in 25 yard rolls or custom cut to specified lengths, while Class 4 matting is sold in 20 yard rolls only.

Maximum Use AC Voltage Class 2, 17,000 volts; Class 4, 36,000 volts.

The **R96** vinyl/roll-up carrier is recommended as a ground barrier.





| Cat.<br>No.   | ASTM Class    | Туре          | Size<br>in. ( mm )                                     | Weight ea.<br>lbs. ( kgs ) |
|---------------|---------------|---------------|--|----------------------------|
| SWITCHE       | BOARD MATTING |               |  |                            |
| M24-2         | 2             | II            | 1/4 x 24 ( 6 x 610 )                                   | 9 ( 4.1 )                  |
| M30-2         | 2             | II            | 1/4 x 30 ( 6 x 762 )                                   | 12 ( 5.4 )                 |
| M36-2         | 2             | II            | 1/4 x 36 ( 6 x 914 )                                   | 15 ( 6.8 )                 |
| M48-2         | 2             | II            | 1/4 x 48 ( 6 x 1219 )                                  | 18 ( 8.2 )                 |
| SWITCHE       | BOARD MATTING |               |  |                            |
| M36-4*        | 4             | II            | 1/2 x 36" x 60 feet long ( 12 x 914 mm x 18.3 m long ) | 684 (307.8)                |
| *Sold in full | •             | h current AST | M D178 standards                                       |                            |
| GROUND        | BARRIER       |               |  |                            |
| R96           | Carrier Vin   | yl Roll-Up /  | Ground Barrier   | 3.5 ( 1.6 )                |

Salisbury by Honeywell arc Protection blankets are now available in 4' x 5' and 4' x 8' sizes. Each size is available in 15kA or 40kA ratings. The 15kA blankets include convenient loops and the 40kA blankets include grommets to easily keep the blanket in place. These new blankets are sold individually or with a storage bag or storage bag and tie-strap kit.

The Arc Suppression Blanket is used as a barrier for protection from the explosive and incendiary effects of electrical arcs and flashes. These hazardous electrical discharges can be caused by faults in cables, in cable splices and joints, and at transformer terminals, or they may be generated by the operation of switch gear, circuit breakers and lightning arrestors. The blanket can be used for worker protection in underground vaults, switchyards, and other locations where electrical equipment poses a risk of exposure to explosive electrical discharges.



**NOTE** These products do not eliminate or reduce requirements for proper PPE for arc flash protection



### **WARNING**

Because of the unpredictability of electrical Arcs, the Arc Protective Blanket (APB) may not totally contain the arc and flashes, but only reduce or limit explosive and incendiary effects. Properly installed APB's can reduce the risk of injury from the blast and heat. They do not provide any personal protection for hearing, eyes, smoke inhalation, hazardous gas inhalation, or burns.



#### **WARNING**

Arc Protective Blankets are not designed for electrical insulating protection. Using the Arc Protective Blanket for electrical insulating protection can result in serious injury or death.





#### **MEETS NEW ASTM F2676 STANDARD**

#### ASTM Standard for Testing of Arc Blankets

Arc protective blankets are used in many electrical applications to protect workers who are stationed near energized electrical parts. While these blankets have been used for years, there have been no testing criteria for their evaluation. A new ASTM International standard will be used to determine the effectiveness of arc protective blankets in suppressing the combined effect of an arc flash and an arc blast. The new standard, ASTM F2676, Test Method for Determining the Protective Performance of an Arc Protective Blanket for Electric Arc Hazards, was developed by Subcommittee F18.65 on Wearing Apparel, part of ASTM International Committee F18 on Electrical Protective Equipment for Workers.

This new standard gives companies the ability to evaluate blankets with a repeatable standard that can be done at many test labs using an electric arc and a high speed camera.

| Cat. No.  | Dimensions in. ( mm )         | Description  | Weight ea.<br>lbs. ( kgs ) |
|-----------|-------------------------------|--|----------------------------|
| ARC45-15  | 48 x 60 ( 1219 x 1524 )       | 15kA rating - navy blue                                | 10 ( 4.5 )                 |
| ARC45-40  | 48 x 60 ( 1219 x 1524 )       | 40kA rating -gray/khaki                                | 10 ( 4.5 )                 |
| ARC48-15  | 48 x 96 ( 1219 x 2438 )       | 15kA rating - navy blue                                | 15 ( 6.8 )                 |
| ARC48-40  | 48 x 96 ( 1219 x 2438 )       | 40kA rating -gray/khaki                                | 15 ( 6.8 )                 |
| -Α        | dd suffix "P" to include stor | rage bagAdd suffix "PS" to include storage bag and tie | -straps.                   |
| -Δ        | dd suffix "C" to include P4   | canisterAdd suffix "CS" to include P4 canister and tie | -straps.                   |
| ARC142    | 1 x 42 ( 25.4 x 1067 )        | Single Kevlar Strap w/ Buckle                          |                            |
| ARC142-K1 | 6                             | Arc48 Strap Kit With 16 Buckles                        | 4 ( 1.8 )                  |
| ARC142-K1 | 2                             | Arc45 Strap Kit With 12 Buckles                        | 3 ( 1.4 )                  |
| P4        | 7 x 37 ( 178 x 940 )          | Canister holds 1-4 blankets w/ max. size 36" (914mm)   | 3.5 ( 1.6 )                |

B-12



## **INSULATING PLASTIC GUARDS & COVERS TESTING**

#### **ASTM F 712-06** TABLE 3 Typical Electrodes for Testing Plastic Guard Equipment **Types of Guards Energized Inner Electrode** Outer Ground Electrode<sup>A</sup> for All Tests<sup>A</sup> **Proof Test Withstand Voltage** Flashover Leakage Tests Line guards and line guard con-Round metal tube or har Complete electrode<sup>B</sup> shall be 4 x 6" flexible conducspaced back from openings tive pad placed alternately through which the energized on all exterior surfaces Insulator covers and deadend Maximum conductor, hardware and insulator aselectrode protrudes during and across conductor covers sembly for which rated or similar mock-up including the test only as necessary to opening of guard and asmandrel<sup>C</sup> of conducive material approximate. <sup>D</sup> avoid flashover. Therefore, sembled guard system <sup>E</sup> Round metal tube, fabricated mandrel<sup>C</sup> or cluster Pole guards, ridge pin and switch the entire area of each cover joints spaced back from blade covers small metal tubes. D shall be tested as nearly as openings through which practical. the energized electrode Arm quards Round or rectangular metal tube or fabricated protrudes during the test Cutout covers madrel<sup>DC</sup> Largest cutout with bare leads covered with only as necessary to avoid equal rated line hose. Or similar mock-up including flashover at outer ends. mandrel<sup>C</sup> of conductive material. <sup>D</sup> Structural barrier Rectangular metal sheets approximately 3mm (0.06") thick, having smoothly rounded edges and

corners, have been found to be satisfactory for this purpose. Also satisfactory are wet felt or sponge-top

electrodes

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A Moistened electrodes may be secured with rubber straps or blanket pins. Pressure-sensitive tape is helpful in securing dry metal foil electrodes

B Suitable materials include: metal foil or screen; tap water-moistened sponge sheeting, or blanket made of wool, or similar material including synthetics.

C Thin metal sheet or screen wire secured on wood frames make suitable electrodes. Carved synthetic sponge moistened with tap water is suitable for small forms.

<sup>&</sup>lt;sup>D</sup> The dimensions of the mandrel are to approximate the maximum size of equipment to which the guard system is to be applied.

<sup>&</sup>lt;sup>E</sup> Metal canisters made for storing rubber blankets make suitable electrodes for pole guard tests.

### INSULATING PLASTIC GUARDS AND COVERS



guards and Covers are intended for brush contact applications. All guards can be coupled together to cover any length required.

Guards and covers are available in three different grades: Grade 1 with hot stick handles attached for application and removal and Grade 2 with eye fittings for standard shotgun sticks and Grade 3 without eye fittings. Guards are designed to nest within each other for storage.

The guards and covers are made from two different orange thermoplastics: Type I is an ABS standard cold weather high impact plastic and Type III is an ABS/PVC weather resistant material that offers advantages in tensile and impact strength, hardness, UV stability, and flame resistance.

### ALWAYS FOLLOW YOUR COMPANY SAFETY PROCEDURES.

Rubber insulating equipment is realistically limited to Class 4 material in the design specification standards. Plastic guard equipment has been designed to go beyond these voltages and provide a satisfactory degree of worker protection. Major differences exist in use criteria between the rubber and the plastic guard equipment. Each glove, sleeve, or other article of rubber insulating equipment has a given safety factor for the phase to phase voltage on which it may be used and the class or proof voltage at which it is tested. Plastic guard equipment, however, is designed to provide a satisfactory safety factor only when used in a phase-to-ground exposure. If exposure is phase-to-phase, then a satisfactory safety factor is only provided if the exposure is covered-phase-to-covered-phase.

| ASTM F712-06 TABLE 2 Minimum Flashover Test <sup>4</sup> |                  |                  |   |    |                         |
|--|------------------|------------------|---|----|-------------------------|
|  | Rating,<br>kV    | Max Use<br>60 Hz | Min Flashover Voltage<br>Test φ-Ground kV |    | Criteria                |
|  | 0-0 <sup>A</sup> | 0-Ground         | 60 Hz                                     | DC |                         |
| 2  | 14.6             | 8.4              | 14.0                                      | 20 | No flashover            |
| 3  | 26.4             | 15.3             | 25.0                                      | 35 | other than<br>momentary |
| 4  | 36.6             | 21.1             | 34.0                                      | 48 | as a result of          |
| 5  | 48.3             | 27.0             | 43.0                                      | 61 | too-close               |
| 6  | 72.5             | 41.8             | 67.0                                      | 95 | spacing of<br>electrode |

A Cover-up materials are tested at values greater than the maximum use phase to ground values. The maximum use phase to phase values relate to guarded phase to guarded phase. The units are not rated for bare phase to guarded phase

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#### AIR GAP® POLE GUARDS

Pole guards are installed before setting new poles to guard against accidental line contact. They also guard against pole contacts by personnel working in insulating aerial buckets or on platforms. Pole Guards are made from orange, Type I ABS, cold weather, high impact thermoplastic. Salisbury Pole Guards feature the unique Air Gap® design. Uniformly spaced dimples minimize the amount of surface area contacting the pole. This provides added insulation to keep electrical leakage to a minimum. When two pole guards are used to cover longer lengths, the Air Gap dimples nest together "locking" the two together with ample overlap. This is an exclusive feature to Salisbury Pole guards. The Air Gap design also allows for air flow between it and the pole minimizing moisture condensation and contamination buildup.

All Salisbury Pole Guards include drilled handles for easy application. Pole Guards should be used for brush contact. The opening should face away from possible line contacts, whenever possible. Pole Guards should be stored indoors to avoid prolonged exposure to UV rays and can be cleaned with a warm detergent solution.



2856

Maight on

The 21936 Pole Guard includes cut-out to allow dearance for a line post insulator base which is mounted to a utility pole.

| Cat. No. | Length     | Dia.          | Class             | Weight ea.    |
|----------|------------|---------------|-------------------|---------------|
|          | ft. ( m )  | in. ( mm )    |                   | lbs. ( kgs )  |
| 2851     | 1'(.3)     |               |                   | 3.3 ( 1.5 )   |
| 2852     | 2' ( .61 ) |               |                   | 6.3 ( 2.9 )   |
| 2853     | 3' ( .92 ) | 6" ( 152.4 )  | 4                 | 9.0 ( 4.1 )   |
| 2854     | 4' ( 1.2 ) |               |                   | 11.0 ( 5.0 )  |
| 2856     | 6' ( 1.8 ) |               |                   | 17.0 ( 7.7 )  |
|          |            |               |                   |               |
| 1385     | 1' ( .3 )  |               |                   | 3.6 ( 1.6 )   |
| 1386     | 2' ( .61 ) |               |                   | 7.0 ( 3.2 )   |
| 1356     | 3' ( .92 ) | 9" ( 228.6 )  | 4                 | 10.0 ( 4.5 )  |
| 1357     | 4' ( 1.2 ) |               |                   | 12.0 ( 5.4 )  |
| 2496     | 6' ( 1.8 ) |               |                   | 19.0 ( 8.6 )  |
|          |            |               |                   |               |
| 2461     | 1' (.3 )   |               |                   | 5.0 ( 2.3 )   |
| 2462     | 2' ( .61 ) | 12" ( 304.8 ) | 4                 | 8.0 ( 3.6 )   |
| 2464     | 4' ( 1.2 ) |               |                   | 15.0 ( 6.8 )  |
| 2466     | 6' ( 1.8 ) |               |                   | 22.0 ( 10.0 ) |
|          |            |               |                   |               |
| 21837    | 4' ( 1.2 ) | 9" ( 228.6 )  | 4 - FR Pole Guard | 12.0 ( 5.4 )  |
| 21936    | 2' ( .61 ) | 7" ( 177.8 )  | 4                 | 2.8 ( 1.27 )  |
|          |            |               |                   |               |

All guards are tested to ASTM F712

#### **VERSA® AND LINK® GUARDS**

**versa guards® and link guards®** make use of air as well as the dielectric strength of plastic to provide total insulating value. Both guards have a 7" diameter and a hook shaped inner lip to keep the guard in place.

Versa Guards® and Link Guard® Cross Section

2475

2884

**versa guards**, with a voltage rating of 36.6 kV\*, are designed so that two guards can be coupled together to cover most 13 kV single and double arm, pin and post constructions. A lighter 47" version (**2389**) of the standard 4.5' Versa Guard is available in a Type III ABS/PVC weather resistant material.

**link guards**, with a voltage rating of 72.5kV\*, have inner and outer shells that run full length to include male and female couple ends. Two guards connected provide four overlapping thicknesses of plastic plus air at a joint.

**Tee Connectors** are used on horizontal and vertical posts and suspension insulator strings when plastic line guards are used on the conductor. Made from Type I, ABS plastic with eye fittings, the connector accommodates the male end of a guard. Available in two ratings: 72.5 kV\* and 48.3 kV\*. Accepts 34.5 kV pin insulators along with post and insulator strings.

 $^*$ guarded Ø to guarded Ø .

| Cat. No. | Descri           | ption      | Type | ASTM          | Grade | Weight ea.    |
|----------|------------------|------------|------|---------------|-------|---------------|
|          |                  |            |      | Voltage Class |       | lbs. ( kgs)   |
| VERSA GI | UARDS®- 4.5' (   | 1.37 m )   |      |               |       |               |
| 1686     | ABS              | Eye        | I    | 4             | 2     | 8.8 ( 4.0 )   |
| 1687     | ABS              | 4' Stick   | I    | 4             | 1     | 10.8 ( 4.9 )  |
| 1688     | ABS              | 6' Stick   | I    | 4             | 1     | 11.8 ( (5.4 ) |
| 2373     | ABS/PVC          | Eye        | III  | 4             | 2     | 8.8 ( 4.0 )   |
| 2377     | ABS/PVC          | 4 'Stick   | III  | 4             | 1     | 10.8 ( 4.9 )  |
| 2378     | ABS/PVC          | 6' Stick   | III  | 4             | 1     | 11.8 ( 5.4 )  |
| VERSA GI | UARDS®- 3.92'    | ( 1.19 m ) |      |               |       |               |
| 2389     | ABS/PVC          | 4' Stick   | III  | 4             | 1     | 6.1 ( 2.8 )   |
| 2689     | ABS/PVC          | Eye        | III  | 4             | 2     | 8.1 ( 3.7 )   |
| LINK GUA | RDS- 4.5' ( 1.37 | ' m )      |      |               |       |               |
| 1680     | ABS              | Eye        | I    | 6             | 2     | 10.5 ( 4.8 )  |
| 1681     | ABS              | 4' Stick   | I    | 6             | 1     | 12.5 ( 5.7 )  |
| 1682     | ABS              | 6' Stick   |      | 6             | 1     | 13.5 ( 6.1 )  |
| 2475     | ABS/PVC          | Eye        | III  | 6             | 2     | 10.5 ( 4.8 )  |
| 2476     | ABS/PVC          | 4' Stick   | III  | 6             | 1     | 12.5 ( 5.7 )  |
| 2477     | ABS/PVC          | 6' Stick   | III  | 6             | 1     | 13.5 ( 6.1    |
| TEE CON  | NECTORS          |            |      |               |       |               |
| 2224     | 69               | kV         |      | 6             | 2     | 7.8 ( 3.5 )   |
| 2884     | 46 1             | kV         | I    | 5             | 2     | 6.0 ( 2.7 0   |

All guards are tested to ASTM F712

**SALISBURY** by Honeywell

Bags are available on page C-10.

#### LIGHTWEIGHT CONDUCTOR COVERS

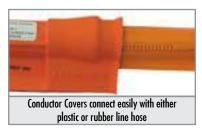
lightweight Conductor Covers are ideal to cover long spans when weight is a consideration. They can be applied when wearing rubber gloves or with a fiberglass stick. Available with an eye for application with shotgun sticks. These covers have a voltage rating of 26.4 kV\*. The inside diameter is 2". This product can connect with Salisbury 1.5" I.D. Class 3 or 4 flexible cover-up equipment.

The **21826 lightweight Conductor Cover** is a six (6', 1.8m) foot, cover rated Class 4 (36.6 kV\*). It is applied using rubber gloves when following appropriate company work rules. The inside diameter is 3" making it useful on a wide range of conductor sizes.

The unique "connector-stop" molded into one end prevents covers from overlapping during installation. This eliminates wasted time when trucks have to be moved to reconnect sections that did not couple correctly. This cover is also compatible with Salisbury 1.5" I.D. Class 3 or 4 flexible rubber line hose.

All of our lightweight covers are made from safety orange Type I high density cross link polyethylene.









|     |          | I         |         |   |
|-----|----------|-----------|---------|---|
|     |          |           |         |   |
| 218 | 26 Uniqu | ie Connec | tor Sto | p |

| Cat. No.  | Description                                    | ASTM          | Grade | Weight ea.   |
|-----------|--|---------------|-------|--------------|
|           | ft. ( m )                                      | Voltage Class |       | lbs. ( kgs ) |
| 27 kV CON | IDUCTOR COVERS                                 |               |       |              |
| 21172     | 5' ( 1.5 ) Cover w/ Eye                        | 3             | 2     | 4.0 ( 1.8 )  |
| 21173     | 5' ( 1.5 ) Cover w/o Eye                       | 3             |       | 3.0 ( 1.4 )  |
| 21315     | 5' ( 1.5 ) Cover w/ 4' ( 1.2) Fiberglass Stick | 3             | 1     | 5.0 ( 2.25 ) |
| 21234     | Adapter Eye                                    | 3             |       | 1.5 ( 0.7 )  |
| 35kV CON  | DUCTOR COVER                                   |               |       |              |
| 21826     | 6' ( 1.8 ) Cover                               | 4             |       | 6.5 ( 2.95 ) |

All guards are tested to ASTM F712

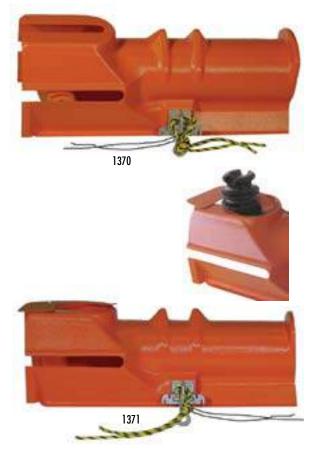
#### CROSSARM GUARDS

Crossarm guards are available in two different styles: the 1370 pin type and the 1371 post type. They are used to prevent tie wires from contacting crossarms during hot line operations. Two different tie downs are provided: a neoprene and a polypropylene rope. Both are secured in the slots provided in the eye fitting. The post type model has an automatic gap closer which covers the insulator slot opening over the end of the arm.

The Slide-On Crossarm guard 736PH is applied by sliding the cover on to the arm from the end using the shotgun eye until the unit locks onto the insulator pins. The cover overlaps on top and has notches to ease application and removal.

Both of these guards are made from orange Type I ABS cold weather high impact plastic. These guards have a voltage rating of 36.6 kV\*.





| Cat. No | . Description               | Dimensions<br>in. ( mm )          | ASTM<br>Voltage Class | Weight ea.<br>lbs. ( kgs ) |
|---------|-----------------------------|-----------------------------------|-----------------------|----------------------------|
| 1370    | Crossarm or Pin Type Guard  | 9 x 9 x 25.5 ( 229 x 229 x 648 )  | 4                     | 5.7 ( 2.6 )                |
| 1371    | Crossarm or Post Type Guard | Fits Crossarm:5 x 6 ( 127 x 152 ) | 4                     | 6.0 ( 2.7 )                |
| 736PH   | Slide-On Crossarm Guard     | 7" I.D. x 36" ( 178 I.D. x 914 )  | 4                     | 4.5 ( 2 )                  |

All guards are tested to ASTM F712



#### SUBSTATION COVER-UP

#### **BUS GUARDS**

**Substation Cover-up** and barrier equipment is used during routine maintenance where accidental contact may occur. This barrier equipment is often used where outages are difficult to reach and the occurrence of accidental contact is high. These covers may be applied with rubber gloves or hot sticks. These covers are made from Type I orange ABS plastic. This equipment is not intended for permanent or semipermanent barrier or insulating applications. Use these covers to protect against accidental contact only. These covers are not to be left installed for extended periods of time especially when in contact with both a grounded and energized object.

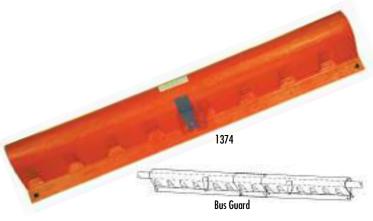
bus guards are easily interlocked with each other. To interlock units determine the length of bus to be covered. Place one unit on the bus then the other, pulling it over the first cover until the dimples interlock at the required length. This guard has a voltage rating of  $36.6 \, \text{kV}^*$ .

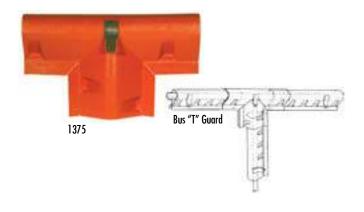
**bus "T" guards** interlock two or three bus guards at bus tap "T" connections and 90 degree angles. To interlock units, first position the bus guard then slide the "T" guard over the top interlocking the dimples. This guard has a voltage rating of 36.6 kV\*.

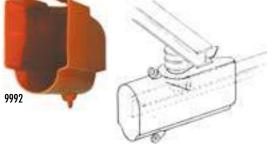
**bus End guards** cover the ends of a substation bus supported by station post insulators. The slot and insulator grip hole can be easily enlarged in the field with a sharp knife. This cover also has a guide bead for a trim fit. This guard has a voltage rating of 26.4 kV\*.

Eye kit is available on page C-10.









**Bus End Guard** 

| Cat. No | o. Dimension<br>in. ( mm )         | Description         | ASTM<br>Voltage Class | Weight ea.<br>lbs. ( kgs ) |
|---------|------------------------------------|---------------------|-----------------------|----------------------------|
| Bus G   | uard                               |                     |                       |                            |
| 1374    | 5.25"x 9.5"x4.5' ( 133 x241x1.4m ) | Impact Resistant    | 4                     | 6.0 ( 2.7 )                |
| Bus "T  | " Guard                            |                     |                       |                            |
| 1375    | 5"x15"x25" ( 127x381 x635 )        | ABS Plastic         | 4                     | 4.0 ( 1.8 )                |
| Bus Er  | nd Guard                           |                     |                       |                            |
| 9992    | 8.5"x12"x24" ( 216x305x610 )       | UV Resistant        | 3                     | 5.0 ( 2.3 )                |
|         |                                    | High Density Cross  |                       |                            |
|         |                                    | Linked Polyethylene |                       |                            |

All guards are tested to ASTM F712

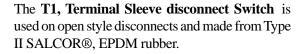
All Bus Guards may be applied with rubber gloves or hot sticks. Contact your local Salisbury representative for Hot Stick purchasing or check out salisburybyhoneywell.com for more information on our line of hot stick products. Use Salisbury Insualting Rubber Blankets as additional or alternative cover-up in situations where Bus Guards may be used.

#### SUBSTATION COVER-UP

#### SWITCH JAW GUARD & BARRIER

Switch Jaw guards insulate the energized upper switch jaw and insulator when work is being done on the switch blade, lower insulator or other de-energized equipment ahead of the open switch. These guards easily slide over the upper insulator on open substation switches and lock over the bus. Jaw Guards are made from Type I UV resistant plastic. This guard has a voltage rating of 26.4 kV\*.

The 24219 Switch Jaw Cover provides an insulated barrier to the energized upper switch jaw and insulator, when work is being done on the switch blade, lower insulator, or other de-energized equipment ahead of the open switch. This guard slides easily over the upper insulator on open substation neutral disconnect cabinet switches and locks over the bus. The 24219 Cover is made from Type I cold weather high impact plastic. This guard has a voltage rating of 14.6 kV\*.



Switch barriers slide between the last two skirts on the post or pin cap insulators of the substation disconnect switch. This locks the barrier in place. When switches are mounted back to back and work is needed on one, the barrier can be placed on the energized switch to form a visible, electrical and mechanical barrier. Work can then be done on the opposite switch or other de-energized equipment. This guard has a voltage rating of 36.6 kV\*.









e contact y<u>our loc</u>c or custom applications.

#### **GUARD AND COVER ACCESSORIES**

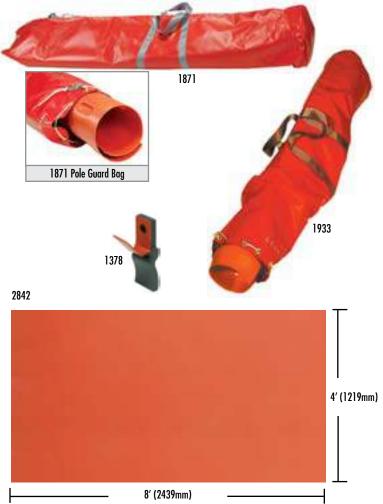
bags for line guards and Pole guards in two different sizes and can hold two nested line guards.

The 1871 **Pole guard bag** is designed to hold two nested pole guards.

All of these bags are made from soil resistant vinyl coated nylon and equipped with a drawstring and mail bag lock.

The **applicator Eye Kit** is used to apply a new or extra shotgun eye where needed. If a Bus or "T" guard needs to be shortened or inverted, this kit allows modifications to be made. Clear PVC pipe cement may be used to secure the eye. Directions are included.

The **Insulating barrier Sheet** can be used to create barriers in the field. This sheet is made from Type I ABS plastic and can be worked with ordinary hand tools, saws, tin snips and drills. It can also be hot formed using a heat gun. For example, this sheet can be bent at right angles over a table top to produce flanges for joining with other parts. Pipe adhesive can be used to join to other parts. The rated puncture is 50kV. This sheet is not intended for permanent or semipermanent barrier or insulating applications. It should be used for accidental brush applications. The 2842 barrier material meets the requirements of ASTM F712, 9.1.1 Type 1 Guards. The final application and classification of the barrier/cover is the responsibility of the user.



| Cat. No.    | Dimensions ft. ( m ) in. ( mm )  | Weight ea.<br>lbs. ( kgs ) |
|-------------|--|----------------------------|
| BAGS - LINE |  | ( 3-7                      |
| 1841        | 2 - 6' ( 1.8 ) line guards or 2 - 9" x 6' ( 229 x 1.8 ) Line Guards  | 4.5 ( 2.0 )                |
| 1933        | $2$ - $4.5^{\circ}$ ( $1.4^{\circ}$ ) line guards $$ or $2$ - $9"$ x $4'$ ( $229$ x $1.22^{\circ}$ ) Line Guards | 3.5 ( 1.6 )                |
| BAGS - POLI | E GUARDS   |                            |
| 1871        | 2 - 12" x 6' ( 305 x 1.8 ) Pole Guards   | 5.2 ( 2.4 )                |
| EYE KIT     |  |                            |
| 1378        | 1 eye per kit  | .25 ( .11 )                |
| BARRIER SH  | IEET   |                            |
| 2842        | 4' x 8' x .125" ( 1.2m x 2.4m x 3.2 )  | 36 ( 16.4 )                |

#### GUARD AND COVER ACCESSORIES

The **universal Hot Cover** is used to provide additional cover-up and clearances. This cover is made from orange Type I polyethylene plastic. The hot stick eye allows this cover to be placed and removed with a shotgun type clamp stick or with rubber gloves. To secure in place use the elastic tie-down cord. This cover can be used on overhead or underground energized cable terminators, potheads or while inverted, on lightning arrestors. This cover has a voltage rating of 26.4 kV\*.

The Pole bracket and Insulator base Cover guards against accidental contact with pole, bracket and insulator base during routine maintenance. It is made from an orange UV resistant Type I polyethylene plastic. The Grade 2 hot stick eye allows this cover to be applied and removed with a hot stick or with rubber gloves. It covers metal or fiberglass brackets 8-12" long and pole mounting plates. This cover also interlocks with a pole insulator. This cover has a voltage rating of 26.4 kV\*.

The underground distribution Elbow Cover covers primary elbows and spade terminals during routine maintenance. It covers up to the face plate and cable connection. This cover is made from orange Type I polyethylene plastic. The hot stick eye allows this cover to be applied and removed with a hot stick. This cover self locks for a secure fit in confined areas. The bead can be trimmed in the field to meet clearance requirements. This cover has a voltage rating of 26.4 kV\*.

 $^st$ guarded Ø to guarded Ø .





| Cat. No. | Description   | ASTM          | Weight ea.   |
|----------|---|---------------|--------------|
|          |   | Voltage Class | lbs. ( kgs ) |
|          |   |               |              |
| 816      | Hot Cover 8" x 16" ( 203 x 406 )                              | 3             | 2.5 ( 1.1 )  |
| 4314     | Underground Distribution Elbow Cover 15" x 14.25" ( 381 x 362 | ) 3           | 2.0 ( .9 )   |
| 4333     | Pole Bracket & Insulator Base Cover 20" x 25" ( 508 x 635 )   | 3             | 2.5 ( 1.1 )  |

All guards are tested to ASTM F712



# **OUTAGE PROTECTION**

### **FAQ**

Q: Why should I use outage protection?

A: The cost of animal caused outages to the utilities is preventable. Animals cause power outages daily, creating time lost to utilities. Salisbury offers an easy solution to this expensive problem.

Animals cannot be stopped, but these products can prevent them from causing costly outages. It's only a matter of time before an animal caused outage happens. Salisbury's Outage Protection Product Line includes the essential items you need to protect yourself from costly outages.

All of these products are completely made from material that is resistant to the effects of UV and ozone. Designed to withstand the test of time, sun and weather, to keep you protected longer.

Designed for linemen. These lightweight products are easy to use and install.

# NOTE

Outage protection is not to be used as Personal Protective Equipment (PPE).

#### SILICONE BUSHING COVERS

Standard Salisbury bushing Covers and Salisbury Tri-Port® bushing Covers are made from Ozone and UV resistant *silicone* rubber, maximizing the outdoor durability and tracking resistance. These covers have been accepted by Rural utilities Service (RuS).

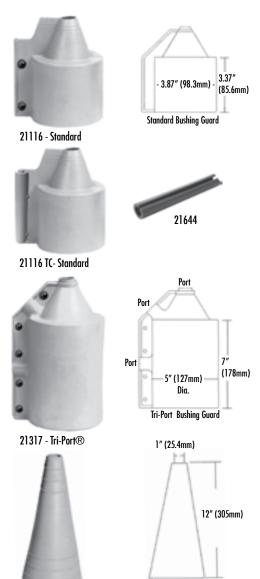
Bushing Covers protect against wildlife contacts between energized equipment and ground by insulating exposed energized bushing parts.

Standard and Tri-Port bushing Covers interlock with the top weathershed of the bushing and are securely fastened by inserting lock buttons (provided). The 21116TC, Standard bushing Cover, includes the 21644 Tube Closure. The 21644 Tube Closure provides an easier and quicker way to securely close the standard bushing cover.

Bushing Covers can be installed without disconnecting equipment using rubber insulating gloves. Covering a small area of the lead wire, the opening can be trimmed to accommodate larger wires or 5/8" and 3/4" Salisbury Stinger Covers.

#### **Cone bushing Covers**

For complete 360 degree coverage, the BC512 is the right choice. Complete with upper and lower trim rings for a custom fit size and internal ribs for added air flow and water drainage. Made from Ozone and UV resistant silicone rubber, the BC512 permanently protects bushings from all sources of potential outages. Installation requires de-energizing equipment.



| Cat. No. | Description                 | Dimensions in. ( mm )       | Quantity | Flashover Test<br>Voltage | Weight ea.<br>lbs. ( kgs ) |
|----------|-----------------------------|-----------------------------|----------|---------------------------|----------------------------|
| BUSHING  | COVERS                      |                             |          |                           |                            |
| 21116    | Cover Only                  | -                           | 24 pcs.  | 16 kV                     | 16 (7.3)                   |
| 21116TC  | Cover Only w/ 21644         | -                           | 24 pcs.  | 16 kV                     | 16 (7.3)                   |
| 21644    | Tube Closure                | -                           | -        | -                         | -                          |
| 21183    | Cover Kit w/Stinger Cover*  | .375 x 18 ( 9.5 x 457 )     | 24 pcs.  | n/a                       | 20 (9)                     |
| BC512    | Cone Bushing Cover          | 12H x 5 W ( 305 H x 127 W ) | 1        | n/a                       | 1.5 ( .7 )                 |
| TRI-PORT | ® BUSHING COVERS            |                             |          |                           |                            |
| 21317    | Cover Only                  |                             | 24 pcs.  | 16 kV                     | 28 ( 12.7 )                |
| 24140    | Cover Kit w/ Stinger Cover* | 3/8 x 18 ( 9.5 x 457 )      | 24 pcs.  | n/a                       | 35 ( 16 )                  |

BC512

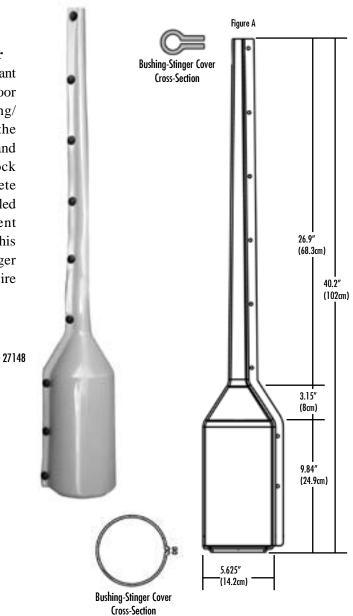
\* See page D-5 for more Stinger Covers

(127mm)

#### **COMPLETE BUSHING-STINGER COVER**

#### **Complete bushing-Stinger Cover**

This product is made from UV resistant PVC plastic to maximize the outdoor durability. The Complete Bushing/Stinger Cover interlocks with the top weathershed of the bushing and securely fastens by inserting lock buttons (provided). The Complete Bushing/Stinger Cover can be installed without disconnecting equipment using rubber insulating gloves. This product offers an integrated stinger cover which will cover the lead wire for an easy solution.



| Cat. No. | Description                        | Dimensions in. ( cm ) | Quantity | Weight ea.<br>lbs. ( kgs ) |
|----------|------------------------------------|-----------------------|----------|----------------------------|
| COMPLE   | TE BUSHING-STINGER COVER           |                       |          |                            |
| 27148    | Bushing Cover & Stinger Cover Unit | see figure A          | 20 pcs.  | 48 ( 21.9 )                |

#### STINGER COVERS

Stinger Covers protect against phase to phase and phase to ground wildlife contacts. These covers have been accepted by Rural utilities Service (RuS).

The stinger cover can be installed without disconnecting the lead wire from the bushing. Available in three diameters, it is easily cut in the field to the needed length.

Stinger covers are track resistant and made from Ozone and UV resistant SALCOR® elastomer in a grey color. The covers are proven to provide years of reliable service either independently or when used with bushing covers.





| Cat. No. | I.D.<br>in. ( mm ) | Dimensions<br>ft. ( m ) | Quantity | Flashover Test<br>Voltage kV | Weight<br>lbs. ( kgs ) |
|----------|--------------------|-------------------------|----------|------------------------------|------------------------|
| EPDM     |                    |                         |          |                              |                        |
| 38-2SC   | 3/8 ( 9.5 )        | 2 ( .61 )               | 25 pcs.  | 10.5                         | 9.5 ( 4.3 )            |
| 38-50SC  | 3/8 ( 9.5 )        | 50 ( 15.3 )             | 1 coil   | 10.5                         | 9.5 ( 4.3 )            |
| 38-12SC  | 3/8 ( 9.5 )        | 12 ( 3.7 )              | 4 pcs.   | 10.5                         | 9.5 ( 4.3 )            |
| 38-18SC  | 3/8 ( 9.5 )        | 18" ( 457mm )           | 50 pcs.  | 10.5                         | 11 (5)                 |
| 38-100SC | 3/8 ( 9.5 )        | 100 ( 30.5 )            | 1 coil   | 10.5                         | 16 ( 7.25 )            |
| 58-12SC  | 5/8 ( 15.9 )       | 12 ( 3.7 ) coil         | 4 pcs.   | 12.5                         | 22 ( 10 )              |
| 58-50SC  | 5/8 ( 15.9 )       | 50 ( 15.3 ) coil        | 1 pc.    | 12.5                         | 21 ( 9.5 )             |
| 58-100SC | 5/8 ( 15.9 )       | 100 ( 30.5 ) coil       | 1 pc.    | 12.5                         | 45( 20.5 )             |
| 34-12SC  | 3/4 ( 25.4 )       | 12 ( 3.7 ) coil         | 4 pcs.   | 14.9                         | 22 ( 10 )              |
| 34-25SC  | 3/4 ( 25.4 )       | 25 ( 7.6 ) coil         | 2 pc.    | 14.9                         | 22 ( 10 )              |

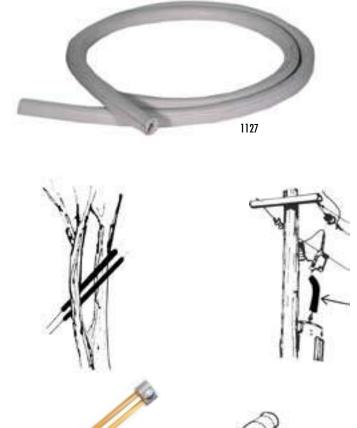
For sizes and lengths other than those listed above, contact your local Salisbury representative.

#### **INSTANT INSULATION**

Instant Insulation may be installed as permanent cover to protect against outages caused by weather, trees and animals. Instant Insulation resists ozone and ultraviolet deterioration while remaining flexible even at sub-zero conditions.

Instant Insulation is made of orange or grey SALCOR® elastomer. Instant Insulation is sold in three diameters, each 12 feet in length. Each include six nylon UV resistant bar-lock cable ties to secure it to the conductor.

Instant Insulation can be installed using the **2494 applicator**. To install, insert one end of the Instant Insulation into the applicator prongs, then roll and coil the insulation as shown. Secure the coil end with tape, cable ties, or rubber bands. To install, release the secured end and the Instant Insulation will unroll and enclose the conductor.



| Cat No.       | Dimen<br>in.                       | sions<br>mm               | Color  | Weigh<br>lbs. | it ea.<br>kgs |  |  |
|---------------|------------------------------------|---------------------------|--------|---------------|---------------|--|--|
| INSTANT INSUL | INSTANT INSULATION 12' / 3.6m long |                           |        |               |               |  |  |
| 1127          | .75 I.D.                           | 19 I.D.                   | Grey   | 7             | 3.2           |  |  |
| 1128          | .75 I.D.                           | 19 I.D.                   | Orange | 7             | 3.2           |  |  |
| 1129          | 1.00 I.D.                          | 25 I.D.                   | Grey   | 8             | 3.6           |  |  |
| 1130          | 1.00 I.D.                          | 25 I.D.                   | Orange | 8             | 3.6           |  |  |
| 1131          | 1.25 I.D.                          | 32 I.D.                   | Grey   | 10            | 4.5           |  |  |
| 1132          | 1.25 I.D.                          | 32 I.D.                   | Orange | 10            | 4.5           |  |  |
| 2494          |                                    | Jniversal Hot Stick Appli | icator | 1             | .5            |  |  |

#### GREENJACKET® ANIMAL CAUSED OUTAGE PROTECTION



Salisbury by Honeywell is proud to offer Greenjacket® Outage Protection products and services. Here is more information about this great new service. For additional information please visit GreenjacketSalisbury.com.

- 1. It is the only industry comprehensive product line designed for energized installation
- 2. It is custom designed to precisely fit each piece of equipment "It Fits"
- 3. It is offered as part of a service where site plans are made to identify what exactly is needed for coverage

#### WHAT WE OFFER

Greenjacket provides world-class patented products, tools, and processes for preventing animalcaused power outages at electrical substations. Our customized, turnkey outage protection solutions make it easy for managers to select the best option for improving power reliability. Greenjacket custom-manufactures its dielectric covers to ensure that each cover has the right fit for the electrical component being protected. We provide a product that is quick and easy to install—even in an energized environment.

#### HOW WE dO IT

- 1. We evaluate schematics and/or images of existing facilities to develop a budgetary estimate for a solution.
- 2. On agreement, we conduct a site assessment to determine points of risk in the substation, then use 3D photogrammetry to obtain equipment dimensions off energized equipment.
- 3. We create a Site Protection Plan that includes a prioritized, itemized list of the protective covers required to mitigate bird- and animal-caused outages. The plan includes detailed installation instructions.
- 4. The product is manufactured using existing and/or custom-developed moulds, as required to protect the substation that has been evaluated.
- 5. Product is delivered to the customer's site for installation. Greenjacket provides optional consulting support for both customer and contractor based installations.
- 6. Follow-up risk mitigation programs are available to optimize ongoing risk management.

#### THE valuE WE dElIvER

- Improved Power Reliability: by reducing the number of bird- and animal-caused contacts, the number of power interruptions is reduced.
- dollar Savings: bird and animal-caused outages can result in the costly replacement of equipment, expensive overtime repair charges, and fire-drill management of work schedules.
- Increased Revenues: outages can dramatically reduce billable electric services to customers or negatively impact revenues through production downtime.
- Improved Community and Public Relations: outages create stress for everyone, from the customer through to power system managers and executive teams.
- Reduced Penalties: wildlife protection agencies are increasing the scope and dollar amount of fines related to animal "takes"; fines currently range as high as \$500,000 per incident.
- Comprehensive, Turnkey Solutions: no more piecemeal coverage with ill-fitting products. Greenjacket provides a customized solution that is tailored to fit the specific components of a substation.



# GLOVES & SLEEVES

## **Rubber and SALCOR® Protective Equipment**

Rubber insulating gloves are available in six ASTM defined voltage classes. Rubber insulating sleeves are available in Class 00 through 4. The chart below identifies the class, proof test voltage and maximum allowable exposure voltage.

For an 8.5 x 11 reprint of this chart, contact your local Salisbury representative.

|  | Protective Rubber Equipment Labeling Chart for Salisbury Linemen's Natural Rubber and SALCOR® Rubber Protective Equipment |                                 |  |  |   |  |
|--|---|---------------------------------|--|--|---|--|
| Class<br>Color   | Proof Test<br>Voltage<br>AC / DC  | Max. Use<br>Voltage*<br>AC / DC | Rubber<br>Molded<br>Products<br>Label  | Glove Label  | Rubber Dipped<br>Sleeve Label   |  |
| 00<br>Beige  | 2,500 / 10,000  | 500 / 750                       |  | 10 SALISBURY AND SHEET AND |   |  |
| O<br>Red   | 5,000 / 20,000  | 1,000 / 1,500                   | ST SECTION OF THE PROPERTY OF  | 10 SANBURT   | SALISBURY AND APPENDENCE OF THE PROPERTY OF T |  |
| 1<br>White   | 10,000 / 40,000   | 7,500 / 11,250                  | SHILLING THE INTERPRETATION OF THE INTERPRET | 10 SALISBURY STOR SALISBURY STORE SALISBURY STORE SALISBURY SALISB | SALISBURY  ANEL ASTRI MENT DICET  CLASS 1 THE 1  MAX USE VOLT TERMY AC  |  |
| 2<br>Yellow  | 20,000 / 50,000   | 17,000 / 25,500                 | STATE OF THE PARTY | 10 SALISBURY  MAD AND VOCT THEORY AC   | SALISBURY  ANS: /ASTW AMAY DINCT CLASS   WITTER    MAX USE VOCT 1 PROCE! AC   |  |
| <b>3</b><br>Green  | 30,000 / 60,000   | 26,500 / 39,750                 |  | 10 SALISBORY   | SALISBURY  AND AND AND STORY  THAT S  AND ONE YEAR SCHOOL ASS   |  |
| <b>4</b><br>Orange   | 40,000 / 70,000   | 36,000 / 54,000                 | SUSBOAN AND THE SAME SAME SAME SAME SAME SAME SAME SAM   | 10 MALESBURY   | SALISBURY  RANI FAMILY WARD TOTAL  CLASS 4 TOTAL  WACE LISE VOLUME MACKET AC  |  |
| Insulating Gloves and Sleeves must have a color coded label to meet appropriate ASTM Specifications. |   |                                 |  |  |   |  |

Max. Use Voltage when worn with leather protectors.

Gloves and Sleeves.

#### SALISBURY LINEMEN'S GLOVES

#### Manufactured for outstanding protection, comfort and long-life

Rubber insulating gloves are among the most important articles of personal protection for electrical workers. Incorporating high dielectric and physical strength, flexibility and durability, Salisbury rubber insulating gloves have earned the reputation for superior performancemeeting and exceeding the requirements of current ASTM D120 specifications and IEC EN60903 Standards.

Salisbury rubber insulating gloves are manufactured by dipping porcelain forms into a tank of liquefied rubber. The thin layer of rubber which results is allowed to dry and the process is repeated until the required thickness is reached. Depending on the voltage class of the glove, this dipping-drying-dipping cycle may need to be repeated over 30 times. After the desired thickness is achieved, the gloves



are allowed to dry. Once dry, they are cut to length, the reinforcing bead is rolled, and the ASTM label and manufacturing information is applied along with any additional permanent marking that may be requested.

The gloves are cured in an autoclave under steam pressure and heat. After curing, the gloves are visually inspected. Gloves with visual imperfections are rejected. The gloves are then given a halogenation treatment (chlorination) to increase the comfort and wearability. The gloves are electrically tested following ASTM D120/IEC 903 specifications. Following the electrical test, the gloves are given a final visual inspection. The gloves are then ready to be boxed and shipped.

#### ARE YOU NOT SURE WHAT **GLOVES YOU NEED?**

Salisbury has made it easy with the Salisbury Glove Configurator<sup>TM</sup>

#### **Glove Configurator**

Visit www.salisburybyhoneywell.com to use Salisbury's exclusive Glove Configurator<sup>TM</sup>. This interactive web tool allows you to easily determine which Salisbury gloves you need to meet your requirements.



#### MAKING A PROPER INSPECTION

OSHA 1910.137 states "Insulating equipment shall be inspected before each day's use and immediately following any incident that can reasonably be suspected of having caused damage. Insulating gloves shall be given an air test, along with the inspection." Salisbury's New g100 (Patent Pending), with g100a adapter for Class 00 and 0 and smaller size gloves, and the g99, without additional adapter, are the perfect answer for inflating your gloves for inspection.

The **g99** is a simple, easy to use, portable glove inflator. The G99 provides a quality means of inspecting gloves in the field. The glove is secured to the inflator using a nylon strap and fastened with a hook and pile closure. Inflation is accomplished by pumping the bellows of the inflator against any surface. **nOTE: gloves should be expanded no more than 1.5 times their normal size for Type I, and 1.25 times normal for Type II SalCOR.** 

#### **SALISBURY ADVANTAGE**

The **g100** is also a simple and easy to use, portable glove inflator. The G100 operates exactly like the G99, but includes an additional **g100a** adapter to also inspect Class 00 and 0 and smaller gloves. To use the adapter, the glove is secured to the G100A adapter using a nylon strap with a hook and pile closure. The adapter, with glove attached, is then placed on top of the inflator to be inflated for inspection.

#### **INF Series Glove Inflators & Sleeve Expanders**

Proper safety requires frequent inspection of gloves and sleeves. These glove inflators and sleeve expanders provide an efficient way to conduct complete and thorough visual inspections before and after use in the field. Easy to install. Simple to operate. Accommodates all sleeve and glove sizes. Minimum floor space. Compressed air source required.

| source rec | quiieu.   |
|------------|---|
| Cat. No.   | Description   |
| G99        | Glove Inflator Kit  |
| G99B       | Replacement Bag   |
| G99S       | Replacement Strap   |
| G99V       | Replacement Check Valve   |
| G100       | Glove Inflator Kit w/ Adapter   |
| G100A      | Lo-Volt Glove Adapter   |
| INF-1      | Standard Bench Model Inflator with Hand Pump  |
| INF-2      | Standard Bench Model Inflator with Alr-Line Connection                                    |
| INF-3      | Standard Floor Model  |
| INF-4      | Bench Model Air-Bag Inflator for High Voltage Gloves                                      |
| INF-5      | Bench Model Air-Bag Inflator for High and Low Voltage Gloves                              |
| INF-6      | Standard Sleeve Expander  |
| INF-7      | Replacement Glove Inflator Boots for Air Bag Glove Inflators                              |
| INF-8      | Replacement Bladders for Sleeve Expander (with closed ends) - Set of three                |
| INF-9      | Single Replacement Bladders for Sleeve Expander (with closed ends) - Outside Bladder only |
| INF-10     | Hand Held Glove Inflator  |







G100 with inflated lo-volt glove ready for inspection.





#### SALISBURY LINEMEN'S GLOVES

#### **LOW VOLTAGE - ASTM CLASS 00, 0**



Measure the circumference around the palm.

#### Selecting the right size, length and style

Salisbury linemen's gloves are available in a full range of sizes, from 7 through 12, including half sizes on 8, 9, and 10. Proper fit is important. To determine glove size, measure the circumference around the palm. Allow for additional room if fabric glove liners are to be worn, especially with thermal liners.

#### **SALISBURY ADVANTAGE**

Type I and Type II gloves are extremely flexible to make working with small parts easy. The gloves meet or exceed ASTM D120 and IEC EN60903 Standards.

Class 00 and 0 gloves are available in 11 and 14 inch lengths. Class 00 Electrical Insulating Rubber gloves are made from red or black Type I natural rubber, blue Type II SALCOR®, or in contrasting blue/orange Type II SALCOR. The contrast between the outer orange color against the inner blue color makes inspecting for cuts and tears easier when the glove is inflated or stretched.

Class 0 Electrical Insulating Rubber gloves are available in red, black, yellow, and contrasting black/ yellow colors in Type I Natural Rubber. The contrast between the outer yellow color against the inner black color makes inspecting for cuts and tears easier when the glove is inflated or stretched. These gloves are also available in blue or contrasting blue/orange colors Type II SALCOR rubber.

|   | Cat. No. I | Breakdow | n for Class 00 Gl                                 | oves             |
|---|------------|----------|---|------------------|
|   | Class      | Length   | Color   | Size             |
| E   | 00         | 11       | R, B, BL, or BLO                                  | 7, 8, 8H         |
| E   | 00         | 14       | R, B, BL, or BLO<br>R, B, BL, or BLO<br>al Rubber | 9, 9H<br>10, 10H |
| R=red B=black Type I Natural Rubber 11, 12 BL=blue BLO=blue in, orange out :Type II SALCOR <b>Example:</b> E0011BL/8 <b>NOTE:</b> Size 11H no longer available. |            |          |   |                  |

|   | Cat. No    | . Breakd | own for Class 0 Glo     | ves       |  |
|---|------------|----------|-------------------------|-----------|--|
|   | Class      | Length   | Color                   | Size      |  |
| Е   | 0          | 11       | Y, B, R, BL, BLO, or BY | 7, 8, 8H  |  |
| E   | 0          | 14       | Y, B, R, BL, BLO, or BY | 10, 10H   |  |
| R=red B=black Y=yellow:Type I Natural Rubber 11, 12 BY=black in, yellow out:Type I Natural Rubber |            |          |                         |           |  |
| BL=blue BLO=blue in, orange out :Type II SALCOR   |            |          |                         |           |  |
| Fxa   | mple: F014 | 1R/9 NOT | E: Size 11H no longer a | available |  |





#### SALISBURY LINEMEN'S GLOVES

#### HIGH VOLTAGE - ASTM CLASS 1, 2, 3, 4

Class 1 through 4 gloves are available in the industry standard color black, or in contrasting two-color combinations. The contrast between the thin outer color against the inner color makes inspecting for cuts and tears easier when the glove is inflated or stretched.

Class 1 through 4 gloves are available in 14, 16 and 18 inch lengths. A **straight cuff** is standard on 14" (356 mm), 16" (406 mm) & 18" (457 mm) gloves. The straight cuff is the default style.

A **contour cuff** is angled to prevent bunching or binding at the elbow when the arm is bent. Available on all 18" (457mm) gloves only.

The **bell cuff** accommodates heavier winter clothing and allows for greater air flow in warmer weather. These are available for Class 1 through 4 gloves. Bell cuff gloves are not available in sizes 7, 8 or 8H.



|   | Cat. No. Breakdown for Class 1,2,3,4 Gloves |                  |            |             |                  |  |
|---|---|------------------|------------|-------------|------------------|--|
|   | Class                                       | Glove Length in. | Cuff Style | Color       | Size             |  |
| Е | 1   | 14, 16 or 18     | BC***, C   | B, YB or RB | 7, 8, 8H<br>9,9H |  |
| Е | 2   | 14, 16 or 18     | BC***, C   | B, YB or RB | 9,9H             |  |
| Е | 3*  | 14, 16 or 18     | BC***, C   | B, YB or RB | 10, 10H          |  |
| Ε | 4**   | 14, 16 or 18     | BC***, C   | B, YB or RB | 11, 12           |  |

BC\*\*\*=bell cuff C=contour cuff (Contour cuff available for 18" only.)

B=black YB=Y inside, B out RB=R inside, B out:Type I Natural Rubber

Example: E116BCYB/10

NOTE: Size 11H no longer available.

<sup>\*</sup>available in sizes 8 through 12 including half sizes only

<sup>\*\*</sup>available in sizes 9 through 12 including half sizes only

<sup>\*\*\*</sup>bell cuff gloves available in sizes 9 through 12 including half sizes

#### SALISBURY LINEMEN'S MITTENS

#### **HIGH VOLTAGE - ASTM CLASS 1, 2, 3, 4**

Salisbury lineman's mittens are made from the same durable, lightweight rubber as the five finger gloves yet keep the user warmer during harsh temperatures. The three finger mitten allows for precise hand movement as well.

Class 1 through 4 mittens are available in the industry standard black or in contrasting two-color combinations. The contrast between the thin outer color against the inner color makes inspecting for cuts and tears easier when the glove is inflated or stretched.

Class 1 through Class 2 mittens are available in 14, 16 and 18 inch lengths. Class 3 through Class 4 mittens are available in 16 and 18 inch lengths. A bell cuff design is standard on all mittens. BC=Bell Cuff.

Mittens are available in sizes 9, through 11 full sizes only.



EM216BCRB/10

| Cat. No. Breakdown for Class 1,2,3,4 Gloves |              |              |                 |                      |               |
|---|--------------|--------------|-----------------|----------------------|---------------|
|   | Class<br>in. | Glove Length | Cuff Style      | Color                | Size          |
| EM  | 1            | 14, 16 or 18 | ВС              | B, YB or RB          | 9             |
| EM  | 2            | 14, 16 or 18 | BC              | B, YB or RB          | 10            |
| EM  | 3            | 16 or 18     | BC              | B, YB or RB          | 11            |
| EM  | 4            | 16 or 18     | BC              | B, YB or RB          |               |
| Rell  | Cuff colors  | B=black YI   | R=Yellow inside | Black out RB=Red ins | side Black ou |

#### LEATHER PROTECTORS

leather Protector gloves should always be worn over Rubber Insulating Gloves to provide the needed mechanical protection against cuts, abrasions and punctures. All Salisbury protectors are steamed pressed on curved hand forms to insure proper fit over Rubber Gloves. Manufactured from top grade leather, all are sewn with heavy duty nylon thread in the "gunn cut" inseam construction pattern. Each protector for Class 1-4 gloves are equipped with a nonmetallic buckle on the pull strap and an extra wide leather reinforcement over the thumb seam. Protectors for Class 00 and 0 gloves are available with nonmetallic buckle and pull strap or elastic wrist.

## all Salisbury leather Protectors meet aSTm F696 standards.

It is the responsibility of the purchaser to specify the overall length of the protector gloves. The Clearance Table shows the minimum distance which shall be allowed between the protector glove cuff and the bead of the rubber glove per ASTM F496 Specifications.



WaRnIng: do not use leather protectors alone for protection against electric shock. Serious injury or death will result. always use a properly rated insulating glove for the voltage being worked.

Proper care of leather protectors is essential to user safety. Inspect the leather protectors when inspecting rubber gloves. Metal particles, imbedded wire, abrasive materials or any substance that could physically damage the rubber gloves must be removed from the protector before use.





# CLEARANCE TABLE FOR LEATHER PROTECTORS PER ASTM F496 - Table 4

| Glove<br>Class | Min. Distance Between<br>Protectors and Rubber Gloves |     |  |
|----------------|---|-----|--|
|                | in.   | mm  |  |
| 00, 0          | 1/2   | 13  |  |
| 1              | 1   | 25  |  |
| 2              | 2   | 51  |  |
| 3              | 3   | 76  |  |
| 4              | 4   | 102 |  |

Adapted, with permission, from F496-08 Standard Specification for In-Service Care of Insulating Gloves and Sleeves, copyright ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428. A copy of the complete standard may be obtained from ASTM, www.astm.org.

| a)   | Glove Class |      | Leather Protector Cuff |
|--|-------------|------|------------------------|
| <u>8</u>   |             |      | Cuff Line              |
| pper G   | 00, 0       | 1/2— | 1/2" from cuff         |
| nd Ru  | 1           | 1    | 1" from cuff           |
| Minimum Distance from Protector and Rubber Glove | 2           | 2 —  | 2" from cuff           |
| ım Distaı  | 3           | 3    | 3" from cuff           |
| Minim  | 4           | 4 —  | 4" from cuff           |

#### PREMIUM LEATHER PROTECTORS

#### **SALISBURY ADVANTAGE**

#### **156 Premium Series**

Salisbury's SALCOR® cuff provides maximum protection.

These protectors are made from specially tanned Grade A Red Boulevard buffed leather and an orange colored SALCOR "Super Cuff" in the 4" (102 mm) and 6" (152 mm) cuff lengths. The "Super Cuff" has better characteristics than leather or vinyl cuffs; it does not absorb water, has greater track resistance, and creepage.

| Cat. No. | Cuff Length in. ( mm )  | OAL Length in. ( mm ) | Weight ea.<br>lbs. ( kgs ) |
|----------|-------------------------|-----------------------|----------------------------|
| 156-4    | 4 ( 102 ) Straight Cuff | 12 ( 305 )            | 1 ( .5 )                   |
| 156-6    | 6 ( 152 ) Straight Cuff | 14 ( 356 )            | 1.2 ( .5 )                 |
|          |                         |                       |                            |



Available in dual sizes: 8/8.5, 9/9.5, 10/10.5, 11/11.5, 12



156-4



#### **LEATHER PROTECTORS**

#### **IIP Series**

Manufactured from top grain cowhide, or goatskin, these protectors provide excellent protection for rubber insulating gloves at a very economical price. Cowhide cuffs are tough leather on palm side and orange vinyl on the back, while the goatskin cuffs are green leather on palm side and orange vinyl on back. Full complement of styles from low-volt through 16" contour cuff. Comes in size 7, dual sizes 8/8.5 through 11/11.5 and size 12.

#### **IIPm Series mitten Protector**

Manufactured from top grain cowhide, these protectors offer excellent comfort and protection. The ILPM Series mitten protectors feature adjustable straps with non-metallic buckles and are stitched with polyester thread for strong seams. Cuffs are tough leather on palm side and orange vinyl on the back of the hand. Comes in sizes 9, 10 and 11.

#### **IP Series**

Manufactured from top grain cowhide or goatskin, these protectors offer excellent comfort and protection. The LP Series protectors feature adjustable straps with non-metallic buckles and are stitched with polyester thread for strong seams. Cuffs are tough leather on palm side and orange vinyl on the back of the hand. Comes in sizes 7 to 12, including half sizes 8 1/2 to 11 1/2.

| Cat. No.                | OAL Length in. ( mm ) | Weight ea.<br>lbs. ( kgs ) |
|-------------------------|-----------------------|----------------------------|
| ILP SERIES - COWHI      | DE                    |                            |
| ILP3S*                  | 12 ( 305 )            | 1 ( .5 )                   |
| ILP4S*                  | 13 ( 330 )            | 1 ( .5 )                   |
| ILP5S*                  | 14 ( 356 )            | 1.2 ( .5 )                 |
| ILP6S* / **             | 15 ( 381 )            | 1.2 ( .5 )                 |
| ILP7C* / **             | 16 ( 406 )            | 1.5 ( .7 )                 |
| ILP10*                  | 10 ( 254 )            | .7 ( .32 )                 |
| ILP10A* w/ pull strap   | 10 ( 254 )            | .7 ( .32 )                 |
| *To specify goatskin, u | se ILPG. Goatskin     | not available in size 7.   |

<sup>\*</sup>To specify goatskin, use ILPG. Goatskin not available in size 7. Available in dual sizes: 7, 8/8.5, 9/9.5, 10/10.5, 11/11.5, 12

<sup>\*\*</sup> Not available in size 7.

ILPM SERIES - COWHIDE

| ILPM3S                    | 12 ( 305 ) | 1 ( .5 )   |
|---------------------------|------------|------------|
| ILPM4S                    | 13 ( 330 ) | 1 ( .5 )   |
| ILPM5S                    | 14 ( 356 ) | 1.2 ( .5 ) |
| Available in sizes: 9, 10 | O, 11      |            |
| LP SERIES                 |            |            |
| LP3S                      | 12 ( 305 ) | 1 ( .5 )   |
| LP4S                      | 13 ( 330 ) | 1 ( .5 )   |
| LP5S                      | 14 ( 356 ) | 1.2 ( .5 ) |
| LP6S                      | 15 ( 381 ) | 1.2 ( .5 ) |
| LP7C                      | 16 ( 406 ) | 1.5 ( .7 ) |
| LP10                      | 10 ( 254 ) | .7 ( .32 ) |
| LP10A w/ pull strap       | 10 ( 254 ) | .7 ( .32 ) |

To specify goatskin, use LPG.

Available in single sizes: 8, 8.5, 9, 9.5, 10, 10.5, 11, 11.5, 12



LPG3S

#### **GLOVE STORAGE & GLOVES KITS**

# Proper storage extends the service life of linemen's gloves and sleeves.

Folds and creases strain rubber and cause it to crack from ozone prematurely. By storing rubber gloves in the right size bag, and never forcing more than one pair into each bag, equipment will lie flat and last longer.

Salisbury bags are constructed of heavy duty canvas duck and are double stitched and riveted at stress points for extra durability. Canvas bags feature a D ring for hanging in trucks or on work belts. Bags feature tapered gussets with wide opening tops for easy insertion.





#### glove Kits

Salisbury's insulating rubber gloves are necessary for every electrical worker's complete safety. And to insure your safety, Salisbury's leather protectors provide needed protection from cuts, abrasions, and punctures. To keep these safety items in top condition, proper storage is very important.



| Out. No.  | length in. ( mm )     | inches ( mm )          | lbs. ( kgs ) |
|-----------|-----------------------|------------------------|--------------|
| 26 oz. C/ | ANVAS GLOVE BAG       | is                     |              |
| GB112     | 11 ( 280 )            | 9" x 14" ( 229 x 356 ) | 1 ( .5 )     |
| GB114     | 14 ( 356 )            | 9" x 16" ( 229 x 406 ) | 1 ( .5 )     |
| GB116     | 16 ( 406 )            | 9" x 18" ( 229 x 457 ) | 1.2 ( .6 )   |
| GB118     | 18 ( 457 )            | 9" x 20" ( 229 x 508 ) | 1.5 ( .7 )   |
| 26 oz. C/ | ANVAS GLOVE BAG       | S w/ goggle case       |              |
| GB114G    | C 14 (356)            | 9" x 16" ( 229 x 406 ) | 1 ( .5 )     |
| GB116G    | C 16 (406)            | 9" x 18" ( 229 x 457 ) | 1.2 ( .6 )   |
| GB118G    | C 18 (457)            | 9" x 20" ( 229 x 508 ) | 1.5 ( .7 )   |
| 14.75 oz. | CANVAS GLOVE &        | PROTECTOR BAGS         |              |
| GPB112    | 12 ( 305 )            | 9" x 14" ( 229 x 356 ) | 1 ( .5 )     |
| GPB114    | 14 ( 356 )            | 9" x 16" ( 229 x 406 ) | 1 ( .5 )     |
| GPB116    | 16 ( 406 )            | 9" x 18" ( 229 x 457 ) | 1.2 ( .6 )   |
| GPB118    | 18 ( 457 )            | 9" x 20" ( 229 x 508 ) | 1.5 ( .7 )   |
| GLOVE 8   | R PROTECTOR COM       | IBO BAGS               |              |
| 2C16      | 14 ( 356 ) 16 ( 406 ) | 9" x 18" ( 229 x 457 ) | 1.2 ( .6 )   |
| 2C18      | 18 ( 457 )            | 9" x 20" ( 229 x 508 ) | 1.5 ( .7 )   |



| Product Numbering Chart for Glove Kits |       |                    |             |   |
|--|-------|--------------------|-------------|---|
|  | Class | Length<br>(inches) | Color       | Size<br>of Gloves<br>(choose one below) |
| GK                                     | 00    | 11 or 14           | B, R, BL    | 7, 8, 9, 10, 11, 12                     |
| GK                                     | 0     | 11 or 14           | R, BL, B, Y | 7, 8, 9, 10, 11, 12                     |
| GK                                     | 2     | 14, 16, or 18      | B, RB       | 7, 8, 9, 10, 11, 12                     |
| Example: GK011BL/9                     |       |                    |             |   |

RB=Red in, Black out Type II SALCOR® Rubber available in: BL=Blue

E011BL/9 2 11 ST 9 Note: If you require test date stamping, please specify when ordering.

Type I Natural Rubber available in:

R=Red, Y=Yellow, B=Black,

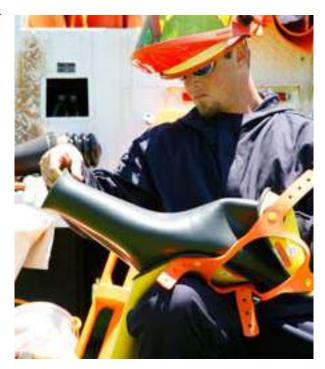
Cat. No.

Rubber Insulating Sleeves extend coverage of the arm from the cuff of rubber insulating gloves to the shoulder– fully protecting these areas from accidental contact with energized conductors and equipment. Salisbury sleeves feature a reinforcing fold at the cuff. This fold is preferred over a rolled bead because it adds less bulk to the cuff and fits into the glove easier without pushing. Two different processes are used to manufacture insulating sleeves; dipping and molding. Both meet the current requirements of ASTM D1051 and offer the same high level of quality and protection.

#### Sizing

CTDAL

Sleeves should be selected to fit the arm comfortably, covering from the top of the shoulder to inside the top of the glove. Regular size sleeves are the shortest and have the smallest arm and wrist openings. To minimize the possibility of the sleeves pushing gloves off the hand, size the sleeve to the shortest length possible while maintaining complete coverage to the shoulder.



| 21      | zing Lin | emen's   | Sieeves |
|---------|----------|----------|---------|
| GHT ARM | SLEEVE   | - Figure | 1       |
|         | _        | _        | _       |

| STRAIGHT ARM SLEEVE- Figure 1 |               |               |              |  |
|-------------------------------|---------------|---------------|--------------|--|
| Α                             | В             | C             | D            |  |
| in. ( mm )                    | in. ( mm )    | in. ( mm )    | in. ( mm )   |  |
| Small                         |               |               |              |  |
| 24.25 (616)                   | 15.13 ( 384 ) | 12.5 ( 317 )  | 5.75 ( 146 ) |  |
| Regular                       |               |               |              |  |
| 26.25 ( 667 )                 | 15.5 ( 394 )  | 11.25 ( 286 ) | 5.5 ( 140 )  |  |
| Large                         |               |               |              |  |
| 28.5 ( 724 )                  | 17 ( 432 )    | 12.87 ( 327 ) | 6.87 ( 175 ) |  |
| Extra Large                   |               |               |              |  |
| 30 (762)                      | 19 ( 483 )    | 13.25 ( 337 ) | 6.87 ( 175 ) |  |
|                               |               |               |              |  |

| <b>EXTRA CURV</b> | EXTRA CURVED ARM SLEEVE- Figure 2 |               |              |  |  |  |
|-------------------|-----------------------------------|---------------|--------------|--|--|--|
| Α                 | В                                 | С             | D            |  |  |  |
| in. ( mm )        | in. ( mm )                        | in. ( mm )    | in. ( mm )   |  |  |  |
| Small             |                                   |               |              |  |  |  |
| 24.25 ( 616 )     | 15.13 ( 384 )                     | 12.5 ( 317 )  | 5.75 ( 146 ) |  |  |  |
| Regular           |                                   |               |              |  |  |  |
| 26.5 (673)        | 15.5 ( 394 )                      | 12.25 ( 311 ) | 5.25 ( 140 ) |  |  |  |
| Large             |                                   |               |              |  |  |  |
| 27.75 ( 705 )     | 16 (406)                          | 12.87 ( 327 ) | 6.87 ( 175 ) |  |  |  |
| Extra Large       |                                   |               |              |  |  |  |
| 29.5 ( 749 )      | 17.5 ( 445 )                      | 12.87 ( 327 ) | 7 ( 178 )    |  |  |  |

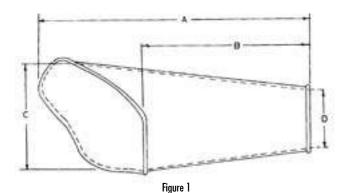


Figure 2

#### LINEMEN'S SLEEVES

#### **DIPPED**

#### **SALISBURY ADVANTAGE**

dipped sleeves are manufactured in the same way as Salisbury rubber insulating gloves. Porcelain forms are dipped into liquefied rubber, dried, trimmed, marked and cured. Every sleeve receives the same quality inspections and electrical testing before shipping. Dipped sleeves are available in the same colors as dipped gloves, including two color combinations.

Salisbury is the only manufacturer that offers two popular styles of dipped lineman's sleeves: straight and extracurved. Both styles are available in every color or color combination, size, and voltage class. Most importantly, all are made to the same rigid levels of quality demanded by Salisbury.

Only Salisbury offers both dipped and molded sleeves.



| Cat. No. Breakdown for Dipped Type I Sleeves |               |                    |  |  |
|--|---------------|--------------------|--|--|
| Voltage<br>Class                             | Size          | Color              |  |  |
| D0   | S, R, L or XL | Y=yellow           |  |  |
| D1   | S, R, L or XL | B=black            |  |  |
| D2   | S, R, L or XL | YB=Y inside, B out |  |  |
| D3   | S, R, L or XL | RB=R inside, B out |  |  |
| D4   | S, R, L or XL | YR=Y inside, R out |  |  |
| S=small, R=regular, L=large                  |               |                    |  |  |
| XL=extra large                               |               |                    |  |  |
| Example:                                     | D2LYB-ST      |                    |  |  |

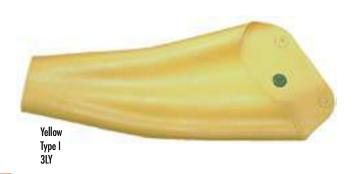
Add suffix "-ST" to order straight cuff or "-EC" to order extra-curved cuff

#### **LINEMEN'S SLEEVES**

#### **MOLDED**

molded sleeves are manufactured by either injection or compression molding methods. The advantage these methods offer is the ability to produce sleeves of Type I or SALCOR® Type II synthetic rubber. SALCOR sleeves provide the same high quality and electrical protection as natural rubber, with the added benefit of being resistant to ozone and ultraviolet radiation. Type I sleeves are available in black, yellow or maroon. Type II SALCOR sleeves are black or orange. Molded sleeves are available in curved arm style only.





| Cat. N                     | Cat. No. Breakdown for Molded Type I Sleeves |                              |  |  |  |
|----------------------------|--|------------------------------|--|--|--|
| Voltage<br>Class           | Size   | Color                        |  |  |  |
| 1                          | R or L                                       | Υ                            |  |  |  |
| 2                          | R, L or XL                                   | B, Y, M                      |  |  |  |
| 3                          | R or L                                       | Y, M                         |  |  |  |
| 4                          | R or L                                       | M                            |  |  |  |
| R=regular <b>Example</b> : | L=large XL=extra large<br>2LB                | B=black Y=yellow<br>M=maroon |  |  |  |



| Cat.             | No. Breakdown for Mold    | ed Type II Sleeves |
|------------------|---------------------------|--------------------|
| Voltage<br>Class | Size                      | Color              |
| 1                | R or L                    | BS or OS           |
| 2                | R, L or XL                | BS or OS           |
| •                | ar L=large XL=extra large | BS=black SALCOR    |
| Example          | e: 2LOS                   | OS=orange SALCOR   |
|                  |                           |                    |

#### SLEEVE STORAGE & ACCESSORIES

#### Proper storage extends the service life of linemen's sleeves.

Folds and creases strain rubber and cause it to crack from ozone prematurely. By storing rubber sleeves in the right size bag, and never forcing more than one pair into each bag, equipment will lie flat and extend the life of the product.

Salisbury bags are constructed of heavy duty canvas duck and are double stitched and riveted at stress points for extra durability. Canvas bags feature a D ring for hanging in trucks or on work belts. Bags feature tapered gussets with wide opening tops for easy insertion.

#### **SALISBURY ADVANTAGE**

Cat. No. For Sleeve

The **T32** bag contains a **crush resistant** lining to create a more protective environment for your sleeves.

Sleeve buttons, straps, and harnesses are required to wear rubber insulating sleeves properly. Four buttons are required per pair of sleeves. Two straps are required per pair of sleeves. One harness is required per pair of sleeves.

|               | D Ring on back |
|---------------|----------------|
| - Additionary | RAMBAGES       |
| T32           |                |
|               | Т31            |



Two-piece sleeve button 4 required per pair of sleeves

One piece sleeve button 4 required per pair of sleeves

|        | length in. ( mm ) | inches ( mm )            | lbs. ( kgs )    |
|--------|-------------------|--------------------------|-----------------|
| CANVAS | SLEEVE BAG        |                          |                 |
| T31    | _                 | 30" x 9.5" ( 762 x 241m  | nm) 1.5 ( . 7 ) |
| T32    | _                 | 30" x 13" ( 762 x 330 m  | nm) 3 (1.4)     |
|        |                   |                          |                 |
| BUTTON | S                 |                          |                 |
| B2     | _                 | One Piece Sleeve Butt    | on .2 ( .01 )   |
| B22    | -                 | 4 Screw Type Buttons     | s .8 ( .04 )    |
|        |                   |                          |                 |
| STRAPS |                   |                          |                 |
| S1     | 15"(381n          | nm) Strap w/ 4 B2 Buttor | ns .1 (.005)    |
|        |                   |                          |                 |
| HARNES | S                 |                          |                 |
| H1     | Harness           | w/ 4 B2 Buttons          | 1 ( .45 )       |

**Dimensions** 

Weight ea.





#### SALISBURY LINEMEN'S GLOVE LINERS

**liner gloves** enhance the comfort of wearing Rubber Insulating Gloves in every season. Liners provide warmth in the cold season and absorb perspiration in the warm months. Many styles and fabrics are available with either an open or knit wrist.

The knit wrist style grips the wrist rather than allowing the cuff to roll down and bunch at the palm. All Liner Gloves are for year round use with Rubber Insulating Gloves and Mittens. All liners are made from stretch fabric that can fit any hand size.

The **l Series** has a tough outer cotton fabric while the inner lining is soft and comfortable. The **lmKC Series** is light, airy and allows ease of movement. The **lmKW Series** is made from a wool blend fabric that moves easily yet gives a substantial layer of lining.

The **89 Series** is Salisbury's classic summer and winter glove liner. Liners absorb perspiration from hands. The summer liner is white in color and 100% cotton. The winter blend is a rust color and 100% acrylic.



| Cat. No.     | Description                           | Wrist<br>Style | Length in. ( mm ) | Weight ea.<br>lbs. ( kgs ) |
|--------------|---------------------------------------|----------------|-------------------|----------------------------|
| L10JK        | Jersey Style, Light Weight, Seams Out | Knit           | 10 ( 254 )        | .14 (.06)                  |
| L10J         | Jersey Style, Light Weight, Seams Out | Open           | 10 ( 254 )        | .12 (.06)                  |
| L12J         | Jersey Style, Light Weight, Seams Out | Open           | 12 ( 305 )        | .14 (.07)                  |
| L10MKC       | Machine Knit, 100% Cotton             | Knit           | 10 ( 254 )        | .12 (.05)                  |
| L12MKC       | Machine Knit, 100% Cotton             | Knit           | 12 ( 305 )        | .12 (.05)                  |
| L10MKW       | Machine Knit, Wool Blend              | Knit           | 10 ( 254 )        | .14 (.06)                  |
| L12MKW       | Machine Knit, Wool Blend              | Knit           | 12 ( 305 )        | .14 (.07)                  |
| 89/1402      | White Machine Knit, 100% Cotton       | Knit           | 10 ( 254 )        | .12 (.06)                  |
| 89/4702      | Rust Machine Knit, 100% Acrylic       | Knit           | 10 ( 254 )        | .12 (.06)                  |
| One size fit | ts all.                               |                |                   |                            |

#### SALPOL & WORK GLOVES

Salisbury's **SalPOl gloves** protect hands during cold weather jobs. The black split cowhide leather has a 3M Thinsulate\* lining to keep hands warm. For extra warmth a long knit wrist is sewn into the safety cuff to keep out snow and ice. The glove also has a full leather index finger, knuckle strap, leather fingertips, and pull patch. \*Thinsulate is a registered Irodemark of the 3M Company.

**drivers Work gloves** set the standard for quality at an affordable price. Combining comfort, durability and economy, Salisbury leather Drivers Work Gloves meet the tough challenges of today's demanding workplace. Available in lined or unlined styles. The bindings are color coded to indicate size: red-small, green-medium, brown-large, purple-extra large.

**linemen Work gloves** are designed specifically for use by linemen and offers many of the quality features found in our leather protectors. Made from high quality grain cowhide or goatskin, this glove is soft and flexible, while still being highly abrasion and cut resistant for long wear.

| SALPOL GLOVES |                        |                   |                            |  |  |
|---------------|------------------------|-------------------|----------------------------|--|--|
| Cat. No.      | Description            | Length in. ( mm ) | Weight ea.<br>lbs. ( kgs ) |  |  |
| SALPOL GLOVES |                        |                   |                            |  |  |
| SP-S          | Small Size Polar Glove | n/a               | .5 ( .23 )                 |  |  |
| SP-I          | Large Size Polar Glove | n/a               | 5 ( 23 )                   |  |  |

| DRIVERS & LINEMEN WORK GLOVES            |   |                            |  |  |
|--|---|----------------------------|--|--|
| Cat. No.                                 | Description   | Weight ea.<br>Ibs. ( kgs ) |  |  |
| I95/217/WHS*                             | Unlined   | .3 ( .14 )                 |  |  |
| 195/317/WHS*<br>*Add "-S" for small, "-M | Lined<br>" for medium, "-L" for large, "-XL" for extra-large. | .3 ( .14 )                 |  |  |
| LW2SPE**                                 | Cowhide leather, natural pigskin cuff                         | .4 ( .18 )                 |  |  |
| LWG2SPE** **Add "-M" for medium          | Goatskin leather, natural pigskin cuff                        | .4 ( .18 )                 |  |  |









LW2SPE

#### **CLEANERS, SUNSCREEN AND SUPPLIES**



**Rub-OuT**® is a non-petroleum-based hand cleaner for workers who wear rubber gloves and sleeves. Dissolves and removes grease, oil, ink, tar, pipe dope, creosote, paint and more without harming natural rubber or SALCOR® rubber. Cleans with or without water. Contains natural skin conditioners and leaves a fresh citrus scent.

#### Salisbury's Rub-OuT® Towelettes are

premoistened heavy duty hand cleaner towels that work fast to loosen, dissolve, and absorb dirt and grease, and will not harm rubber gloves! Our powerful yet safe cleaning agents work together with an absorbent, nonscratching abrasive cleaning towel. The citrus-based formula easily removes soil from your hands and leaves them cleaned and conditioned anywhere you're working. And after cleaning your hands there is enough absorbency to clean your tools and other surfaces with the same towel. These shop size (10.5" x 12.25") durable towels quickly remove tough-to-clean substances including lubricants, tar, oils, wax, caulk and much more.

# **TEn-FOuR® glOvE duST** is a cooling, frictionless powder that absorbs moisture and perspiration when wearing rubber gloves. Provides extra comfort while preventing gloves from getting sticky. The 5-oz. bottle easily fits in a pocket or glove bag. The 4-quart bulk package is used in test labs as a dusting powder when cleaning and testing.

**SuPER SalCO® Cleaner** is a concentrated detergent with a special grease release formula that removes oils, grease and dirt from natural rubber and SALCOR rubber equipment. Suitable for washing linemen's rubber gloves, sleeves and other specialty equipment, by hand or in commercial washing machines. Also works well on fiberglass and other materials. Just dilute with water, apply with a rag or sponge and rinse thoroughly.

| Cat. N   | o. Description                        | Weight ea.<br>lbs. ( kgs ) |  |  |  |
|--|---------------------------------------|----------------------------|--|--|--|
| DIIID (  | NITO HAND OF EARLES                   | ibs. ( kgs )               |  |  |  |
| RUB-OUT® HAND CLEANER                                      |                                       |                            |  |  |  |
| 1451   | 16 oz. ( .45kg ) can, 12/pack         | 16 ( 7.3 )                 |  |  |  |
| 1452   | 4.5 lbs. ( 2kgs ) cans, 6/pack        | 28 ( 12.7 )                |  |  |  |
| 1453   | Dispenser for 4.5lb. ( 2kg ) can      | 1 ( .5 )                   |  |  |  |
| RUB-OUT® TOWELETTES  |                                       |                            |  |  |  |
| 1460   | Bucket of 60, 6 buckets / Case        | 14 ( 6.4 )                 |  |  |  |
| 1461   | Single Packets, 100 Singles / Cas     | e 3 (1.4)                  |  |  |  |
| TEN-F  | OUR® GLOVE DUST                       |                            |  |  |  |
| <b>10-4</b> 12 @ 5 oz. ( 170g ) squeeze bottles 5.5( 2.2 ) |                                       |                            |  |  |  |
| 10-4-4   | QT4 quarts ( 3.8 ltrs. ) bulk, single | 8 ( 3.6 )                  |  |  |  |
| SUPER SALCO® DETERGENT                                     |                                       |                            |  |  |  |
| S4   | 1 gal ( 3.8 ltr. ) jugs, 4 pack       | 54( 24.5 )                 |  |  |  |
| S5   | 5 gal ( 19 ltr. ) drum                | 49 ( 22.3 )                |  |  |  |
| S55  | 55 gal ( 208 ltr. ) drum              | 540 ( 245 )                |  |  |  |
| SALCON® SILICONE SPRAY                                     |                                       |                            |  |  |  |
| S99  | Aerosol can                           | 16 oz. ( .454 )            |  |  |  |
| SUNSCREEN 30   |                                       |                            |  |  |  |
| SS30   | 100 towelettes                        | 6 (2.72)                   |  |  |  |
|  |                                       |                            |  |  |  |

SalCOn® Silicone Spray is specially formulated to reduce friction on SALCOR or natural rubber products. Reduces surface creepage on rubber gloves and sleeves. Forms an oxygen barrier which helps reduce corona cutting and weather checking on rubber equipment. May also be used to spray spark plugs and battery terminals in damp weather to assist in starting.

**SunSCREEn 30** is a non-oily sunscreen that does the job for at least four hours. Safe for leather and rubber gloves, leaves no residue—no slippery hands. Large convenient towelettes.



# PROTECTIVE FOOTWEAR

# **FAQ**

Q: What is the difference between the yellow/black Salisbury ASTM F2413-05 EH Footwear and the red/black ASTM Dielectric Footwear?

A: The yellow/black Salisbury ASTM F2413-05 EH Footwear are manufactured per the requirements of ASTM F2413-05 EH. Which means the outsole of these overshoes and boots have been lot tested to 20,000 volts to the electrical hazard requirements of ASTM F2413-05. Salisbury's red/black ASTM dielectric footwear conforms with ASTM F1117 and are all 100% tested to the electrical hazard requirements of ASTM F1116 at 20,000 volts.

Q: What are the benefits of ASTM Dielectric Footwear?

A: ASTM Dielectric Footwear protects ground workers from step and touch potential in the whole work zone, not just one confined work area, like a grounding mat.

ASTM Dielectric Footwear can help reduce the amount of electrical workers in a work area since they are not confined.

ASTM Dielectric Footwear allows personnel to safely mount and dismount equipment in the work zone.

ASTM Dielectric Footwear allows personnel to safely retrieve material from truck bins.

#### ASTM DIELECTRIC FOOTWEAR

#### **DEEP HEEL OVERSHOES - 100% TESTED TO 20KV**

aSTm dielectric Footwear provides extra safety when climbing ladders and poles where the deep heel cavity can lock onto the rungs. These boots and overshoes are 100% waterproof and made from premium grade ozone resistant rubber. 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 has a durable construction with a non-skid bar tread outsole.

all of Salisbury's aSTm dielectric Footwear conforms with aSTm F1117 and all are 100% **TESTEd** to the electrical hazard requirements of aSTm F1116 at 20,000 volts.

ASTM Dielectric Footwear comes in four styles all with pole-climbing reinforcement patch. The Overshoe is available without buckles or with two buckles. The **Overboot** with adjustable side strap features a 14" height or a 17" height. The attached buckle and hardware is nonmetallic.

**nEW Improved Overshoes**-Salisbury now offers improved 51511 non-buckle overshoe and 51512 2buckle overshoe. The improved overshoes include a bob sole with aggressive tread for better traction. The deep heel and improved arch are specially designed for climbing ladders comfortably. The wider opening allows for easier on/off.



**BOB SOLE** 

| Cat. No. | Description                    | Sizes<br>in. ( mm ) | Weight pr.<br>lbs. ( kgs ) |
|----------|--------------------------------|---------------------|----------------------------|
| 21405    | 17", 1 Buckle Overboot         | Whole Sizes 7 - 16  | 5.8 ( 2.6 )                |
| 21406    | 14" 1 Buckle Overboot          | Whole Sizes 7 - 17  | 5.0 ( 2.3 )                |
| 51508    | Non-Buckle Overshoe            | Whole Sizes 7 - 17  | 3.3 ( 1.5 )                |
| 51509    | 2 Buckle Overshoe              | Whole Sizes 7 - 17  | 4.4 (2)                    |
|          |                                |                     |                            |
| 51511    | Bob Sole - Non-Buckle Overshoe | Whole Sizes 7 - 16  | 3.3 ( 1.5 )                |
| 51512    | Bob Sole - 2 Buckle Overshoe   | Whole Sizes 7 - 16  | 44(2)                      |

NOTE: When ordering, add size as suffix to part number. Be sure to add a space between the part number and size. Example: 51511 7

# **ASTM F2413-05 EH FOOTWEAR**

# **DEEP HEEL OVERSHOES, OUTSOLE TESTED TO 20KV**

aSTm F2413-05 EH 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 get on and off. The sole is an anti-skid bar tread. The outsole of these overshoes and boots have been lot tested to 20,000 volts to the electrical hazard

ASTM F2413-05 EH Deep Heel Overshoes come in three styles all with pole-climbing reinforcement patch. The **Storm Rubber Overshoe** is available without buckles or with two buckles. The **Full-Cut Overshoe** with adjustable side strap features a 17" height.

requirements of aSTm F2413-05.







| Cat. No. | Sizes   | Description in. ( mm ) | Weight pr.<br>lbs. ( kgs ) |
|----------|---|------------------------|----------------------------|
| 21402    | Whole Sizes 7-17                              | 17" ( 432 ) Overshoe   | 5.8 ( 2.6 )                |
| 51530    | Whole Sizes 6-17                              | 2-Buckle               | 4.4 (2)                    |
| 51581    | Whole & Half Sizes 7-12, Whole Sizes 6, 13-17 | Storm Rubber           | 3.3 ( 1.5 )                |

NOTE: When ordering, add size as suffix to part number. Be sure to add a space between the part number and size. Example: 515117

# **ASTM F2413-05 EH FOOTWEAR**

# **OVERSHOES, OUTSOLE TESTED TO 20KV**

aSTm F2413-05 EH Overshoes are made from an ozone resistant yellow rubber. The construction is hand-layered in full-cut patterns to easily fit over work boots. These overshoes are 100% waterproof. The lining is fabric so they easily slip on and off. The sole is an anti-skid bar tread. The outsole of these overshoes and boots have been lot tested to 20,000 volts to the electrical hazard requirements of aSTm F2413-05.

ASTM F2413-05 EH Overshoes are available in two styles: a Storm Rubber Overshoe and an 11" 4-Buckle Arctic both with a pole-climbing reinforcement patch.





| Cat. No. | Sizes                   | Description<br>in. ( mm )   | Weight pr.<br>lbs. ( kgs ) |
|----------|-------------------------|-----------------------------|----------------------------|
| 31924    | Whole Sizes 6-17        | 11" ( 279 ) 4-Buckle Arctic | 4.6 ( 2.1 )                |
| 51824    | Whole & Half Sizes 7-12 | Storm Rubber                | 3.25 ( 1.5 )               |
|          | Whole Sizes 13-16       |                             |                            |

NOTE: When ordering, add size as suffix to part number. Be sure to add a space between the part number and size. Example: 51511 7

# **ASTM F2413-05 EH FOOTWEAR**

# **OVERSHOES, OUTSOLE TESTED TO 14KV**

aSTm F2413-05 EH Overshoes are made from yellow ozone resistant rubber that's 100% waterproof. The construction is hand-layered in full-cut patterns to easily slip over work shoes. The lining is fabric so they easily slip on and off. The outsole of these overshoes and boots have been lot tested to 14,000 volts to the electrical hazard requirements of aSTm F2413-05.

ASTM F2413-05 EH Overshoes come in two styles. The **deep Heel lineman's Storm Rubber** has a diamond V-grip outsole and poleclimbing reinforcement patch. The **11" 4-buckle** has an anti-skid bar tread sole and heel.







| Cat. No. | Sizes                    | Description in. ( mm ) | Weight pr.<br>lbs. ( kgs ) |
|----------|--------------------------|------------------------|----------------------------|
| 31910    | Whole Sizes 7-17         | 11" ( 279 ) 4-Buckle   | 3.8 ( 1.7 )                |
| 51510    | Whole & Half Sizes 6-12, | Deep Heel Storm Rubber | 3.1 ( 1.4 )                |
|          | Whole Sizes 13-17        |                        |                            |

NOTE: When ordering, add size as suffix to part number. Be sure to add a space between the part number and size. Example:  $51511\ 7$ 



# INSULATED JUMPERS

# **FAQ**

Q: What are the benefits of the Sure-lok® Jumper clamp?

A: The Salisbury Sure-lok Jumper clamp is an improvement over other jumper clamps available. The Sure-lok features a ratchet-type locking mechanism (patent pending), which guarantees the clamp not to loosen once it is installed on a line.

Loose Jumper clamps not only jeopardize your safety but can also cause fires and power outages. Even when torqued using wrenches or pliers, traditional clamps will eventually loosen from line vibrations and thermal cycling. This clamp tightens with a ratchet action using one hand, with no extra tools for a secure, positive connection. It can't come loose until you want it to. Pull and turn the locking knob and it loosens like any traditional clamp.

### INSULATED JUMPERS



#### **SALISBURY ADVANTAGE**

Insulated bypass jumper sets consist of three basic components: one pair of clamps, one pair of ferrules, and a length of insulated cable. Many of the most popular jumper sets are listed on the following pages associated with each of the different types of jumper clamps. When a custom jumper is required, follow this procedure to ensure that a complete and functional jumper is specified.

If you need assembled jumper sets, quickly, please contact your local Salisbury Representative for more information.

Let Salisbury professionally assemble your sets for you.

All Salisbury Insulating Jumpers meet ASTM F2321 standards.

#### **Insulated Jumper Checklist**



- 1. Specify the style of insulated damps. All of the damps are hand installed wearing rubber insulating gloves, accept either shrouded or unshrouded ferrules, and accept insulated cable up to 4/0, 35kV. Insulated jumper clamps are sold in pairs.
- 2. Specify the size and length of insulated cable. Salisbury offers 15kV cable from #2 to 4/0. 25 and 35 kV cable are both available in sizes 1/0 and 2/0. Be sure to specify the length of the cable chosen.
- 3. Specify the size and style of ferrules required. The size of the ferrule will be determined by the size of the cable. Specify the appropriate ferrule catalog number for either shrouded or unshrouded ferrules. Both types are sold in pairs.
- 4. Specify if the jumpers are to be factory assembled. A complete jumper set with crimped ferrules and installed jumper clamps will be supplied. Salisbury has state of the art computer controlled crimping available.
- 5. Specify if there are any special requirements. This could include heat shrink tubing, special assembly instructions, markings, packaging etc.

# **LOCKING INSULATED JUMPER CLAMPS**

# The Salisbury Sure-lok® Jumper Clamp

The Salisbury Sure-lok® Jumper clamp is a revolutionary improvement over any other jumper clamp in the world. Featuring a ratchet type locking mechanism (patent pending), this is the only clamp available guaranteed not to loosen once installed on a line.

Loose Jumper clamps not only jeopardize your safety but can also cause fires and power outages. Even when torqued using wrenches or pliers, traditional clamps will eventually loosen from line vibrations and thermal cycling. This clamp tightens with a ratchet action using one hand, with no extra tools for a secure, positive connection. It can't come loose until you want it to. Pull and turn the locking knob and it loosens like any traditional clamp.

Available in our exclusive SALCOR® material and the industry's most durable single piece clear plastic jumper clamps.

Custom built assemblies are available. Contact your local Salisbury Representative for more information.



2261

SALCOR® Sure-lok®

|               | Cat. No. | Main Line<br>Range  | Max Amps<br>Continuous | Rating      | OAL Length in. ( mm ) | Weight ea.<br>lbs. ( kgs ) |
|---------------|----------|---------------------|------------------------|-------------|-----------------------|----------------------------|
| :OR®          | 2261     | 477 MCM (.9"162")   | 400                    | 36 kV Ø-Ø   | 11.5 ( 292 mm )       | 10 ( 4.5 )                 |
| SALCOR®       | 2271     | 954 MCM (1.25"162") | 400                    | 21 kV Ø-GRD | 11.5 ( 292 mm )       | 11 (5)                     |
| stic          | 1786     | 477 MCM (.9"162")   | 400                    | 36 kV Ø-Ø   | 11.5 ( 292 mm )       | 8 ( 3.6 )                  |
| Clear Plastic | 2116     | 954 MCM (1.25"162") | 400                    | 21 kV Ø-GRD | 11.5 ( 292 mm )       | 10 ( 4.5 )                 |
| ၂ပ၂           |          |                     |                        |             |                       |                            |

# **SALCOR® INSULATED JUMPER CLAMPS**

SalCOR® Jumper Clamps are available in two main line sizes with a maximum use voltage of 35kV.

The SalCOR Jumper Clamp not only provides a superior grip, but also resists ozone cutting and tracking. Being molded of rubber, these handles are inherently impact resistant and extremely durable. The body and jaw are made from a copper base alloy. The lower ring contact is made of self lubricating bronze. Assemble jumpers with insulated jumper cable and 5/8"- 11 NC threaded ferrules. Assembled kits are sold with a 10 ft. (3m) cable and unshrouded ferrules.

Custom built assemblies are available. Contact your local Salisbury Representative for more information.



| Cat. No. | Main Line<br>Range  | Max Amps<br>Continuous | Rating      | OAL Length in. ( mm ) | Weight ea.<br>lbs. ( kgs ) |
|----------|---------------------|------------------------|-------------|-----------------------|----------------------------|
| 2260     | 477 MCM (.9"162")   | 400                    | 36 kV Ø-Ø   | 11.5 ( 292 mm )       | 10 ( 4.5 )                 |
| 2270     | 954 MCM (1.25"162") | 400                    | 21 kV Ø-GRD | 11.5 ( 292 mm )       | 11 (5)                     |

|       |                    | Assembled 10 ft. / 3 | m Jumper Set      | s ( Unshroud        | ed Ferrules)           |                            |
|-------|--------------------|----------------------|-------------------|---------------------|------------------------|----------------------------|
|       | Jumper<br>Cat. No. | Cable Size           | Cable<br>Cat. No. | Ferrule<br>Cat. No. | Max Amps<br>Continuous | Weight ea.<br>lbs. ( kgs ) |
| du    | 2264               | #2-15 kV             | 2754              | 2022                | 200                    | 10.9 ( 4.9 )               |
| Clamp | 2265               | 1/0-15 kV            | 2755              | 2023                | 250                    | 13.5 ( 6.1 )               |
| 2260  | 2266               | 2/0-15 kV            | 2756              | 2024                | 300                    | 14.8 ( 6.8 )               |
| Clamp | 2274               | #2-15 kV             | 2754              | 2022                | 200                    | 11.9 ( 5.4 )               |
|       | 2275               | 1/0-15 kV            | 2755              | 2023                | 250                    | 14.6 ( 6.8 )               |
| 2270  | 2276               | 2/0-15 kV            | 2756              | 2024                | 300                    | 15.9 ( 7.2 )               |

### **CLEAR PLASTIC & FRP INSULATED JUMPER CLAMPS**

**Salisbury's superior stress cracking resistant Clear Jumper Clamps** are available in two main line sizes with a maximum use voltage of 35kV. Assemble these clamps with insulated jumper cable and 5/8" - 11 NC threaded ferrules.

Clear Plastic Jumper Clamps are compact, lightweight, and virtually unbreakable. The transparency allows easy inspection of the ferrule and cable inside of the handle. The body and jaw are made from a copper base alloy. The lower floating ring contact is bronze. These handles should be cleaned only with a mild detergent to maintain the transparency of the handle. Assembled kits are sold with a 10 ft. (3m) cable and unshrouded ferrules.

**FRP Jumper Clamps** are designed for maximum loads, voltages, and cables. During a temperature rise test at 25% overload, these clamps heated 35% less than 4/0 cu. cable. Blunted points on the handle provide optimum grip, resist impact, and will not soften with overloads. The body and jaw are made from a copper based alloy. The lower jaw is made of self lubricating bronze. The assembled jumpers are sold with a 10ft. (3m) or 12 ft. (3.7m) cable and unshrouded ferrules.

Custom built assemblies are available. Contact your local Salisbury Representative for more information.



| Cat. No. | Main Line<br>Range  | Max Amps<br>Continuous | Rating      | OAL Length in. ( mm ) | Weight ea.<br>lbs. ( kgs ) |
|----------|---------------------|------------------------|-------------|-----------------------|----------------------------|
| 1610     | 954 MCM (1.25"162") | 400                    | 36 kV Ø-Ø   | 11 ( 279 )            | 14 ( 6.4 )                 |
|          |                     |                        | 21 kV Ø-GRD |                       |                            |
| 1785     | 477 MCM (.9"162")   | 400                    | 36 kV Ø-Ø   | 11.5 ( 292 mm )       | 8 ( 3.6 )                  |
| 2115     | 954 MCM (1.25"162") | 400                    | 21 kV Ø-GRD | 11.5 ( 292 mm )       | 10 ( 4.5 )                 |

|               |                 | Assembled 10 ft. / 3 | m Jumper Set      | s ( Unshroud        | led Ferrules)          |                            |
|---------------|-----------------|----------------------|-------------------|---------------------|------------------------|----------------------------|
|               | Jumper Cat. No. | Cable Size           | Cable<br>Cat. No. | Ferrule<br>Cat. No. | Max Amps<br>Continuous | Weight ea.<br>lbs. ( kgs ) |
| ار<br>م ط     | 2067            | #2-15 kV             | 2754              | 2022                | 200                    | 9.9 ( 4.5 )                |
| 1785<br>Clamp | 2178            | 2/0-15 kV            | 2756              | 2024                | 300                    | 13.9 ( 6.3 )               |
| Clamp         | 2074R1          | #2-15 kV             | 2754              | 2022                | 200                    | 10.9 ( 4.9 )               |
| 2115 Cla      | 2164            | 2/0-15 kV            | 2756              | 2024                | 300                    | 14.8 ( 6.8 )               |
|               | 2174R1          | 1/0-15 kV            | 2755              | 2023                | 250                    | 16.8 ( 7.6 )               |

| Assembled Jumper Sets ( Unshrouded Ferrules) |                              |   |   |  |   |   |  |  |  |  |
|--|------------------------------|---|---|--|---|---|--|--|--|--|
| Jumper Cat. No.                              | Cable Length                 | Cable Size  | Cable<br>Cat. No.   | Ferrule<br>Cat. No.  | Max Amps<br>Continuous  | Weight ea.<br>lbs. ( kgs )  |  |  |  |  |
| 2772   | 10'                          | 2/0-15kV  | 2756  | 2024   | 300   | 5.8 ( 2.9 )   |  |  |  |  |
| 2773   | 10'                          | 4/0-15kV  | 2757  | 2025   | 400   | 20.3 ( 9.2 )  |  |  |  |  |
| 2450   | 10'                          | 1/0-15kV  | 2755  | 2023   | 250   | 15 ( 6.8 )  |  |  |  |  |
| 2066   | 12'                          | 1/0-35kV  | 2059  | 2023   | 250   | 20.3 ( 9.2 )  |  |  |  |  |
| 20876  | 12'                          | 2/0-35kV  | 4370  | 2024   | 300   | 21.5 ( 9.8 )  |  |  |  |  |
|  | 2772<br>2773<br>2450<br>2066 | Jumper Cable Length           2772         10'           2773         10'           2450         10'           2066         12' | Jumper Cat. No.         Cable Length         Cable Size           2772         10'         2/0-15kV           2773         10'         4/0-15kV           2450         10'         1/0-15kV           2066         12'         1/0-35kV | Jumper Cable Length Cat. No.         Cable Size Cat. No.           2772         10'         2/0-15kV         2756           2773         10'         4/0-15kV         2757           2450         10'         1/0-15kV         2755           2066         12'         1/0-35kV         2059 | Jumper Cat. No.         Cable Length Cat. Size Cat. No.         Cable Cat. No.         Ferrule Cat. No.           2772         10'         2/0-15kV         2756         2024           2773         10'         4/0-15kV         2757         2025           2450         10'         1/0-15kV         2755         2023           2066         12'         1/0-35kV         2059         2023 | Jumper Cat. No.         Cable Length Cat. No.         Cable Size Cat. No.         Cable Cat. No.         Ferrule Cat. No.         Max Amps Continuous           2772         10'         2/0-15kV         2756         2024         300           2773         10'         4/0-15kV         2757         2025         400           2450         10'         1/0-15kV         2755         2023         250           2066         12'         1/0-35kV         2059         2023         250 |  |  |  |  |

Insulated Jumpers.

# INSULATED JUMPER CLAMPS ACCESSORIES

Stirrup Clamps are used to convert a hand installed jumper into a stick installed jumper. The stirrup is designed to accept all conventional jumper heads.

The Hot Jumper Parking Stand safely holds either hand or stick installed hot bypass jumpers. This insulated tool removes the risk of accidental contact with the uninstalled end of an energized jumper. Installs by hand using rubber insulating gloves or with a standard shotgun stick. The fiberglass jumper hanger bar will accommodate standard size mechanical jumper heads.

The Connector link connects two insulated jumpers to create a longer jumper length. After the two clamps are connected to the link, the assembly can be wrapped with a small rubber insulating blanket.













| Cat. No. | Main Line<br>Range       | Description                   | Max. Amps<br>Continuous | Weight ea.<br>lbs. ( kgs ) |
|----------|--------------------------|-------------------------------|-------------------------|----------------------------|
| 2750     |                          | Connector Link                | 400                     | .3 ( .1 )                  |
| 21132RG  | 1033 MCM ASCR to #6 Sol. | Hot Jumper Stirrup Clamp      | 400                     | 3.0 ( 1.4 )                |
|          | 1.25"16" ( 32-4.1mm )    |                               |                         |                            |
| 4245     | 954 MCM ACSR to #6 Sol.  | Parking Stand for Hot Jumpers | n/a                     | 3.5 ( 1.6 )                |
|          | 1.14"16" ( 29- 4.1 mm )  |                               |                         |                            |

# STICK INSTALLED FLEXIBLE JUMPERS

Stick Installed Flexible Jumpers can be manufactured for hot stick operations using Salisbury heavy-duty eye clamps. Clamps are rated for continuous current and fit all standard shotgun type hot sticks. For ease of application, a Hanger Stud is recommended. Shrouded ferrules are not recommended for use with eye type clamps.

Custom built assemblies are available. Contact your local Salisbury Representative for more information.



| Cat. No. | Main Line<br>Range      | Max Amps<br>Continuous | Components  | Rating    | Weight ea.<br>lbs. ( kgs ) |
|----------|-------------------------|------------------------|---|-----------|----------------------------|
| 2300     | 1431 ACSR               |                        | 95 Alum "C" Clamp 1#1928A Hanger Stud<br>27 Alum Ferrule 10' #2755 1/0 15kV Cable   | 15 kV Ø-Ø | 16 (7.3)                   |
| 2308     |                         |                        | 95 Alum "C" Clamp 1#1928A Hanger Stud<br>26 Alum Ferrule 12' #2754 #2 15kV Cable    | 15 kV Ø-Ø | 10.8 ( 4.9 )               |
| 2317     | to #6 Sol.              |                        | 95 Alum "C" Clamp 1#1928A Hanger Stud<br>27 Alum Ferrule 12' #2059 1/0 35kV Cable   | 35 kV Ø-Ø | 16 ( 7.3 )                 |
| 2318     | 1.5"16"                 |                        | 18 Alum "C" Clamp 1#1928A Hanger Stud<br>20 Alum Ferrule 12' #2756 2/0 15kV Cable   | 15 kV Ø-Ø | 15.6 ( 7.1 )               |
| 2559     | 1033 ASCR<br>to #6 Sol. |                        | Alum Duckbill Clamp 1#1858A Hanger Stud<br>27 Alum Ferrule 10' #2755 1/0 15kV Cable | 15 kV Ø-Ø | 16 ( 7.3 )                 |
|          | 1.25"16"                |                        |   |           |                            |
| 2877     | 795 ASCR                |                        | 32 Alum "C" Clamp 1#2537A Hanger Stud<br>27 Alum Ferrule 10' #2755 1/0 15kV Cable   | 15 kV Ø-Ø | 11 ( 5.0 )                 |
| 9976     | to #8 Sol.              |                        | 35 Brnz "C" Clamp 1#9983A Hanger Stud<br>23 Cu Ferrule 10' #2755 1/0 15kV Cable     | 15 kV Ø-Ø | 12 ( 5.4 )                 |
| 9977     | 1.12"12"                |                        | 37 Brnz "C" Clamp 1#9983A Hanger Stud<br>23 Cu Ferrule 10' #2059 1/0 35kV Cable     | 35 kV Ø-Ø | 12.5 ( 5.6 )               |

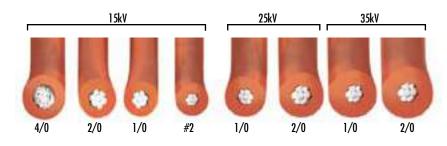
### FLEXIBLE INSULATED JUMPER CABLES

Flexible Insulated Jumper Cables are lightweight and resistant to oil, heat, moisture, ozone and abrasion. The cable is embossed every three feet with conductor size and kV rating.

All jumper cables use fine stranded conductor and a new EPR low temperature Unipass orange CV cured jacket. The fine stranded copper conductor is alloy coated and assembled in a unidirectional rope lay for extra flexibility. The conductor has a semiconducting shield surrounding it to relieve voltage stress and improve dielectric strength and service life.



Cable meets requirements of ASTM F2321.



| Cat.<br>No. | Size & Str.<br>AWG | kV Rating<br>Ø to Ø | Nominal Ø to Grd | Str. Dia.<br>in. ( mm ) | O.A. Dia.<br>in. ( mm ) | Max Amps<br>Continuous | Weight p | er 1000 ft.<br>kgs |
|-------------|--------------------|---------------------|------------------|-------------------------|-------------------------|------------------------|----------|--------------------|
| 2754        | #2-259W            | 15                  | 10               | .320 ( 8.1 )            | .75 ( 19 )              | 200                    | 440      | 199                |
| 2755        | 5 1/0-413W         | 15                  | 10               | .403 ( 10.2 )           | .83 ( 21 )              | 250                    | 600      | 272                |
| 2756        | 3 2/0-427W         | 15                  | 10               | .456 ( 11.5 )           | .90 ( 23 )              | 300                    | 710      | 322                |
| 2757        | 4/0-437W           | 15                  | 10               | .592 ( 15.0 )           | 1.01 ( 25.6 )           | 400                    | 1050     | 476                |
| 2130        | <b>1/0-413W</b>    | 25                  | 15               | .403 ( 10.2 )           | 1.06 ( 27 )             | 250                    | 650      | 295                |
| 2106        | <b>60</b> 2/0-427W | 25                  | 15               | .456 ( 11.5 )           | 1.10 ( 28 )             | 300                    | 750      | 341                |
| 2059        | 1/0-413W           | 35                  | 20               | .403 ( 10.2 )           | 1.22 ( 31 )             | 250                    | 950      | 431                |
| 4370        | 2/0-427W           | 35                  | 20               | .48 ( 12.1 )            | 1.31 ( 33.1 )           | 300                    | 1060     | 482                |

# SHROUDED / UNSHROUDED

**Ferrules** are manufactured in two different styles: unshrouded and shrouded. Shrouded ferrules are compressed on both the conductor and the insulating jacket of the high voltage EPR cable to reduce bending stress. Shrouded ferrules are designed to be used on glove-installed high voltage jumpers. Unshrouded ferrules are crimped to the conductor strands only and can be used on either stick- or glove-installed jumpers.

Ferrules are manufactured of 99.5% pure copper with industry standard 5/8"-11 NC threads. Ferrules are topped with a brass hex jam nut and toothed stainless steel lockwasher.



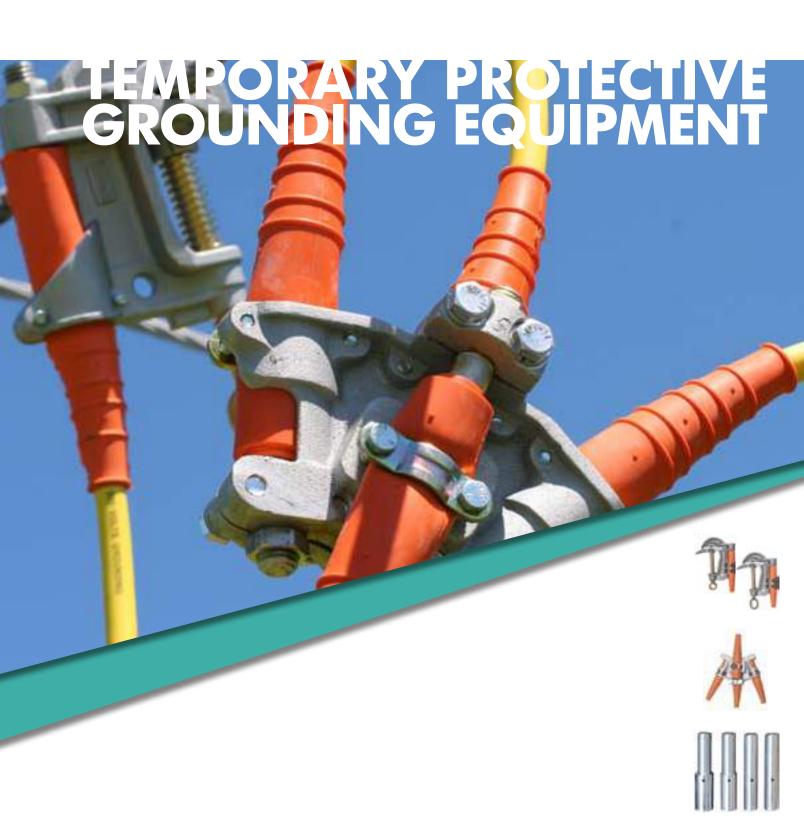




unshrouded

| Cat. No.<br>Pair | Cable Size      | Strand Die Codes<br>T&B | Jacket Die Codes<br>T&B | Burndy<br>Die Number | Weight ea.<br>lbs. ( kgs ) |
|------------------|-----------------|-------------------------|-------------------------|----------------------|----------------------------|
| SHROUDED         | )               |                         |                         |                      |                            |
| 2012             | #2-15 kV ERP    | 66                      | 106                     | -                    | 1.2 ( .5 )                 |
| 2013             | 1/0-15 kV ERP   | 66                      | 106                     | -                    | 1.2 ( .5 )                 |
| 2014             | 2/0-15 kV ERP   | 66                      | 106                     | -                    | 1.1 ( .5 )                 |
| 2015             | 4/0-15 kV ERP   | 66                      | 106                     | -                    | 0.9 ( .4 )                 |
|                  |                 |                         |                         |                      |                            |
| 21353            | 1/0-25 kV       | 66                      | 112                     | -                    | 1.1( .5 )                  |
| 21354            | 2/0-25 kV       | 66                      | 112                     | -                    | 1.1 ( .5 )                 |
| 21356            | 2/0-35 kV       | 66                      | 125                     | -                    | 1.1 ( .5 )                 |
|                  |                 |                         |                         |                      |                            |
| UNSHROUD         | ED - Tin Plated |                         | Strand Die Codes        |                      |                            |
| 2022             | #2              | 50                      | -                       | U243                 | 0.5 ( .2 )                 |
| 2023             | 1/0             | 50                      | -                       | U243                 | 0.4 ( .2 )                 |
| 2024             | 2/0             | 60                      | -                       | U245                 | 0.4 ( .2 )                 |
| 2025             | 4/0             | 66                      | -                       | U247                 | 0.6 ( .3 )                 |

Add suffix "A" to the catalog number when requesting a custom insulated jumper set.



# TEMPORARY PROTECTIVE GROUNDING EQUIPMENT

# **NOTE:**

When ordeing assemblies of grounding products, please make sure all items included in the assembly are only from the product line found within this section. Including items from other grounding equipment sections of this book will add additional shipping time.

# Grounding Configurator™

**The Grounding Configurator**<sup>TM</sup> makes ordering grounding equipment simple and easy. This interactive web tool allows you to easily build the proper temporary grounding equipment for your specific needs. The step by step process takes out the guess work, and makes it easy to change components until the most appropriate ground set is developed.



Just go to our web site and give it a try. You will be prompted from start to finish. All you need to know is the maximum fault current, its duration and the size of cable required on the fault, and the configurator will do the rest. No more second guessing quantities or parts to be sure that you have put together a ground set that will function just as you expect. When you finish, enter your personal information and the configurator will instantly provide you with the bill of materials including part numbers. All that's left to do is to place the order!

# Salisbury's Grounding Configurator™ 48-Hour Shipping



Need grounding equipment fast? Salisbury's 48-Hour Shipping Grounding Configurator<sup>TM</sup> works just as great as our standards Grounding Configurator, but it includes only our quick-ship items.

Get the grounding equipment you need as fast as you need it.

Visit **salisburybyhoneywell.com** to use the exclusive Grounding Configurator<sup>TM</sup> and 48-Hour Grounding Configurator<sup>TM</sup>.

# TEMPORARY PROTECTIVE GROUNDING EQUIPMENT

# How to specify temporary protective grounding assemblies.

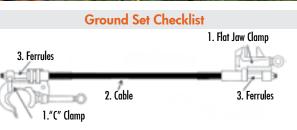
A grounding assembly in its basic form consists of two clamps, one pair of ferrules and a length of cable.

The clamps can be identical to each other or quite different depending on each grounding application. Because of this, ground clamps are sold individually, not in pairs. Salisbury offers a wide variety of clamps including C-clamps, flat jaw clamps, socket clamps, duckbill clamps and specialty clamps for unique situations. Clamps are offered in either bronze or aluminum alloys and are manufactured to meet the current specifications of ASTM F 855.

To attach a clamp to the grounding cable requires the use of a ferrule. Ferrules are compressed on the strands of the cable to provide a low resistance permanent connection. The size of the ferrule is determined by the size of the cable. Ferrules are available in aluminum or plated copper. Plated copper ferrules can be used with either aluminum or bronze clamps. Two ferrules are required for each assembly therefore they are sold in pairs. Ferrules are manufactured to the specifications of ASTM F 855.

The final component that makes up a ground set is the grounding cable itself. The size of the cable is dependent on the short circuit current capacity of the system being grounded. Once this is determined, only the length of the cable and the color of the jacket need to be specified to complete the assembly.





- 1. Specify the clamps. Two are required for a complete assembly. The maximum amperage of the clamp is designated by the ASTM grade of each clamp. Be sure that the clamp will meet or exceed the maximum amperage rating of the ground cable that it will be used with.
- 2. Specify the cable. Once the short circuit capacity of the system has been determined, choose the appropriate size cable. Specify the cable length, and the color of the jacket desired.
- 3. Specify the ferrules. One pair of ferrules is required per assembly. The size of the ferrule must match the size of the cable that it will be used with. Specify whether copper or aluminum, and threaded or plain.
- 4. Specify the options. List any optional equipment that is desired. This can include hanger studs, contact studs, heat shrink tubing, markings, dear strain relief, etc.

Options also include a ground set label. These optional labels include the date of manufacture and are available upon request when ordering.

# **DUCK BILL GROUNDING CLAMPS**

.96", 1.1", AND 1.65" SIZES





|          | Cat. No. | Description              | Class              | Range                 | Continuous<br>Current Rating | lbs. ( kgs ) |
|----------|----------|--------------------------|--------------------|-----------------------|------------------------------|--------------|
|          | 556 KCM  | SMOOTH JAW BRON          | ZE DUCK BILLGra    | vity Actuated - "V" T | 'hread                       |              |
| ш        | 1793     | Eye                      |                    |                       |                              | 1.3 ( .6 )   |
| 7        |          | w/ strain relief sleeve  |                    | 556 MCM ACSR          |                              |              |
| z<br>o   | 21080    | Eye                      | 4 / A              | to #6                 | 350 RMS Amps                 | 1.1 ( .5 )   |
| ~        |          | w/o strain relief sleeve | Smooth Jaw         |                       | 60 Hz                        |              |
| m<br>m   | 1797*    | Mounted                  |                    | .96"16"               |                              | 4.3 (2)      |
| "        |          | w/ strain relief sleeve  |                    | 24mm - 4mm Dia.       |                              |              |
|          | 2093     | Hanger Stud only         |                    |                       |                              | .4 ( .1 )    |
|          |          |                          |                    |                       |                              |              |
|          | 1.1" SMC | OOTH JAW ALUMINUM        | I DUCK BILLSpring  | J Loaded - "V" Threa  | d                            |              |
| ≥        | 21030    | Eye                      |                    |                       |                              | 1.1 ( .5 )   |
|          |          | w/ strain relief sleeve  |                    | 795 KCM ACSR          |                              |              |
|          | 21059    | Eye                      | 5/A                | to #6                 | 400 RMS Amps                 | 1.0 ( .5 )   |
| <b>-</b> |          | w/o strain relief sleeve | Smooth Jaw         |                       | 60 Hz                        |              |
|          | 21081*   | Mounted                  |                    | 1.1"16"               |                              | 4.3 (2)      |
|          |          | w/ strain relief sleeve  |                    | 28mm - 4mm Dia.       |                              |              |
| Z        | 21754    | Hanger Stud only         |                    |                       |                              | .3 ( .1 )    |
|          |          |                          |                    |                       |                              |              |
|          | 1.66" SE | RRATED JAW ALUMIN        | IUM DUCK BILLSp    | ring Loaded - "V" Th  | read                         |              |
|          | 2553     | Eye                      | 5 / B              | 1590 MCM ACSR         | 400 RMS Amps                 | 1.4 ( .6 )   |
|          |          | w/o strain relief sleeve |                    | to #6                 |                              |              |
| <b>=</b> | 1855*    | Mounted                  | Serrated Jaw       |                       | 60 Hz                        | 4.7 ( 2.1 )  |
|          |          | w/ strain relief sleeve  |                    | 1.65"16"              |                              |              |
|          |          |                          |                    | 42mm - 4mm Dia.       |                              |              |
|          | 21754    | Hanger Stud only         |                    |                       |                              | .3 ( .1 )    |
| >        |          |                          |                    |                       |                              |              |
|          | 1.66" SE | RRATED JAW ALUMIN        | IUM DUCK BILL - Ac | me thread             |                              |              |
| ,        | 1853     | Eye                      |                    | 1590 MCM ACSR         |                              | 1.5 ( .7 )   |
|          |          | w/ strain relief sleeve  | 5 / B              | to #6                 | 400 RMS Amps                 |              |
|          |          |                          | Serrated Jaw       | 1.65"16"              | 60 Hz                        |              |
| ∢        |          |                          |                    | 42mm - 4mm Dia.       |                              |              |
|          |          |                          |                    |                       |                              |              |

\*Mounted: 1.25" dia x 6' Fiberglass Hot Stick permanently mounted

# .83" AND 1.12" SIZES



|          | Cat. No.  | Eye & Clamp<br>Description   | ASTM Grade / Class     | Main Line<br>Range        | Continuous<br>Current Rating | Weight ea.<br>lbs. ( kgs ) |
|----------|-----------|------------------------------|------------------------|---------------------------|------------------------------|----------------------------|
|          | 477 MCN   | M BRONZE "C" CLAMP           | w/ Curved Lower        | Jaw - "V" Thread          |                              |                            |
| ш        | 4200      | Eye                          |                        |                           |                              | 1.1 ( .5 )                 |
| 7        |           | w/ strain relief sleeve      | 5/A                    | 477 MCM 18 x 1 ACSR       |                              |                            |
| z        | 21067     | Eye                          | Smooth Jaw             | to                        |                              | 1.0 ( .4 )                 |
|          |           | w/o strain relief sleeve     |                        | #8                        | 400 RMS Amps                 |                            |
| 0        | 4260      | Eye                          |                        |                           | 60 Hz                        | 1.1 ( .5 )                 |
| ~        |           | w/ strain relief sleeve      | 5/B                    | .83"12"                   |                              |                            |
| <b>~</b> | 21068     | Eye                          | Serrated Jaw           | 21mm - 3mm Dia.           |                              | 1.0 ( .4 )                 |
|          |           | w/o strain relief sleeve     | İ                      |                           | İ                            |                            |
|          | 2093      | Hanger Stud only             |                        |                           |                              | .4 ( .2 )                  |
|          | 1" AL LIM | IINUM "C" CLAMP - Ac         | me thread              |                           |                              |                            |
|          | 2531      | Eve                          | ille tilleau           | I                         | Ī                            | 1.1 ( .5 )                 |
| 2        | 2331      | w/ strain relief sleeve      | 5 / A                  | <br>  795 MCM 26 x 7 ACSR | <br>                         | 1.1 ( .3 )                 |
| 5        | 2532      |                              |                        | to                        | <br>                         | 11/5)                      |
|          | 2332      | Eye w/o strain relief sleeve | Smooth Upper<br>Jaw w/ | to<br>  #8                |                              | 1.1 ( .5 )                 |
|          | 0500*     | ,                            |                        | #8                        | 400 DMO                      | 4.0 (40)                   |
| 2        | 2533*     | Mounted                      | Flat Lower Jaw         |                           | 400 RMS                      | 4.2 ( 19 )                 |
| <b>–</b> | 4000      | w/ strain relief sleeve      | 5 / 5                  | 1 10" 10"                 | 60 Hz                        | 45/7                       |
| _        | 4388      | Eye                          | 5/B                    | 1.12"12"                  |                              | 1.5 ( .7 )                 |
| <        |           | w/ strain relief sleeve      | Smooth Upper           | 29mm - 3mm Dia.           |                              |                            |
|          | 4389      | Eye                          | Jaw w/                 |                           |                              | 1.1 ( .5 )                 |
|          |           | w/o strain relief sleeve     | Curved Lower Jaw       |                           |                              |                            |
|          | 2537      | Hanger Stud only             |                        |                           |                              | .2 ( .1 )                  |

<sup>\*</sup>Mounted: 1.25" dia x 6' Fiberglass Hot Stick permanently mounted

# 1.12" SIZES



|          | Cat. No. | Eye & Clamp<br>Description | ASTM Grade /<br>Class | Main Line<br>Range  | Continuous<br>Current Rating | Weight ea.<br>lbs. ( kgs ) |
|----------|----------|----------------------------|-----------------------|---------------------|------------------------------|----------------------------|
|          | 1" Bronz | ze "C" Clamp - Acme        | thread                |                     |                              |                            |
| ш        | 9985     | Eye                        |                       |                     |                              | 1.9 ( .9 )                 |
|          |          | w/ strain relief sleeve    |                       | 795 MCM 26 x 7 ACSR |                              |                            |
| 7        | 2937     | Eye                        | 5 / A                 | to                  | ĺ                            | 1.8 ( .8 )                 |
| Z        |          | w/o strain relief sleeve   | Smooth Jaw            | #8                  | 400 RMS Amps                 |                            |
| 0        | 4280*    | Mounted                    |                       | i                   | 60 Hz                        | 4.9 ( 2.2 )                |
| ~        |          | w/ strain relief sleeve    |                       | 1.12"12"            | İ                            |                            |
|          | 4187     | Eye                        | 5/B                   | 29mm - 3mm Dia.     | i<br>I                       | 1.9 ( .9 )                 |
| Δ        |          | w/ strain relief sleeve    | Serrated Jaw          | 1                   | 1                            |                            |
|          | 2537     | Hanger Stud only           |                       |                     |                              | .4 ( .2 )                  |
|          |          |                            |                       |                     |                              |                            |
|          | GRADE    | 5 "T" / EYE "C" CLAN       | IP - Acme Thread      |                     |                              |                            |
| NZE      | 4242     | "T" w/ strain              |                       |                     |                              | 1.9 ( .9 )                 |
| 0        |          | sleeve & "T"               |                       | 795 MCM             |                              |                            |
| Δ.       |          | eye screw                  |                       | 26" x 7"ACSR        |                              |                            |
|          |          |                            | 5 / A                 | to #6               | 400 RMS Amps                 |                            |
| <b>∑</b> | 9993     | "T" w/ strain              | Smooth Jaw            | İ                   | 60 Hz                        | 1.6 ( .7 )                 |
| ALUMINUM |          | sleeve & "T"               |                       | 1.12"16"            |                              |                            |
| A L U    |          | eye screw                  |                       | 29mm - 4mm Dia.     |                              |                            |

\*Mounted: 1.25" dia x 6' Fiberglass Hot Stick permanently mounted

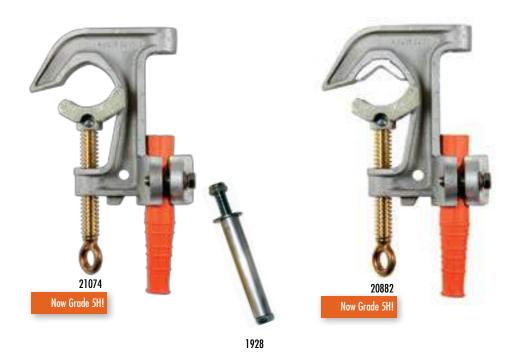
# 1.26" AND 1.5" SIZES



|          |          |                            |                         |                    | 21099                        |                           |
|----------|----------|----------------------------|-------------------------|--------------------|------------------------------|---------------------------|
|          |          | Eye & Clamp<br>Description | ASTM Grade /<br>Class   | Main Line<br>Range | Continuous<br>Current Rating | Weight ea<br>lbs. ( kgs ) |
|          | 1.25" BF | RONZE "C" CLAMP - A        | cme Thread              |                    |                              |                           |
|          | 9984     | Eye                        | 5/A                     |                    |                              | 2.2 ( 1.0 )               |
| ш        |          | w/ strain relief sleeve    | Smooth Jaw              |                    |                              |                           |
|          | 1897     | Eye                        | w/                      |                    |                              | 2.1 ( .9 )                |
| 7        |          | w/o strain relief sleeve   | Flat Lower Jaw          | 1035.5 KCM ACSR    |                              |                           |
|          | 4255     | Eye                        | 5/A                     | to #6              |                              | 2.2 ( 1.0 )               |
| Z        |          | w/ strain relief sleeve    | Smooth Jaw              | i i                | 400 RMS Amps                 |                           |
| 0        | 21069    | Eye                        | w/                      |                    | 60Hz                         | 2.1 ( .9 )                |
|          |          | w/o strain relief sleeve   | Curved Lower Jaw        | 1.26 "16"          |                              |                           |
| ¥        | 4279     | Eye                        | 5 / B                   | 32mm - 4mm Dia.    |                              | 2.2 ( 1.0 )               |
|          |          | w/ strain relief sleeve    | Serrated Jaw            | i i                |                              |                           |
| n        | 21070    | Eye                        | w/                      | i i                |                              | 2.1 ( .9 )                |
|          |          | w/o strain relief sleeve   | Flat Lower Jaw          | i i                |                              |                           |
|          | 9983     | Hanger Stud only           |                         |                    |                              | .4 ( .2 )                 |
| Σ        | 24410    | Eye                        | 5 / A                   | 1035.5 KCM ACSR    | 400 PMS Amps                 | 2.2 ( 1.0 )               |
|          |          | w/ strain relief sleeve    | Smooth Jaw              | to #6              | 400 RMS Amps                 |                           |
| >        |          |                            | w/ Flat Lower Jaw       | 1.26 "16"          | 60Hz                         |                           |
|          |          |                            |                         | 32mm - 4mm Dia.    |                              |                           |
| Z        | 1.5" ALU | JMINUM "C" CLAMP, w        | ı/ flat lower jaw - Acı | me Thread          |                              |                           |
|          | 1895     | Eye                        |                         |                    |                              | 1.7 ( .8 )                |
|          |          | w/ strain relief sleeve    |                         | i i                |                              |                           |
| ≥        | 2195     | Eye                        |                         | 1431 KCM ACSR      |                              | 1.5 ( .7 )                |
|          |          | w/o strain relief sleeve   | 5 / B                   | to #6              | 400 RMS Amps                 |                           |
|          | 1896*    | Mounted                    | Serrated Jaw            | 1.5"16"            | 60 Hz                        | 4.8 ( 2.1 )               |
| <b>D</b> |          | w/ strain relief sleeve    |                         | to #6              |                              |                           |
|          | 21099    | "T"                        |                         | 38mm - 4mm Dia.    |                              | 1.7 ( .8 )                |
| 1        |          | w/ strain relief sleeve    |                         |                    |                              |                           |
|          | 1928     | Hanger Stud only           |                         |                    |                              | .2 ( .1 )                 |
| < │      |          |                            |                         |                    |                              |                           |

<sup>\*</sup>Mounted: 1.25" dia x 6' Fiberglass Hot Stick permanently mounted

# 2" SIZES

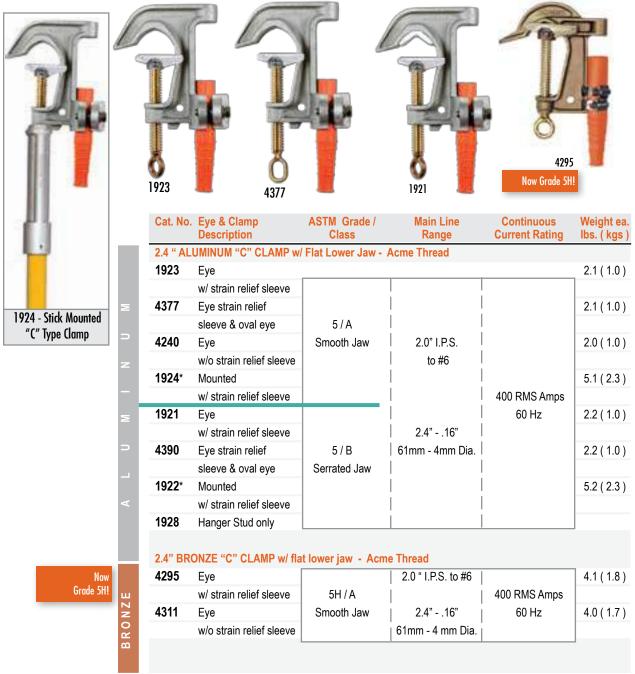


| Now       |  |
|-----------|--|
|           |  |
| Grade 5H! |  |

| Now<br>ade 5H! | ١ |
|----------------|---|

|   | Cat. No.   | Eye & Clamp<br>Description | ASTM Grade /<br>Class | Main Line<br>Range | Continuous<br>Current Rating | Weight ea.<br>lbs. ( kgs ) |  |  |
|---|--|----------------------------|-----------------------|--------------------|------------------------------|----------------------------|--|--|
|   | 2 " ALUMINUM "C" CLAMP w/ Curved Lower Jaw - Acme Thread |                            |                       |                    |                              |                            |  |  |
|   | 21074  | Eye                        | 5H / A                |                    |                              | 2.1 ( 1.0 )                |  |  |
| L |  | w/ strain relief sleeve    | Smooth Jaw            | 3000 KCM ACSR      |                              |                            |  |  |
|   | 21075  | Eye                        | 5 / A                 |                    | 400 RMS Amps                 | 2 ( .9 )                   |  |  |
| Ш |  | w/o strain relief sleeve   | Smooth Jaw            | to #6              |                              |                            |  |  |
| Г | 20882  | Eye                        | 5H / B                |                    | 60 Hz                        | 2.1 ( 1.0 )                |  |  |
| L |  | w/ strain relief sleeve    | Serrated Jaw          |                    |                              |                            |  |  |
| Г | 21077  | Eye                        | 5 / B                 | 2"16"              |                              | 2 ( .9 )                   |  |  |
| L |  | w/o strain relief sleeve   | Serrated Jaw          | 51mm - 4 mm        |                              |                            |  |  |
| Г | 1928   | Hanger Stud only           |                       |                    |                              | .2 ( .1 )                  |  |  |
|   |  |                            |                       |                    |                              |                            |  |  |

# 2.4" SIZE



\*Mounted: 1.25" dia x 6' Fiberglass Hot Stick permanently mounted

# PRESSURE TERMINAL CLAMPS

These **Duckbill** and "C" Clamps feature pressure terminations for use with plain ferrules. Made of high strength aluminum, with bronze eye-screws, these Grade 5 clamps are designed for smooth operation and long service life. Duckbill clamps for all grounding applications from .16 to 1.1" diameter. "C" clamps for all grounding applications from .06 to 1.26" diameter.

Flat Jaw Grounding Clamps are now available with pressure terminals for use with plain cable ferrules. These clamps are made of a high strength aluminum, and a bronze eye screw or "T" handle for durability and smooth operation. Also featured is a hardened aluminum alloy serrated insert. This insert is designed to grip tightly to flat surfaces and cut through surface contamination and oxidation for low resistance contact. The pressure termination is designed on an angle keeping the cable out of the way during installation. The cable termination is angled to minimize interface with the "T" handle or eye when installing or removing the clamp.

Salisbury's **24438 Plain Ferrule 4-way Connector** is available on page H-25.



| Cat. No. | Eye & Clamp<br>Description      | ASTM Grade /<br>Class | Main Line<br>Range           | Continuous<br>Current Rating | Weight ea<br>lbs. ( kgs |
|----------|---------------------------------|-----------------------|------------------------------|------------------------------|-------------------------|
| 1.1" SM  | OOTH JAW ALUMINUMS <sub>i</sub> | pring Loaded - "      | V" Thread                    |                              |                         |
| 24404    | Duckbill                        |                       | 795 KCM ACSR                 |                              | 1.5 ( .68 )             |
|          | Eye w/o strain relief sleeve    | 5/A                   | to #6                        | 400 RMS Amps                 | , ,                     |
|          |                                 | Smooth Jaw            | 1.1"16"                      | 60 Hz                        |                         |
|          |                                 |                       | 28mm - 4mm Dia.              |                              |                         |
| l 25" SI | MOOTH JAW ALUMINUMS             | Spring Loaded -       | Acma Thread                  |                              |                         |
| 24466    | "C" Type                        | Spring Loaded -       | 1035.5 KCM ACSR              |                              | 2.2 (1.0)               |
| 27700    | Eye w/o strain relief sleeve    | 5/B                   | to #6                        | 400 RMS Amps                 | 2.2 ( 1.0 )             |
|          | Lye w/o strain relief sieeve    | Serrated              | 1.26"06"                     | 60 Hz                        |                         |
|          |                                 | Serrateu              | 1.2000<br> 32mm - 1.5mm Dia. | 00112                        |                         |
| 24407    | Stick mounted duckhill alam     |                       | SZIIIII - 1.SIIIII Dia.      |                              | 4.5 ( 2.05 °            |
|          | Stick mounted duckbill clam     | ıþ                    |                              |                              | •                       |
| 21754    | Hanger Stud only                |                       |                              |                              | .3 ( .1 )               |
| 2" SMO   | OTH JAW ALUMINUMSpr             | ing Loaded - A        | cme Thread                   |                              |                         |
| 21942    | "C" Type                        |                       | 1035.5 KCM ACSR              |                              | 2.2 ( 1.0 )             |
|          | Eye w/o strain relief sleeve    | 5/B                   | to #6                        | 400 RMS Amps                 |                         |
|          |                                 | Serrated              | 1.26"06"                     | 60 Hz                        |                         |
|          |                                 |                       | 32mm - 1.5mm Dia.            |                              |                         |
|          |                                 |                       |                              |                              |                         |
| ALUMIN   | IUM FLAT JAW Grounding (        | Clamp - Acme T        | hread                        |                              |                         |
| 24405    | "T" screw                       |                       | 1.5"06"                      |                              | 2.1 ( .9 )              |
|          | no strain relief sleeve         | 5/B                   | Flat or Square               | 400 RMS Amps                 |                         |
| 24406    | Eye screw                       | Serrated Jaw          | 1.26"06"                     | 60Hz                         | 2.0 ( .9 )              |
|          |                                 | 1                     | 32 - 1.5 mm Dia.             |                              |                         |

# **GROUNDING CLAMPS FOR SUBSTATION BUSES**



2991 Now Grade 5H!

| 6 / B                    | 89mm - 4 mm Dia.   | 450 RMS Amps   | 3.0 ( 1.5 )   |
|--------------------------|--|--|---|
| Serrated Jaw             |  | 60 Hz  |   |
| w/ Flat Lower Jaw        | <br>   |  |   |
| C " CLAMP for Ro         | ound, Square, Rectan   | gle or "H" Section   | Substation  |
| 5H / A                   |  |  | 6.9 ( 3.1 )   |
| Smooth Jaw w/ Flat Lower |  |  |   |
| 5/A                      |  |  | 7.0 ( 3.2 )   |
| Smooth Jaw               | 6.12" I.P.S.   | 400 RMS Amps   |   |
| w/                       | 6.62"4"  | 60 Hz  | 7.3 ( 3.3 )   |
| Flat Lower Jaw           | 168mm - 10mm Dia.  |  |   |
|                          |  |  | 6.9 ( 3.1 )   |
|                          |  |  |   |
|                          | Serrated Jaw w/ Flat Lower Jaw  C " CLAMP for Ro  5H / A  Smooth Jaw w/ Flat Lower  5 / A  Smooth Jaw w/ | Serrated Jaw w/ Flat Lower Jaw  C " CLAMP for Round, Square, Rectanged Sh / A Smooth Jaw w/ Flat Lower 5 / A Smooth Jaw W 6.12" I.P.S. | Serrated Jaw w/ Flat Lower Jaw  C " CLAMP for Round, Square, Rectangle or "H" Section  5H / A Smooth Jaw w/ Flat Lower  5 / A Smooth Jaw 6.12" I.P.S.   400 RMS Amps w/   6.62"4"   60 Hz |

3" I.P.S. to #6

3.5" - .16"

Smooth Jaw w/

Flat Lower Jaw

sleeve & long eye screw

(Main line range 3.5"-.16"(89-4mm)

<sup>\*</sup>Mounted: 1.25" dia x 6' Fiberglass Hot Stick permanently mounted

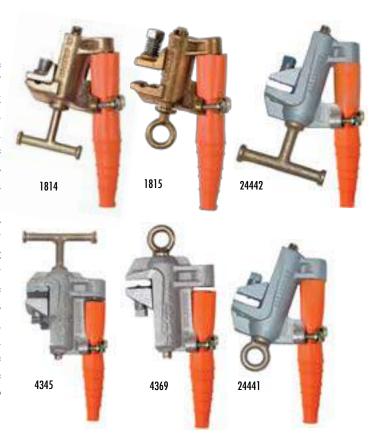
<sup>\*\*</sup>No Ferrule Connection

<sup>+</sup>Accepts 3/4 - 10 ferrule threads

# **GROUNDING CLAMPS**

# FOR FLATS, ANGLES & ROUNDS

Flat Jaw Grounding Clamps are available with either a large "T" handle or with an eye for clampstick application. The handles and eyes are designed so that the cable will not interfere with the torquing of the clamp. The set screw that secures the clamp to a flat surface is located on the movable jaw on all designs. When tightened, the set screw forces the fixed jaw of the clamp firmly against the flat ensuring a consistent low resistance current path directly through the body of the clamp to the cable connection. With other designs having a set screw on the fixed jaw, current is required to flow through mechanical connections between the movable jaw, the eye screw, and the body of the clamp before passing to the cable connection.



|          | Cat. No. | Eye & Clamp<br>Description | ASTM Grade /<br>Class | Main Line<br>Range | Continuous<br>Current Rating | Weight ea.<br>lbs. ( kgs ) |
|----------|----------|----------------------------|-----------------------|--------------------|------------------------------|----------------------------|
| ш        | GRADE :  | BRONZE FLAT JAW            | / Grounding Clamps    | s - "V" Thread     |                              |                            |
| N<br>N   | 1814     | "T" w/ strain              |                       | 1.5"06"            |                              | 1.7 ( .8 )                 |
| 0        |          | sleeve & "T" screw         | 3 / B                 | Flat or Square     | 300 RMS Amps                 |                            |
| ~        | 1815     | Eye w/ strain              | Serrated Jaw          | 1.26"06"           | 60Hz                         | 1.6 ( .7 )                 |
| <b>B</b> |          | sleeve & eye screw         |                       | 32mm - 1.5 mm Dia. |                              |                            |
|          |          |                            |                       |                    |                              |                            |
| _        | GRADE S  | 5 ALUMINUM FLAT J          | AW Grounding Clan     | np - Acme Thread   |                              |                            |
|          | 4345     | "T" w/ strain              |                       |                    |                              | 2.1 ( .9 )                 |
| )        |          | sleeve & "T" screw         |                       |                    |                              |                            |
| Z        | 24442    | "T" w/ strain              |                       | 1.5"06"            |                              | 2.1 ( .9 )                 |
|          |          | sleeve & "T" screw         | 5 / B                 | Flat or Square     | 400 RMS Amps                 |                            |
| Σ        | 4369     | Eye w/ strain              |                       | İ                  |                              | 2.0 ( .9 )                 |
|          |          | sleeve & eye screw         | Serrated Jaw          | 1.26"06"           | 60Hz                         |                            |
| _        | 24441    | Eye w/ strain              |                       | 32mm - 1.5 mm Dia. |                              | 2.0 ( .9 )                 |
| ⋖        |          | sleeve & eye screw         |                       |                    |                              |                            |
|          |          |                            |                       |                    |                              | _                          |

\*Mounted: 1.25" dia x 6' Fiberglass Hot Stick permanently mounted

Grounding Equipment.

# **HEAVY DUTY DUAL-PURPOSE CLAMPS**

The Heavy Duty Bronze "C" Type Flat Jaw Clamp with antiblow off keeper is made to fit structural angles, flats, and copper or copperweld stranded grounding assemblies. To install, first use an abrasive cloth or wire brush to clean the surface to be clamped. Then, wipe the surface clean, position the clamp, finger tighten and set the screws. Use a wrench to secure and tighten. A 2667 clamp with contact stud offers greater versatility.

Cat. No. Eve & Clamp



Continuous

Weight ea.

| 2567 Now  |
|-----------|
| Grade 5H! |

| out. No. | Description          | Class        | Range               | Current Rating       | lbs. ( kgs ) |
|----------|----------------------|--------------|---------------------|----------------------|--------------|
|          |                      |              |                     |                      | 7            |
| 2567     | w/ Strain            |              | Angles & Flats:     | 5/8-11UNC            | 4 ( 1.8 )    |
|          | Relief Sleeve        | 5H / B       | 2.5"-4" WX          | Max. Cable           |              |
|          | 5/8"-11NC Connection | Serrated Jaw | ( 64-101 x 3-19mm ) | Size 4/0 Type V      |              |
|          |                      |              | Rounds: C           | Compression Ferrules |              |
|          |                      |              | .25"75"             |                      |              |
|          |                      |              | ( 6-19mm ) Dia.     |                      |              |
|          |                      |              |                     |                      | _            |
|          |                      |              |                     |                      | _            |
| 2577     | w/ Strain            |              | Angles & Flats:     | 3/4-10UNC            | 4 ( 1.8 )    |
|          | Relief Sleeve        | 6 / B        | 2.5"-4" WX          | Max. Cable           |              |
|          | 3/4"-10NC Connection | Serrated Jaw | ( 64-101x3-19mm )   | Size 250 MCM         |              |
|          |                      |              | Rounds:             | Type V               |              |
|          |                      |              | .25"75" C           | Compression Ferrules |              |
|          |                      |              | ( 6-19mm ) Dia.     | •                    |              |
|          |                      |              |                     |                      | _            |
| 2667     | 2567 Clamp           | 5 / B        | Angles & Flats:     | 5/8-11UNC            | 5 ( 2.3 )    |
|          | w/ Contact Stud      | Serrated Jaw | 2.5"-4" WX          | Max. Cable           |              |
|          |                      |              | ( 64-101 x 3-19mm ) | Size 4/0 Type V      |              |
|          |                      |              | Rounds: C           | Compression Ferrules |              |
|          |                      |              | .25"75"             | •                    |              |
|          |                      |              | ( 6-19mm ) Dia.     |                      |              |
|          |                      |              | (                   |                      |              |

**Main Line** 

ASTM Grade /

# SPECIALTY CLAMPS

Cutout Clamps are applied with a clampstick into the bottom hinge contact of a cutout. This clamp can be used as part of a ground assembly or by using a contact stud using a standard grounding assembly with "C" clamps from the stud to ground.

Lightweight, heavy duty Stringing Ground installs anywhere along the length of conductor to provide a continuous grounding bond, even if the conductor is slack. Constructed of high-strength aluminum alloy with large diameter sheaves and bronze bushing bearings. Side opening for quick, easy installation. Adjustable compression spring assures proper contact for different sizes of conductor and for easy passage of splices. In tests, this clamp withstood a 25kA, 28 cycle short circuit. The three options for a ground tap connection are: termination for ground cables, contact/hanger stud and connector for ground wire.









Contact Stud

| 2.1 ( 1.1 ) |
|-------------|
| 2.1 ( 1.1 ) |
|             |
|             |
| 3.3 ( 1.5 ) |
|             |
| 1.2 ( .5 )  |
|             |
|             |
|             |
| 5.3 ( 2.4 ) |
|             |
|             |
|             |
|             |
|             |
|             |

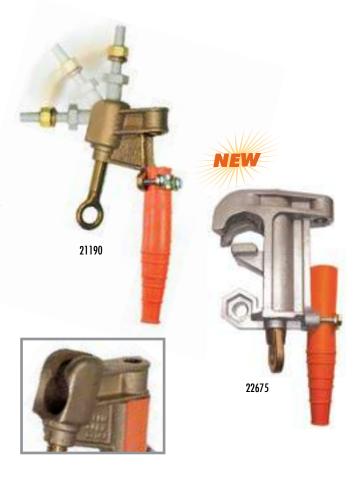
## **BALL & SOCKET SYSTEM**

### **SOCKET CLAMP & BALL STUD "C" CLAMP**

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 21190 Socket Clamp, made from bronze alloy, has a socket size of 1 inch (25.4mm) and a threaded bore boss of 5/8"-11 UNC. The socket clamp has an integral cable support with strain relief sleeve.

The Ball Stud "C" Clamp is an universal clamp that can be used in substations and on overhead lines. This universal clamp can be used as a socket clamp on a 1 inch (25.4mm) Ball Stud and as a 1 ½ inch (38mm) C-Clamp on overhead lines. The eye screw is not extended beyond the body of the clamp, minimizing possible thread damage during handling. Double lead V-thread allows for faster installation, minimizing worker fatigue. External and internal ball studs assembly can be used as a current carrying contact stud.

See page J-3 for ball socket studs and accessories available for both Ball & Socket clamps and Ball Stud "C" Clamps.



#### Specifications for Ball Stud "C" Clamp

- Aluminum clamp body
- Double lead V-thread eye screw is bronze alloy
- ASTM Type 1, Class A, Grade 5 rating
- Fault current ratings:
  - 43,000 Amps 15 cycles
  - 30,000 Amps 30 cycles
- Ferrule attachment: 5/8" x 11 UNC for Grade 5 rating
- Grounding cable: #2 min size to 4/0 max size

| Cat. No. | Description                            | ASTM<br>Grade | Continuous Current Rating | Weight ea.<br>lbs. ( kgs) |
|----------|--|---------------|---------------------------|---------------------------|
| 21190    | w/ Strain<br>Relief Sleeve             | 5             | 400 Amps                  | 1.2 ( .54 )               |
| 21277    | w/o Strain<br>Relief Sleeve            | 5             | 400 Amps                  | 1.1 ( .5 )                |
| 22675    | 1" Ball Stud C-Clamp w/ strain relief  | 5             | 400 Amps                  | 2.7 (x)                   |
| 22704    | 1" Ball Stud C-Clamp w/o strain relief | 5             | 400 Amps                  | 2.6 ( x )                 |

### **GROUNDING CABLES**

**Grounding Cables** are made with extra flexible strand of soft drawn #30 AWG (.01") copper and are available in three different jackets.

The yellow thermoplastic elastomer jacketed cable is the standard for grounding service. It provides a combination of economy, flexibility, and durability. The service temperature ranges from 200° to -50°F per ASTM F 855, Type I requirements.

The black thermoplastic elastomer jacketed cable has a smaller diameter and thinner jacket material giving it better flexibility than the yellow cable. The service temperature ranges from 200° to -50°F per ASTM F 855, Type I requirements.

The PVC transparent flexible thermoplastic jacketed cable allows easy inspection for strand breakage. The flexibility decreases with low temperatures. The service temperature ranges from 140° to -40°F per ASTM F 855, Type III requirements.

The silicone transparent flexible thermoplastic jacketed cable allows easy inspection for strand breakage. The service temperature ranges from 302° to -40°F per ASTM F 855, Type I requirements.



|                       | Cat No. | Size      | Strand Dia.<br>in. ( mm ) | Jacket<br>in. ( mm ) | Short Circu<br>AMPS, RI<br>15 Cycles | uit Withstand<br>MS, 60Hz<br>30 Cycles | Continuous<br>Current<br>AMPS, RMS, 60Hz | Wt. / 1000 ft.<br>lbs. ( kgs ) |
|-----------------------|---------|-----------|---------------------------|----------------------|--------------------------------------|--|--|--------------------------------|
| _                     | 2136    | #2-665W   | .35 ( 8.9 )               | .5 ( 12.7 )          | 14500                                | 10000                                  | 200                                      | 282 ( 127 )                    |
| <b>M</b> 0            | 2137    | 1/0-1064W | .45 ( 11.4 )              | .62 ( 15.7 )         | 21000                                | 15000                                  | 250                                      | 488 ( 221 )                    |
| 1                     | 2138    | 2/0-1330W | .49 ( 12.4 )              | .65 ( 16.5 )         | 27000                                | 20000                                  | 300                                      | 537 ( 243 )                    |
| YE                    | 2139    | 4/0-2109W | .62 ( 1.7 )               | .83 ( 21.1 )         | 43000                                | 30000                                  | 400                                      | 836 ( 379 )                    |
|                       |         |           |                           |                      |                                      |  |  |                                |
|                       | 2636    | #2-665W   | .35 ( 8.9 )               | .47 ( 12 )           | 14500                                | 10000                                  | 200                                      | 263 ( 119 )                    |
| ×                     | 2637    | 1/0-1064W | .45 ( 11.4 )              | .58 ( 14.7 )         | 21000                                | 15000                                  | 250                                      | 404 ( 183 )                    |
| LAC                   | 2638    | 2/0-1330W | .49 ( 12.4 )              | .63 ( 16 )           | 27000                                | 20000                                  | 300                                      | 497 ( 225 )                    |
| BL/                   | 2649    | 3/0-1672W | .55 ( 14 )                | .72 ( 18.3 )         | 36000                                | 25000                                  | 350                                      | 680 ( 308 )                    |
|                       | 2639    | 4/0-2109W | .62 ( 1.7 )               | .78 ( 19.8 )         | 43000                                | 30000                                  | 400                                      | 770 ( 349 )                    |
|                       |         |           |                           |                      |                                      |  |  |                                |
| AR                    | 2128    | #2-665W   | .35 ( 8.9 )               | .53 ( 13.5 )         | 14500                                | 10000                                  | 200                                      | 289 ( 131 )                    |
| LE/                   | 2129    | 1/0-1064W | .45 ( 11.4 )              | .64 ( 16.3 )         | 21000                                | 15000                                  | 250                                      | 520 ( 235 )                    |
| ပ                     | 2133    | 2/0-1330W | .49 ( 12.4 )              | .7 ( 17.8 )          | 27000                                | 20000                                  | 300                                      | 546 ( 247 )                    |
| PVC                   | 2288    | 4/0-2109W | .62 ( 1.7 )               | .84 ( 21.3 )         | 43000                                | 30000                                  | 400                                      | 841 ( 381 )                    |
| <u> </u>              |         |           |                           |                      |                                      |  |  |                                |
| AR                    | 21930   | 2/0-1330W | .49 ( 12.4 )              | .62 ( 15.7 )         | 27000                                | 20000                                  | 300                                      | 487 ( 221 )                    |
| C L E A R<br>SILICONE | 21931   | 4/0-2109W | .62 ( 1.7 )               | .78 ( 19.8 )         | 43000                                | 30000                                  | 400                                      | 579 ( 263 )                    |
| ပ က                   |         |           |                           |                      |                                      |  |  |                                |

# THREADED GROUNDING FERRULES

Salisbury compression **Threaded Grounding Ferrules** provide low resistant connection to cable strands with a threaded stud that securely screws into a clamp. Nut and lock washers increase contact pressure and secure the assembly. Tin plated copper ferrules can be used on either bronze or aluminum body clamps. All Salisbury threaded grounding ferrules are unshrouded and manufactured with a 5/8-11 UNC threaded stud and meets the requirements of ASTM F855.



|           | Cat. No.<br>Pair | ASTM<br>Grade | Size | Installing Die Codes<br>T&B | Burndy<br>Die Numbers | Weight ea.<br>lbs. ( kgs ) |
|-----------|------------------|---------------|------|-----------------------------|-----------------------|----------------------------|
| ≥         |                  |               |      |                             |                       |                            |
| $\supset$ | 2026             | 1             | #2   | 50                          | -                     | .2 ( .1 )                  |
| z         | 2027             | 2             | 1/0  | 50                          | -                     | .2 ( .1 )                  |
| –<br>≥    |                  |               |      |                             |                       |                            |
|           | 2620             | 3             | 2/0  | 60                          | -                     | .3 ( .1 )                  |
| $\supset$ |                  |               |      |                             |                       |                            |
| _         | 2640             | 5             | 4/0  | 71                          | -                     | .3 ( .1 )                  |
| ∢         |                  |               |      |                             |                       |                            |
| œ         | 2022             | 1             | #2   | 50                          | U243                  | .5 ( .2 )                  |
| ш         | 2023             | 2             | 1/0  | 50                          | U243                  | .4 ( .2 )                  |
| <u>a</u>  | 2024             | 3             | 2/0  | 60                          | U245                  | .4 ( .2 )                  |
| <b>a</b>  |                  |               |      |                             |                       |                            |
| 0         | 4277             | 4             | 3/0  | 66                          |                       | .6 ( .3 )                  |
| ပ         | 2025             | 5             | 4/0  | 66                          | U247                  | .6 ( .3 )                  |
|           |                  |               |      |                             |                       |                            |

Add suffix "A" to the catalog number when requesting a custom insulated grounding set.

# PLAIN SHROUDED & UNSHROUDED FERRULES

Plain Ferrules are designed for use with all grounding clamps that feature pressure terminal including the 1" duckbill and 1.5" flat jaw clamp.

**Copper Ferrules** are available in two different styles: unshrouded and shrouded. Shrouded ferrules are compressed on both the conductor and the jacket of the cable to reduce bending stress. Unshrouded ferrules are crimped on the conductor strands only. These ferrules are manufactured of tin plated, 99.5% pure copper.

**Aluminum Ferrules** are available in two different styles: unshrouded and shrouded. Shrouded ferrules are compressed on both the conductor and the jacket of the cable to reduce bending stress. Unshrouded ferrules are crimped on the conductor strands only.



plain shrouded



plain unshrouded

| Cat. No.<br>Pair | Cable Size | Strand Die Codes<br>T&B | Jacket Die Codes<br>T&B | Burndy<br>Die Number | Weight ea.<br>Ibs. ( kgs ) |
|------------------|------------|-------------------------|-------------------------|----------------------|----------------------------|
| SHROUDE          | :D         |                         |                         |                      |                            |
| 24424            | #2         | 50                      | 71                      | -                    | 0.3 ( .14 )                |
| 24425            | 1/0        | 50                      | 71                      | -                    | 0.35 ( .16 )               |
| 24426            | 2/0        | 60                      | 76                      | -                    | 0.4 ( .18 )                |
| 24427            | 4/0        | 66                      | 106                     | -                    | 0.45 ( .20 )               |
| UNSHROU          | IDED       |                         |                         |                      |                            |
| 24420            | #2         | 50                      | -                       |                      | 0.3 ( .14 )                |
| 24421            | 1/0        | 50                      | -                       | U243                 | 0.3 ( .14 )                |
| 24422            | 2/0        | 60                      | -                       | U245                 | 0.35 ( .16 )               |
| 24423            | 4/0        | 66                      | -                       | U247                 | 0.35 ( .16 )               |
| SHROUDE          | :D         |                         |                         |                      |                            |
| 24434            | #2         | 50                      | 71                      | -                    | 0.1 ( .045 )               |
| 24436            | 2/0        | 60                      | 76                      | -                    | 0.15 ( .07 )               |
| 24437            | 4/0        | 71                      | 106                     | -                    | 0.15 ( .07 )               |
| UNSHROU          | IDED       |                         |                         |                      |                            |
| 24430            | #2         | 50                      | -                       | -                    | 0.12 ( .54 )               |
| 24431            | 1/0        | 50                      | -                       | -                    | 0.12 ( .54 )               |
| 24432            | 2/0        | 60                      | -                       | -                    | 0.16 ( .073 )              |
| 24433            | 4/0        | 71                      | -                       | -                    | 0.16 ( .073 )              |

Add suffix "A" to the catalog number when requesting a custom insulated grounding set.

# **GROUNDING ACCESSORIES**

Strain Relief Sleeves reinforce cables at the termination points when used with the cable support system. This decreases strand damage to cables from age or mishandling which reduces current carrying capacity and service life. SALCOR® Strain Relief Sleeves accept all grounding cables #2 through 4/0. Sleeve assembly consists of two parts: the inner sleeve which is discarded if the cable diameter exceeds .72" and tapered outer sleeve, 6.5" long, which can be cut to match the diameters. Clear strain relief sleeves and heat shrink are available to fit ground clamps.



| Cat. No.     | Description  | Weight ea.<br>lbs. ( kgs ) |
|--------------|--|----------------------------|
| CABLE STRAIN | RELIEF SLEEVES   |                            |
| 0786         | Tapered Outer SALCOR Sleeve Only                       | .1 ( .04 )                 |
| 1758         | Inner SALCOR Sleeve Only                               | .1 ( .04 )                 |
| 1788         | Complete SALCOR Strain Relief Assembly                 | .1 ( .04 )                 |
| 2633         | Clear Sleeve for 4/0 Grounding Cable                   | .1 ( .04 )                 |
| 2983         | Clear Sleeve for #2 to 2/0 Grounding Cable             | .1 ( .04 )                 |
| 20886        | Clear Heat Shrink, 5" (127mm) for All Grounding Cables | .1 ( .04 )                 |

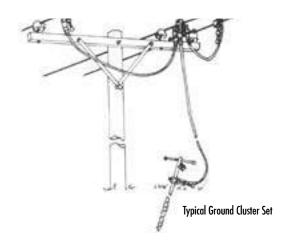
# SINGLE GROUNDING ASSEMBLIES

#### SINGLE GROUNDING ASSEMBLIES & SETS

Salisbury offers a variety of single grounding assemblies. These single ground assemblies offer versatility to the user when performing temporary grounding.

For ordering convenience, completed **Single Grounding Assemblies** are listed which cover many standard application needs. Modification to these sets to meet specific needs can be made. Contact your local Salisbury representative for assistance or visit www.whsalisbury.com/configurator/ to use our helpful online grounding configurator.





| Cat. No.   | Description                                  |   | Weight ea.<br>lbs. ( kgs ) |
|------------|--|---|----------------------------|
| SINGLE GRO | UNDING ASSEMBLIES                            |   |                            |
| 24309      | 2 ea. #1895 Serrated Aluminum "C" Clamp 1.5" | 3 | 5.9 ( 2.7 )                |
|            | 1 pr. #2024 Ferrules                         |   |                            |
|            | 6 ft. #2138 2/0 Cu. Cable yellow             |   |                            |
|            |  | _ |                            |

Optional ground set label available upon request when ordering.

# **SINGLE GROUNDING ASSEMBLIES**

# **SINGLE GROUNDING ASSEMBLIES & SETS**

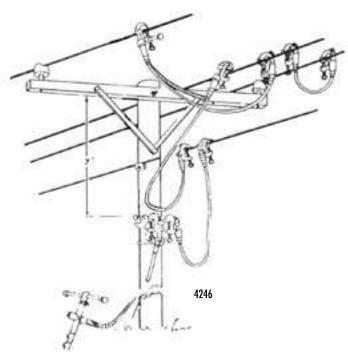
| 1 ea. #1928 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable 2 ea. #1923 Smooth Aluminum "C" Clamp 2.4" 1 ea. #1928 Hanger Stud, 1 pr. #2620 Ferrules 10 ft. #2138 2/0 Cu. Cable 2 ea. #1923 Smooth Aluminum "C" Clamp 1 ea. #4345 Aluminum Flat Jaw "T" Handle Clamp 1 pr. #2620 Ferrules, 15 ft. #2138 2/0 Cu. Cable 2 ea. #1793 Bronze Duck Bill 556 KCM 2 ea. #2093 Hanger Stud, 1 pr. #2023 Ferrules 6 ft. #2137 1/0 Cu. Cable 2 ea. #1921 Serrated Aluminum "C" Clamp 2.4" 1 ea. #1928 Hanger Stud, 1 pr. #2620 Ferrules 10 ft. #2138 2/0 Cu. Cable 2 ea. #1852 Smooth Aluminum Duck Bill Clamp 1.66" 1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable 2 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable 2 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable 2 ea. #2531 Smooth Aluminum Duck Bill Clamp 1.25" 1 ea. #2537 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable 2 ea. #2537 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  | Cat. No.   | Description   | ASTM<br>Grade | Weight ea.<br>lbs. ( kgs ) |
|---|------------|---|---------------|----------------------------|
| 1 ea. #1928 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2 ea. #1923 Smooth Aluminum "C" Clamp 2.4" 1 ea. #1928 Hanger Stud, 1 pr. #2620 Ferrules 10 ft. #2138 2/0 Cu. Cable  2 ea. #1923 Smooth Aluminum "C" Clamp 1 ea. #4345 Aluminum Flat Jaw "T" Handle Clamp 1 pr. #2620 Ferrules, 15 ft. #2138 2/0 Cu. Cable  2 ea. #1793 Bronze Duck Bill 556 KCM 2 5.4 (2.5) 1 ea. #2093 Hanger Stud, 1 pr. #2023 Ferrules 6 ft. #2137 1/0 Cu. Cable  2 ea. #1921 Serrated Aluminum "C" Clamp 2.4" 3 9 (4.1) 1 ea. #1928 Hanger Stud, 1 pr. #2620 Ferrules 10 ft. #2138 2/0 Cu. Cable  2 ea. #1852 Smooth Aluminum Duck Bill Clamp 1.66" 2 5.2 (2.4) 2 ea. #1853 Serrated Aluminum Duck Bill Clamp 1.25" 1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2 ea. #1853 Serrated Aluminum Duck Bill Clamp 1.25" 1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2 ea. #2531 Smooth Aluminum "C" Clamp 1.0" 2 4.9 (2.2) 1 ea. #2537 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2 ea. #2537 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2 ea. #3985 Smooth Bronze "C" Clamp 1.0" 2 6.9 (3.1) | SINGLE GRO | OUNDING ASSEMBLIES                                  |               |                            |
| 2319 2 ea. #1923 Smooth Aluminum "C" Clamp 2.4" 3 8.7 (3.9) 1 ea. #1928 Hanger Stud, 1 pr. #2620 Ferrules 10 ft. #2138 2/0 Cu. Cable 2320 1 ea. #1923 Smooth Aluminum "C" Clamp 3 7.4 (3.4) 1 ea. #1923 Smooth Aluminum "C" Clamp 3 7.4 (3.4) 1 ea. #4345 Aluminum Flat Jaw "T" Handle Clamp 1 pr. #2620 Ferrules, 15 ft. #2138 2/0 Cu. Cable 2321 2 ea. #1793 Bronze Duck Bill 556 KCM 2 5.4 (2.5) 1 ea. #2093 Hanger Stud, 1 pr. #2023 Ferrules 6 ft. #2137 1/0 Cu. Cable 2329 2 ea. #1921 Serrated Aluminum "C" Clamp 2.4" 3 9 (4.1) 1 ea. #1928 Hanger Stud, 1 pr. #2620 Ferrules 10 ft. #2138 2/0 Cu. Cable 2556 2 ea. #1852 Smooth Aluminum Duck Bill Clamp 1.66" 2 5.2 (2.4) 1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable 2558 2 ea. #1853 Serrated Aluminum Duck Bill Clamp 1.25" 2 5.5 (2.5) 1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable 2876 2 ea. #2531 Smooth Aluminum "C" Clamp 1.0" 2 4.9 (2.2) 2876 2 ea. #2537 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable 2 ea. #2537 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable   | 2299       | 2 ea. #1895 Serrated Aluminum "C" Clamp 1.5"        | 2             | 5.9 ( 2.7 )                |
| 2319  |            | 1 ea. #1928 Hanger Stud, 1 pr. #2027 Ferrules       |               |                            |
| 1 ea. #1928 Hanger Stud, 1 pr. #2620 Ferrules 10 ft. #2138 2/0 Cu. Cable  2320 1 ea. #1923 Smooth Aluminum "C" Clamp 1 ea. #4345 Aluminum Flat Jaw "T" Handle Clamp 1 pr. #2620 Ferrules, 15 ft. #2138 2/0 Cu. Cable  2321 2 ea. #1793 Bronze Duck Bill 556 KCM 2 5.4 (2.5) 1 ea. #2093 Hanger Stud, 1 pr. #2023 Ferrules 6 ft. #2137 1/0 Cu. Cable  2329 2 ea. #1921 Serrated Aluminum "C" Clamp 2.4" 3 9 (4.1) 1 ea. #1928 Hanger Stud, 1 pr. #2620 Ferrules 10 ft. #2138 2/0 Cu. Cable  2556 2 ea. #1852 Smooth Aluminum Duck Bill Clamp 1.66" 1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2558 2 ea. #1853 Serrated Aluminum Duck Bill Clamp 1.25" 1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2576 2 ea. #2531 Smooth Aluminum "C" Clamp 1.0" 2 4.9 (2.2) 1 ea. #2537 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2876 2 ea. #2531 Smooth Aluminum "C" Clamp 1.0" 2 4.9 (2.2) 1 ea. #2537 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable   |            |   |               |                            |
| 10 ft. #2138 2/0 Cu. Cable  1 ea. #1923 Smooth Aluminum "C" Clamp 1 ea. #4345 Aluminum Flat Jaw "T" Handle Clamp 1 pr. #2620 Ferrules, 15 ft. #2138 2/0 Cu. Cable  2321 2 ea. #1793 Bronze Duck Bill 556 KCM 1 ea. #2093 Hanger Stud, 1 pr. #2023 Ferrules 6 ft. #2137 1/0 Cu. Cable  2329 2 ea. #1921 Serrated Aluminum "C" Clamp 2.4" 1 ea. #1928 Hanger Stud, 1 pr. #2620 Ferrules 10 ft. #2138 2/0 Cu. Cable  2556 2 ea. #1852 Smooth Aluminum Duck Bill Clamp 1.66" 1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2558 2 ea. #1853 Serrated Aluminum Duck Bill Clamp 1.25" 1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2876 2 ea. #2531 Smooth Aluminum "C" Clamp 1.0" 2 4.9 (2.2) 1 ea. #2537 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2876 2 ea. #2531 Smooth Aluminum "C" Clamp 1.0" 2 4.9 (2.2) 1 ea. #2537 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable 2 ea. #9985 Smooth Bronze "C" Clamp 1.0" 2 6.9 (3.1)   | 2319       | 2 ea. #1923 Smooth Aluminum "C" Clamp 2.4"          | 3             | 8.7 ( 3.9 )                |
| 1 ea. #1923 Smooth Aluminum "C" Clamp 1 ea. #4345 Aluminum Flat Jaw "T" Handle Clamp 1 pr. #2620 Ferrules, 15 ft. #2138 2/0 Cu. Cable  2321 2 ea. #1793 Bronze Duck Bill 556 KCM 1 ea. #2093 Hanger Stud, 1 pr. #2023 Ferrules 6 ft. #2137 1/0 Cu. Cable  2329 2 ea. #1921 Serrated Aluminum "C" Clamp 2.4" 3 9 (4.1) 1 ea. #1928 Hanger Stud, 1 pr. #2620 Ferrules 10 ft. #2138 2/0 Cu. Cable  2556 2 ea. #1852 Smooth Aluminum Duck Bill Clamp 1.66" 1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2558 2 ea. #1853 Serrated Aluminum Duck Bill Clamp 1.25" 1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2876 2 ea. #2531 Smooth Aluminum "C" Clamp 1.0" 2 4.9 (2.2) 1 ea. #2537 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2 ea. #2531 Smooth Aluminum "C" Clamp 1.0" 2 4.9 (2.2) 2 ea. #2531 Smooth Bronze "C" Clamp 1.0" 2 6.9 (3.1)  |            | 1 ea. #1928 Hanger Stud, 1 pr. #2620 Ferrules       |               |                            |
| 1 ea. #4345 Aluminum Flat Jaw "T" Handle Clamp 1 pr. #2620 Ferrules, 15 ft. #2138 2/0 Cu. Cable  2 ea. #1793 Bronze Duck Bill 556 KCM 1 ea. #2093 Hanger Stud, 1 pr. #2023 Ferrules 6 ft. #2137 1/0 Cu. Cable  2 ea. #1921 Serrated Aluminum "C" Clamp 2.4" 1 ea. #1928 Hanger Stud, 1 pr. #2620 Ferrules 10 ft. #2138 2/0 Cu. Cable  2 ea. #1852 Smooth Aluminum Duck Bill Clamp 1.66" 1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2 5.5 (2.5) 1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2 ea. #2531 Smooth Aluminum Duck Bill Clamp 1.25" 1 ea. #2537 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2 ea. #2537 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2 ea. #2537 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable   |            | 10 ft. #2138 2/0 Cu. Cable                          |               |                            |
| 1 pr. #2620 Ferrules, 15 ft. #2138 2/0 Cu. Cable  2 ea. #1793 Bronze Duck Bill 556 KCM 1 ea. #2093 Hanger Stud, 1 pr. #2023 Ferrules 6 ft. #2137 1/0 Cu. Cable  2 2 ea. #1921 Serrated Aluminum "C" Clamp 2.4" 3 9 (4.1) 1 ea. #1928 Hanger Stud, 1 pr. #2620 Ferrules 10 ft. #2138 2/0 Cu. Cable  2 5.2 (2.4) 2 5.2 (2.4) 2 6 ft. #2137 1/0 Cu. Cable  2 5.2 (2.4) 2 6 ft. #2137 1/0 Cu. Cable  2 6 ft. #2137 1/0 Cu. Cable  2 6 ft. #2137 1/0 Cu. Cable  2 6 ft. #2137 1/0 Cu. Cable  2 6 ft. #2137 1/0 Cu. Cable  2 6 ft. #2137 1/0 Cu. Cable  2 6 ft. #2137 1/0 Cu. Cable  2 6 ft. #2137 1/0 Cu. Cable  2 6 ft. #2137 1/0 Cu. Cable  2 ea. #2531 Smooth Aluminum "C" Clamp 1.0" 1 ea. #2537 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2 ea. #9985 Smooth Bronze "C" Clamp 1.0" 2 6.9 (3.1)   | 2320       | 1 ea. #1923 Smooth Aluminum "C" Clamp               | 3             | 7.4 ( 3.4 )                |
| 2 2 ea. #1793 Bronze Duck Bill 556 KCM 1 ea. #2093 Hanger Stud, 1 pr. #2023 Ferrules 6 ft. #2137 1/0 Cu. Cable 2 2 ea. #1921 Serrated Aluminum "C" Clamp 2.4" 3 9 (4.1) 1 ea. #1928 Hanger Stud, 1 pr. #2620 Ferrules 10 ft. #2138 2/0 Cu. Cable 2 ea. #1852 Smooth Aluminum Duck Bill Clamp 1.66" 1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable 2 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable 2 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable 2 ea. #2531 Smooth Aluminum "C" Clamp 1.0" 2 4.9 (2.2) 1 ea. #2537 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable 2 ea. #2537 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable 2 ea. #9985 Smooth Bronze "C" Clamp 1.0" 2 6.9 (3.1)  |            | 1 ea. #4345 Aluminum Flat Jaw "T" Handle Clamp      |               |                            |
| 1 ea. #2093 Hanger Stud, 1 pr. #2023 Ferrules 6 ft. #2137 1/0 Cu. Cable  2 ea. #1921 Serrated Aluminum "C" Clamp 2.4" 1 ea. #1928 Hanger Stud, 1 pr. #2620 Ferrules 10 ft. #2138 2/0 Cu. Cable  2 ea. #1852 Smooth Aluminum Duck Bill Clamp 1.66" 1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2 5.2 ( 2.4 )  2 5.5 ( 2.5 ) 1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2 ea. #2531 Smooth Aluminum "C" Clamp 1.0" 2 4.9 ( 2.2 ) 1 ea. #2537 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2 ea. #9985 Smooth Bronze "C" Clamp 1.0" 2 6.9 ( 3.1 )  |            | 1 pr. #2620 Ferrules, 15 ft. #2138 2/0 Cu. Cable    |               |                            |
| 2329 2 ea. #1921 Serrated Aluminum "C" Clamp 2.4" 3 9 (4.1)  1 ea. #1928 Hanger Stud, 1 pr. #2620 Ferrules 10 ft. #2138 2/0 Cu. Cable  2556 2 ea. #1852 Smooth Aluminum Duck Bill Clamp 1.66" 2 5.2 (2.4) 1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2558 2 ea. #1853 Serrated Aluminum Duck Bill Clamp 1.25" 2 5.5 (2.5) 1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2876 2 ea. #2531 Smooth Aluminum "C" Clamp 1.0" 2 4.9 (2.2) 1 ea. #2537 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable 2975 2 ea. #9985 Smooth Bronze "C" Clamp 1.0" 2 6.9 (3.1)  | 2321       | 2 ea. #1793 Bronze Duck Bill 556 KCM                | 2             | 5.4 ( 2.5 )                |
| 2 ea. #1921 Serrated Aluminum "C" Clamp 2.4"  1 ea. #1928 Hanger Stud, 1 pr. #2620 Ferrules  10 ft. #2138 2/0 Cu. Cable  2 ea. #1852 Smooth Aluminum Duck Bill Clamp 1.66"  1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules  6 ft. #2137 1/0 Cu. Cable  2 5.2 ( 2.4 )  2 5.5 ( 2.5 )  1 ea. #1853 Serrated Aluminum Duck Bill Clamp 1.25"  1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules  6 ft. #2137 1/0 Cu. Cable  2876  2 ea. #2531 Smooth Aluminum "C" Clamp 1.0"  1 ea. #2537 Hanger Stud, 1 pr. #2027 Ferrules  6 ft. #2137 1/0 Cu. Cable  2 ea. #9985 Smooth Bronze "C" Clamp 1.0"  2 6.9 ( 3.1 )  |            | 1 ea. #2093 Hanger Stud, 1 pr. #2023 Ferrules       |               |                            |
| 1 ea. #1928 Hanger Stud, 1 pr. #2620 Ferrules 10 ft. #2138 2/0 Cu. Cable  2 ea. #1852 Smooth Aluminum Duck Bill Clamp 1.66" 2 5.2 ( 2.4 ) 1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2 5.5 ( 2.5 ) 2 ea. #1853 Serrated Aluminum Duck Bill Clamp 1.25" 1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2876 2 ea. #2531 Smooth Aluminum "C" Clamp 1.0" 2 4.9 ( 2.2 ) 1 ea. #2537 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable 2 ea. #9985 Smooth Bronze "C" Clamp 1.0" 2 6.9 ( 3.1 )  |            | 6 ft. #2137 1/0 Cu. Cable                           |               |                            |
| 10 ft. #2138 2/0 Cu. Cable  2 ea. #1852 Smooth Aluminum Duck Bill Clamp 1.66"  1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2 5.2 ( 2.4 )  2 5.2 ( 2.4 )  1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2 ea. #2531 Smooth Aluminum "C" Clamp 1.0" 1 ea. #2537 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2 ea. #9985 Smooth Bronze "C" Clamp 1.0" 2 6.9 ( 3.1 )  | 2329       | 2 ea. #1921 Serrated Aluminum "C" Clamp 2.4"        | 3             | 9 ( 4.1 )                  |
| 2 ea. #1852 Smooth Aluminum Duck Bill Clamp 1.66"  1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules  6 ft. #2137 1/0 Cu. Cable  2 5.2 ( 2.4 )  2 5.2 ( 2.4 )  1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules  2 5.5 ( 2.5 )  1 ea. #1853 Serrated Aluminum Duck Bill Clamp 1.25"  1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules  6 ft. #2137 1/0 Cu. Cable  2 ea. #2531 Smooth Aluminum "C" Clamp 1.0"  1 ea. #2537 Hanger Stud, 1 pr. #2027 Ferrules  6 ft. #2137 1/0 Cu. Cable  9975  2 ea. #9985 Smooth Bronze "C" Clamp 1.0"  2 6.9 ( 3.1 )   |            | 1 ea. #1928 Hanger Stud, 1 pr. #2620 Ferrules       |               |                            |
| 1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2 ea. #1853 Serrated Aluminum Duck Bill Clamp 1.25" 1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2876 2 ea. #2531 Smooth Aluminum "C" Clamp 1.0" 2 4.9 ( 2.2 ) 1 ea. #2537 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  9975 2 ea. #9985 Smooth Bronze "C" Clamp 1.0" 2 6.9 ( 3.1 )  |            | 10 ft. #2138 2/0 Cu. Cable                          |               |                            |
| 6 ft. #2137 1/0 Cu. Cable  2 ea. #1853 Serrated Aluminum Duck Bill Clamp 1.25"  1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules  6 ft. #2137 1/0 Cu. Cable  2876  2 ea. #2531 Smooth Aluminum "C" Clamp 1.0"  1 ea. #2537 Hanger Stud, 1 pr. #2027 Ferrules  6 ft. #2137 1/0 Cu. Cable  9975  2 ea. #9985 Smooth Bronze "C" Clamp 1.0"  2 6.9 (3.1)   | 2556       | 2 ea. #1852 Smooth Aluminum Duck Bill Clamp 1.66"   | 2             | 5.2 ( 2.4 )                |
| 2 ea. #1853 Serrated Aluminum Duck Bill Clamp 1.25"  1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2 ea. #2531 Smooth Aluminum "C" Clamp 1.0" 2 4.9 ( 2.2 ) 1 ea. #2537 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2 ea. #9985 Smooth Bronze "C" Clamp 1.0" 2 6.9 ( 3.1 )  |            | 1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules       |               |                            |
| 1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  2 ea. #2531 Smooth Aluminum "C" Clamp 1.0" 1 ea. #2537 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable  9975 2 ea. #9985 Smooth Bronze "C" Clamp 1.0" 2 6.9 ( 3.1 )  |            | 6 ft. #2137 1/0 Cu. Cable                           |               |                            |
| 6 ft. #2137 1/0 Cu. Cable  2 ea. #2531 Smooth Aluminum "C" Clamp 1.0"  1 ea. #2537 Hanger Stud, 1 pr. #2027 Ferrules  6 ft. #2137 1/0 Cu. Cable  9975  2 ea. #9985 Smooth Bronze "C" Clamp 1.0"  2 6.9 ( 3.1 )  | 2558       | 2 ea. #1853 Serrated Aluminum Duck Bill Clamp 1.25" | 2             | 5.5 ( 2.5 )                |
| 2 ea. #2531 Smooth Aluminum "C" Clamp 1.0" 2 4.9 ( 2.2 ) 1 ea. #2537 Hanger Stud, 1 pr. #2027 Ferrules 6 ft. #2137 1/0 Cu. Cable 2 ea. #9985 Smooth Bronze "C" Clamp 1.0" 2 6.9 ( 3.1 )   |            | 1 ea. #1858 Hanger Stud, 1 pr. #2027 Ferrules       |               |                            |
| 1 ea. #2537 Hanger Stud, 1 pr. #2027 Ferrules<br>6 ft. #2137 1/0 Cu. Cable<br>9975 2 ea. #9985 Smooth Bronze "C" Clamp 1.0" 2 6.9 ( 3.1 )   |            | 6 ft. #2137 1/0 Cu. Cable                           |               |                            |
| 6 ft. #2137 1/0 Cu. Cable  9975 2 ea. #9985 Smooth Bronze "C" Clamp 1.0" 2 6.9 ( 3.1 )  | 2876       | 2 ea. #2531 Smooth Aluminum "C" Clamp 1.0"          | 2             | 4.9 ( 2.2 )                |
| 9975 2 ea. #9985 Smooth Bronze "C" Clamp 1.0" 2 6.9 ( 3.1 )   |            | 1 ea. #2537 Hanger Stud, 1 pr. #2027 Ferrules       |               |                            |
| ·   |            | 6 ft. #2137 1/0 Cu. Cable                           |               |                            |
| 1 ea. #9983 Hanger Stud, 1 pr. #2023 Ferrules   | 9975       | 2 ea. #9985 Smooth Bronze "C" Clamp 1.0"            | 2             | 6.9 ( 3.1 )                |
|   |            | 1 ea. #9983 Hanger Stud, 1 pr. #2023 Ferrules       |               |                            |
| 6 ft. #2137 1/0 Cu. Cable   |            | 6 ft. #2137 1/0 Cu. Cable                           |               |                            |
| 9982 2 ea. #9984 Smooth Bronze "C" Clamp 1.25" 2 8.3 ( 3.7 )  | 9982       | 2 ea. #9984 Smooth Bronze "C" Clamp 1.25"           | 2             | 8.3 ( 3.7 )                |
| 1 ea. #9983 Hanger Stud, 1 pr. #2023 Ferrules   |            | 1 ea. #9983 Hanger Stud, 1 pr. #2023 Ferrules       |               |                            |
| 6 ft. #2137 1/0 Cu. Cable   |            | 6 ft. #2137 1/0 Cu. Cable                           |               |                            |

Optional ground set label available upon request when ordering.

### SINGLE POINT DISTRIBUTION GROUNDING SET

This **Single Point Distribution Grounding Set** creates an equal potential zone on the working structure. This is accomplished by bonding all conductors and the structure to a ground source using individual assemblies as shown in the adjacent drawing.

Going from either the ground rod or the system ground to the pole mounted contact bar under the worker's feet, to the assemblies bonding the conductors creates an equal potential zone.



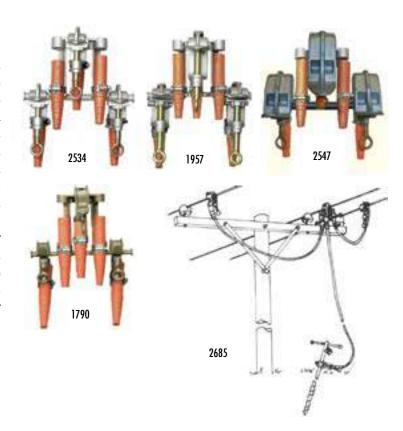
| Cat. No. | <b>Description</b>                              | ASTM<br>Grade | Weight ea.<br>lbs. ( kgs ) |
|----------|---|---------------|----------------------------|
|          |   |               |                            |
| 4246     | Complete Distribution Grounding Set             | 1             | 45.5 ( 20.6 )              |
|          | 10 ea. #2531 Smooth Aluminum "C" Clamps 795 KCM |               |                            |
|          | 1 ea. #9998 Aluminum Pole Mount Contact Bar     |               |                            |
|          | 5 pr. #2026 Ferrules                            |               |                            |
|          | 3 ea. #2537 Hanger studs                        |               |                            |
|          | 60 ft. #2636 # Cu. Cable                        |               |                            |
|          | 1 ea. #2103 Screw Ground Rod w/ Connector       |               |                            |
|          |   |               |                            |

Additional Single Point Sets are available. Contact your local Salisbury representative. Optional ground set label available upon request when ordering.

### **GROUNDING SETS**

### **3 WIRE UNIVERSAL GROUNDING CLUSTERS & SETS**

Grounding Clusters are used to make it easy for a single line worker to apply multiple grounding assemblies on a three phase system. All clusters have an option of a ground lead by using the extra connection point on each cluster. Three wire clusters are recommended for three phase Delta systems. Complete grounding cluster assemblies are available from the factory. Specify cable size and length required and assembly will be made to your specifications.

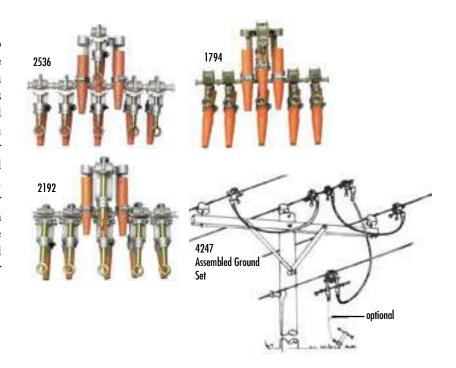


| Cat. No. | Description   | ASTM<br>Grade | Weight ea.<br>lbs. ( kgs ) |
|----------|---|---------------|----------------------------|
|          |   |               |                            |
| 1790     | Cluster w/ 3 #1793 Smooth Jaw                         | 4             | 6 (2.7)                    |
|          | 556 KCM Bronze Duck Bill Clamps                       |               |                            |
| 1957     | Cluster w/ 3 #1895 Serrated Jaw                       | 5             | 6.4 ( 2.9 )                |
|          | 1.5" Aluminum "C" Clamps                              |               |                            |
| 2534     | Cluster w/ 3 #2531 Smooth Jaw                         | 5             | 4.9 ( 2.2 )                |
|          | 1" Aluminum "C" Clamps                                |               |                            |
| 2547     | Cluster w/ 3 #1853 Serrated Jaw                       | 5             | 5.4 ( 2.5 )                |
|          | 1.66" Aluminum Duck Bill Clamps                       |               |                            |
| 2685     | Assembled Ground Cluster Set                          | 2             | 54.2 ( 24.6 )              |
|          | 1 ea. #2516 Serrated Aluminum "C" Clamp 1.25" Cluster |               |                            |
|          | 74 ft. #2637 1/0 Cu. Cable                            |               |                            |
|          | 3 pr. #2027 Ferrules, 1 ea. #2103 Screw Ground Rod    |               |                            |
|          | 1 ea. #2654 Storage Bag                               |               |                            |
| 4248     | Assembled Ground Cluster Set                          | 1             | 54.2 ( 24.6 )              |
|          | 1 ea. #1790 Smooth Bronze Duck Bill Cluster           |               |                            |
|          | 76 ft. #2636 #2 Cu. Cable                             |               |                            |
|          | 3 pr. #2022 Ferrules, 1 ea. #2103 Screw Ground Rod    |               |                            |
|          | 1 ea. #2654 Storage Bag                               |               |                            |

Clusters are also available with Mounted Clamps, consult the factory for more information. Optional ground set label available upon request when ordering.

#### **4 WIRE UNIVERSAL GROUNDING CLUSTERS & SETS**

Grounding Clusters are used to make it easy to apply multiple grounding assemblies easy for a single line worker. All clusters have an option of a ground lead by using the extra connection point on each cluster. Four wire clusters are recommended for three phase Wye systems. Complete grounding cluster assemblies are available from the factory. Specify cable size and length required and assembly will be made to your specifications.



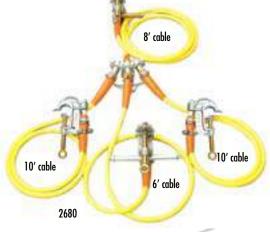
| Cat. No. | Description                                 | ASTM<br>Grade | Weight ea.<br>lbs. ( kgs ) |
|----------|---|---------------|----------------------------|
|          |   |               |                            |
| 1794     | Cluster w/ 6 #1793 Smooth Jaw               | 4             | 9 ( 4.1 )                  |
|          | 556 KCM Bronze Duck Bill Clamps             |               |                            |
| 2192     | Cluster w/ 6 #1895 Serrated Jaw             | 5             | 11.8 ( 5.4 )               |
|          | 1.5" Aluminum "C" Clamps                    |               |                            |
| 2536     | Cluster w/ 6 #2531 Smooth Jaw               | 5             | 8.8 (4)                    |
|          | 1" Aluminum "C" Clamps                      |               |                            |
| 2604     | Cluster w/ 6 #1853 Serrated Jaw             | 5             | 6.2 ( 2.8 )                |
|          | 1.66" Aluminum Duck Bill Clamps             |               |                            |
| 2682     | Assembled Ground Cluster                    | 1             | 14.5 ( 6.6 )               |
|          | 1 ea. #1794 Smooth Bronze Duck Bill Cluster |               |                            |
|          | 18 ft. #2636 #2 Cu. Cable                   |               |                            |
|          | 3 pr. #2022 Ferrules                        |               |                            |
|          | 1 ea. #2654 Storage Bag                     |               |                            |
| 4247     | Assembled Ground Cluster                    | 2             | 18 ( 8.2 )                 |
|          | 1 ea. #2536 Smooth Aluminum "C" Cluster     |               |                            |
|          | 18 ft. #2637 1/0 Cu. Cable                  |               |                            |
|          | 3 pr. #2027 Ferrules                        |               |                            |
|          | 1 ea. #2654 Storage Bag                     |               |                            |

Clusters are also available with Mounted Clamps, consult the factory for more information. Optional ground set label available upon request when ordering.

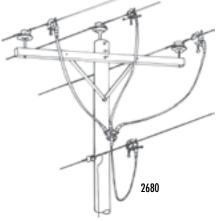
#### **4 WAY CONNECTOR**

The **2680 4-way connector** ground set provides an excellent system for the grounding of a 3 phase system.

**4-way connectors** are used to create a common connection between the conductor leads and the ground lead of a ground set.



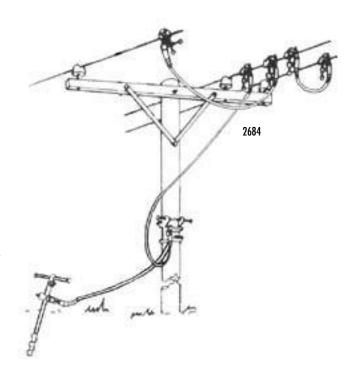




| Cat. No. | Description  | ASTM<br>Grade | Weight ea.<br>lbs. ( kgs ) |
|----------|--|---------------|----------------------------|
| 2680     | Four Way Connector Ground Set - Grade 2 21 kA 15 cycles 1 #2374 Four Way Connector w/ Sleeves 4 #1895 1.5" Serrated Jaw Clamps w/ Sleeves 1 #2427 Double Hanger Stud, 1 #2402 Contact Stud 34 ft. #2137 1/0 Cu. Cable 4 pr. #2027 Ferrules | 2             | 28 ( 12.7 )                |
| 2374     | Threaded Ferrule Four Way Connector  | 5             | 1.8 ( .8 )                 |
| 21702    | Threaded Ferrule Four Way Connector 1 3/4 long x 2 1/4 dia   | a. 5          | .5 ( .23 )                 |
| 24438    | Plain Ferrule Four Way Connector   | 5             | 2 ( .9 )                   |

#### FOR SPECIAL APPLICATIONS

Listed are some typical complete personal protection ground sets for common line construction. These sets, although practical for many applications, are shown as a guide to help determine individual system needs and for ease of ordering. Variations of these sets may be requested to meet specific situations or user preferences. Your local Salisbury representative can answer any questions you have on personal protection grounding needs and applications.



| Cat. No.   | Description  | ASTM<br>Grade | Weight ea.<br>lbs. ( kgs ) |
|------------|--|---------------|----------------------------|
| COMPLETE 3 | PHASE DELTA  |               |                            |
| 2684       | 2 ea. #20880 Contact Bar                               | 2             | 63.5 ( 28.8 )              |
|            | 7 ea. #1895 Serrated Aluminum "C" Clamp 1.5"           |               |                            |
|            | 84 ft. #2637 1/0 Cu. Black Cable, 4 pr. #2027 Ferrules |               |                            |
|            | 2 ea. #1928 Hanger Studs, 1 ea. #2654 Storage Bag      |               |                            |
|            | 1 ea. #2103 Screw Ground Rod                           |               |                            |
| 4249       | 2 ea. #20880 Contact Bar                               | 2             | 63.5 ( 28.8 )              |
|            | 7 ea. #2531 Smooth Aluminum "C" Clamp 795 KCM          |               |                            |
|            | 86 ft. #2637 1/0 Cu. Cable, 4 pr. #2027 Ferrules       |               |                            |
|            | 2 ea. #2537 Hanger Studs, 1 ea. #2654 Storage Bag      |               |                            |
|            | 1 ea. #2103 Screw Ground Rod                           |               |                            |
| COMPLETE 4 | WIRE WYE   |               |                            |
| 4276       | 1 ea. #20880A Contact Bar                              | 2             | 34 ( 15.4 )                |
|            | 7 ea. #2531 Smooth Aluminum "C" Clamp 795 KCM          |               |                            |
|            | 32 ft. #2637 1/0 Cu. Cable, 4 pr. #2027 Ferrules       |               |                            |
|            | 3 ea. #2537 Hanger Studs, 1 ea. #2654 Storage Bag      |               |                            |
|            |  |               |                            |

#### **DEAD FRONT GROUNDING JUMPERS & ELBOWS**

**Dead Front Ground Sets** are supplied with an insulated grounding elbow, yellow jacketed copper grounding cable, and a 1815 bronze flat jaw ground clamp for the ground connection. **Grounding Elbows** are equipped with arc quenching tips as provided on standard load break elbows.

Both 15kV and 25kV elbows are available with connectors for 1/0 or 2/0 cable. Assembled sets for 15kV and 25kV are available for single phase or three phase grounding requirements. The fault duty rating for 200 amp grounding elbows is 10kA for 10 cycles per IEEE 386. Standard three phase sets have a 4 ft. tail connecting to a 2374 four wire connector with 2 ft. leads for the elbows. Sets can be factory assembled to customer specifications.



| Cat. No.    | Description                                | Weight ea.<br>lbs. ( kgs ) |
|-------------|--|----------------------------|
| INSULATED G | ROUNDING ELBOWS                            |                            |
| 2910        | 15kV Elbow w/ 1/0 Cable Connector          | 1.7 ( .7 )                 |
| 2912        | 15kV Elbow w/ 2/0 Cable Connector          | 1.7 ( .7 )                 |
| 2935        | 25kV Elbow w/ 1/0 Cable Connector          | 2 ( .9 )                   |
| 2936        | 25kV Elbow w/ 2/0 Cable Connector          | 2 ( .9 )                   |
| ASSEMBLED   | GROUNDING SETS                             |                            |
| 2961        | 15kV Single Phase, 6 ft. 1/0 Cable w/ Bag  | 10 ( 4.5 )                 |
| 2962        | 15kV Single Phase, 6 ft. 1/0 Cable w/o Bag | 8 ( 3.6 )                  |
| 2963        | 15kV Three Phase, 1/0 Cable w/ Bag         | 22 ( 10 )                  |
| 22630       | 15kV Three Phase, 1/0 Cable w/o Bag        | 20 (9)                     |
| 2971        | 25kV Single Phase, 6 ft. 1/0 Cable w/ Bag  | 13 ( 5.9 )                 |
| 22631       | 25kV Single Phase, 6 ft. 1/0 Cable w/o Bag | 11 (5)                     |
| 2973        | 25kV Three Phase, 1/0 Cable w/ Bag         | 24 ( 10.9 )                |
| 22632       | 25kV Three Phase, 1/0 Cable w/o Bag        | 22 ( 10 )                  |

#### **ASTM F855-09 Table 1 - Protective Grounding Clamp Ratings**

TABLE 1 Protective Ground Cable, Ferrule, Clamp and Assembly Ratings for Symmetrical Current

|       | Grou                        | unding C<br>Strengt | lamp Torq<br>th, min  | ue  |   |                          | Short Cir             | cuit Proper                        | ties <sup>A</sup>           |                       |                                      |               |
|-------|-----------------------------|---------------------|---|-----|---|--------------------------|-----------------------|------------------------------------|-----------------------------|-----------------------|--------------------------------------|---------------|
| Grade | Yield <sup>B</sup> Ultimate |                     | Withstand Rating, Symmetrical Yield <sup>B</sup> Ultimate kA RMS, 60 Hz |     | Ultimate Rating Capacity <sup>CD</sup> , Symmetrical kA<br>RMS, 60 Hz |                          |                       | Continuous<br>Current<br>Rating, A |                             |                       |                                      |               |
|       | lbf∙in.                     | n∙m                 | lbf∙in.   | n∙m | 15<br>cycles<br>(250 ms)  | 30 cycles<br>(500<br>ms) | Copper Cable<br>Size  | 15<br>cycles<br>(250<br>ms)        | 30<br>cycles<br>(500<br>ms) | 60<br>cycles<br>(1 s) | Maximum<br>Copper Test<br>Cable Size | RMS, 60<br>Hz |
| 1     | 280                         | 32                  | 330   | 37  | 14  | 10                       | #2                    | 18                                 | 13                          | 9                     | 2/0                                  | 200           |
| 2     | 280                         | 32                  | 330   | 37  | 21  | 15                       | 1/0                   | 29                                 | 21                          | 14                    | 4/0                                  | 250           |
| 3     | 280                         | 32                  | 330   | 37  | 27  | 20                       | 2/0                   | 37                                 | 26                          | 18                    | 4/0                                  | 300           |
| 4     | 330                         | 37                  | 400   | 45  | 34  | 25                       | 3/0                   | 47                                 | 33                          | 23                    | 250 kcmil                            | 350           |
| 5     | 330                         | 37                  | 400   | 45  | 43  | 30                       | 4/0                   | 59                                 | 42                          | 29                    | 250 kcmil                            | 400           |
| 6     | 330                         | 37                  | 400   | 45  | 54  | 39                       | 250 kcmil or<br>2 2/0 | 70                                 | 49                          | 35                    | 350 kcmil                            | 450           |
| 7     | 330                         | 37                  | 400   | 45  | 74  | 54                       | 350 kcmil or 2 4/0    | 98                                 | 69                          | 48                    | 550 kcmil                            | 550           |

A Withstand and ultimate short circuit properties are based on performance with surges not exceeding 20 % asymmetry factor (see 9.1 and 12.3.4.2).

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#### ASTM F855-09 Table 2 - Grounding Cable Ferrule and Assembly Ratings

TABLE 2 Ultimate Assembly Rating for High X/R Ratio Applications

|       | High Asymmetrical Test Requirements |                                 |  |                                    |                        |  |  |  |  |
|-------|-------------------------------------|---------------------------------|--|------------------------------------|------------------------|--|--|--|--|
| Grade | Size                                | Rating<br>Rated Current<br>(kA) | X/R = 30<br>1st Cycle Current Peak<br>(kA)<br>X 2.69 | Last Cycle<br>Current Peak<br>(kA) | Test Duration (cycles) |  |  |  |  |
|       |                                     |                                 |  |                                    |                        |  |  |  |  |
| 1H    | No. 2                               | 15                              | 41   | 23                                 | 15                     |  |  |  |  |
| 2H    | 1/0                                 | 25                              | 65   | 37                                 | 15                     |  |  |  |  |
| 3H    | 2/0                                 | 31                              | 84   | 46                                 | 15                     |  |  |  |  |
| 4H    | 3/0                                 | 39                              | 105  | 58                                 | 15                     |  |  |  |  |
| 5H    | 4/0                                 | 47                              | 126  | 70                                 | 15                     |  |  |  |  |
| 6H    | 250 MCM                             | 55                              | 148  | 82                                 | 15                     |  |  |  |  |
| 7H    | 350 MCM                             | 68                              | 183  | 101                                | 15                     |  |  |  |  |

Note 1—The above current values are based on electromechanical test values.

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<sup>&</sup>lt;sup>B</sup> Yield shall mean no permanent deformation such that the clamp cannot be reused throughout its entire range of application.

<sup>&</sup>lt;sup>C</sup> Ultimate rating represents a symmetrical current which the assembly or individual components shall carry for the specified time.

Dultimate values are based upon application of Onderdonk's equation to 98 % of nominal circular mil area allowed by Specifications B 172 and B 173.

Note 2—Assemblies that have been subjected to these shall not be re-used.

Note 3—For use with currents exceeding 20 % asymmetry factor.

Note 4—See X4.7.2 for additional information.

Note 5—Alternate testing circuits are available for laboratories that cannot achieve the above requirements. See Appendix X4 for details.

# safety line



# Safety line. TEMPORARY PROTECTIVE GROUNDING EQUIPMENT

# **NOTE:**

Salisbury by Honeywell's Safety Line grounding equipment offers solutions for all applications. This line of temporaty protective grounding equipment offers a wide variety of products to meet many individual needs. These products are available in complete assemblies or individual components.

PLEASE NOTE: When ordeing assemblies of grounding products, please make sure all items included in the assembly are only from the product line found within this section. Including items from other grounding equipment sections of this book will add additional shipping time.

# Grounding Configurator™

The Grounding Configurator<sup>TM</sup> makes ordering grounding equipment simple and easy. This interactive web tool allows you to easily build the proper temporary grounding equipment for your specific needs. The step-by-step process takes out the guess work, and makes it easy to change components until the most appropriate ground set is developed.



Just go to our web site and give it a try. You will be prompted from start to finish. All you need to know is the maximum fault current, its duration and the size of cable required on the fault, and the configurator will do the rest. No more second guessing quantities or parts to be sure that you have put together a ground set that will function just as you expect. When you finish, enter your personal information and the configurator will instantly provide you with the bill of materials including part numbers. All that's left to do is to place the order!

Visit **salisburybyhoneywell.com** to use the exclusive Grounding Configurator™.

#### SAFETY LINE TEMPORARY PROTECTIVE GROUNDING EQUIPMENT

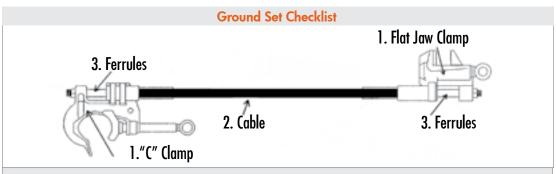
# How to specify temporary protective grounding assemblies.

A grounding assembly in its basic form consists of two clamps, one pair of ferrules and a length of cable.

The clamps can be identical to each other or quite different depending on each grounding application. Because of this, ground clamps are sold individually, not in pairs. Salisbury offers a wide variety of clamps including C-clamps, flat jaw clamps, socket clamps, duck bill clamps and specialty clamps for unique situations. Clamps are offered in either bronze or aluminum alloys and are manufactured to meet the current specifications of ASTM F 855.

To attach a clamp to the grounding cable requires the use of a ferrule. Ferrules are compressed on the strands of the cable to provide a low resistance permanent connection. The size of the ferrule is determined by the size of the cable. Ferrules are available in aluminum, copper and tin plated copper, shrouded and non-shrouded. Plated copper ferrules can be used with either aluminum or bronze clamps. Two ferrules are required for each assembly therefore they are sold in pairs. Ferrules are manufactured to the specifications of ASTM F 855.

The final component that makes up a ground set is the grounding cable itself. The size of the cable is dependent on the short circuit current capacity of the system being grounded. Once this is determined, only the length of the cable and the color of the jacket need to be specified to complete the assembly.



- Specify the clamps. Two are required for a complete assembly. The maximum amperage of the clamp is designated by the ASTM grade of each clamp. Be sure that the clamp will meet or exceed the maximum amperage rating of the ground cable that it will be used with.
- 2. Specify the cable. Once the short circuit capacity of the system has been determined, choose the appropriate size cable. Specify the cable length, and the color of the jacket desired.
- 3. Specify the ferrules. One pair of ferrules is required per assembly. The size of the ferrule must match the size of the cable that it will be used with. Make sure to specify whether the ferrule should be copper or aluminum and threaded or plain.
- 4. Specify the options. List any optional equipment that is desired. This can include hanger studs, contact studs, heat shrink tubing, markings, clear strain relief, etc.

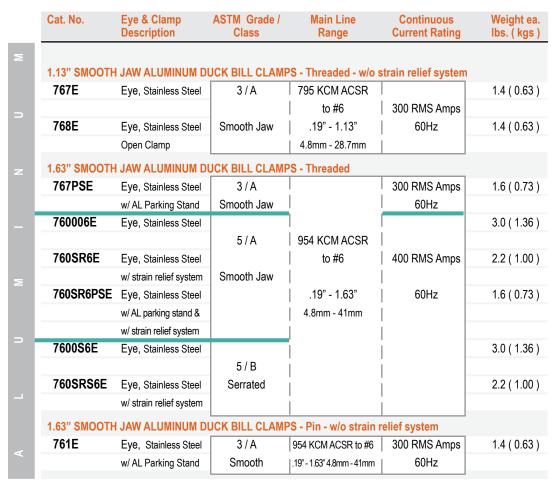
Options also include a ground set label. These optional labels include the date of manufacture and are available upon request when ordering.



#### **DUCK BILL GROUNDING CLAMPS**

#### 1.13", AND 1.63" SIZES





Additional screw options available. See page 3 or contact your local Salisbury Representative for more information.

760SRS6E

# **"C" TYPE GROUNDING CLAMPS**

# .75" SIZES



|          | Cat. No.      | Eye & Clamp<br>Description | ASTM Grade /<br>Class | Main Line<br>Range   | Continuous<br>Current Rating | Weight ea.<br>lbs. ( kgs ) |
|----------|---------------|----------------------------|-----------------------|----------------------|------------------------------|----------------------------|
| Ξ        |               |                            |                       |                      |                              |                            |
| <b>-</b> | 0.75" ALUMINU | JM "C" CLAMP - TI          | nreaded - w/o strai   | n relief system      |                              |                            |
| <b>Z</b> | 7640001E      | Eye, Stainless Steel       | 5/A                   | 2Ø KCM ACSR          |                              | 1.0 ( 0.45 )               |
| Ξ        | 7640001EB     | Eye, Bronze                | Smooth Jaw            | to #6                | 400 RMS Amps                 | 1.0 ( 0.45 )               |
|          | 76400S1E      | Eye, Stainless Steel       | 5 / B                 | .19"75"              | 60Hz                         | 1.0 ( 0.45 )               |
| ⋖        | 76400S1EB     | Eye, Bronze                | Serrated Jaw          | 4.8mm - 19mm         |                              | 1.0 ( 0.45 )               |
| Z E      | 0.75" BRONZ   | E "C" CLAMP - Thi          | readed - w/o strain   | relief system        |                              | _                          |
| 2        | 7640CM1E      | Eye, Stainless Steel       | 5 / A Smooth Jaw      | 2 Ø KCM ACSR to #6   | 400 RMS Amps                 | 3.0 ( 1.40 )               |
| œ        | 7640CMS1E     | Eye, Stainless Steel       | 5 / B Smooth Jaw      | .19"75" 4.8mm - 19mm | 60Hz                         | 3.0 ( 1.40 )               |
| Ω        |               |                            |                       |                      |                              |                            |

# **"C" TYPE GROUNDING CLAMPS**

# 1.25" AND 1.5" SIZES



|          | Cat. No.      | Eye & Clamp Description | ASTM Grade /<br>Class | Main Line<br>Range      | Continuous<br>Current Rating | Weight ea.<br>lbs. ( kgs ) |
|----------|---------------|-------------------------|-----------------------|-------------------------|------------------------------|----------------------------|
| <b>=</b> | 1.25" ALUMINU | IM "C" CLAMPS - Thre    | eaded - w/o stra      | nin relief system       |                              |                            |
|          | 760001E       | Eye, Stainless Steel    |                       |                         |                              | 1.0 ( 0.45 )               |
|          | 760001EB      | Eye, Bronze             |                       |                         |                              | 1.0 ( 0.45 )               |
|          | 760001RT      | Removable T             |                       |                         |                              | 1.0 ( 0.45 )               |
|          |               | Stainless Steel         | 5/A                   | 900 KCM ACSR            |                              |                            |
| 2        | 760001T       | T-Handle                | Smooth Jaw            | to #6                   |                              | 1.0 ( 0.45 )               |
|          |               | Stainless Steel         |                       |                         | 400 RMS Amps                 |                            |
|          | 760001PSE     | Eye, Stainless Steel    |                       | .19" - 1.25"            | 60Hz                         | 1.3 ( 0.59 )               |
| _        |               | w/ Parking Stand        |                       | 4.8mm - 31.8mm          |                              |                            |
|          | 760001CS      | Eye, Stainless Steel    |                       |                         |                              | 1.3 ( 0.59 )               |
|          |               | w/ steel parking stand  |                       |                         |                              |                            |
| Σ        | 7600S1PSE     | Eye, Stainless Steel    | 5/B                   |                         |                              | 1.3 ( 0.59 )               |
|          |               | w/ Parking Stand        | Serrated Jaw          |                         |                              |                            |
|          | 7600S1EB      | Eye, Bronze             |                       |                         |                              | 1.0 ( 0.45 )               |
|          |               |                         |                       |                         |                              |                            |
|          | 1.5" ALUMINUM | M "C" CLAMPS - Threa    | aded                  |                         |                              |                            |
| _        | 760SR1EB      | Eye, Bronze             |                       | 1035.5 KCM ACSR         |                              | 1.6 ( 0.75 )               |
|          |               | w/ strain relief system | 5/A                   | to #6                   | 400 RMS Amps                 |                            |
|          | 760SRS1E      | Eye, Stainless Steel    | Smooth Jaw            | .19" - 1.5"             | 60Hz                         | 5.0 ( 2.27 )               |
| <        |               | w/ strain relief system |                       | 4.8mm - 38mm            |                              |                            |
| Z E      | 1.25" BRONZE  | "C" CLAMPS - Thread     | ded - w/o strain      | relief system           |                              |                            |
| N O      | 760CM1E       | Eye, Stainless Steel 5  | / A Smooth Jaw        | 900 KCM ACSR to #6      | 400 RMS Amps                 | 3.3 ( 1.50 )               |
| ~        | 760MS1E       | Eye, Stainless Steel 5  | / B Serrated Jaw      | .19" - 1.25" 4.8-31.8mm | 60Hz                         | 3.3 ( 1.50 )               |
| <b>B</b> |               |                         |                       |                         |                              |                            |

# **"C" TYPE GROUNDING CLAMPS**

# 2.13" - 2.5" SIZE



|   | Cat. No.      | Eye & Clamp<br>Description | ASTM Grade /<br>Class | Main Line<br>Range | Continuous<br>Current Rating | Weight ea.<br>lbs. ( kgs ) |
|---|---------------|----------------------------|-----------------------|--------------------|------------------------------|----------------------------|
|   | 2.13" ALUMINU | M "C" CLAMP - Thre         | aded - w/o strai      | in relief system   |                              |                            |
|   | 7660001E      | Eye, Stainless Steel       | 5/A                   | 3000 KCM ACSR      |                              | 2.0 ( 0.91 )               |
| L |               |                            | Smooth Jaw            | to #6              | 400 RMS Amps                 |                            |
|   | 76600S1E      | Eye, Stainless Steel       | 5/B                   | 0.25" - 2.13"      | 60Hz                         | 2.0 ( 0.91 )               |
|   | 76600S1PG     | Posigrip, Stainless Steel  | Serrated Jaw          | 6.4mm - 54mm       | !<br>                        | 2.0 ( 0.91 )               |
|   | 2.5" ALUMINUN | // "C" CLAMP - Threa       | aded - w/o strai      | n relief system    |                              | _                          |
|   | 7512B         | Bayonet,                   |                       | 2.0" I.P.S.        |                              | 4.0 ( 1.82 )               |
|   |               | Stainless Steel            | 5/A                   | to #6              | 400 RMS Amps                 |                            |
|   | 7512Q         | Quick Change,              | Smooth Jaw            |                    | 60Hz                         | 4.0 ( 1.82 )               |
|   |               | Stainless Steel            |                       | 0.5" - 2.5"        |                              |                            |
|   | 7512E         | Eye, Stainless Steel       |                       | 12.7mm - 63.5mm    | !<br>                        | 4.0 ( 1.82 )               |
|   |               |                            |                       |                    |                              |                            |

# **BUS BAR AND BUS BAR ALLIGATOR CLAMPS**



0

m





| Cat. No.    | Eye & Clamp<br>Description | ASTM Grade /<br>Class | Main Line<br>Range   | Continuous<br>Current Rating | Weight ea.<br>lbs. ( kgs ) |
|-------------|----------------------------|-----------------------|----------------------|------------------------------|----------------------------|
| 0.5" BRONZE | BUS BAR ALLIGATOR CL       | AMPS - Threaded       | - w/o strain relief  | system                       |                            |
| 7575FE      | Eye, Stainless Steel       |                       |                      |                              | 2.0 ( 0.91 )               |
| 7575FEST    | Eye-T, Stainless Steel     |                       |                      |                              | 2.0 ( 0.91 )               |
| 7575FGA     | Grip-All, Stainless Steel  | 2/A                   | 0.234" - 0.5"        | 250 RMS Amps                 | 2.0 ( 0.91 )               |
| 7575FPSE    | Eye, Stainless Steel       | Smooth Jaw            | 6mm - 12.7mm         | 60 Hz                        | 2.0 ( 0.91 )               |
|             | w/ Parking Stand           |                       |                      |                              |                            |
| 0.5" BRONZE | BUS BAR ALLIGATOR CL       | AMPS with TEETH       | I - Threaded - w/o   | strain relief sy             | stem                       |
| 7575FTE     | Eye, Stainless Steel       | 2 / B                 |                      | 250 RMS Amps                 | 2.0 ( 0.91 )               |
| 7575FTGA    | Grip-All, Stainless Steel  | Serrated Jaw          | 0.234"-0.5" 6-12.7mm | 60 Hz                        | 2.0 ( 0.91 )               |
|             |                            |                       |                      |                              |                            |

Additional screw options available. See page 3 or contact your local Salisbury Representative for more information.

|          | Cat. No.    | Eye & Clamp<br>Description | ASTM Grade /<br>Class | Main Line<br>Range | Continuous<br>Current Rating | Weight ea.<br>lbs. ( kgs ) |
|----------|-------------|----------------------------|-----------------------|--------------------|------------------------------|----------------------------|
| ≥        | 4.4" ALUMIN | UM BUS BAR CLAMPS - Th     | readed - w/o stra     | in relief system   |                              |                            |
| z        | 7541E       | Eye, Stainless Steel       | 5/B                   | 0.31" - 4.25"      | 400 RMS Amps                 | 2.0 ( 0.91 )               |
|          | 7541T       | T-Handle, Stainless Steel  | Serrated Jaw          | 7.9mm - 112mm      | 60Hz                         | 2.0 ( 0.91 )               |
| ≥        | 4.4" ALUMIN | IUM BUS BAR CLAMPS - Pi    | n - w/o strain reli   | ef system          |                              |                            |
|          | 7542B       | Bayonet, Stainless Steel   | 5/B                   | 0.31" - 4.25"      | 400 RMS Amps                 | 2.0 ( 0.91 )               |
| <b>⊿</b> |             |                            | Serrated Jaw          | 7.9mm - 112mm      | 60Hz                         |                            |
|          |             | L                          |                       |                    |                              |                            |

# **LARGE SUBSTATION BUS CLAMPS**



|   | Cat. No.    | Eye & Clamp<br>Description | ASTM Grade /<br>Class | Main Line<br>Range   | Continuous<br>Current Rating | Weight ea.<br>lbs. ( kgs ) |
|---|-------------|----------------------------|-----------------------|----------------------|------------------------------|----------------------------|
| Σ | 4.5" ALUMII | NUM SUBSTATION BUS         | CLAMPS - Threaded     | l - w/o strain relie | f system                     |                            |
|   | 7311E       | Eye, Stainless Steel       | 5 / A                 | 0.5" - 4.5"          | 400 RMS Amps                 | 4.0 ( 1.82 )               |
|   |             |                            | Smooth Jaw            | 12.7mm - 114mm       | 60Hz                         |                            |
| z | 6" ALUMINU  | JM SUBSTATION BUS          | CLAMPS - Threaded -   | w/o strain relief    | system                       |                            |
|   | R101DE      | Eye, Stainless Steel       | 5 / B                 | 1 Ø I.P.S.           | 400 RMS Amps                 | 4.0 ( 1.82 )               |
|   |             |                            | Serrated Jaw          | 0.5" - 6"            | 60Hz                         |                            |
|   |             |                            |                       | 12.7mm - 152mm       |                              |                            |
| ≥ | 7" ALUMINU  | JM SUBSTATION BUS          | CLAMPS - Threaded -   | w/o strain relief    | system                       |                            |
|   | 73065E      | Eye, Stainless Steel       | 5 / B                 | 0.4" - 7"            | 400 RMS Amps                 | 6.7 ( 3.00 )               |
|   |             |                            | Smooth Jaw            | 10.2mm - 178mm       | 60Hz                         |                            |
|   |             | 4.5" ALUMINUM SUB          | STATION BUS CLAME     | PS - Pin - w/o stra  | in relief system             |                            |
|   | 7310E       | Eye, Stainless Steel       | 5 / A Smooth Jaw      | 1/2" I.P.S.          | 400 RMS Amps                 | 4.0 ( 1.82 )               |
| ∢ |             |                            |                       | 0.5"-4.5" 12.7-114mm | 60Hz                         |                            |
|   |             |                            |                       |                      |                              |                            |

# **GROUNDING CLAMPS FOR FLATS & ANGLES**



|           | Cat. No.     | Eye & Clamp Description   | ASTM Grade / Class | Main Line<br>Range    | Continuous Current Rating | Weight ea.<br>lbs. ( kgs ) |
|-----------|--------------|---------------------------|--------------------|-----------------------|---------------------------|----------------------------|
| Σ         |              | ·                         |                    |                       |                           | iboi ( ilgo )              |
| $\supset$ | 1.4" ALUMINU | M FLAT FACE CLAMPS        | Pin - w/o strai    | n relief system       |                           | ,                          |
| z         | 760002E      | Eye, Stainless Steel      | 5 / B              |                       | 400 RMS Amps              | 1.0 ( 0.45 )               |
|           | 760002EB     | Eye, Bronze               | Serrated Jaw       | 0.19" - 1.4"          | 60Hz                      | 1.0 ( 0.45 )               |
| ≥         | 760002T      | T-Handle, Stainless Steel |                    | 4.8mm - 35.6mm        |                           | 1.0 ( 0.45 )               |
| $\supset$ | 1.4" ALUMINU | M FLAT FACE CLAMPS        | - Threaded         |                       |                           |                            |
| -         | 760SR3E      | Eye, Stainless Steel      | 5 / B              | 0.19" - 1.4"          | 400 RMS Amps              | 1.5 ( 0.68 )               |
| ⋖         |              | w/ strain relief system   | Serrated Jaw       | 4.8mm - 35.6mm        | 60Hz                      |                            |
| BRONZE    | 1.4" BRONZE  | FLAT FACE CLAMPS - T      | hreaded            |                       |                           | '                          |
| ROI       | 760CMSR3E    | Eye, Stainless Steel      | 5/B                | 0.19" - 1.4"          | 400 RMS Amps              | 4.5 ( 2.0 )                |
| Δ         |              | w/ strain relief system   | Serrated Jaw       | 4.8mm - 35.6mm        | 60Hz                      |                            |
| ≥<br>⊃    | 1.5" ALUMINU | M FLAT FACE CLAMPS        | - Threaded - w/o   | o strain relief syste | m                         |                            |
| Z         | 760003B      | Bayonet, Stainless Steel  | 5 / B              |                       | 400 RMS Amps              | 1.2 ( 0.54 )               |
|           | 760003E      | Eye, Stainless Steel      | Serrated Jaw       | 0.19" - 1.5"          | 60Hz                      | 1.2 ( 0.54 )               |
| ¥         | 760003EB     | Eye, Stainless Steel      |                    | 4.8mm - 38mm          |                           | 1.2 ( 0.54 )               |
| ZE        | 1.5" BRONZE  | FLAT FACE CLAMPS - T      | hreaded - w/o s    | train relief system   |                           |                            |
| RONZE     | 760CM3T      | T-Handle, Stainless Steel | 5 / B              | 0.19" - 1.5"          | 400 RMS Amps              | 3.2 ( 1.40 )               |
| BR        |              |                           | Serrated Jaw       | 4.8mm - 38mm          | 60Hz                      |                            |

# **GROUNDING CLAMPS FOR FLATS & ANGLES**



|          | Cat. No.    | Eye & Clamp<br>Description | ASTM Grade / Class | Main Line<br>Range     | Continuous<br>Current Rating | Weight ea.<br>lbs. ( kgs ) |
|----------|-------------|----------------------------|--------------------|------------------------|------------------------------|----------------------------|
| <b>E</b> | 2.5" ALUMII | NUM ALL ANGLE CLAMPS       | S - Threaded - w/o | strain relief syster   | n                            |                            |
|          | 7315E       | Eye, Stainless Steel       | 5 / B              | 2" I.P.S. to #4        | 400 RMS Amps                 | 4.3 ( 2.00 )               |
|          | 7315B       | Bayonet, Stainless Steel   | Serrated Jaw       | 0.25" - 2.5"           | 60Hz                         | 4.3 ( 2.00 )               |
|          | 7315PG      | Posigrip, Bronze           |                    | 6.4mm - 57mm           |                              | 4.3 ( 2.00 )               |
| z        | 2.5" ALUMII | NUM TOWER ANGLE CLA        | MPS - Threaded     | - w/o strain relief sy | stem                         |                            |
|          | 73025T      | T-Handle, Stainless Steel  | 5 / A Smooth Jaw   | 0.3" - 1.6" 8-41mm     | 400 RMS Amps 60Hz            | 2.5 ( 1.14 )               |
| _        | 4" ALUMINU  | JM TOWER ANGLE CLAM        | PS - Threaded - v  | v/o strain relief syst | em                           |                            |
|          | 7304T       | T-Handle, Stainless Steel  | 5 / A Smooth Jaw   | 0.25" - 0.94" 6-24mm   | 400 RMS Amps 60Hz            | 3.3 ( 1.50 )               |
| ≥        | 4" ALUMINU  | JM TOWER ANGLE CLAM        | PS - Pin + Thread  | led - w/o strain relie | ef system                    |                            |
|          | 7314T       | T-Handle, Stainless Steel  | 5/A                | 0.25" - 0.94" 6-24mm   | 400 RMS Amps                 | 3.3 ( 1.50 )               |
|          | 7320SB      | Bayonet, Stainless Steel   | Smooth Jaw         | 0.4" - 2.5" 10-64mm    | 60Hz                         | 5.0 ( 2.27 )               |
|          |             |                            |                    |                        |                              |                            |
|          |             | JM TOWER ANGLE CLAM        | •                  |                        |                              |                            |
|          | 7320PGA     | Grip-All, Stainless Steel  | 5 / A Smooth Jaw   | 0.25" - 0.94" 6-24mm   | 400 RMS Amps 60Hz            | 3.3 ( 1.50 )               |
|          | 4" AL. TOW  | ER ANGLE CLAMPS with       | Copper Parking     | Stand - Rated for 49   | kA for 15 cycles w/ )        | (/R=25                     |
|          | 7316E       | Eye, Stainless Steel       | Exceeds Grade 5    | Smooth Jaw - Inside    | Angle Clamp 4" max.          | -                          |
| <        | 7304DE      | Eye, Stainless Steel       | Exceeds Grade 5    | Smooth Jaw - Outsid    | le Angle Clamp 4" ma         | IX                         |



|           | Cat. No.        | Eye & Clamp Description   | ASTM Grade /<br>Class | Main Line<br>Range | Continuous Current Rating | Weight ea.<br>lbs. ( kgs ) |
|-----------|-----------------|---------------------------|-----------------------|--------------------|---------------------------|----------------------------|
| Σ         | 1.63" ALUMINUM  | CUTOUT CLAMPS - Th        | readed - w/o stra     | in relief sleeve   |                           |                            |
| o<br>z    | 7640002E        | Eye, Stainless Steel      |                       |                    |                           | 1.0 ( 0.45 )               |
|           | 7640002EB       | Eye, Bronze               |                       |                    |                           | 1.0 ( 0.45 )               |
| ≥         | 7640002PSE      | Eye, Stainless Steel      | 3/A                   | 0.188" - 1.63"     | 300 RMS Amps              | 1.2 ( 0.5 )                |
| $\supset$ |                 | w/ Al. Dbl. Parking Stand | Smooth Jaw            |                    | 60Hz                      |                            |
|           | 7640002PSEB     | Eye, Bronze               |                       |                    |                           | 1.2 ( 0.5 )                |
| ⋖         |                 | w/ Al. Dbl. Parking Stand |                       |                    |                           |                            |
| ZE        | 1.63" BRONZE CU | JTOUT CLAMPS - Threa      | aded - w/o strain     | relief sleeve      |                           |                            |
| 0 8       | 7640CM2T        | T-Handle, Stainless Steel | 3 / A Smooth Jaw      | 0.188" - 1.63"     | 300 RMS Amps 60H          | z 2.0 (0.91)               |
| <u>—</u>  |                 |                           |                       |                    |                           |                            |

#### RUNNING RAIL CLAMPS



Additional screw options available. See page 3 or contact your local Salisbury Representative for more information.

3 / A Smooth Jaw

1.63" ALUMINUM TRAVELING GROUND CLAMPS - Pin/Threaded

Eye, Stainless Steel

w/ Contact Stud

78000

0.125" - 1.63" 300 RMS Amps 60Hz 10 (4.54)

#### **BALL & SOCKET SYSTEM**

#### **SOCKET CLAMP**

The **Ball and Socket Grounding System** has a lightweight compact design and allows for variable angle accessibility. These clamps are made from bronze alloy and have a socket size of 1" (25.4mm) with a threaded bore boss of 5/8"-11 UNC. There are fixed grounding points on the socket clamp.

See page J-3 for ball socket studs and accessories available.



| Cat. No.  | Description                          | ASTM<br>Grade | Continuous Current Rating | Weight ea.<br>lbs. ( kgs) |
|-----------|--------------------------------------|---------------|---------------------------|---------------------------|
| 7542CM1B  | Smooth Jaw, Threaded w/ Bayonet, SS  | 5             | 400                       | 1.5 ( .68 )               |
| 7542CM1E  | Smooth Jaw, Threaded w/ Eye, SS      | 5             | 400                       | 1.5 ( .68 )               |
| 7542CM1PG | Smooth Jaw, Threaded w/ Posigrip, BR | 5             | 400                       | 1.5 ( .68 )               |
| 7542CM1T  | Smooth Jaw, Threaded w/ T-Handle, SS | 5             | 400                       | 1.5 ( .68 )               |
| 7542CM2E  | Smooth Jaw, Pin<br>w/ Eye, SS        | 5             | 400                       | 1.9 ( .86 )               |

#### **GROUNDING CABLES FOR SAFETY LINE SETS**

Grounding Cables are made with extra flexible strand of soft drawn #30 AWG (.01") copper and are available in three different jackets.

The transparent flexible thermoplastic (PVC) jacketed cable allows easy inspection for strand breakage. The flexibility decreases with low temperatures. The service temperature ranges from 140° to -40°F per ASTM F 855, Type III requirements.

The yellow thermoplastic elastomer jacketed cable is the standard for grounding service. It provides a combination of economy, flexibility, and durability. The service temperature ranges from 200° to -50°F per ASTM F 855, Type I requirements.

The black thermoplastic elastomer jacketed cable has a smaller diameter and thinner jacket material giving it better flexibility than the yellow cable. The service temperature ranges from 200° to -50°F per ASTM F 855, Type I requirements.



|             | Cat. No. | Conductor<br>Size | Conductor<br>Typ. O.D. | Jacket<br>Typ. O.D. | ASTM F855<br>Grade | Fault Duty<br>15 Cycles | Wt. / ft.<br>Ibs. ( kgs ) |
|-------------|----------|-------------------|------------------------|---------------------|--------------------|-------------------------|---------------------------|
| ပ           | 73310XF  | #10               | .11"                   | .25"                | n/a                | n/a                     | 0.06 (0.09)               |
| <u>&gt;</u> | 7336XF   | #6                | .21"                   | .37"                | n/a                | 3.5                     | 0.13 (0.19)               |
| <u>~</u>    | 7340XF   | #2                | .33"                   | .50"                | 1                  | 14.0                    | 0.29 (0.43)               |
| EAI         | 7341XF   | 1/0               | .45"                   | .64"                | 2                  | 21.0                    | 0.52 (0.77)               |
| CLE         | 7342XF   | 2/0               | .47"                   | .66"                | 3                  | 27.0                    | 0.54 (0.80)               |
|             | 7343XF   | 4/0               | .63"                   | .84"                | 5                  | 43.0                    | 0.84 (1.25)               |
|             |          |                   |                        |                     |                    |                         |                           |
| >           | 7340XFY  | #2                | .33"                   | .50"                | 1                  | 14.0                    | 0.29 (0.43)               |
| 0           | 7341XFY  | 1/0               | .45"                   | .64"                | 2                  | 21.0                    | 0.52 (0.77)               |
| 1           | 7342XFY  | 2/0               | .47"                   | .66"                | 3                  | 27.0                    | 0.54 (0.80)               |
| ΥE          | 7343XFY  | 4/0               | .63"                   | .84"                | 5                  | 43.0                    | 0.84 (1.25)               |
|             |          |                   |                        |                     |                    |                         |                           |
|             | 7340XFB  | #2                | .33"                   | .50"                | 1                  | 14.0                    | 0.29 (0.43)               |
| ×           | 7341XFB  | 1/0               | .45"                   | .64"                | 2                  | 21.0                    | 0.52 (0.77)               |
| BLAC        | 7342XFB  | 2/0               | .47"                   | .66"                | 3                  | 27.0                    | 0.54 (0.80)               |
| B           | 7333XFB  | 3/0               | .55"                   | .72"                | 4                  | 36.0                    | 0.68 (0.30)               |
|             | 7343XFB  | 4/0               | .62"                   | .78"                | 5                  | 43.0                    | 0.77 (0.35)               |

#### **THREADED & PIN FERRULES FOR SAFETY LINE SETS**

For Threaded Ferrules (Terminals) the recommended torque applied during installation of jam nut for threaded ferrules is 20 ft.-lb. These threaded ferrules include one brass jam nut and one lock washer. For Pin Terminals the recommended torque applied during installation of pin ferrule eye bolts is 28 ft.-lb.



| 7600011CT42 | 7600011PT4  |
|-------------|-------------|
| /000011114/ | / 000011117 |

|          | Cat. No.                 | Conductor<br>Size  | Style                 | Stud<br>Size | Body Die<br>Codes | Shroud Die<br>Codes | Length<br>Stripped inches |
|----------|--------------------------|--------------------|-----------------------|--------------|-------------------|---------------------|---------------------------|
|          | SHROUDED                 |                    |                       |              |                   |                     |                           |
| <b>~</b> | 760001CT40*              | #2                 | Threaded              | 5/8-11       | U27RT             | U27ART              | 1-5/8                     |
|          | 7600011CT41*             | 1/0                | Threaded              | 5/8-11       | T&B 66            | B75-AH              | 1-15/16                   |
|          | 7600011CT42*             | 2/0                | Threaded              | 5/8-11       | T&B 66            | B75-AH              | 2                         |
| ш        | 76CT43*                  | 4/0                | Threaded              | 5/8-11       | T&B 66            | B75-AH              | 2                         |
|          | 760001PT40*              | #2                 | Pin                   | 11/16        | U27RT             | U27ART              | 1-5/8                     |
|          | 7600011PT41*             | 1/0                | Pin                   | 11/16        | T&B 66            | B75-AH              | 1-15/16                   |
| <u>a</u> | 7600011PT42*             | 2/0                | Pin                   | 11/16        | T&B 66            | B75-AH              | 2                         |
|          | 76PT43*                  | 4/0                | Pin                   | 11/16        | T&B 66            | B75-AH              | 2                         |
|          | UNSHROUDED               |                    |                       |              |                   |                     |                           |
| <u>a</u> | 98132022*                | #2                 | Threaded              | 5/8-11       | U243              | -                   | 1-5/16                    |
|          | 98132023*                | 1/0                | Threaded              | 5/8-11       | U243              | -                   | 1-5/16                    |
|          | 98132024*                | 2/0                | Threaded              | 5/8-11       | T&B 60            | -                   | 1-5/16                    |
|          | 98132025*                | 4/0                | Threaded              | 5/8-11       | T&B 62            | -                   | 1-5/16                    |
| 0        | 98132022P*               | #2                 | Pin                   | 11/16        | U243              | -                   | 1-5/16                    |
|          | 98132023P*               | 1/0                | Pin                   | 11/16        | U243              | -                   | 1-5/16                    |
|          | 98132024P*               | 2/0                | Pin                   | 11/16        | T&B 60            | -                   | 1-5/16                    |
| ပ        | 98132025P*               | 4/0                | Pin                   | 11/16        | T&B 62            | -                   | 1-5/16                    |
|          | Add suffix "T" to the co | atalog number when | requesting tin-plated | copper.      |                   |                     |                           |
|          | SHROUDED                 |                    |                       |              |                   |                     |                           |
| ≥        | 760001AT40*              | #2                 | Threaded              | 5/8-11       | U27RT             | U27ART              | 1-5/8                     |
|          | 760001AT41*              | 1/0                | Threaded              | 5/8-11       | T&B 66            | B75-AH              | 1-15/16                   |
|          | 7600011AT41*             | 2/0                | Threaded              | 5/8-11       | T&B 66            | B75-AH              | 2                         |
|          | 76AT43*                  | 4/0                | Threaded              | 5/8-11       | T&B 66            | B75-AH              | 2                         |
|          | 760001PA40*              | #2                 | Pin                   | 11/16        | U27RT             | U27ART              | 1-5/8                     |
| Z        | 7600011PA41*             | 1/0                | Pin                   | 11/16        | T&B 66            | B75-AH              | 1-15/16                   |
|          | 7600011PA42*             | 2/0                | Pin                   | 11/16        | T&B 66            | B75-AH              | 2                         |
| _        | 76PA43*                  | 4/0                | Pin                   | 11/16        | T&B 66            | B75-AH              | 2                         |
|          | UNSHROUDED               |                    |                       |              |                   |                     |                           |
| Ξ        | 98132A22*                | #2                 | Threaded              | 5/8-11       | U243              | -                   | 1-5/16                    |
|          | 98132A23*                | 1/0                | Threaded              | 5/8-11       | U243              | -                   | 1-5/16                    |
|          | 98132A24*                | 2/0                | Threaded              | 5/8-11       | T&B 60            | -                   | 1-5/16                    |
|          | 98132A25*                | 4/0                | Threaded              | 5/8-11       | T&B 62            | -                   | 1-5/16                    |
|          | 98132A22P*               | #2                 | Pin                   | 11/16        | U243              | -                   | 1-5/16                    |
|          | 98132A23P*               | 1/0                | Pin                   | 11/16        | U243              | -                   | 1-5/16                    |
|          | 98132A24P*               | 2/0                | Pin                   | 11/16        | T&B 60            | -                   | 1-5/16                    |
| ⋖        | 98132A25P*               | 4/0                | Pin                   | 11/16        | T&B 62            | -                   | 1-5/16                    |
| ~        |                          |                    |                       |              |                   |                     |                           |

#### SINGLE POINT DISTRIBUTION GROUNDING SET

**Sets for Grounded "Y" Systems** provide all the equipment required to safely ground a variety of structures on a grounded "Y" distribution systems. Factory assembled kits are for conductors ranging from #6 to 1-1/2" (3.8 cm) diameter, with serrated jaw "C" clamps with threaded terminals. All clamps are supplied with eye screws for installation with clampstick (not included). Other lengths and configurations are available.

**Standard Equipotential Grounding Sets** provide all the equipment required to safely ground a variety of structures on delta distribution systems. Factory assembled kits are for conductors ranging from #6 to 1-1/2" (3.8 cm) diameter, with smooth or serrated jaw clamps with threaded terminals. All clamps are supplied with eye screws for installation with gripall clampsticks (not included). Other lengths and configurations are available.



| Cat. No.   | Cable<br>Size                | Fault Duty<br>15 Cycles | ASTM<br>Grade | Weight ea.<br>lbs. ( kgs ) |
|------------|------------------------------|-------------------------|---------------|----------------------------|
| GROUNDED ' | "Y" SYSTEMS                  |                         |               |                            |
| 763S011    | 2/0                          | 27 kA                   | 3             | 69 ( 31.3 )                |
| 763S45     | 4/0                          | 43kA                    | 5             | 110 ( 49.9 )               |
|            | Complete Grounded "Y" Se     | et Includes             |               |                            |
|            | 3 - 6' (1.83 m) Line Jumper  | 'S                      |               |                            |
|            | 1 - 12' (3.66 m) Line to Gro | und Jumper              |               |                            |
|            | 1 - 60' (18.3 m) Ground Lea  | ad                      |               |                            |
|            | 1 - Pole Band                |                         |               |                            |
|            | 1 - Pole Band Extension      |                         |               |                            |
|            | 1 - Flat Face Clamp (76000   | )3E)                    |               |                            |
|            | 1 - Protective Bag           |                         |               |                            |
| EQUIPOTENT | TIAL DELTA                   |                         |               |                            |
| 7600011    | 2/0                          | 27 kA                   | 3             | 62 ( 28.1 )                |
| 760045     | 4/0                          | 43 kA                   | 5             | 100 ( 45.4 )               |
|            | Complete Delta Set Include   | es                      |               |                            |
|            | 2 - 6' (1.83 m) Line Jumper  | 'S                      |               |                            |
|            | 1 - 12' (3.66 m) Line to Gro | und Jumper              |               |                            |
|            | 1 - 60' (18.3 m) Ground Lea  | ad                      |               |                            |
|            | 1 - Pole Band                |                         |               |                            |
|            | 1 - Pole Band Extension      |                         |               |                            |
|            | 1 - Flat Face Clamp (76000   | 03E)                    |               |                            |
|            | 1 - Protective Bag           |                         |               |                            |
|            |                              |                         |               |                            |

#### **BALL SOCKET 4-WAY CONNECTER SETS**

**Ball Socket 4-Way Connecter Sets** are designed for variable angle accessibility, three-phase grounding. It is supplied with three-foot leads and six feet of cable from a common connection to ground. Upper heads are ball socket clamps (7542CM1E). Lower ground head is standard "C" type ground head (760001E) with a range of #6 to 1-1/4" (32 mm). Ball studs needed but not included.



| Cat. No.    | Cable<br>Size | Fault Duty<br>15 Cycles |   | Weight ea.<br>lbs. ( kgs ) |
|-------------|---------------|-------------------------|---|----------------------------|
| 75420010236 | #2            | 14.5 kA                 | 1 | 9 ( 4.08 )                 |
| 75420011036 | 1/0           | 21 kA                   | 2 | 12 ( 5.44 )                |
| 75420012036 | 2/0           | 27 kA                   | 3 | 14 ( 6.35 )                |

#### **QUICK GRIP GROUND CLAMPS & GROUNDING SETS**

Quick Grip Clamps are specifically designed and ideally suited for temporary grounding where spacing and orientation of components limit the use of traditional ground clamps. The Quick Grip Ground Clamp is available with a Grip-All eye or a Bayonet fitting for installation with a live line tool.

• Available in both the traditional style (VG0l) and a hot stick operated version (VG01GA and VG01B).

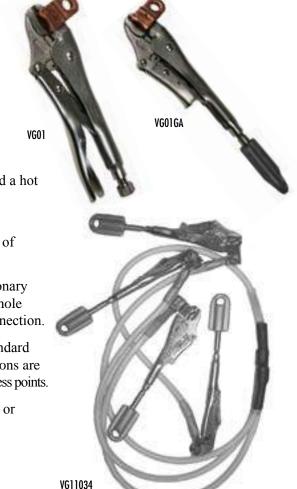
• Available in a single lead ground jumper or grounding set with 1, 3 or 4 leads for grounding of single or three-phase secondary terminals.

• Fitted with a copper overlay, riveted to the stationary jaw, connected to a grounding jumper with one hole NEMA connector to assure a low resistance connection.

• The grounding set connection is made using standard copper compression connectors and all connections are covered with a heat-shrink tube to reduce fatigue at stress points.

• The locking jaw pliers are equally suited for flat or rounded terminals.

Optional flat jaw available.



| Cat. No.<br>Standard | Cat. No.<br>Flat Jaw  | Description                                 | Cable Length<br>ft. ( m ) | ASTM<br>Grade | Weight<br>lbs. ( kgs ) |  |  |  |  |
|----------------------|---|---|---------------------------|---------------|------------------------|--|--|--|--|
| QUICK GRIP G         | QUICK GRIP GROUND CLAMPS & GROUNDING SETS, Clamp Opening: Min. 0.125" - Max. 1.5" |   |                           |               |                        |  |  |  |  |
| VG01                 | VGF01   | Locking Pliers, Cu Overlay                  | N/A                       | 3             | 1.5 ( 0.68 )           |  |  |  |  |
| VG01B                | VGF01B  | Locking Pliers, Cu Overlay. Bayonet         | N/A                       | 3             | 1.6 ( 0.73 )           |  |  |  |  |
| VG01GA               | VGF01GA   | Locking Pliers, Cu Overlay. Grip-All        | N/A                       | 3             | 1.6 ( 0.73 )           |  |  |  |  |
| VG01013              | VGF01013  | Single Lead, 1/0 x 3' with VG01             | 3 ( 0.914 )               | 3             | 3.6 ( 1.63 )           |  |  |  |  |
| VG01033              | VGF01033  | Grounding Set, 3 Leads, 1/0 x 3' with VG01  | 9 ( 2.743 )               | 3             | 10.5 ( 4.77 )          |  |  |  |  |
| VG01034              | VGF01034  | Grounding Set, 4 Leads, 1/0 x 3' with VG01  | 12 ( 3.657 )              | 3             | 13.2 ( 5.99 )          |  |  |  |  |
| VG11013              | VGF11013  | Single Lead, 1/0 x 3' with VG01GA           | 3 ( 0.914 )               | 3             | 3.7 ( 1.68 )           |  |  |  |  |
| VG11013B             | VGF11013B   | Single Lead, 1/0 x 3' with VG01GB           | 3 ( 0.914 )               | 3             | 3.7 ( 1.68 )           |  |  |  |  |
| VG11033              | VGF11033  | Grounding Set, 3 Leads, 1/0 x 3' with VG010 | GA 9 (2.743)              | 3             | 10.8 ( 4.9 )           |  |  |  |  |
| VG11033B             | VGF11033B   | Grounding Set, 3 Leads, 1/0 x 3' with VG010 | GB 9 (2.743)              | 3             | 10.8 ( 4.9 )           |  |  |  |  |
| VG11034              | VGF11034  | Grounding Set, 4 Leads, 1/0 x 3' with VG010 | GA 12 (3.657)             | 3             | 13.6 ( 6.17 )          |  |  |  |  |
| VG11034B             | VGF11034B   | Grounding Set, 4 Leads, 1/0 x 3' with VG010 | GA 12 (3.657)             | 3             | 13.6 ( 6.17 )          |  |  |  |  |

#### **4 WAY CONNECTOR SET**

The 4-Way Connecter Sets are made with #2 clear-jacketed, extra flexible cable, three 8-foot (2.44 m) leads from the heads to the common connection, and one 50-foot (15.25 m) lead from the common connection to the ground connection. The grounding 4-way connector set has a fixture to raise and lower the set which can be easily tied onto the pole. The 752076 grounding 4-way connector set is also supplied with 3 fiberglass handles (10078BC) and bag. The 752576 grounding 4-way connector set requires a clampstick. Sets come with bags. Other lengths and configurations available. Meets ASTM F 855 Grade 1 specifications. Maximum fault duty is 14.5 kA for 15 cycles.



| Cat. No. | Description                                    | Max. Opening in. ( cm ) |   | Weight ea.<br>lbs. ( kgs ) |
|----------|--|-------------------------|---|----------------------------|
| 752076   | 4-Way Connector Set w/ "C" Type Clamps, Bayone | et 1 1/4 ( 3.2 )        | 1 | 32 ( 14.5 )                |
| 752576   | 4-Way Connector Set w/ "C" Type Clamps, Eye    | 1 1/4 ( 3.2 )           | 1 | 39 ( 17.9 )                |

# **4 WAY CONNECTOR & SQUEEZE-ONS**

**4-way connectors** are used to create a common connection between the conductor leads and the ground lead of a ground set.







| Cat. No.   | Description                    | Qty.<br>Required | Weight oz. (g) |
|------------|--------------------------------|------------------|----------------|
| CONNECTORS | For Ground Sets                |                  |                |
| 76630882   | Squeeze-on for #2 Cable        | 1                | 4 ( 112 )      |
| 76630782   | Squeeze-on for 1/0 - 4/0 Cable | 2                | 4 ( 112 )      |
| CB36       | 4-Way Set Block , Cu           | 1                | 3 (1.36)       |
| CA36       | 4-Way Set Block, Al            | 1                | 2 ( 0.9 )      |

#### **INDUSTRIAL GROUND 4-WAY GROUND SETS**

The **Industrial Ground Set** consists of three upper ground heads, one lower head, visible trifurcation, six-foot (1.83m) leads to common connections, and a twenty foot lead from common to ground connection.

All ground heads (7541B and 7541T) will accept 4"x 4"(10.2 x 10.2 cm) copper or aluminum bus configurations.

Also includes a bag and a tag for installation at the main disconnect point. The 7551 includes a one-foot fiberglass handle (10012BC) for installing upper heads.

**NOTE:** 8106C clampstick (not included) must be used to apply 7551GA grounds. Other lengths available. Conductor size is 2/0 copper. Meets ASTM F-855 Grade 3 specifications. Maximum fault duty is 27kA for 15 cycles.

Lightweight Industrial Ground Sets are designed for smaller conductor size applications. Clamps used include screws with eyes (GA attachments) for use with a clampstick. #2 extra flexible copper ground cable is used throughout. The 75FGT0266 has sixfoot (1.83 m) leads to the common connection and a six-foot lead from the common connection to ground. The 7640244GA uses four-foot (1.22 m) leads throughout. Sets include a bag. Other lengths and configurations are available.





| Cat. No.  | Description                           | ASTM<br>Grade | Weight<br>lbs. ( kgs ) |
|-----------|---------------------------------------|---------------|------------------------|
| INDUSTRIA | L GROUND SETS                         |               |                        |
| 7551      | Industrial Ground Set - with Bayonet  | 1             | 35 ( 15.8 )            |
| 7551GA    | Industrial Ground Ser - with Grip-All | 3             | 35 ( 15.8 )            |

| Cat. No.  | Description       | Clamp<br>Used | Fault Duty<br>15 Cycles | ASTM<br>Grade | Weight ea.<br>lbs. ( kgs ) |
|-----------|-------------------|---------------|-------------------------|---------------|----------------------------|
| LIGHTWEIG | HT INDUSTRIAL GRO | OUND SETS     |                         |               |                            |
| 75FGT0266 | Lightweight       | 7575FTE       | 14.5 kA                 | 1             | 15 ( 6.80 )                |
| 7640244GA | Ultra Lightweight | 7640001E      | 14.5 kA                 | 1             | 13 ( 5.90 )                |
|           |                   |               |                         |               |                            |

Optional ground set label available upon request when ordering.

Ground Sets include three upper heads and are easily and safely attached to the line with the fiberglass handles. The ground heads have a maximum opening of 1-3/4" (4.4 cm) and can be applied to angle irons, flat busses as well as on-line wires.



A tight, four-point contact is made with the quick adjusting screw. The handles are easily removed when necessary. The lifting fixture provides ease when raising and lowering the set, and eliminates hanging the entire ground set's weight on the conductor. Other lengths and configurations available.

Parking studs provide a temporary location to attach ground clamps when raising or lowering multiple ground leads.

**Shrink tube** for terminal connection strain relief fits #2 through 4/0 terminals and ground cable.

| Cat. No. | Cable<br>Size                | Fault Duty<br>15 Cycles      | ASTM<br>Grade | Weight ea.<br>lbs. ( kgs ) |
|----------|------------------------------|------------------------------|---------------|----------------------------|
|          |                              |                              |               |                            |
| 766FG    | #2                           | 14.5 kA                      | 1             | 42 ( 19.0 )                |
| 7661FG   | 1/0                          | 21 kA                        | 2             | 43 ( 19.5 )                |
|          | Standard Ground Set Inclu    | des                          |               |                            |
|          | 3 - Upper Heads              |                              |               |                            |
|          | 1 - Lower Head               |                              |               |                            |
|          | 1 - Leather, Lace and Liftin | g Ring                       |               |                            |
|          | 74 - Cable only with 8-foot  | leads to common connection   | on,           |                            |
|          | and 50' from common conr     | nection to ground connection | n             |                            |
|          | 3 - 6'6" (1.98 m) Fiberglass | s Handles                    |               |                            |
|          | 1 - Bag for Handles          |                              |               |                            |
|          | 1 Bag for Ground Set         |                              |               |                            |
|          | -                            |                              |               |                            |

| Cat. No.   | Description                      | Weight oz. (g) |
|------------|----------------------------------|----------------|
| PARKING S  | TUDS                             |                |
| 76000APS   | Single Stud                      | 3 (84)         |
| SHRINK TUI | BE                               |                |
| 761ST      | 6" (15 cm) for Shrouded Ferrules | 6 (168)        |

#### **NEUTRAL JUMPER ASSEMBLY**

The Concentric Neutral Jumper Assembly is used for bonding purposes on non-jacketed cable. It is usually installed across a portion of cable to be cut, repaired, or spliced. The assembly is left in place until the concentric neutral is spliced. As a safety precaution, follow all of your organization's applicable rules and/or policies pertaining to faulted cable, spiking, and grounding.

Made with two ground clamps and 4 feet (1.22 m) of 1/0 clear jacketed extra flexible copper cable. The concentric neutral ground clamp is spring pressured. The assemblies have a continuous current rating of 250 amps and fault rated to ASTM Grade 1, 14 KA for 15 cycles. Other lengths are available. Bag not included.



| Cat. No. | Description         | For Cable Diameter   | Weight       |
|----------|---------------------|----------------------|--------------|
|          |                     | in. ( cm )           | lbs. ( kgs ) |
| CONCENTR | RIC NEUTRAL JUMPE   | R ASSEMBLY           |              |
| 7603     | Assembly            | 3/4 to 2 (1.9 - 5.1) | 12 ( 5.44 )  |
| 7603GA   | Grip-All Assembly   | 3/4 to 2 (1.9 - 5.1) | 12 ( 5.44 )  |
| 7604     | Assembly            | 2 to 4 (5.1 - 10.2)  | 12 ( 5.44 )  |
| 7604GA   | Grip-All Assembly   | 2 to 4 (5.1 - 10.2)  | 12 ( 5.44 )  |
| Parts    |                     |                      |              |
| 7603C    | Clamp with Wing Nu  | t                    | 4 ( 1.81 )   |
| 7603CGA  | Clamp with Grip-All |                      | 4 ( 1.81 )   |
| 7604C    | Clamp with Wing Nu  | t                    | 4 ( 1.81 )   |
| 7604CGA  | Clamp with Grip-All |                      | 4 ( 1.81 )   |

#### UNDERGROUND DEAD BREAK SET & URD ASSEMBLY

The components of the Underground Dead Break Ground Set provide safe and simple grounding methods on padmount transformers or any related URD equipment. These grounds can be ordered in complete sets or individual components. The jumpers are made with 6 foot (1.83 m) lengths of #2, clear-jacketed, extra flexible cable. Clamps (7640001E) supplied include an eye for a grip-all insulating stick application.

The URD Grounding Assembly is used for underground personal protective grounding elbow used for grounding pad-mounted equipment, switches and transformers when performing de-energized maintenance on URD distribution systems, and draining DC capacitive charges from de-energized URD cables.





| Cat. No.                     | QTY        | Description                             | Weight lbs. ( kgs ) |
|------------------------------|------------|---|---------------------|
| 15 KV UNDERGRO<br>Local Loop | UND D      | EAD BREAK GROUND SET                    |                     |
| 764156STGESO                 |            | Full Assembly with Bag                  | 21 (9.52)           |
| Assembly Includes            | <b>3</b> : |   |                     |
| 764156234H                   | 3          | Ground Jumper, 6' (1.83 m)              | 6 ( 2.72 )          |
| 764000ST                     | 3          | Ground Stud for Low Profile Transformer | 1 ( 0.45 )          |
| 764015GE                     | 3          | 15 kV Ground Elbow                      | 1 ( 0.45 )          |
| 764015S0                     | 3          | 15 kV Ground Standoff with Spring Bail  | 1 ( 0.45 )          |
| B1715                        | 1          | Protective Bag                          | 2 ( 0.91 )          |

Optional ground set label available upon request when ordering.

| Cat. No.      | Description   | Weight<br>lbs. ( kgs ) |
|---------------|---------------|------------------------|
| URD GROUNDING | ASSEMBLY      |                        |
| ES10Y615LB    | Single, 15 kV | 9 (4.08)               |
| ES1Y21015LB   | Set, 15 kV    | 22 ( 9.98 )            |
| ES10Y625LB    | Single, 25 kV | 10 ( 4.53 )            |
| ES1Y21025LB   | Set, 25 kV    | 23 ( 10.43 )           |
| ES10Y635LB    | Single, 35 kV | 10 ( 4.53 )            |
| ES1Y21035LB   | Set, 35 kV    | 23 ( 10.43 )           |

#### GROUNDED BUSHING SETS & ELBOW GROUNDING SETS

#### **200 AMP**

The single Grounded Bushing Set is a single lead made from 6 feet (1.83 m) of 1/0 cable. The bushing set consists of 3 bushing assemblies connected together with 3-foot (0.92 m) leads to a common connection, and 10 feet (3.05 m) from common connection to ground. The conductor is made of 1/0 clear jacketed copper stranded cable. The ground clamp (7640001E) can be applied with a clampstick. Sets come complete with bag; single leads do not. All sets are rated for 10 kA for 10 cycles. Other lengths and configurations are available.

**Ground Bushings with Connections** (parking stands for 'J' boxes or padmounts) provide a safe, convenient ground for elbows and a "positive" test to ensure a de-energized elbow.

The Elbow Grounding Set includes a single lead made from 6 feet (1.83 m) of 1/0 cable. This set consists of 3 elbow assemblies connected together with 3-foot (0.92 m) leads to a common connection, and 10-feet (3.05 m) from a common connection to ground. The conductor is made of 1/0 clear jacketed copper stranded cable. A ground clamp (7640001E) can be applied with a clampstick. Sets are rated for a maximum fault current of 10,000 amps for 10 cycles. Sets come complete with bag; single leads do not. Other lengths and configurations are available.

| Cat. No.                    | Description                      | Weight<br>Ibs. ( kgs ) |
|-----------------------------|----------------------------------|------------------------|
| 200 AMP GROUN<br>Dead Break | IDED BUSHING SETS                |                        |
| EB100615                    | Single, 15 kV                    | 8 ( 3.63 )             |
| EB1021015                   | Set, 15 kV                       | 20 ( 9.30 )            |
| Load Break                  |                                  |                        |
| EB100615LB                  | Single, 15 kV                    | 9 (4.08)               |
| EB1021015LB                 | Set, 15 kV                       | 22 ( 9.98 )            |
| EB100625LB                  | Single, 25 kV                    | 10 ( 4.53 )            |
| EB1021025LB                 | Set, 25 kV                       | 23 ( 10.43             |
| otional ground set labe     | l available upon request when or | dering.                |
| Cat. No.                    | Description                      | Weight                 |

| Cat. No.                    | Description       | Weight<br>lbs. ( kgs ) |
|-----------------------------|-------------------|------------------------|
| 200 AMP GROUI<br>Dead Break | NDED BUSHINGS WIT | TH CONNECTIONS         |
| 764015SO                    | 15 kV             | 1 ( 0.45 )             |
| Load Break                  |                   |                        |
| 764150015LS                 | <b>O</b> 15 kV    | 2 ( 0.91 )             |
| 764150025LS                 | O 25 kV           | 4 ( 1.81 )             |

Optional ground set label available upon request when ordering.



| Cat. No.                    | Description      | Weight<br>Ibs. ( kgs ) |
|-----------------------------|------------------|------------------------|
| 200 AMP ELBOW<br>Dead Break | GROUNDING SETS   |                        |
| ES100615                    | Single, 15 kV    | 8 ( 3.63 )             |
| ES1021015                   | Set, 15 kV       | 20 ( 9.30 )            |
| Load Break                  |                  |                        |
| ES100615LB                  | Single, 15 kV    | 9 (4.08)               |
| ES1021015LB                 | Set, 15 kV       | 22 ( 9.98 )            |
| ES1LY635                    | Single, 35 kV    | 10 ( 4.53 )            |
| ES3LY635                    | Set, 35 kV       | 23 ( 10.43 )           |
| ES100625LB                  | Single, 25/35 kV | 10 ( 4.53 )            |
| ES1021025LB                 | Set, 25/35 kV    | 23 ( 10.43 )           |
|                             |                  |                        |

#### **ASTM F855-09 Table 1 - Protective Grounding Clamp Ratings**

TABLE 1 Protective Ground Cable, Ferrule, Clamp and Assembly Ratings for Symmetrical Current

|       | Grou    | unding C<br>Streng | lamp Torq<br>th, min | ue  |                          |                                 | Short Cir            | rcuit Proper                | ties <sup>A</sup>           |   |                                      |                                    |
|-------|---------|--------------------|----------------------|-----|--------------------------|---------------------------------|----------------------|-----------------------------|-----------------------------|---|--------------------------------------|------------------------------------|
| Grade | Yield   | d <sup>B</sup>     | Ultim                | ate | Withs                    | tand Rating, S<br>kA<br>RMS, 60 | •                    | Ultima                      |                             | apacity <sup>CD</sup> ,<br>kA<br>S, 60 Hz | Symmetrical                          | Continuous<br>Current<br>Rating, A |
|       | lbf-in. | n∙m                | lbf-in.              | n∙m | 15<br>cycles<br>(250 ms) | 30 cycles<br>(500<br>ms)        | Copper Cable<br>Size | 15<br>cycles<br>(250<br>ms) | 30<br>cycles<br>(500<br>ms) | 60<br>cycles<br>(1 s)                     | Maximum<br>Copper Test<br>Cable Size | RMS, 60<br>Hz                      |
| 1     | 280     | 32                 | 330                  | 37  | 14                       | 10                              | #2                   | 18                          | 13                          | 9   | 2/0                                  | 200                                |
| 2     | 280     | 32                 | 330                  | 37  | 21                       | 15                              | 1/0                  | 29                          | 21                          | 14  | 4/0                                  | 250                                |
| 3     | 280     | 32                 | 330                  | 37  | 27                       | 20                              | 2/0                  | 37                          | 26                          | 18  | 4/0                                  | 300                                |
| 4     | 330     | 37                 | 400                  | 45  | 34                       | 25                              | 3/0                  | 47                          | 33                          | 23  | 250 kcmil                            | 350                                |
| 5     | 330     | 37                 | 400                  | 45  | 43                       | 30                              | 4/0                  | 59                          | 42                          | 29  | 250 kcmil                            | 400                                |
| 6     | 330     | 37                 | 400                  | 45  | 54                       | 39                              | 250 kcmil or 2 2/0   | 70                          | 49                          | 35  | 350 kcmil                            | 450                                |
| 7     | 330     | 37                 | 400                  | 45  | 74                       | 54                              | 350 kcmil or 2 4/0   | 98                          | 69                          | 48  | 550 kcmil                            | 550                                |

A Withstand and ultimate short circuit properties are based on performance with surges not exceeding 20 % asymmetry factor (see 9.1 and 12.3.4.2).

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#### ASTM F855-09 Table 2 - Grounding Cable Ferrule and Assembly Ratings

TABLE 2 Ultimate Assembly Rating for High X/R Ratio Applications

| High Asymmetrical Test Requirements |         |                                 |  |                                    |                        |  |  |  |
|-------------------------------------|---------|---------------------------------|--|------------------------------------|------------------------|--|--|--|
| Grade                               | Size    | Rating<br>Rated Current<br>(kA) | X/R = 30<br>1st Cycle Current Peak<br>(kA)<br>X 2.69 | Last Cycle<br>Current Peak<br>(kA) | Test Duration (cycles) |  |  |  |
|                                     |         |                                 |  |                                    |                        |  |  |  |
| 1H                                  | No. 2   | 15                              | 41   | 23                                 | 15                     |  |  |  |
| 2H                                  | 1/0     | 25                              | 65   | 37                                 | 15                     |  |  |  |
| 3H                                  | 2/0     | 31                              | 84   | 46                                 | 15                     |  |  |  |
| 4H                                  | 3/0     | 39                              | 105  | 58                                 | 15                     |  |  |  |
| 5H                                  | 4/0     | 47                              | 126  | 70                                 | 15                     |  |  |  |
| 6H                                  | 250 MCM | 55                              | 148  | 82                                 | 15                     |  |  |  |
| 7H                                  | 350 MCM | 68                              | 183  | 101                                | 15                     |  |  |  |

Note 1—The above current values are based on electromechanical test values.

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<sup>&</sup>lt;sup>B</sup> Yield shall mean no permanent deformation such that the clamp cannot be reused throughout its entire range of application.

<sup>&</sup>lt;sup>C</sup> Ultimate rating represents a symmetrical current which the assembly or individual components shall carry for the specified time.

<sup>&</sup>lt;sup>D</sup> Ultimate values are based upon application of Onderdonk's equation to 98 % of nominal circular mil area allowed by Specifications B 172 and B 173.

Note 2—Assemblies that have been subjected to these shall not be re-used.

Note 3—For use with currents exceeding 20 % asymmetry factor.

Note 4—See X4.7.2 for additional information.

Note 5—Alternate testing circuits are available for laboratories that cannot achieve the above requirements. See Appendix X4 for details.



# TEMPORARY PROTECTIVE GROUNDING EQUIPMENT ACCESSORIES

#### **BALL & SOCKET SYSTEM**

#### **BALL STUDS**

The ball Studs and the Offset nema Pad ball Studs are made from tinplated copper alloy or copper. They each have a 1" (25.4mm) diameter ball. Recommended installation torque of 300 in. lbs. The short stud is used conventionally. The long stud can also be used as the grounding point for "C" or Duck bill clamps that have a jaw width of 2.75" or less. The Offset Nema Pad Ball Stud has the standard Nema bolt hole spacing and also comes in both long and short lengths.

The ball Stud Cover, made from orange SALCOR®, allows for multiple angle application when installed using

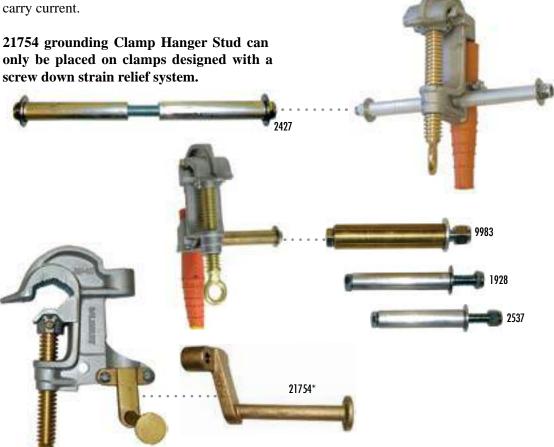




| Cat. No.                             | Description  | Dimensions in. ( mm )   |             |                       | ASTM  | Weight ea.   |  |  |
|--------------------------------------|--|-------------------------|-------------|-----------------------|-------|--------------|--|--|
|                                      |  | OAL                     | Thread      | Shank                 | Grade | lbs. ( kgs ) |  |  |
| Thread Size - 1/2" - 13 UNC - 2A     |  |                         |             |                       |       |              |  |  |
| 21191                                | Ball Stud Short, Tin-Plated Copper Alloy           | 4.38 ( 111 )            | 2.12 ( 54 ) | 1 ( 25 )              | 5     | .53 ( .23 )  |  |  |
| 7542121BS                            | Ball Stud, Copper Alloy                            | 4.7 ( 119 )             | 2.25 (57)   | 1 ( 25 )              | 5     | 9 ( 16 )     |  |  |
| 21192                                | Ball Stud Long, Tin-Plated Copper Alloy            | 6.13 ( 156 )            | 2.12 ( 54 ) | 2.75 ( 70 )           | 5     | .81 ( .37 )  |  |  |
| 7542123BST                           | Ball Stud, Tin-Plated Copper Alloy                 | 6.78 ( 172 )            | 2.5 (64)    | 2.875 (73)            | 5     | 13 ( 23 )    |  |  |
| 7542123BS                            | Ball Stud, Copper Alloy                            | 6.78 ( 172 )            | 2.5 (64)    | 2.875 (73)            | 5     | 13 ( 23 )    |  |  |
| 7542125BST                           | Ball Stud, Tin-Plated Copper Alloy                 | 9 ( 229 )               | 2.12 ( 54 ) | 5.5 ( 140 )           | 5     | 16 ( 28 )    |  |  |
| 7542905BS                            | 90º Ball Stud, Copper Alloy                        | 7 ( 178 ) x 5.2 ( 132 ) | 2.12 ( 54 ) | 5.5 ( 140 ), 2 ( 51 ) | 3     | 20 ( 35 )    |  |  |
| 7542905BST                           | 90º Ball Stud, Tin-Plated Copper Alloy             | 7 ( 178 ) x 5.2 ( 132 ) | 2.12 ( 54 ) | 5.5 ( 140 ), 2 ( 51 ) | 3     | 20 ( 35 )    |  |  |
| Thread Size - 3/8" - 16 UNC - 2A     |  |                         |             |                       |       |              |  |  |
| 7542385BST                           | Ball Stud, Tin-Plated Copper Alloy                 | 9 ( 229 )               | 2.12 ( 54 ) | 5.5 (140)             | 5     | 16 (28)      |  |  |
| NEMA Pads and Pothead Stud           |  |                         |             |                       |       |              |  |  |
| 21846                                | 90° Offset NEMA Pad, Tin-Plated Copper Alloy       | 5.75 ( 147 )            | -           | 2.7 (69)              | 5     | 1 ( .45 )    |  |  |
| 21228                                | Offset NEMA Pad Short, Tin-Plated Copper Allo      | y 5.14 ( 131 )          | -           | 1 ( 25 )              | 5     | .84 ( .38 )  |  |  |
| 24087                                | Offset NEMA Pad Long, Tin-Plated Copper Alloy      | y 6.9 ( 175 )           | -           | 2.7 (69)              | 5     | 1 ( .45 )    |  |  |
| 7542PHS                              | Pothead Stud, Spade, Brass                         | 5.4 ( 137 )             | -           | -                     | 2     | 14 ( 25 )    |  |  |
| Internal Thread - 1/2" - 13 UNC - 2A |  |                         |             |                       |       |              |  |  |
| 24082                                | Internal Thread Ball Stud, Tin-Plated Copper Alloy | 3.85 (98)               | 1.5 (38)    | .75 ( 19 )            | 5     | .54 ( .25 )  |  |  |
| 7542K                                | 3/4" Ground Knob, Brass                            | 1.4 ( 36 )              | 1 ( 25 )    | .75 ( 19 )            | 3     | 6 ( 11 )     |  |  |
| 7542001BSF                           | Female Ball Stud, Brass                            | -                       | 1.5 (38)    | 1 ( 25 )              | 2     | 14 ( 25 )    |  |  |
| 21236                                | Cover for Ball Stud                                | 3 (76)                  | n/a         | n/a                   | n/a   | .09 ( .04 )  |  |  |

#### **GROUNDING CLAMP HANGER STUDS**

**Hanger Studs** are designed to be used with all "C" and Duck Bill ground clamps. Hanger Studs are used to hold one clamp of a set while the other is being installed on the de-energized line. Hanger Studs are not designed or tested to carry current.



| Cat. No. | Stud          | For Use With                                | Weight ea.<br>lbs. ( kgs ) |  |
|----------|---------------|---|----------------------------|--|
| 1858     | Hanger        | Aluminum Duck Bill 1", 1.25", 1.66"         | .5 ( .2 )                  |  |
| 1928     | Hanger        | Aluminum "C" Clamps 1.25", 1.5", 2.4", 3.5" | .5 ( .2 )                  |  |
| 2427     | Double Hanger | Aluminum "C" Clamps 1.25", 1.5", 2.4", 3.5" | .5 ( .2 )                  |  |
| 2537     | Hanger        | Aluminum "C" Clamps 1"                      | .5 ( .2 )                  |  |
|          |               |   | - / - /                    |  |
| 2093     | Hanger        | 556 Bronze Duck Bill, 477 Brz. "C"Clamp     | .5 ( .2 )                  |  |
| 9983     | Hanger        | Brass 1", 1.25", 2.4" "C"Clamps             | .5 ( .2 )                  |  |
| 21754*   | Hanger        | Bronze 1", 1.25", 2.4" "C"Clamps            | .5 ( .2 )                  |  |

\*For use with only Plain Ferrule Clamps and Threaded Ferrule Clamps with a screw down strain relief restraint system.

#### ADAPTERS & TRUCK GROUNDING REEL

The "T" Handle adapter allows the user to quickly and easily change an eye screw into a "T" handle screw.

**adapters** are used on any pin type ground clamps. Meets ASTM F-855 Grade 5 specifications. Maximum fault duty is 43 kA for 15 cycles.

| Cat. No.   | Weight<br>lbs. ( kgs ) |  |
|------------|------------------------|--|
| "T" HANDLE | ADAPTER                |  |
| 760001HDL  | 0.5 ( 0.21 )           |  |



| Cat. No. | Description                 | Weight<br>lbs. ( kgs ) |
|----------|-----------------------------|------------------------|
| ADAPTERS | Die to Theory deal Advertor | 0.5 (0.04)             |
| 7300ABC  | Pin to Threaded Adapter     | 0.5 ( 0.21 )           |
| 7310G    | Eye Bolt Assembly           | 0.5 ( 0.21 )           |
| 7300AET  | Pin to Threaded Adapter     | 0.5 ( 0.21 )           |



**Truck grounding Reels** are designed to provide a secure and efficient way to ground trucks and equipment when working on or near energized lines. Bolt-down design allows easy removal of reels for installation on vehicles. Heavy duty construction for rugged field use. Independently tested to 14.5 kA for 30 cycles. Reels with factory installed cable include 6-foot equal gauge and frame bonding jumper. Other end must be attached to frame of

| Cat. No.       | Cable<br>Length       | Cable<br>Size | Fault Duty<br>15 CYCLES | ASTM F-855<br>Grade | Weight<br>lbs. ( kgs ) |
|----------------|-----------------------|---------------|-------------------------|---------------------|------------------------|
| TRUCK G        | ROUNDING REEL         | SPRING        | REWIND, 760             | 0001E Clamp         |                        |
| HSCR024        | <b>0</b> 40' (12.2 m) | #2            | 14.5 kA                 | 1                   | 39 (17.7)              |
| HSCR025        | <b>0</b> 50' (15.2 m) | #2            | 14.5 kA                 | 1                   | 42 (19.0)              |
| HSCR104        | <b>0</b> 40' (12.2 m) | 1/0           | 21 kA                   | 2                   | 48 (21.7)              |
| HSCR105        | <b>0</b> 50' (15.2 m) | 1/0           | 21 kA                   | 2                   | 53 (24.0 )             |
| TRUCK G        | ROUNDING REEL         | HAND R        | EWIND, 7600             | 01E Clamp           |                        |
| HCR0240        | 40' (12.2 m)          | #2            | 14.5 kA                 | 1                   | 36 (16.3)              |
| HCR0250        | 50' (15.2 m)          | #2            | 14.5 kA                 | 1                   | 39 (17.7)              |
| HCR1040        | 40' (12.2 m)          | 1/0           | 21 kA                   | 2                   | 46 (20.8)              |
| HCR1050        | 50' (15.2 m)          | 1/0           | 21 kA                   | 2                   | 51 (23.1)              |
| <b>REELS W</b> | ITHOUT CABLE          |               |                         |                     |                        |
| HSCR1          | Reel only, spring re  | wind          | 21 kA                   | 2                   | 27 (12.2)              |
| HCR1           | Reel only, hand rev   | wind          | 21 kA                   | 2                   | 25 (11.3)              |
| HC1 Re         | el storage only, han  | d rewind      | N/A                     | N/A                 | 26 (11.8)              |



#### vehicle.

#### NOIE:

- Model HSCR1, with spring rewind, will store and operate with a maximum of 60 feet (18.3 m) of #2 cable and 50 feet (15.2 m) of 1/0 cable.
- Reel models HCR1 and HC1 will store a maximum length of 150 feet (45.8 m) of #2 cable and 85 feet (25.9 m) of 1/0 cable.
- To order factory installed cable of lengths different than shown above, give reel model number and length of cable required. Lengths should not exceed maximum operating and storage capacities.
- The use of 2/0 and 4/0 cable is not recommended since the fault duty rating of these cables exceeds that of the truck grounding reel.

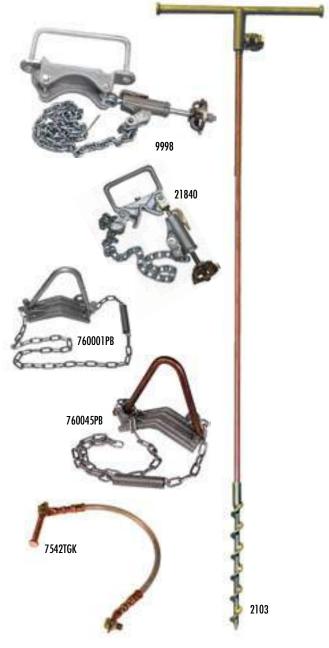
#### **GROUNDING ACCESSORIES**

Pole mounted Contact bars are designed to act as a convenient common point for electrical connections and also as a hanger for grounding sets during installation and removal. Supplied with a chain and an adjustable wheel binder that will accommodate most common pole diameters. Catalog #20880 has one 5/8-11UNC tapped hole for the permanent connection of a ground lead. The Salisbury 21840 is a lighter-weight pole mounted contact bar.

The **Pole band** is lightweight and easy to install. It is a required component of equiotential zone grounding systems.

**Truck grounding Kit** contains 2/0 cable, 24 inches (61 cm) long, with a chassis/frame attachment on one end and a grounding stud on the other for Cat. No. 7542TGK. Brings body and chassis to the same ground potential. Other lengths are available. Meets ASTM F-855 Grade 3 specifications.

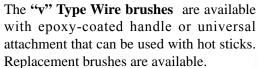
The Salisbury 2103 **Screw Type Temporary ground Rod** is used when an adequate system ground is not available. The design incorporates a copperweld rod with bronze fittings screwed and pinned on both ends. The terminal on the handle is designed to accept cables equipped with a 5/8-11 UNC threaded ferrule. As an alternative, a "C" clamp may also be attached directly to the ground rod shaft.



| Cat. No.   | ASTM<br>Grade |         |                         | Des       | scription              |                      | Weight ea.<br>lbs. ( kgs )   |                  |
|------------|---------------|---------|-------------------------|-----------|------------------------|----------------------|------------------------------|------------------|
| Pole Mount | ed Conta      | ct Bars |                         |           |                        |                      | _                            |                  |
| 9998       | 5             | Contac  | t Bar No Conr           | nection 4 | 0" Chain w/ Ad         | ljustable Wheel Bind | ler 9.1 (4.1)                |                  |
| 21840      | 5             | Contac  | t Bar No Conr           | nection 4 | 0" Chain w/ Ad         | ljustable Wheel Bind | ler 7 (3.3)                  |                  |
| 20880      | 5             | Contact | Bar One Cor             | nection 4 | 0" Chain w/ Ad         | djustable Wheel Bind | der 9.1 (4.1)                |                  |
| SCREW GR   | ROUND R       | OD      |                         | 75" (     | 1.9m ) long            |                      | 8 ( 3.6 )                    |                  |
| 2100       |               |         |                         | 70 (      | 1.5iii / long          |                      | 0 ( 0.0 )                    |                  |
| Cat. No.   | Desci         | ription | Fault Duty<br>15 Cycles | Grade     | Weight<br>lbs. ( kgs ) | Cat. No.             | Description                  | Weig<br>lbs. ( i |
| POLE BANI  | D             |         |                         |           |                        | TRUCK GROUN          | NDING KIT                    |                  |
| 760001PE   | 3 Alumi       | num Bar | 27 kA                   | 3         | 4 ( 1.81 )             | 7542TGK              | Truck Grounding Kit w/ Stud  | 2 ( 0.           |
| 760045PE   | 3 Coppe       | or Dar  | 43 kA                   | 5         | 5 ( 2.27 )             | 7542TGKLS            | Truck Grounding Kit w/o Stud | 1.5 ( 0          |

#### **CONDUCTOR & CLEANING TOOLS**

Tubular brushes are preferred when rubber gloving or working on de-energized conductors. The steel bristles are internal to prevent damaging rubber gloves. The 2.5" tubular brush is used in confined areas such as between two connectors or clamps.





| Cat. No. | Description in. ( mm )                    | Weight ea.<br>lbs. ( kgs ) |
|----------|---|----------------------------|
| 4108     | Universal Tubular                         | 1.3 ( 0.6 )                |
| 4110     | 5" ( 127 ) Tubular                        | 0.4 ( 0.2 )                |
| 4111     | Universal "V" Line Cleaner                | 1 ( 0.5 )                  |
| 4112     | "V" Type handle w/ brushes                | 1.2 ( 0.6 )                |
| 4113     | "V" Type carton of 10 replacement brushes | 3 ( 1.4 )                  |
| 4337     | 2.5" ( 63.5 ) Tubular                     | 0.2 ( 0.1 )                |

#### **GROUND ELBOW & ACCESSORIES**

#### 200 AMP & 600 AMP

The **200** amP ground Elbow with Connections may be used on single phase or three phase installations. Grounding sets come complete with extra flexible cable and connections. Elbows are rated for a maximum fault current of 10,000 amps for 10 cycles. All the clamps come with grip-all eyes for use with a clampstick.

The **200** amP Elbow Connector Tool is designed to fit all the 15kV and 25 kV rated loadbreak and non-loadbreak elbows. The jaws are contoured to provide a positive grip and not interfere with the contact interface area, allowing the elbow to operate properly while connecting or disconnecting.

The **600** amP Elbow Connector Tool is designed to fit all the 15kV and 25 kV rated loadbreak and non-loadbreak elbows. The jaws are contoured to provide a positive grip and not interfere with the contact interface area, allowing the elbow to operate properly while connecting or disconnecting.

The **Insulated Elbow Remover** is used by inserting a hook in the loop on the back of any elbow while applying a hammering action. This tool can also be used to seal elbows when installing them. Other lengths available.

| Cat. No.                     | Description              | Weight<br>lbs. ( kgs ) |
|------------------------------|--------------------------|------------------------|
| 200 AMP GROUNI<br>Dead Break | ELBOW WITH CONNECT       | TIONS                  |
| 764015GE                     | 15 kV                    | 1 ( 0.45 )             |
| Load Break                   |                          |                        |
| 764150015LGE                 | 15 kV                    | 1 ( 0.45 )             |
| 764150025I GE                | 25/35 kV Small Interface | 2 ( 0 91 )             |







| Cat. No.    | Description                         | Weight<br>lbs. ( kgs ) |
|-------------|-------------------------------------|------------------------|
| 200 AMP ELE | BOW CONNECTOR TOOL                  |                        |
| 9202Q       | Quick Change Fitting                | 2 ( 0.91 )             |
| 9202U       | Universal Fitting                   | 2 ( 0.91 )             |
| 9202GA      | Grip-All Fitting                    | 2 ( 0.91 )             |
| 600 AMP EL  | BOW CONNECTOR TOOL                  |                        |
| 9206Q       | Quick Change                        | 2 ( 0.91 )             |
| 9206U       | Universal                           | 2 (0.91)               |
| 9206GA      | Grip-All                            | 2 (0.91)               |
| 9206GAS     | With Insert Pair for 200 AMP Elbows | 2 ( 0.91 )             |
| 92021       | Insert Pair                         | 8 ( 0.22 )             |

| Cat. No.  | Description                             | Weight<br>lbs. ( kgs ) |
|-----------|---|------------------------|
| INSULATED | ELBOW REMOVER                           |                        |
| 9204HIP   | 4' (1.22 m) with 9202HQ                 | 10 ( 4.53 )            |
| 9206HIP   | 6' (1.83 m) with 9202HQ                 | 11 (4.99)              |
| 9208HIP   | 8' (2.44 m) with 9202HQ                 | 12 ( 5.44 )            |
| Parts     |   |                        |
| 9202HQ    | Elbow Remover Head with Quick Change    | 2 ( 0.91 )             |
| 9202HPQ   | Impact Hammer with Quick Change         | 6 (2.72)               |
| 12524HH   | Insulated Stick for 2' (0.61 m) Remover | 2 ( 0.91 )             |
| 12548HH   | Insulated Stick for 4' (1.22 m) Remover | 3 ( 1.36 )             |
| 12572HH   | Insulated Stick for 6' (1.83 m) Remover | 4 ( 1.81 )             |

#### UNDERGROUND GROUNDING STUDS

The 1712 and 1725 grounding stud series are used for grounding when the fault duty on the 600 amp Deadbreak elbow/ "T" body exceeds the rating of a 200 amp grounding elbow, as rated by IEEE 386 @ 10kA for 10 cycles. Grounding studs consist of a 10" conductor stud with male or female threads for replacing 200 amp bushing wells and/or insulating plugs and a ground clamp bar for use with regular grounding jumper assemblies. After the cable has been proven de-energized, the stud is installed and a ground is applied.

The **1725001** grounding stud is made of 7/8" diameter copper with a 5/8-11 female thread on one end and a 1" (2.5 cm) hex drive on the other end. This stud is fitted with a tapered guide and a 3/8" diameter copper cross bar perch used for installing the ground. A socket drive is used for installation. For application, use catalog number 5900CS captured socket.

The 17250003, 17250004, and 17250005 are steel grounding plugs and studs with one 5/8" diameter perch. The perch has a sturdy lip to ensure clamp contact during faults. These models are supplied with grip-all attachments for application with insulated clampstick tools and connectors. These studs are used for grounding equipment such as non load-break connectors or power distribution connectors.

The 1735 grounding stud is made of 7/8" diameter copper with a 5/8-11 female thread on one end and a 1" (2.5 cm) hex drive on the other end for application with a socket drive. The cross bar perch is 3/4" diameter copper, providing heavy duty service. This ground plug also comes equipped with a tapered guide and the yellow protective cap.



| Cat. No. | Description                                  | Threads    | Material<br>(Stud) | Grade | M F855<br>Fault Duty<br>Cycles | Weight<br>lbs. ( kgs ) |
|----------|--|------------|--------------------|-------|--------------------------------|------------------------|
| UNDERGRO | OUND GROUNDING STUDS                         |            |                    |       |                                |                        |
| 1725001  | Copper Electrode, Female, Hex Drive, w/Guide | 5/8-11 (F) | Cu                 | 1     | 17 kA                          | 2.2 ( 1.0 )            |
| 17250003 | Steel Electrode, Male, Grip-All, w/Guide     | 5/8-11 (M) | Steel              | 3     | 27 kA                          | 2.0 ( 0.9 )            |
| 17250004 | Steel Electrode, Female, Grip-All, w/Guide   | 5/8-11 (F) | Steel              | 3     | 27 kA                          | 2.0 ( 0.9 )            |
| 17250005 | Steel Electrode, Male, Grip-All              | 3/4-10 (M) | Steel              | 3     | 27 kA                          | 1.8 ( 0.8 )            |
| 1735     | Copper Electrode, Female, Hex Drive, w/Guide | 5/8-11 (F) | Cu                 | 4     | 35 kA                          | 3.5 ( 1.6 )            |
| 5900CS   | Captured Socket for 1725001 and 1735         |            |                    |       |                                |                        |

#### UNDERGROUND TOOLS & GROUND ADAPTER DEVICE KIT

The Padmount Switch Hook is designed to operate the secondary switch on a padmount transformer. Also used as a standard switch hook for cutouts. Weight - 1 lbs. (0.45 kgs).

The underground Spanner Wrench is designed for installing and removing the connector bushing, and reducing bushing inserts. Can be used when the conductor is deenergized, but not grounded. The tool is used one way for installation, and turned over for removal. A universal toggle and spring is used with this tool and should be ordered separately (5900Q). Weight -1 lbs. (0.45 kgs).

The **Plug Installing Tool** is used to install or remove 600 amp reducing plugs. Weight:2 lbs. (0.91 kgs).

The ground adapter device Kit enables application of personal grounds up to a 600 amp separable pre-molded component system when used with a clampstick.

| PADMOUNT SWITCH HOOK |                                  |  |  |  |  |  |
|----------------------|----------------------------------|--|--|--|--|--|
| 190UGQ               | With Quick Change                |  |  |  |  |  |
| 190UGU               | With Universal                   |  |  |  |  |  |
|                      |                                  |  |  |  |  |  |
| Cat. No.             | Description                      |  |  |  |  |  |
| UNDERGRO             | OUND SPANNER WRENCH              |  |  |  |  |  |
| 1720                 | For 600 AMP Connector            |  |  |  |  |  |
|                      |                                  |  |  |  |  |  |
| Cat. No.             | Description                      |  |  |  |  |  |
| PLUG INSTALLING TOOL |                                  |  |  |  |  |  |
| 172300               | 1/2" (1.3cm) Female Square Drive |  |  |  |  |  |
|                      |                                  |  |  |  |  |  |

Description

Cat. No.

| Cat. No.   | Description                      | QTY | Weight lbs. ( kgs ) |
|------------|----------------------------------|-----|---------------------|
| GROUND ADA | PTER DEVICE KIT - Non-Load Break |     |                     |
| 76174459   |                                  |     | 15 ( 6.8 )          |
|            |                                  |     |                     |

#### Each Set Includes The Following:

| 44C     | Ratchet Wrench with Ball and Ring   | 1 | 2 ( 0.91 )        |
|---------|-------------------------------------|---|-------------------|
| 5900Q   | Universal Toggle and Spring         | 1 | 1 ( 0.45 )        |
| 5900CS  | Captured Socket with Friction Balls | 1 | 8 oz ( 0.22 kgs ) |
| 9206GAS | Elbow Connector Tool with Inserts   | 1 | 2.5 ( 1.1 )       |
| 1725001 | Ground Stud                         | 3 | 2.5 (1.1)         |
| B1715   | Protective Bag with Zipper          | 1 | 1 ( 0.45 )        |



172300

#### HYDRAULIC CABLE SPIKE

The **Hydraulic Cable Spike** is designed to verify underground cable, up to 1000MCM, is de-energized before cutting, repairing, splicing or replacing.

The cable spike, a solid brass body with a stainless steel piercing tip, is fitted to hydraulic compression tools so that the cable can be accurately spiked from a safe distance. An anodized aluminum insert is included to position the cable precisely.

The Cable Penetrating ground Clamp is designed to be used either as a tool for "spiking" jacketed cable or as a part of a grounding assembly used to bond both ends of an opened cable. The 7/8" long plated steel point is inserted into the eye screw making a low resistant one piece spear. If one point becomes blunted it may be sharpened or replaced with a new spear. Clamps are aluminum body with either smooth or serrated upper jaws. The hard aluminum serrated insert makes optimum contact with the stranded neutral shield.



#### WARNING: ELECTRIC SHOCK HAZARD

24320

This tool is not insulated. Use only certified, non-conductive hoses, dielectric fluids, and proper personal protective equipment when using this unit. Failure to do so could result in severe injury or death.

#### Improves Control, Accuracy and Safety Saves Time Remote Controlled

Adapter fits the following tools:
Huskie EP610H
Burndy Y46
Brock 13-H

| Cat. No. | ft (m)  | Description                        | lbs. (kgs)  |
|----------|---------|------------------------------------|-------------|
|          |         |                                    | ,           |
| 24320    | 6 (1.8) | Spiking Tool & Grounding Assembly: | 9.5 (4.3)   |
|          |         | Cable Spiking Tool & Insert        |             |
| 24321    | 8 (2.4) | 4388 C Clamp                       | 11.2 (5.1)  |
|          |         | 2139 4/0 Cu Cable                  |             |
| 24322    | 10 (3)  | 2025 4/0 Cu Ferrules (Pair)        | 12.9 (5.86) |
|          |         | 616 Bag                            |             |
|          |         | US Patent # 544 7450               |             |
| RPT1     |         | Replacement Piercing Tip           | 1 oz (28 g) |

#### CABLE PENETRATING GROUND CLAMP - Acme Thread - Pointed Lower Jaw

| 2607  | - Aluminum 1.5" Opening, Class B, Serrated Jaw 1.7 ( .8 ) |
|-------|---|
| 20867 | - Aluminum 2.40" Opening, Class B, Serrated Jaw 2.2 (1)   |
| 4290  | - Aluminum 2.40" Opening, Class A, Smooth Jaw 2.1 (1)     |

# **HYDRAULIC GROUND, BLADE, & CABLE SPIKE CLAMPS**



| Cat. No.       | Description                | Pump<br>MDL / p.s.i. | Cable Assembly Cable | ASTM<br>Fault / Duty<br>Cycles / Grade | Weight<br>lbs. ( kgs ) |
|----------------|----------------------------|----------------------|----------------------|--|------------------------|
| HYDRAULIC GRO  | OUND SPIKE CLAMPS: Clamp   | Cat. No. 7600011     | E, Spike Depth 1 5/8 | ", Conductor Min.                      | 1" - Max. 3"           |
| 1715EPP        | Spike Point w/ Eye Screw   | 1715PE / 1200        | 1/0 Clear            | 14.5kA / 15 / 1                        | 28 ( 12.7 )            |
| 17150060EPP    | Spike Point w/ Eye-T Screw | 1715PE / 1200        | 1/0 Clear            | 14.5kA / 15 / 1                        | 28 ( 12.7 )            |
| 17150060PFP    | Spike Point w/ Eye-T Screw | 1715PE / 1200        | 1/0 Clear            | 14.5kA / 15 / 1                        | 32 ( 14.5 )            |
| NOTE: Suffix E | PP = Enerpac Pump Suffix P | FP = Porter Fergu    | son Pump             |  |                        |

| Cat. No.        | Pump<br>MDL / p.s.i. | Spike<br>Depth | Conductor<br>Max<br>in. ( cm ) | Cable Assembly Cable | ASTM<br>Fault / Duty<br>Cycles / Grade | Weight<br>lbs. ( kgs ) |
|-----------------|----------------------|----------------|--------------------------------|----------------------|--|------------------------|
| HYDRAULIC BLA   | DE SPIKE CLAMPS:     | Spike Blade    | w/ Eye Screw,                  | Clamp Cat. No. 760   | 001E                                   | _                      |
| 17150063EPP     | 1715EP25 / 2500      | 3"             | 2 1/4 ( 5.7 )                  | 1/0 Clear            | 14.5kA / 15 / 1                        | 30 ( 13.6 )            |
| 17150063PFP     | 1715PF25 / 2500      | 3"             | 2 1/4 ( 5.7 )                  | 1/0 Clear            | 14.5kA / 15 / 1                        | 34 (15.4 )             |
| 17150066        | 1715P392 / 10000     | 6"             | 4 1/2 ( 10.8 )                 | 1/0 Clear            | 14.5kA / 15 / 1                        | 85 ( 38.6 )            |
| NOTE: Suffix Ef | PP = Enerpac Pump    | Suffix PFP =   | Porter Ferguso                 | n Pump               |  |                        |

#### HAND OPERATED GROUND SPIKE & HYDRAULIC CUTTER



| Cat. No.  | Description   | Cable Assen<br>Cable / Clamp C | at. No. F               | ASTM<br>ault / Duty<br>cles / Grade    | Weight<br>lbs. ( kgs ) |  |  |
|---|---|--------------------------------|-------------------------|--|------------------------|--|--|
| HAND OPERAT   | HAND OPERATED GROUND SPIKE: Spike Depth 1 3/4", Conductor Min. 1" - Max. 3 1/2" |                                |                         |  |                        |  |  |
| 1712CS  | 3' FG Hndl, Toggle /GA  | 1/0 Clear / 760                | 001E 14.                | .5kA / 15 / 1                          | 15 ( 6.8 )             |  |  |
| 1712Q   | Spike Point w/QC  | 1/0 Clear / 760                | 001E 14.                | .5kA / 15 / 1                          | 10 (4.5)               |  |  |
| 1712U   | Spike Point w/U   | 1/0 Clear / 760                | 001E 14.                | .5kA / 15 / 1                          | 10 (4.5)               |  |  |
| 1712GA  | Spike Point w/GA  | 1/0 Clear / 760                | 001E 14.                | 5kA / 15 / 1                           | 10 ( 4.5 )             |  |  |
| Cat. No.  | Description   | Pump<br>MDL / p.s.i.           | Cable Assembly<br>Cable | ASTM<br>Fault / Duty<br>Cycles / Grade | Weight<br>lbs. ( kgs ) |  |  |
| HYDRAULIC CUTTER SPIKE: Clamp Cat. No. 760001E, Conductor Min. 0" - Max. 3 1/2" |   |                                |                         |  |                        |  |  |
| 17150050  | Huskie Head   | N/A / N/A                      | #2 Clear                | 14.5kA / 15 / 1                        | 23 ( 10.5 )            |  |  |
| 17150050WP  | H Huskie Head   | 1715P392 /10,000               | #2 Clear                | 14.5kA / 15 / 1                        | 52 ( 23.6 )            |  |  |

### **ACCESSORIES FOR UNDERGROUND SPIKE TOOLS**

| Cat. No.           | Description   |
|--------------------|---|
| Spikes, Blades and | l Tool Heads  |
| 1710E              | Spike Point Complete for 1710                                   |
| 1710F              | Spike Blade Complete for 1710                                   |
| 1712E              | Carbide Spike Point Only  |
| 1715E              | Spike Point Complete for 1715                                   |
| 1715GS             | Ground Shaft Complete for 1715 (Includes Shaft and Spike Point) |
| 171550SP100A       | Huskie Cutter Head Only   |

#### **Hydraulic Pump Assemblies and Pumps**

|              | •   |
|--------------|---|
| 1715PE       | Enerpac Pump w/ Fittings, 1200 psi              |
| 1715P142     | Enerpac Pump Only, 1200 psi                     |
| 1715PE25     | Enerpac Pump w/ Fittings, 2500 psi              |
| 1715PE14225  | Enerpac Pump Only, 2500 psi                     |
| 1715PE100    | Enerpac Pump w/ Fittings, 10000 psi             |
| 1715P392     | Enerpac Pump Only, 10000 psi                    |
| 1715PE       | Enerpac Pump w/ Fittings, 1200 psi              |
| 1715PF       | Porter Ferguson Pump w/ Fittings, 1200 psi      |
| 1715SM0033   | Porter Ferguson Pump Only, 1200 psi             |
| 1715PFSD     | Porter Ferguson Pump w/ 1/4" Fittings, 1200 psi |
| 1715PF25     | Porter Ferguson Pump w/ Fittings, 2500 psi      |
| 1715SM003325 | Porter Ferguson Pump Only, 2500 psi             |



| 1715H      | 30' Non-conductive Hose w/ Fittings, 3000 psi                |
|------------|--|
| 1715H1     | 30' Hose Only, 3000 psi                                      |
| 1715HSD    | 30' Non-conductive Hose w/ 1/4" Fittings, 3000 psi           |
| 1715HSD1   | 30' Hose Only, 3000 psi                                      |
| 17150066H  | 30' High Pressure Non-conductive Hose w/ Fittings, 10000 psi |
| 17150066H1 | 30' High Pressure Hose Only, 10000 psi                       |

#### **Hydraulic Ram Assemblies and Rams**

| <b>7</b>     |   |
|--------------|---|
| 1715R        | Enerpac Ram w/ Fittings, 1 5/8" Stroke      |
| 1715RCH121   | Enerpac Ram Only, 1 5/8" Stroke             |
| 1715RSD      | Enerpac Ram w/ 1/4" Fittings, 1 5/8" Stroke |
| 171561RCH123 | Enerpac Ram Only, 3" Stroke                 |
| 17150066R    | Enerpac Ram w/ Fittings, 6" Stroke          |
| 1715RCH306   | Enerpac Ram Only, 6" Stroke                 |

#### **Protective Bags**

| B1710     | Bag for 1710: 52" x 15" Yellow Vinyl Strap Tie Bag, 4 Tool Compartments, Outer Pocket   |
|-----------|---|
| B1715     | Bag for 1712, 1715, 17150060: 20" x 14" x 5" Yellow Vinyl, Zipper, Outer Pocket, Straps |
| B17150050 | Bag for 17150050, 17150063: 26" x 12" x 8" Yellow Vinyl, Zipper, Outer Pocket, Straps   |
| 1370BF1   | Storage Box for 17150066: 44" x 12" x 15" Wooden, Hinged, Latched, Forklift Stringers   |









# HOT STICKS & TOOLS

FAQ

Q: Are rescue sticks required to be periodically electrically tested?

A: Yes, see OSHA 1910.269(j) for specific testing requirements.

#### FIBERGLASS HOT STICKS

#### STANDARD SPECIFICATIONS

There are a variety of Fiberglass Reinforced Plastic (FRP) constructions used for hot sticks. Included are foam filled tubular sticks used for all products requiring solid construction. All Salisbury fiberglass sticks meet ASTM F711 Standard Specifications for FRP and tube used in live line tools and IEC 855.

Foam filled hot sticks are manufactured using the pultrusion process. This method incorporate fiberglass reinforcement in a resin matrix which creates a moisture resistant laminate with excellent electrical and mechanical properties.

Hot stick production is 100% electrically proof tested. Hot Stick blanks must conform with ASTM F711 requirements.



| Live Line Work<br>Minimum Approach Distance |                                    |                               |  |  |  |
|---|------------------------------------|-------------------------------|--|--|--|
| Nominal<br>Voltage kV                       | Exposure Distar<br>Phase to Ground | nce ftin ( m ) Phase to Phase |  |  |  |
| .05 to 1                                    | avoid contact                      | avoid contact                 |  |  |  |
| 1.1 to 15                                   | 2-1 ( .64 )                        | 2-2 ( .66 )                   |  |  |  |
| 15.1 to 36                                  | 2-4 ( .72 )                        | 2-7 ( .77 )                   |  |  |  |
| 36.1 to 46                                  | 2-7 ( .77 )                        | 2-10 ( .85 )                  |  |  |  |
| 46.1 to 72.5                                | 3-0 ( .9 )                         | 3-6 ( 1.05 )                  |  |  |  |
| 72.6 to 121                                 | 3-2 ( .95 )                        | 4-3 ( 1.29 )                  |  |  |  |
| 138 to 145                                  | 3-7 ( 1.09 )                       | 4-11 ( 1.5 )                  |  |  |  |
| 161 to 169                                  | 4-0 ( 1.22 )                       | 5-8 ( 171 )                   |  |  |  |
| 230 to 242                                  | 5-3 ( 1.59 )                       | 7-6 ( 2.27 )                  |  |  |  |
| 345 to 362                                  | 8-6 ( 2.59 )                       | 12.6 ( 3.8 )                  |  |  |  |
| 500 to 550                                  | 11-3 ( 3.42 )                      | 18-1 ( 5.5 )                  |  |  |  |
| 765 to 800                                  | 14-11 ( 4.53 )                     | 26-0 ( 7.91 )                 |  |  |  |

<sup>-</sup> These distances take into consideration the highest switch surge an employee will be exposed to on any system with air as the insulating medium and the maximum voltage shown.

<sup>-</sup>The clear live-line total distances shall equal or exceed the values for the indicated voltage ranges.

#### **FRP CLAMPSTICKS**

Tough Thermoplastic head ferrule. EZ Grip plastic hand grip. Wide opening 15/16" (23.8mm) stainless steel hook. Heavy duty rubber end cap.

**External Rod Clampsticks** are constructed of closed cell foam-filled tubular fiberglass in accordance with ASTM standard F711. The hook's operating rod, made of solid 3/8" (9.5mm) dia. fiberglass, is mounted on the exterior of the tool so that it can be easily wiped down prior to use.

These Clampsticks meet ASTM F1825 Standards.

| Cat. No.                            | Len<br>Feet | Length<br>Feet Meters |     | ght ea.<br>kgs |  |  |  |
|-------------------------------------|-------------|-----------------------|-----|----------------|--|--|--|
| EXTERNAL ROD CLAMPSTICK             |             |                       |     |                |  |  |  |
| 4007*                               | 4' 8"       | 1.32                  | 4.2 | 1.9            |  |  |  |
| 4008*                               | 5' 8"       | 1.62                  | 4.6 | 2.1            |  |  |  |
| 4009*                               | 6' 8"       | 1.93                  | 5.2 | 2.4            |  |  |  |
| 4010*                               | 8' 8"       | 2.54                  | 6.2 | 2.8            |  |  |  |
| 4011*                               | 10' 8"      | 3.15                  | 7.0 | 3.2            |  |  |  |
| 4012*                               | 12' 8"      | 3.76                  | 7.7 | 3.5            |  |  |  |
| 4013*                               | 14' 8"      | 4.37                  | 9.4 | 4.3            |  |  |  |
| EXTERNAL ROD CLAMPSTICK - PLAIN CAP |             |                       |     |                |  |  |  |
| 8106C                               | 6'6"        | 1.98                  | 5   | 2.27           |  |  |  |

<sup>\*</sup>Add a "9864" suffix for a Switch Stick Head or a "9840" suffix for a Splined Universal Head. Clamp sticks may be ordered with these fittings attached to the end by adding the appropriate suffix to the catalog number.









#### **UNIVERSAL SWITCH STICKS**

One, two, and three section hot sticks have a standard splined universal head. 1.25" dia. switch sticks are supplied with a #9971 Prong. A Heavy Duty Disconnect Prong #9969 is supplied on all others.





| 9969 | Prong |
|------|-------|
|------|-------|

| Cat. No | ).     |        | Dimen     | sions: Dia. x | Length     |            | Weigl | ht ea.<br>kgs |
|---------|--------|--------|-----------|---------------|------------|------------|-------|---------------|
| ONE SI  | ECTION | 1      | in x ft.  |               | mm x m     |            |       |               |
| 4213    |        |        | 1.25 x 4  |               | 31.7 x 1.2 |            | 2.6   | 1.2           |
| 4214    |        |        | 1.25 x 6  |               | 31.7 x 1.8 |            | 3.4   | 1.5           |
| 4215    |        |        | 1.25 x 8  |               | 31.7 x 2.4 |            | 4.1   | 1.9           |
| 4216    |        |        | 1.25 x 10 |               | 31.7 x 3   |            | 4.9   | 2.2           |
| 4217    |        |        | 1.25 x 12 |               | 31.7 x 3.6 |            | 5.6   | 2.5           |
| 4218    |        |        | 1.25 x 14 |               | 31.7 x 4.3 |            | 6.4   | 2.9           |
| 4219    |        |        | 1.5 x 8   |               | 38.1 x 2.4 |            | 5.4   | 2.5           |
| 4220    |        |        | 1.5 x 10  |               | 38.1 x 3   |            | 6.5   | 3             |
| 4221    |        |        | 1.5 x 12  |               | 38.1 x 3.6 |            | 7.5   | 3.4           |
| 4222    |        |        | 1.5 x 14  |               | 38.1 x 4.3 |            | 8.6   | 3.9           |
| 4223    |        |        | 1.5 x 16  |               | 38.1 x 4.9 |            | 9.8   | 4.3           |
| 4225    |        |        | 1.5 x 20  |               | 38.1 x 6   |            | 11.7  | 5.3           |
| TWO S   | ECTIO  | NS     |           |               |            |            |       |               |
|         | OAI    | Length | To        | р             | Во         | ttom       | lbs.  | kgs           |
|         | ft.    | m      | in. x ft. | mm x m        | in. x ft.  | mm x m     |       |               |
| 4036    | 8      | 2.4    | 1.25 x 4  | 31.7 x 1.2    | 1.25 x 4   | 31.7 x 1.2 | 4.2   | 1.9           |
| 4037    | 10     | 3      | 1.25 x 5  | 31.7 x 1.5    | 1.25 x 5   | 31.7 x 1.5 | 5.2   | 2.2           |
| 4038    | 12     | 3.6    | 1.25 x 6  | 31.7 x 1.8    | 1.5 x 6    | 38.1 x 1.8 | 6.9   | 3.1           |
| 4039    | 14     | 4.3    | 1.25 x 6  | 31.7 x 1.8    | 1.5 x 8    | 38.1 x 2.4 | 7.9   | 3.1           |
| 4040    | 16     | 4.9    | 1.25 x 8  | 31.7 x 2.4    | 1.5 x 8    | 38.1 x 2.4 | 8.6   | 3.9           |
| 4041    | 18     | 5.5    | 1.25 x 8  | 31.7 x 2.4    | 1.5 x 10   | 38.1 x 3   | 9.6   | 4.4           |
| 4042    | 20     | 6      | 1.25 x 10 | 31.7 x 3      | 1.5 x 10   | 38.1 x 3   | 10.4  | 4.7           |
| THREE   | SECTI  | ON     |           |               |            |            |       |               |
|         | OAL    | Length | To        | р             | Middle     | e / Bottom | lbs.  | kgs           |
|         | ft.    | m      | in x ft.  | mm x m        | in. x ft.  | mm x m     |       |               |
| 4043    | 12     | 3.6    | 1.25 x 4  | 31.7 x 1.2    | 1.5 x 4    | 38.1 x 1.2 | 7.7   | 3.5           |
| 4044    | 15     | 4.6    | 1.25 x 5  | 31.7 x 1.5    | 1.5 x 5    | 38.1 x 1.5 | 9.1   | 4.1           |
| 4045    | 18     | 5.5    | 1.25 x 6  | 31.7 x 1.8    | 1.5 x 6    | 38.1 x 1.8 | 10.5  | 4.7           |





4046

9841

**HEAD ONLY** 9840

20

1.25 x 8

1.25

1.5

31.7 x 2.4

31.7

38.1

1.5 x 6

Universal Head

Universal Head

38.1 x 1.8

16.5

0.2

0.3

7.5

0.1

0.1

#### **FIBERGLASS HOT SWITCH STICKS**

Switch Sticks use closed cell foam filled tubular fiberglass made in accordance with ASTM Standard F711. Both the standard head and the heavy duty prong disconnect are made of durable high strength aluminum bronze alloy.





| Standara | Prona |
|----------|-------|
|          |       |

Heavy Duty Prong

| Cat.  | No.    |            |             | Dimer     | nsions: Dia. x L  | enath      |               | Weigl | nt ea. |
|-------|--------|------------|-------------|-----------|-------------------|------------|---------------|-------|--------|
| HD    |        | rong       |             | in. x ft. | lolollo. Dia. x L | mm x m     |               | lbs.  | kgs    |
| ONE S | ECTION |            |             |           |                   |            |               |       |        |
| 9950  | 9933   |            |             | 1.25 x 4  |                   | 31.7 x 1.2 |               | 2.1   | 1      |
| 9951  | 9934   |            |             | 1.25 x 6  |                   | 31.7 x 1.8 |               | 2.9   | 1.3    |
| 9952  | 9935   |            |             | 1.25 x 8  |                   | 31.7 x 2.4 |               | 3.6   | 1.6    |
| 9953  | 9936   |            |             | 1.25 x 10 |                   | 31.7 x 3   |               | 4.4   | 2      |
| 9954  | 9937   |            |             | 1.25 x 12 |                   | 31.7 x 3.6 |               | 5.1   | 2.3    |
| 9955  | 9938   |            |             | 1.25 x 14 |                   | 31.7 x 4.3 |               | 5.9   | 2.7    |
| 9956  | 9939   |            |             | 1.5 x 8   |                   | 38.1 x 2.4 |               | 5     | 2.3    |
| 9957  | 9940   |            |             | 1.5 x 10  |                   | 38.1 x 3   |               | 6     | 2.7    |
| 9958  | 9941   |            |             | 1.5 x 12  |                   | 38.1 x 3.6 |               | 7     | 3.2    |
| 9959  | 9942   |            |             | 1.5 x 14  |                   | 38.1 x 4.3 |               | 8.1   | 3.7    |
| 9960  | 9943   |            |             | 1.5 x 16  |                   | 38.1 x 4.9 |               | 9.1   | 4.1    |
| 9961  | 9944   |            |             | 1.5 x 18  |                   | 38.1 x 5.5 |               | 10.2  | 4.6    |
| 9962  | 9945   |            |             | 1.5 x 20  |                   | 38.1 x 6   |               | 11.2  | 5.1    |
| TWO S | ECTION | OAL<br>ft. | Length<br>m | in. x ft. | op<br>mm x m      | in. x ft.  | tom<br>mm x m | lbs.  | kgs    |
| 4024  | -      | 8          | 2.4         | 1.25 x 4  | 31.7 x 1.2        | 1.25 x 4   | 31.7 x 1.2    | 3.8   | 1.7    |
| 4025  | -      | 10         | 3           | 1.25 x 5  | 31.7 x 1.5        | 1.25 x 5   | 31.7 x 1.5    | 4.6   | 2.1    |
| 4026  | 4016   | 12         | 3.6         | 1.25 x 6  | 31.7 x 1.8        | 1.25 x 6   | 31.7 x 1.8    | 5.3   | 2.4    |
| -     | 4017   | 14         | 4.3         | 1.25 x 7  | 31.7 x 2.1        | 1.25 x 7   | 31.7 x 2.1    | 6.1   | 2.7    |
| 4028  | 4018   | 16         | 4.9         | 1.25 x 8  | 31.7 x 2.4        | 1.5 x 8    | 38.1 x 2.4    | 8     | 3.6    |
| 4029  | -      | 18         | 5.5         | 1.25 x 8  | 31.7 x 2.4        | 1.5 x 10   | 38.1 x 3      | 9.5   | 4.3    |
| 4030  | -      | 20         | 6           | 1.25 x 10 | 31.7 x 3          | 1.5 x 10   | 38.1 x 3      | 10.3  | 4.6    |
| THREE | SECTIO | N OAL      | Length      | T         | ор                | Middle     | / Bottom      |       |        |
|       |        | in.        | mm          | in. x ft. | mm x m            | in. x ft.  | mm x m        | lbs.  | kgs    |
| 4033  | -      | 18         | 5.5         | 1.25 x 6  | 31.7 x 1.8        | 1.5 x 6    | 38.1 x 1.8    | 10.4  | 4.7    |
| 4034  | 4035   | 20         | 2           | 1.25 x 8  | 31.7 x 2.4        | 1.5 x 6    | 38.1 x 1.8    | 11.1  | 5      |
| HEAD  | ONLY   |            |             |           |                   |            |               |       |        |
| -     | 9864   |            |             | 1.25      | 31.7              | Univer     | sal Head      | 0.4   | 0.2    |
| 9861  | -      |            |             | 1.5       | 38.1              | Univer     | sal Head      | 0.5   | 0.2    |

Fiberglass Hot Switch Stick

#### **UNIVERSAL SWITCH STICKS & ACCESSORIES**

#### **DOUBLE ENDED & TIE HEADS**



FRP Sleeve Splices are fiberglass reinforced plastic with spring loaded push buttons. They sectionize long sticks for easy storage. For splice stick assemblies other than those listed in the catalog consult the factory for quotations.

Splice guards reduce the damage to the end of spliced sticks when working with only the top sections.



| Cat. No.           | Dimer        | sions        | Weigh | nt ea. |
|--------------------|--------------|--------------|-------|--------|
|                    | in.          | mm           | lbs.  | kgs    |
| FRP SLEEVE SPLICES |              |              |       |        |
| 9898               | 1.25 to 1.25 | 31.7 to 31.7 | 0.4   | 0.2    |
| 9897               | 1.5 to 1.25  | 38.1 to 31.7 | 0.8   | 0.4    |
| 9899               | 1.5 to 1.5   | 38.1 to 38.1 | 0.9   | 0.4    |
| SPLICE GUARD CAP   |              |              |       |        |
| 4182               | 1.25 I.D.    | 31.7 I.D.    | 0.2   | 0.1    |

These foam filled FRP Hot Sticks are manufactured using a pultrusion process that results in a product with extremely high electrical and mechanical qualities.





| Cat. No.               | Dimensions:  | Dimensions: Dia. x Length |      |     |
|------------------------|--------------|---------------------------|------|-----|
|                        | in. x ft.    | mm x m                    | lbs. | kgs |
| DOUBLE ENDED UNIVER    | RSAL         |                           |      |     |
| 4230                   | 1.25 x 6     | 31.7 x 1.8                | 3.3  | 1.5 |
| 4231                   | 1.25 x 8     | 31.7 x 2.4                | 4    | 1.8 |
| 4232                   | 1.25 x 10    | 31.7 x 3                  | 4.8  | 2.2 |
| 4233                   | 1.25 x 12    | 31.7 x 3.6                | 5.5  | 2.5 |
| 4234                   | 1.25 x 14    | 31.7 x 4.3                | 6.3  | 2.8 |
|                        |              |                           |      |     |
| UNIVERSAL w/ Rotary Pr | ong or Blade |                           |      |     |
| 4084 Rotary Prong      | 1.25 x 6     | 31.7 x 1.8                | 3.8  | 1.7 |
| 4085 Rotary Prong      | 1.25 x 8     | 31.7 x 2.4                | 4.5  | 2   |
|                        |              |                           |      |     |
| UNIVERSAL w/ Double P  | rong         |                           |      |     |
| 4088                   | 1.25 x 6     | 31.7 x 1.8                | 3.8  | 1.7 |
| 4089                   | 1.25 x 8     | 31.7 x 2.4                | 4.5  | 2   |
|                        |              |                           |      |     |



Switch Stick

#### FIBERGLASS HOT SWITCH STICKS

#### **DOUBLE ENDED**

Cat. No.

**Fiberglass Handles** are manufactured in accordance with the following specifications: ASTM F711, OSHA 1910.269(j), and OSHA 1926.951(d). All handles are made from pultruded, smooth, foam-filled fiberglass. Safety yellow is the primary fiberglass color. It is recommended that handles be wiped clean with a silicote cloth before and after every use.

The most commonly used combinations are shown below. Other lengths are available. Bags are not included but are available.

The **8900** rain guard is a yellow molded EPDM shield held in place with a hose clamp. Rain guards fit over 1-1/4" to 1-1/2" (3.2 cm to 3.8 cm) diameter handles and provide a dry handle area if the sticks are used in the rain.

Weight lbs. ( kgs )

Diameter x Overall Length

|               |                                 | isor ( rigo )        |     |
|---------------|---------------------------------|----------------------|-----|
| CAP & THREAD  | ED FERRULE                      |                      | _   |
| 10078CH       | 1" x 6'6" (2.5 cm x 1.98 m)     | 2 ( 0.91 )           |     |
| 10096CH       | 1" x 8' (2.5 cm x 2.44 m)       | 2 ( 0.91 )           |     |
| 12578CH       | 1 1/4" x 6'6" (3.2 cm x 1.98 m) | 2 ( 0.91 )           |     |
| 12596CH       | 1 1/4" x 8' (3.2 cm x 2.44 m)   | 3 ( 1.36 )           |     |
| 15078CH       | 1 1/2" x 6'6" (3.8 cm x 1.98 m) | 5 ( 2.27 )           |     |
| 15096CH       | 1 1/2" x 8' (3.8 cm x 2.44 m)   | 6 ( 2.72 )           |     |
|               |                                 |                      |     |
| Cat. No.      | Diameter x Overall Length       | Weight<br>Ibs. ( kgs |     |
| TWO THREADE   | D FERRULES                      |                      | -   |
| 10078HH       | 1" x 6'6" (2.5 cm x 1.98 m)     | 2 ( 0.91 )           |     |
| 10096HH       | 1" x 8' ( 2.5 cm x 2.44 m )     | 2 ( 0.91 )           |     |
| 12578HH       | 1 1/4" x 6'6" (3.2 cm x 1.98 m) | 3 ( 1.36 )           |     |
| 12596HH       | 1 1/4" x 8' (3.2 cm x 2.44 m)   | 4 ( 1.81 )           |     |
| 15078HH       | 1 1/2" x 6'6" (3.8 cm x 1.98 m) | 3 ( 1.36 )           |     |
| 15096HH       | 1 1/2" x 8' (3.8 cm x 2.44 m)   | 6 ( 2.72 )           |     |
| 150120HH      | 1 1/2" x 10' (3.8 cm x 3.05 m)  | 6 ( 2.72 )           |     |
| TWO INSULATE  | D HEX FERRULES                  |                      |     |
| 12578HHM      | 1 1/4" x 6'6" (3.2 cm x 1.98 m) | 4 ( 1.81 )           |     |
| 12596HHM      | 1 1/4" x 8' (3.2 cm x 2.44 m)   | 4 ( 1.81 )           |     |
| CAP & UNIVERS | SAL FERRULE                     |                      |     |
| 10078CU       | 1" x 6'6" (2.5 cm x 1.98 m)     | 2 ( 0.91 )           | 12  |
| 12578CU       | 1 1/4" x 6'6" (3.2 cm x 1.98 m) | 2 ( 0.91 )           | 12. |
| 15096CU       | 1 1/2" x 8' (3.8 cm x 2.44 m)   | 6 ( 2.72 )           |     |
|               |                                 |                      |     |



15078CH

**RAIN GUARD** 

8900

0.2 (0.1)

Rain Guard w/ Hose Clamp

#### TOGGLE HANDLE FIBERGLASS CLAMPSTICKS

#### MAKE THE JOB EASIER. Specialized Toggle Handle Increases Leverage.

The toggle handle fiberglass hot switch sticks and clampsticks include a bendable handle that provides increased leverage when needed.

Fiberglass Hot Switchsticks are manufactured in accordance with the following specifications: ASTM F711, OSHA 1910.269(j), and OSHA 1926.951(d). All handles are made from pultruded, smooth, foam-filled fiberglass. Safety vellow is the primary fiberglass color. It is recommended that handles be wiped clean with a silicote cloth before and after every use.

All Fiberglass Clampsticks are fixed length external rod fiberglass clampsticks which maintain maximum dielectric strength. A full open side hook provides an unobstructed view of the hook. The molded, insulated head provides a larger opening. The precision cast slide gives complete control and an extra firm grip. The hook release mechanism is easy to operate and the extended length spear provides an easy method of locating the eye of hot taps that are other-wise hard to locate. All fiberglass used is tested at 50kV / 6 inches (100kV / foot) and meets the dielectric leakage requirements of ASTM F711.

Other lengths available upon request. Bag not included.

#### TOGGLE MAXIMUM TORQUE RATING: 60 FOOT POUNDS.

| Cat. No.   | Description  | Weight<br>lbs. ( kgs |
|------------|--|----------------------|
| TOGGLE HAN | DLE & THREADED FERRULE                               |                      |
| 12578HE    | 1 1/4" x 6'6" (3.2 cm x 1.98 m)                      | 4 ( 1.81 )           |
| 12596HE    | 1 1/4" x 8' (3.2 cm x 2.44 m)                        | 4 ( 1.81 )           |
| 12548HE    | 1 1/4" x 4' (3.2 cm x 1.22 m)                        | 4 ( 1.81 )           |
| TOGGLE HAN | DLE & UNIVERSAL FERRULE                              |                      |
| 12578UE    | 1 1/4" x 6'6" (3.2 cm x 1.98 m)                      | 4 ( 1.81 )           |
| 12596UE    | 1 1/4" x 8' (3.2 cm x 2.44 m)                        | 4 ( 1.81 )           |
| 12548UE    | 1 1/4" x 4' (3.2 cm x 1.22 m)                        | 4 ( 1.81 )           |
| TOGGLE HAN | DLE & INSULATED HEX FERRULE                          |                      |
| 12578HEM   | 1 1/4" x 6'6" (3.2 cm x 1.98 m)                      | 4 ( 1.81 )           |
| 12596HEM   | 1 1/4" x 8' (3.2 cm x 2.44 m)                        | 4 ( 1.81 )           |
| TOGGLE HAN | DLE & CLAMPSTICK                                     |                      |
| 8104E      | 4'6" (1.37m) OAL Toggle Handle Fiberglass Clampstick | 4.5 (2.04)           |
| 8106E      | 6'6" (1.98m) OAL Toggle Handle Fiberglass Clampstick | 5 (2.27)             |
| 8108E      | 8'6" (2.59m) OAL Toggle Handle Fiberglass Clampstick | 6.5 (2.95)           |
| 8110E      | 10'6" (3.2m) OAL Toggle Handle Fiberglass Clampstick | 7 (3.18)             |



#### SPECIALTY HOT SWITCH STICKS

The **mechanical Hand Stick** serves both as a hand and as pliers so that any serve-up or type of tie can be made or removed from the line. Very little effort is required to serve a wire taut and as perfectly as when hand and pliers are used. It is possible to roll the wire into place around the conductor, making a tight connection easily, instead of jerking and pulling.

The Wire Clamp Stick has two fiberglass handles: the operating handle is 1" (2.5 cm) in diameter and the stationary handle is 1 1/4" (3.2 cm) in diameter. The wire clamp stick is used to hold tie wires in place, hold jumper wires while taps are being made or removed, and to hold wires when cutting and removing.

Use the alligator Stick to install and remove single sheave or double blocks in the top of gin poles and to install circuit breakers, line hooks and strain breakers on live lines. With the alligator stick, you can remove arm slings on cross arms, and hook blocks in arm slings and come-alongs when changing dead ends.

**Handle Length** 

Weight

1 (0.45)

1 (0.45)

|                  |                      |                             | lbs. ( kgs )           |
|------------------|----------------------|-----------------------------|------------------------|
| MECHANICA        | L HAND STICK, Fibe   | erglass handle diameter: 1  | -1/4" (3.2 cm)         |
| 1FGQ             | Quick Change         | 6'6" ( 1.98m )              | 4 ( 1.81 )             |
| 1FGU             | Universal            | 6'6" ( 1.98m )              | 4 ( 1.81 )             |
| 101FGQ           | Quick Change         | 8' ( 2.43 m )               | 5 ( 2.27 )             |
| 101FGU           | Universal            | 8' ( 2.43 m )               | 5 ( 2.27 )             |
| <b>Head Only</b> |                      |                             |                        |
| 1CQ              | Mechanical Hand w/   | Quick Change                | 1 ( 0.45 )             |
| 1CU              | Mechanical Hand w/   | Universal                   | 1 ( 0.45 )             |
|                  |                      |                             |                        |
| Cat. No.         | Description          | Handle Length               | Weight<br>lbs. ( kgs ) |
|                  |                      |                             | 103. ( kgs /           |
| WIRE CLAM        | P STICK              |                             |                        |
| 2FGQ             | Quick Change         | 6'6" ( 1.98m )              | 6 ( 2.72 )             |
| 2FGU             | Universal            | 6'6" ( 1.98m )              | 6 ( 2.72 )             |
| 201FGQ           | Quick Change         | 8' ( 2.43 m )               | 9 (4.08)               |
| 201FGU           | Universal            | 8' ( 2.43 m )               | 9 (4.08)               |
| 201CFGQ          | Top Hook and Quick C | hange 8' ( 2.43 m )         | 9 (4.08)               |
| Head Only        |                      |                             |                        |
| 2CQ              | Wire with Quick Cha  | nge                         | 3 ( 1.36 )             |
| 2CU              | Wire with Universal  |                             | 3 ( 1.36 )             |
| 0 ( )            | 5                    |                             |                        |
| Cat. No.         | Description          | Handle Length               | Weight<br>lbs. ( kgs ) |
| ALLIGATOR        | STICK, Fiberglass h  | andle diameter: 1-1/4" (3.2 | -                      |
| 4FGQ             | Quick Change         | 6'6" ( 1.98m )              | 4 ( 1.81 )             |
| 4FGU             | Universal            | 6'6" ( 1.98m )              | 4 ( 1.81 )             |
| 408FGQ           | Quick Change         | 8' ( 2.43 m )               | 7 ( 3.18 )             |
| 408FGU           | Universal            | 8' ( 2.43 m )               | 7 (3.18)               |
|                  |                      |                             |                        |







**Head Only** 4DQ

4DU

Alligator with Quick Change

Alligator with Universal

Cat. No.

**Description** 

#### SPECIALTY HOT SWITCH STICKS

The Pigtail Stick is designed to lift and guide live lines, and maintains clearances while working on poles. The pigtail stick is used to change pin type insulators and ridge pin insulators when the conductor is light enough for one person to lift. Units come standard with 7/8" (2.2 cm) hook; also available with 1-1/2" (3.8 cm) and 2" (5.1 cm) hooks. Other lengths available. Bag not included. Fiberglass handle diameter: 1-1/2" (3.8 cm).

The Stranded Wire Holding Stick has two 1" (2.5 cm) diameter fiberglass handles, holds conductors or wires during operations. The 121 Series has 3/4" (1.9 cm) wide jaws that open to 9/16" (1.4 cm), and the 122 Series, has 2" (5.1 cm) wide jaws that open to 1-1/2" (3.8 cm). Other lengths available. Bag not included.

The Cable Handler has a 1-1/4" (3.2 cm) fiberglass handle. Used to handle, lift, or move energized cables. Other lengths available.

| Cat. No.    | Description             | Handle Length    | Weight<br>lbs. ( kgs ) |
|-------------|-------------------------|------------------|------------------------|
| PIGTAIL STI | СК                      |                  |                        |
| 5FGQ        | Quick Change            | 6'6" ( 1.98m )   | 6 ( 2.72 )             |
| 5FGU        | Universal               | 6'6" ( 1.98m )   | 6 ( 2.72 )             |
| 501FGQ      | Quick Change            | 8' ( 2.43 m )    | 7 ( 3.18 )             |
| 501FGU      | Universal               | 8' ( 2.43 m )    | 7 ( 3.18 )             |
| Head Only   |                         |                  |                        |
| 5C2Q        | Pigtail w/ Quick Change | 7/8" ( 2.2cm )   | 1 ( 0.45 )             |
| 5C2U        | Pigtail w/ Universal    | 7/8" ( 2.2cm )   | 1 ( 0.45 )             |
| 5C3Q        | Pigtail w/ Quick Change | 1 1/2" ( 3.8cm ) | 1 ( 0.45 )             |
| 5C3U        | Pigtail w/ Universal    | 1 1/2" ( 3.8cm ) | 1 ( 0.45 )             |
| 5C4Q        | Pigtail w/ Quick Change | 2" ( 5.1cm )     | 1 ( 0.45 )             |
| 5C4U        | Pigtail w/ Universal    | 2" ( 5.1cm )     | 1 ( 0.45 )             |
|             |                         |                  |                        |

| Cat. No.  | Description                 | Handle Length   | Weight<br>lbs. ( kgs ) |  |  |  |  |
|-----------|-----------------------------|-----------------|------------------------|--|--|--|--|
| STRANDED  | STRANDED WIRE HOLDING STICK |                 |                        |  |  |  |  |
| 121FGQ    | Quick Change                | 6'6" ( 1.98m )  | 6 ( 2.72 )             |  |  |  |  |
| 1211FGQ   | Quick Change                | 8' ( 2.43 m )   | 6 ( 2.72 )             |  |  |  |  |
| 1226FGQ   | Quick Change                | 6'6" ( 1.98 m ) | 8 ( 3.63 )             |  |  |  |  |
| 1228FGQ   | Quick Change                | 8' ( 2.43 m )   | 8 ( 3.63 )             |  |  |  |  |
| Head Only |                             |                 |                        |  |  |  |  |
| 121CQ     | Stranded Wire w/ 0          | Quick Change    | 2 ( 0.91 )             |  |  |  |  |
| 122CQ     | Stranded Wire w/ 0          | Quick Change    | 2 ( 0.91 )             |  |  |  |  |
|           |                             |                 |                        |  |  |  |  |

| Cat. No. | Description     | Length         | Weight<br>lbs. ( kgs ) |
|----------|-----------------|----------------|------------------------|
| CABLE HA | NDLER           |                |                        |
| 50206    | Handle and head | 6'6" ( 1.98m ) | 3 ( 1.36 )             |
| 50208    | Handle and head | 8' ( 2.44 m )  | 4 ( 1.81 )             |
| 5020H    | Head only       |                | 1 ( 0.45 )             |





#### SECTIONALIZER KIT & INSULATING LINK STICKS

The Sectionalizer Kit temporarily disconnects and isolates a section of line without interrupting service to the balance of the circuit. The entire operation of installation and removal of the sectionalizers can be performed with live line tools. Particularly useful when circuits are interrupted as a result of conductor, insulation or pole failures. Service can be restored by cutting in sectionalizers to isolate the section of line that is in trouble.

Consists of 1-3/4" foam-filled fiberglass connected to a manually operated take-up device. The strain of the line is taken by means of the take-up device using the hook (Cat. No. 1370H), which fastens on the end of the socket wrench (Cat. No. 596FG or equal). The conductor is then cut and cleared.

| Cat. No.  | Description                                       | Weight<br>lbs. ( kgs ) |
|-----------|---|------------------------|
| SECTIONAL | IZER KIT  |                        |
| 1370SL    | Set includes: 3 of 1370A, 1 of 1370H, 1 of 1370FB | 100 (45.3)             |
| PARTS     |   |                        |
| 1370A     | One Sectionalizer Only, 25 kV, 36" (0.91 m)       | 12 ( 0.91 )            |
| 1370H     | Hook with 1/2" Drive                              | 1 ( 0.45 )             |
| 1370HR    | Hold Down Hook with Ring                          | 1 ( 0.45 )             |
| 1370V     | Wire Holder, 9/16" (1.43 cm) max. size wire       | 2 ( 0.91 )             |
| 1370FB    | Box w/ Inserts 44" x 12" x 16" (112 x 31 x 41 cm) | 60 (27.22)             |

The **Insulating link Sticks** are designed to isolate rope, hoists, and blocks being used between energized conductors and a pulling device. Also provide dielectric properties if strap hoist becomes contaminated through field use. Cat. Nos. 2512, 2518, and 2524 are made with solid fiberglass. All insulating link sticks are proof tested and marked with WLL prior to shipment. Other lengths and configurations available. All bags hold 3 link sticks. Bags not included.

Fiberglass used meets the requirements of ASTM F711.



| Cat. No.  | Overall Length<br>in. ( cm ) | Length Between<br>Ferrules<br>in. ( cm ) | Fiberglass<br>Diameter<br>in. ( cm ) | WLL<br>lbs. ( kgs ) | Weight<br>lbs. ( kgs ) | Cat. No.        | Weight<br>lbs. ( kgs ) |
|-----------|------------------------------|--|--------------------------------------|---------------------|------------------------|-----------------|------------------------|
| INSULATIN | IG LINK STICKS               |  |                                      |                     |                        |                 |                        |
| 50012EH   | 22 ( 55.9 )                  | 12 ( 30.5 )                              | 1 ( 2.5 )                            | 2,500 ( 1,134 )     | 3 ( 1.36 )             | <b>B522</b> Bag | 1 ( 0.45 )             |
| 50012EF   | 22 ( 55.9 )                  | 12 ( 30.5 )                              | 1 ( 2.5 )                            | 2,500 ( 1,134 )     | 3 ( 1.36 )             | <b>B522</b> Bag | 1 ( 0.45 )             |
| 5012EH    | 22 ( 55.9 )                  | 12 ( 30.5 )                              | 1 1/4 ( 3.2 )                        | 2,500 ( 1,134 )     | 2 ( 0.91 )             | <b>B522</b> Bag | 1 ( 0.45 )             |
| 5012      | 22 ( 55.9 )                  | 12 ( 30.5 )                              | 1 1/4 ( 3.2 )                        | 1,500 ( 682 )       | 2 ( 0.91 )             | <b>B522</b> Bag | 1 ( 0.45 )             |
| 5012R     | 22 ( 55.9 )                  | 12 ( 30.5 )                              | 1 1/4 ( 3.2 )                        | 1,500 ( 682 )       | 2 ( 0.91 )             | <b>B522</b> Bag | 1 ( 0.45 )             |
| 5112      | 24 ( 61.0 )                  | 12 ( 30.5 )                              | 1 1/2 ( 3.8 )                        | 2,500 ( 1,134 )     | 2 ( 0.91 )             | <b>B522</b> Bag | 1 ( 0.45 )             |
| 2512      | 28 ( 71.1 )                  | 12 ( 30.5 )                              | 1 ( 2.5 )                            | 10,000 ( 4,536 )    | 2 ( 0.91 )             | <b>B522</b> Bag | 1 ( 0.45 )             |

#### FERRULES & ACCESSORIES

ferrules are available for 1" (2.5 cm), 1-1/4" (3.2 cm), and 1-1/2" (3.8 cm) diameter fiberglass handles. Ferrules include a disc and rivet.

Kits include all material required to replace insulated stick ferrules. Please specify size. Each kit includes: one ferrule, one rivet, one disc for handle, sandpaper, a two-part adhesive and instructions.

Universal and 5/8"-11 threaded hex Use the **Silicote Cloth** to wipe dust and dirt from fiberglass insulating handles. Cloth is specially treated with Silicone which leaves a thin coating on the insulating handles. Grease, insulation marks, and other foreign matter should be cleaned from handles with fiberglass handle cleaner before using the silicote cloth. Regular use of the silicote cloth will add to the life and safety of insulating handles. Packaged with directions in resealable, plastic bag.

> Handle Cleaner is formulated to clean and condition fiberglass handles. Removes moisture and other contaminates such as dirt, tar, and grease without harming finish and leaves a thin water-repellent coating.



| Cat. No.    | Description   |       | Size                | Weight oz ( g ) |
|-------------|---|-------|---------------------|-----------------|
| HEXAGONAL   | FERRULES  |       |                     |                 |
| 44DFG       | 5/8"-11 - Zinc                                      |       | 1" ( 2.5 cm )       | 4 ( 124 )       |
| 4EFG        | 5/8"-11 - Zinc                                      |       | 1 1/4" ( 3.2 cm )   | 5 ( 156 )       |
| 4EFGM       | Insulated Hex Ferrule w/ Brass Threaded Insert 5/8" | -11   | 1 1/4" ( 3.2 cm )   | 5 ( 156 )       |
| 5EFG        | 5/8"-11 - Zinc                                      |       | 1 1/2" ( 3.8 cm )   | 12 ( 373 )      |
| UNIVERSAL I | FERRULES  |       |                     |                 |
| 44UFG       | Aluminum with Thumb Screw                           |       | 1" ( 2.5 cm )       | 4 ( 124 )       |
| 3400        | Aluminum with Thumb Screw                           |       | 1 1/4" ( 3.2 cm )   | 5 ( 156 )       |
| 5EFGU       | Zinc/Bronze with Thumb Screw                        |       | 1 1/2" ( 3.8 cm )   | 1 lbs. (450 g)  |
| RIVETS      |   |       |                     |                 |
| RH1881375   | For 1" Ferrules                                     | 3/16" | x 13/8" ( 5 x 34 m  | m) 1(31)        |
| RH1881625   | For 1-1/4" Ferrules                                 | 3/16" | x 15/8" ( 5 x 41 m  | m) 1(31)        |
| RH1882000   | For 1-1/2" Ferrules                                 | 3/16  | 3" x 2" ( 5 x 51 mm | 1) 2(62)        |
|             |   |       |                     |                 |

| Cat. No.               | Handle Diameter   | oz ( g )  |
|------------------------|-------------------|-----------|
| HEXAGONAL FERRULE KITS |                   |           |
| 44EK001                | 1" ( 2.5 cm )     | 4 ( 124 ) |
| 4EK001                 | 1 1/4" ( 3.2 cm ) | 4 ( 124 ) |
| 5EK001                 | 1 1/2" ( 3.8 cm ) | 4 ( 124 ) |
| UNIVERSAL FERRULE KITS |                   |           |
| 44UK001                | 1" ( 2.5 cm )     | 4 ( 124 ) |
| 4UK001                 | 1 1/4" ( 3.2 cm ) | 4 ( 124 ) |
| 5UK001                 | 1 1/2" ( 3.8 cm ) | 4 ( 124 ) |
|                        |                   |           |

| Cat. No. | Description           |  |  |
|----------|-----------------------|--|--|
| CAPS     |                       |  |  |
| C100     | 1" ( 2.5 cm ) Cap     |  |  |
| C125     | 1 1/4" ( 3.2 cm ) Cap |  |  |
| C150     | 1-1/2" ( 3.8 cm ) Cap |  |  |
|          |                       |  |  |

| Cat. No. | Description           | Weight oz ( g ) |
|----------|-----------------------|-----------------|
| HANDLE   | CLEANERS              |                 |
| 2000SC   | Silicote Cloth        | 4 ( 124 )       |
| 2001     | Towelette             | 1 ( 31 )        |
| 2002     | 1-Gal Bottle          | 9 lbs. (4 kgs)  |
| 2003     | 16 fl oz Sprav Bottle | 19 ( .53 )      |

#### STORAGE FOR HOT STICKS & TOOLS



Cat. No. 1192 1.25 ( 32mm ) I.D. Tool Holder 3.5 (1.6)

Hot Stick bags are constructed of heavy vinyl with double stitched seams. Flaps snap closed. 6" (152mm) wide and designed to hold sticks up to 4" (102mm) shorter than bag length shown on chart.



Tubular PvC Storage Containers provide weather tight storage. Kit includes two mounting brackets and four steel bolts with each 6" (152mm) I.D. or 4.1" (104mm) tube. Sized for tools 12" (305mm) shorter than tube. Four mounting bolts 3/8" x 1.5" (9.5 x 38mm) are supplied with each container. Kit may be ordered without tubing, or with mounting brackets only.

| Cat. No.   | Len      | gth        | Weight ea.   |
|------------|----------|------------|--------------|
|            | Feet     | meters     | lbs. ( kgs ) |
| HOT STIC   | K BAGS   |            |              |
| 4297       | 5        | 1.5        | .7 ( .3 )    |
| 4298       | 6        | 1.8        | .8 ( .3)     |
| 4299       | 6' 4"    | 1.9        | .9( .4 )     |
| 4300       | 7        | 2          | 1 ( .4 )     |
| 4301       | 8'4"     | 2.5        | 1.1 ( .5 )   |
| 4302       | 9        | 2.7        | 1.2 ( .5 )   |
| 4303       | 10'4"    | 3          | 1.4 ( .6 )   |
| 4" I.D. TU | JBULAR P | VC STORAGE | KIT          |
| 4155       | 7        | 2.13       | 17 ( 7.7 )   |
| 4156       | 9        | 2.74       | 20 (9)       |
| 6" I.D. TU | BULAR PV | C STORAGE  | <b>(IT</b>   |
| 4167       | 6        | 1.82       | 20 (9)       |
| 4168       | 7        | 2.13       | 22 ( 10 )    |
| 4169       | 9        | 2.74       | 26 ( 11.7 )  |

1192



| Cat. No. | . Description/Dimensions in. ( mm )           | lbs. ( kgs ) |  |  |
|----------|---|--------------|--|--|
| 9822     | Kit for 6" ( 152 ) I.D. 6.6" ( 168 ) O.D. tu  | be 8 (3.5)   |  |  |
| 9823     | Kit for 4.1" ( 104 ) I.D. 4.5" ( 114 ) O.D. t | ube 6 (2.7)  |  |  |
| C4007    | I.D. 4" ( 102 ) 7' ( 2.13m )                  | 19 (8.62)    |  |  |
| C4009    | I.D. 4" ( 102 ) 9' ( 2.75m )                  | 22 ( 9.98 )  |  |  |
| C4011    | I.D. 4" ( 102 ) 11' ( 3.35m )                 | 26 ( 11.79 ) |  |  |
| C4013    | I.D. 4" ( 102 )13' ( 3.96m )                  | 29 ( 13.15 ) |  |  |
| C4017    | I.D. 4" ( 102 ) 17' ( 5.18m )                 | 36 ( 16.33 ) |  |  |
| C4020    | I.D. 4" ( 102 ) 20' ( 6.08m )                 | 40 ( 18.15 ) |  |  |
| CONTA    | CONTAINER KITS                                |              |  |  |
| C4000    | Kit w/o Lock I.D. 4" ( 102 )                  | 6 ( 2.72 )   |  |  |
| C4000L   | Kit w/ Lock I.D. 4" ( 102 )                   | 9 (4.08)     |  |  |

# RESCUE HOOK, STATIC DISCHARGE STICK

Salisbury Insulated Rescue Hook is an invaluable tool for any workplace used to withdraw an injured worker out of a hazardous area. Confined spaces, in vaults, or just near electrical cabinets and switch gear are some of the places where this tool is a must. Featuring a foam filled, fiberglass reinforced handle for superior electrical insulation and a coated heat treated body hook with an 18" opening. The stick is available in the standard lengths of 6 and 8-foot lengths. Other lengths are available as a special order. Contact us with your requirements. Handle meets the requirements of ASTM F711.

The Static discharge Stick is designed to safely remove the static charge after de-energizing. This tool is pre-assembled and includes a copper "U"

hook, 3'6" closed cell foam filled tubular fiberglass stick and 6' of copper grounding cable attached to a Salisbury 1814 bronze flat jaw serrated grade 3 clamp. Also available in a 1' length stick.









#### WaRnIng:

Discharge sticks are not grounding tools as described by OSHA 1910.269 and carry no fault duty rating.

| Cat. No.   | Dimensions  | Wei  | Weight ea. |  |
|------------|---|------|------------|--|
|            | in. mm  | lbs. | kgs        |  |
| INSULATED  | RESCUE HOOK   |      |            |  |
| 24400      | Rescue Hook 3' (0.9 m) length                                   | 3.4  | (1.5)      |  |
| 24401      | Rescue Hook 6' (1.8 m) length                                   | 4.5  | (2)        |  |
| 24403      | Rescue Hook 8' (2.4 m) length                                   | 5.5  | (2.5)      |  |
| STATIC DIS | CHARGE STICK  |      |            |  |
| 20817      | Static Discharge Stick OAL 3'8" (1.08m) length                  | 8    | (3.6)      |  |
| 22629      | Static Discharge Stick w/ Universal Attachment 1' (0.3m) length | .38  | (0.17)     |  |

#### STATIC DISCHARGE STICKS

a discharge Hook is used to drain capacitive voltage. The probe is first used to make contact, then the hook can be used to make direct contact bypassing the fuse. The fuse gives added protection in case initial contact is accidentally made on energized equipment. Fuse is rated at 8 kV maximum, 6 amperes continuous.

A discharge Hook is a special discharging device used to deenergize capacitors and other voltage retaining components before maintenance work is performed. Mounting clip (Cat. No. 1925MC) is included. Standard handle length is 2 feet (0.61 m). Other cable and handle lengths are available.

Resistive discharge Hooks/Probes with resistors help eliminate initial surge current. Second hook bypasses resistors for residual discharge. Resistive discharge hooks and probes use #6 flexible copper, clear-jacketed cable, a hand guard, hook or probe, and a 1" (2.5 cm) diameter fiberglass insulating handle. The handle complies with ASTM F-711. All come with a clear PVC cover to protect resistors from damage from bumps and knocks. Not all resistors fit all hooks. Please note resistor's outside diameter and length. Mounting clip (Cat. No. 1925MC) is included. Other lengths and configurations are available.



1930535415Q

#### FOR DISCHARGE ONLY, DO NOT USE AS LIVE LINE TOOL OR GROUNDING DEVICE.

| Cat. No.                        | Description                    |                           | Weig | ght ea. |
|---------------------------------|--------------------------------|---------------------------|------|---------|
|                                 |                                |                           | lbs. | ( kgs ) |
| FUSED DISCHARGE HO              | OK                             |                           |      |         |
| 1930535415Q                     | Fused Dischar                  | ge Hook                   | 10   | (4.53)  |
| DISCHARGE HOOK                  | Ground Lead                    | Length                    |      |         |
| 1925                            | 5' ( 1.52                      | m )                       | 2    | (0.91)  |
| 19257                           | 7' ( 2.13                      | m )                       | 2.5  | (1.13)  |
| 19258                           | 8' ( 2.44                      | m )                       | 3    | (1.36)  |
| 192510                          | 10' ( 3.05                     | 10' ( 3.05 m )            |      | (2.04)  |
| 192520                          | 20' ( 6.10                     | 20' ( 6.10 m )            |      | (2.27)  |
| RESISTIVE DISCHARGE HOOK/PROBES |                                |                           |      |         |
|                                 | Handle Length                  | <b>Ground Lead Length</b> |      |         |
| 19250005                        | 23" ( 0.58 m )                 | 5' ( 1.52 m )             | 2    | (0.91)  |
| 192500655                       | 7' ( 2.13 m )                  | 10' ( 3.05 m )            | 4.5  | (2.04)  |
| 19250007                        | 5' ( 1.52 m )                  | 7' ( 2.13 m )             | 4    | (1.81)  |
| ACCESSORIES                     |                                |                           |      |         |
| 1925SSMC                        | Mounting Clip, Stainless Steel |                           | 3 oz | (84 g)  |
| 1925MC                          | Mounting Clip                  |                           | 3 oz | (84 g)  |
| 1925DMC                         | Mounting Clip wit              | h Hardware                | 4 oz | (112 g) |
|                                 |                                |                           |      |         |

**Tool Heads** are used in live line applications. This equipment should be mounted on suitable handles to ensure proper distance from live conductors. Below are the choices of end fitings available. All tools have one of these three fittings.



#### **QUICK CHANGE END FITTING**

Has a 5/8"-11 threaded stud that threads into the top of a hexagonal ferrule. A hexagonal collar slides down and over the hexagonal ferrule making a strong, positive connection. A plastic safety clip is used to lock the quick change end fitting to an insulating handle.



#### **UNIVERSAL END FITTING**

Gives the user the option to position and secure an universal tool head at several angles. It also allows meters to be attached to universal handles. Universal fittings can be installed on universal sticks by using the 2500 shotgun adapter.



# GRIP ALL or EYE SCREW END FITTING

For use with the clamp stick. The hook from the clamp stick is hooked through the eye hole of the eye screw, then drawn into the damp stick and secured.



Safety Clip for Quick Change Locks a quick change tool head to handle. 320E .1 oz (3 g)



 Convertible Adapter

 3401Q
 Changes QC to U
 1 lbs. (0.45 kgs)

 3401TS
 Thumb Screw Only
 1 lbs. (0.45 kgs)



Convertible Adapter 2500 Shotgun Adaptor .4 lbs ( .2 kgs )



Convertible Adapter 5/8" - 11 Internal Thread 3403 Changes QC to U 3 oz (93 g)



Convertible Adapter 3402Q Changes QC to GA 8 oz (224 g)



Convertible Adapter 3402U Changes GA to U 6 oz (168 g)



Cotter Key Installer

3500 1 lbs. (0.45 kgs) Add suffix "U" for Universal, "Q" for Quick Change



11 Remover 12 oz (0.38 kgs) 1101 Spring Loaded Remover 12 oz (0.38 kgs) Add suffix "U" for Universal, "Q" for Quick Change



Switch Disconnect w/ Hammer Head 1900U .19 lbs. (.08 kgs)



Ratchet Wrench 4115 1/2" ( 12.7 mm ) sq. drive

nm ) sq. arive .5 lbs ( .22 kgs )



Screwdriver

13 Screwdriver 8 oz (0.23 kgs) Add suffix "U" for Universal, "Q" for Quick Change



Hammer

165 1 lbs. (0.45 kgs) Add suffix "U" for Universal, "Q" for Quick Change



GA Adapter w/ Square Drive & Spring-Loaded Socket

3402L5934 1/2" (1.3 cm) Square Drive 3/4" (1.9 cm) Socket 2 lbs (0.91 kgs)



Locating Drift

Use where aligning or hardware fitting is difficult. 8A 2 lbs. (.91 kgs) Add suffix "U" for Universal, "Q" for Quick Change



#### Wrench Attachment

9 2 lbs. (0.91 kgs) Add suffix "U" for Universal, "Q" for Quick Change



Flex Head Socket Wrench

4114 1.2 lbs ( .5 kgs )



Toggle & Spring

The 1/2" (1.3 cm) square drive converts handles into a socket stick.

5900 2 lbs. (0.91 kgs) Add suffix "U" for Universal, "Q" for Quick Change



#### Handle Splice Joint & Spring

Splices two handles together creating a flexible handle.

3302 2 lbs (0.91 kgs) Add suffix "U" for Universal, "Q" for Quick Change



# Quick Change Handle Splice Joint

3301 2 lbs (0.91 kgs)



#### **Bayonet Ferrule**

Installs/removes ground heads with bayonet studs. 98B 1 lbs. (0.45 kgs)

Add suffix "U" for Universal, "Q" for Quick Change



**Hanging Hook** Attaches to all fiberglass handles. 190HC 3 oz. (84 kgs)



Clamp Stick Head 9834 Clamp Stick Head 1.4 lbs (.6 kgs)



Universal System Tool Blanket Pin UST 1 lb. (.45 kgs)



Adjustable Insulator Fork 2 lbs. (0.91 kgs) 8300 Add suffix "U" for Universal, "Q" for Quick Change



**Insulator Fork** Used in handling ball and socket insulators. 2 lbs. (0.91 kgs) Add suffix "U" for Universal, "Q" for Quick Change



Inspection Mirror 9900 5" (12.7 cm) dia. 8 oz. (224 g) Add suffix "U" for Universal, "Q" for Quick Change



Pin Holder for Clevis-Type Insulators 2900 1 lbs. (0.45 kgs) Add suffix "U" for Universal, "Q" for Quick Change



Line Hose Applicator 2" x 18" (5.1 x 45.7 cm) jaws 1680 4 lbs (1.81 kgs) Add suffix "U" for Universal, "Q" for Quick Change



**Extension Offset Switch Hook** Safely removes fuses from outdoor disconnects. 190001 Steel 1 lbs. (0.45 kgs) 190002 Aluminum/Bronze 1 lbs. (0.45 kgs) Add suffix "U" for Universal, "Q" for Quick Change



**Dead End Automatic Sleeve Applicator** Dia. 1/4" to 1 1/2" (6.4 to 38 mm) 2 lbs. (0.91 kgs) Add suffix "U" for Universal, "Q" for Quick Change



Wire Grip Grips conductor, has hole for block or line hook. WWL for grip is 1,000 lbs (454 kgs) at a 4:1 ratio. 3600 Opening min.5/16" max.7/8" 2 lbs (0.91 kgs) (7.9mm, 2.2cm) 3601 Opening min.1/2" max.1-1/2" 3 lbs. (1.36 kgs) (1.3cm, 3.8cm) Add suffix "U" for Universal, "Q" for Quick Change



Pig Tail
5C2 7/8" (2.2cm) opening 1 lbs. (.45 kgs)
5C3 1-1/2" (3.8cm) opening 2 lbs. (.91 kgs)
5C4 2" (5.1cm) opening 2 lbs. (.91 kgs)
Add suffix "U" for Universal, "Q" for Quick Change



Tree / Wire Hook 4236 .36 lbs. ( .2kgs )



Pig Tail Disconnect 9878 .4 lbs ( .2 kgs )



Switch Hook 190 8 oz. (0.25 kgs) Add suffix "U" for Universal, "Q" for Quick Change



Light Duty Cutout Prong 9971 .4 lbs ( .2 kgs )



Heavy Duty Disconnect Head 9969 .6 lbs ( .3 kgs )



Prong Disconnect 9970 .4 lbs ( .2 kgs )



Rotary Prong Tie Head 4099 .6 lbs ( .27 kgs )



Chuck Blank Inside Depth: 1/2" x 1 1/2" ( 13 x 38mm ) 9838 .4 lbs ( .2 kgs )



Alligator
4D Alligator 1 lbs. (0.45 kgs)
Add suffix "U" for Universal, "Q" for Quick Change



Pointed Disconnect 9839 .4 lbs ( .2 kgs )



Double Prong Tie Head 4101 .5 lbs ( .22 kgs )



Mechanical Hand

1 lbs. (0.45 kgs)

Add suffix "U" for Universal, "Q" for Quick Change



4108 Tubular Line Cleaner 1.3 lbs (.6 kgs) 4109 Replacement Brush .5 lbs ( .22 kgs )



4111 "V" Line Cleaner 1.3 lbs (.6 kgs) 4113 Replacement Brushes (10) 3 lbs (1.4 kgs)



152 "V" Brush 1.5 lbs. (0.68 kgs) Add suffix "Q" for Quick Change, "GA" for Grip All Replacement Brush 3 ozs. (0.09 kgs)



Semi-Tube Brush 1.5 lbs. (0.68 kgs) Add suffix "U" for Universal, "Q" for Quick Change, "GA" for Grip All Replacement Brush 12 ozs. (0.37 kgs) 1521B



1521003 Semi-Tube Side Brush 1.5 lbs. (0.68 kgs) Add suffix "U" for Universal, "Q" for Quick Change, "GA" for Grip All



1520010GAH Brush w/ Handle & Cover 1 lbs. (0.45 kgs)



4103 Handle for Pruning Saw .5 lbs ( .22 kgs )



7991 Pruning Saw w/ 14" (35.6 cm) 1 lbs. (0.45 kgs) 7991WS Saw Sheath .5 lbs. (0.22 kgs) Add suffix "U" for Universal, "Q" for Quick Change



4104 Pruning Saw w/ 18"(457mm) blade .5 lbs ( .22 kgs )



Mounted on 12" (30.6cm) fiberglass pole Tree Pruner - Universal 4105 25' (7.62m) of line 4 lbs. (1.81 kgs)

7992FGQ Tree Pruner - Quick Change 12' ( 3.06m ) of line 4 lbs. (1.81 kgs)



4102 Fixed Blade Tie Head .5 lbs (.22 kgs)



4106 Curved Blade Skinning Knife .4 lbs (.2 kgs) 4107 Replacement Blade .1 lbs (.05 kgs)



Stripping Knife 1 lbs. (0.45 kgs) 125 Sheath 4 oz. (0.12 kgs) Add suffix "U" for Universal, "Q" for Quick Change, "GA" for Grip All



4100 Rotary Blade Tie Head .7 lbs ( .3 kgs )



Wire Gauges 860002 Aluminum Fits:#4 to 397.5 1 lbs. (0.45 kgs) 860004 ACSR/Aluminum Fits: #4 to .556 1 lbs. (0.45 kgs) 860005 Copper Fits: #8 to 4/0 1 lbs. (0.45 kgs) Add suffix "U" for Universal, "Q" for Quick Change



Test Point Cap Seal Cleaner 1520006 1lbs. (0.45 kgs) Add suffix "U" for Universal, "Q" for Quick Change, "GA" for Grip All

# **ARMOR ROD TOOLS, JUMPER HEADS & PENTA SOCKETS**



Add suffix "Q" for quick change, "U" for universal, "HDQ" for heavy duty w/ quick change, "HDU" for heavy duty w/ universal.

The **Jumper Heads** have a maximum opening of 19/16" (4.0 cm) and are designed with built-in universal joints in order to accommodate installation lines at an angle. The jumper heads have a quick action tightening screw for fast closing. Threaded adapters are used to accept 5/8-11 threaded non-shrouded ferrules. A hose clamp is included for connection strain relief.



| Cat. No. | Description         | Max. Opening | Continuous<br>Duty | Weight<br>lbs. ( kgs ) |
|----------|---------------------|--------------|--------------------|------------------------|
| JUMPER H | IEADS WITH THREADE  | ED ADAPTERS  |                    |                        |
| 98SADG   | A Grip All Wide Jaw | 1-9/16"      | 600 amps           | 3 ( 1.36 )             |

Use the **Penta Socket** to tighten or loosen special 3/4" (19 mm) penta head sockets. Comes with a "T" handle. Can be used with any 1/2" (13 mm) drive wrench.



| Cat. No.     | Description  | Weight<br>lbs. ( kgs ) |
|--------------|--|------------------------|
| PENTA SOCKET |  |                        |
| 590001S      | 3/4" (19 mm) Penta head Socket Only                              | 1 ( 0.45 )             |
| 590001       | "T" Wrench with 3/4" (19 mm) Penta head Socket                   | 1 ( 0.45 )             |
| 590002       | Speed Wrench with 3/4" (19 mm) Penta head Socket                 | 2 ( 0.91 )             |
| 59P34916SD   | Penta Wrench, 3/4" (11 mm), 9/16" (14 mm), and Screw Driver      | 3 ( 1.36 )             |
| 5900017/16T  | "T" Wrench with 3/4" (11 mm) Penta head Socket and 7/16" depth   | 1 ( 0.45 )             |
| 593412PHT    | "T" Wrench with 3/4" (11 mm) and 1/2" (13 mm) Penta head Sockets | 1 (0.45)               |

590002

#### **FUSE PULLER TOOLS**

The standard **Fuse Puller** heads (Cat.No. 92Q) have plastic jaws that fit fuses from 3/4" (1.9 cm) to 2" (5.1 cm) diameter. Heads are pivotally mounted to permit adjustment to any angle. To tighten the jaws, just rotate the handle. The insert jaws (Cat. No. 190NLF) for the 1-3/16" (2.1 cm) diameter liquid filled fuse are held on the fuse puller with springs. The attachment on the end of each fuse puller is Cat. No. 190Q, quick change switch hook. Other lengths available. Bag not included. Fiberglass handle diameter: 1-1/4" (3.2cm).





| Cat. No.    | Description                     | Handle Length              | Weight<br>lbs. ( kgs ) |  |  |
|-------------|---------------------------------|----------------------------|------------------------|--|--|
| FUSE PULLER | FUSE PULLER TOOL                |                            |                        |  |  |
| 196FGQ      | Quick Change                    | 6'6" ( 1.98 m )            | 5 ( 2.27 )             |  |  |
| 196FGU      | Universal                       | 6'6" ( 1.98 m )            | 5 ( 2.27 )             |  |  |
| 198FGQ      | Quick Change                    | 8' ( 2.43 m )              | 6 ( 2.72 )             |  |  |
| 198FGU      | Universal                       | 8' ( 2.43 m )              | 6 ( 2.72 )             |  |  |
| Parts       |                                 |                            |                        |  |  |
| 92Q         | Head Only, Quick Change         |                            | 2 ( 0.91 )             |  |  |
| 92U         | Head Only, Universal            |                            | 2 ( 0.91 )             |  |  |
| 190Q        | Switch Hook, Quick Change       |                            | 1 ( 0.45 )             |  |  |
| 190NLF      | Insert Jaws for 13/16" (2.1 cm) | diameter S & C Liquid Fuse | 1 ( 0.45 )             |  |  |

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92225001Q

| Cat. No.    | Description                       | Maximum<br>Diameter | Weight<br>lbs. ( kgs ) |
|-------------|-----------------------------------|---------------------|------------------------|
| FUSE PULLER | HEADS                             |                     |                        |
| 9209Q       | Liquid Fuse, Quick Change         | 13/16" (2.1 cm)     | 3 ( 1.36 )             |
| 9209U       | Liquid Fuse, Universal, Head Only | 13/16" ( 2.1 cm )   | 3 ( 1.36 )             |
| 9209GA      | Liquid Fuse, Grip All             | 13/16" ( 2.1 cm )   | 3 ( 1.36 )             |
| 92225001Q   | Quick Change                      | 2 1/4" (5.7 cm)     | 3 ( 1.36 )             |
| 92225001U   | Universal                         | 2 1/4" ( 5.7 cm )   | 3 ( 1.36 )             |
| 92225001GA  | Grip All                          | 2 1/4" ( 5.7 cm )   | 3 ( 1.36 )             |

#### **CONNECTOR TOOL HEADS & PARALLEL GROOVE CLAMP**

# The **Parallel groove Clamp Tool** accommodates cap-screw type parallel groove clamps (one, two, and three bolt types). The parallel groove tool head clamps can be installed from almost any angle by use of the universal ball clamp. The handles are fiberglass, with the operating handle having a diameter of 1" (2.5 cm) and the

stationary handle 1-1/4" (3.2 cm). Bag not included. Other lengths available.



72CQ

The **vise Type Connector Tool** installs and removes all sizes of single bolt vise type connectors on energized lines. With this tool it is possible to install connectors on a line as efficiently as when done by hand. The handles are fiberglass. The operating handle is 1" (2.5 cm) in diameter and the stationary handle is 1-1/4" (3.2 cm) in diameter. Bag not included. Other lengths available.

Order operating sticks separate.

| Cat. No.                 | Description                     | Weight<br>Ibs. ( kgs ) |  |
|--------------------------|---------------------------------|------------------------|--|
| PARALLEL GR              | ROOVE CLAMP TOOL HEAD           |                        |  |
| 1800CQ                   | Quick Change Head               | 3 ( 1.96 )             |  |
| 1800CU                   | Universal Head                  | 3 ( 1.96 )             |  |
| 1800CQS                  | Quick Change Head with Top Hook | 3 ( 1.96 )             |  |
| PARALLEL GR              | ROOVE CLAMP TOOL SOCKET         |                        |  |
| 1800SS                   | 9/16" (1.4 cm)                  | 1 ( 0.45 )             |  |
| 1800SM                   | 3/4" (1.9 cm)                   | 1 ( 0.45 )             |  |
| 1800SL                   | 15/16" (2.4 cm)                 | 1 ( 0.45 )             |  |
| CONNECTOR                | TOOL VISE TYPE HEAD             |                        |  |
| 72CQ                     | Quick Change Head Only          | 3 ( 1.96 )             |  |
| 72CU                     | Universal Head Only             | 3 ( 1.96 )             |  |
| CONNECTOR TOOL VISE TYPE |                                 |                        |  |
| 72\$3/8                  | 3/8" ( 0.95 cm )                | 2 oz. ( 45 g )         |  |
| 72S9/16                  | 9/16" ( 1.4 cm )                | 2 oz. ( 45 g )         |  |
| 72\$3/4                  | 3/4" ( 1.9 cm )                 | 2 oz. ( 45 g )         |  |

#### **HAND TOOLS**

All Insulated adjustable Wrenches have a spring to prevent the jaws from accidentally moving while in use. These wrenches have a 12" (30.5 cm) wrench head and are supplied with a 1-1/4" (3.2 cm) diameter fiberglass handle.

**Insulated Ratchet Wrench** comes with a 1-1/2" (3.2 cm) fiberglass handle. Standard 1/2" (1.3 cm) square drive.

The Insulated Ratchet Wrench for **Clamp Top** has an 1-1/4" (3.2 cm) diameter fiberglass handle with eye on end for use with a clamp top tool (Cat. Nos. 44CQ or 44CU).

The **Toggle Handle** is used to convert any double threaded ferrule stick to a toggle handle for torquing requirements.





| Cat. No.      | Handle Length               | Weight<br>lbs. ( kgs ) |
|---------------|-----------------------------|------------------------|
| INSULATED ADJ | USTABLE WRENCH              |                        |
| 1160          | 12" (30.5 cm)               | 1 (0.45 )              |
| 1161          | 18" (45.7 cm)               | 2 (0.91 )              |
| 1162          | 24" (61.0 cm)               | 3 (1.36)               |
| INSULATED RAT | CHET WRENCH                 |                        |
| 4412          | 12" (30.5 cm)               | 2 ( 0.91 )             |
| 4418          | 18" (45.7 cm)               | 3 (1.36)               |
| 4436          | 36" (91.5 cm)               | 4.5 ( 2.0 )            |
| INSULATED RAT | CHET WRENCH FOR CLAMP TOP   |                        |
| 44CFG         | 8" (20.3 cm)                | 2 ( 0.91 )             |
| TOGGLE HANDL  | E                           |                        |
| 1258HEQ       | Quick Change - 8" (20.3 cm) | 1 ( 0.45 )             |

**live line lever Cutters** are compound shear cutter made from a heat-treated alloy steel. The stationary handle is 1-1/2" (3.8 cm) in diameter and the operating handle is 1" (2.5 cm) in diameter. For cutting tie wires, jumper taps and conductors up to 2/0. Larger wires should be cut with ACSR lever cutters. Bags available. NOT FOR USE ON ACSR.

The **all aluminum & Soft Copper Cutter** cutting head is adapted to fiberglass handles for live line work on underground and overhead conductors. For use on aluminum up to 750 kcmil and copper to 500 kcmil. Bags available. NOT FOR USE ON ACSR OR STEEL.

**aCSR Cutters with Permanent Heads** cut ACSR up to 396 kcmil. The cutting head is permanently attached. Bags available.

The **Soft Cable Cutter with Removable Head** is lightweight, rugged, and strong. The two-handed cutter head gives clean, shearing cuts. Bags available. NOT FOR USE ON ACSR OR STEEL.

| Cat. No.                          | Description                        | Weight<br>lbs. ( kgs ) |  |  |
|-----------------------------------|------------------------------------|------------------------|--|--|
| LIVE LINE LEVER                   | LIVE LINE LEVER CUTTERS            |                        |  |  |
| 3004FG                            | 4' (1.22 m)                        | 11 (4.99 )             |  |  |
| 3006FG                            | 6' (1.83 m)                        | 11 (4.99 )             |  |  |
| 3008FG                            | 8' (2.44 m)                        | 11 (4.99 )             |  |  |
| ALL ALUMINUM 8                    | ALL ALUMINUM & SOFT COPPER CUTTERS |                        |  |  |
| 670                               | 24" (61.0 cm)                      | 5 (2.27 )              |  |  |
| 671                               | 30" (76.2 cm)                      | 6 (2.72)               |  |  |
| 672                               | 36" (91.4 cm)                      | 7 (3.18)               |  |  |
| ACSR CUTTERS WITH PERMANENT HEADS |                                    |                        |  |  |
| 67124ACFG                         | 24" (61.0 cm) 28" (71.1 cm)        | 5 (2.27 )              |  |  |
| 67130ACFG                         | 30" (76.2 cm) 34" (86.4 cm)        | 5 (2.27 )              |  |  |
| 67136ACFG                         | 36" (91.4 cm) 40" (102.0 cm)       | 6 (2.72 )              |  |  |

| Cat. No.                              | Maximum Cable Size |                |                 | Handle        | Weight       |
|---------------------------------------|--------------------|----------------|-----------------|---------------|--------------|
|                                       | Copper Power       | Aluminum Power | Communication   | Length        | lbs. ( kgs ) |
| SOFT CABLE CUTTER WITH REMOVABLE HEAD |                    |                |                 |               |              |
| 670001                                | 500 kcmil          | 750 kcmil 1    | 3/8" (3.5 cm)   | 24" (61.0 cm) | 5 (2.27 )    |
| 6700011                               | 750 kcmil          | 1200 kcmil     | 1 3/4" (4.5 cm) | 24" (61.0 cm) | 6 (2.72 )    |
| 671001                                | 500 kcmil          | 750 kcmil      | 1 3/8" (3.5 cm) | 30" (76.2 cm) | 5 (2.27 )    |
| 6710011                               | 750 kcmil          | 1200 kcmil     | 1 3/4" (4.5 cm) | 30" (76.2 cm) | 7 (3.18)     |
|                                       |                    |                |                 |               |              |



#### TRANSFORMER GIN ASSEMBLY & TOOL FRAME

Transformer gin assemblies are designed to lift transformers, cross arms and other items used in pole construction. Assembly consists of a pole with ferrules, top fitting, center fitting, base fitting and protective bag for the pole. Has a balanced or \*unbalanced safe working load limit of 2,500 lbs. (1,134 kgs), at a minimum of 18" apart. The working load limit (WLL) is the total load on the gin assembly including load to be lifted, pull on fall line and friction. Rope and block assembly not included.



WARNING: TAGGING LOADS WORKING LOAD LIMIT SUBJECT GIN TO SIDE LOADING THAT WILL REDUCE WLL.

The Tool Frame is a convenient place to hang tools when they are not in use, has swivel eye allowing the frame to rotate.

The Rope-Snibbing bracket attaches to the pole and provides a safe place to tie lines or hook blocks when handling loads.



| Cat. No. | Description  | Weight<br>Ibs. ( kgs ) | WLL       |
|----------|--|------------------------|-----------|
| TRANSFO  | RMER GIN ASSEMBLY  |                        |           |
| 112      | Transformer Gin Assembly                                   | 89 (40.36 )            | 2,500 LBS |
| TRANSFO  | RMER GIN ASSEMBLY  |                        |           |
| 100T     | Tool Frame   | 1 (0.45)               |           |
| 100TR    | Tool Frame with Rope and Snap                              | 2 (0.91)               |           |
| ROPE-SNU | BBING BRACKET  |                        |           |
| 8200     | Pole Type Bracket with Rings, Chain Length: 51" (1.30 m)   | 10 (4.55)              |           |
| 8200S    | Pole Type Bracket without Rings Chain Length: 51" (1.30 m) | 10 (4.55)              |           |
|          |  |                        |           |

112

#### **CROSS ARM GIN & TRANSFORMER GIN ASSEMBLIES**

**Cross arm gins** are used on cross arms when only one conductor needs to be raised. Use the arm gin to change insulators; apply an armor rod to a conductor; raise a conductor from a lower position to the cross arm, or lower the conductor. The 2-1/2" (6.4 cm) diameter fiberglass pole has two eyes at the top in which to hook the block line and tie back line. The base fits a 4-3/4" x 5-7/8" (12.1 x 14.9 cm) cross arm. Included shims are needed for smaller arms.

The **Transformer gin assembly** is made from steel. Can be installed on the pole by one lineman with the single alloy chain. The assembly can also be installed over a cross arm. Blocks can be installed in the eye or from the shackle provided. Rope guides for the fall line are located on both sides of the gin assembly. The gin assembly has a safe working load limit of 2,000 lbs. (907 kgs). The safe working load limit is the total load on the gin assembly including load to be lifted, pull on fall line and friction.

WARNING: TAGGING LOADS WILL SUBJECT GIN TO SIDE LOADING THAT WILL REDUCE THE WLL.

The **Heavy duty Transformer gin assembly** designed for easy installation on the pole with a 5/16" high test chain and tightening handle. The gin can also be installed over a cross arm. The assembly has a safe working load limit of 5,000 lbs. (2,268 kgs). The safe working load limit is the total load on the gin assembly including load to be lifted, pull on fall line and friction.

WARNING: TAGGING LOADS WILL SUBJECT GIN TO SIDE LOADING THAT WILL REDUCE THE WIL.

| A | V<br>S |
|---|--------|
|   |        |

| CROSS ARM GIN       7003     3' (0.91 m)     12 (5.44)     600 (27.7004)       7004     4' (1.22 m)     12 (5.44)     600 (27.7004) |    |  |  |  |  |  |  |
|---|----|--|--|--|--|--|--|
| <b>7004</b> 4' (1.22 m) 12 (5.44) 600 (27   |    |  |  |  |  |  |  |
| . ()  | 2) |  |  |  |  |  |  |
|   | 2) |  |  |  |  |  |  |
| <b>7005</b> 5' (1.52 m) 13 (5.90) 600 (27)  | 2) |  |  |  |  |  |  |
| TRANSFORMER GIN ASSEMBLY  |    |  |  |  |  |  |  |
| <b>133</b> 25 ( 11.34 ) 2,000   |    |  |  |  |  |  |  |
| HEAVY DUTY TRANSFORMER GIN ASSEMBLY   |    |  |  |  |  |  |  |
| <b>1200SL</b> 39 ( 17.73 ) 5,000  |    |  |  |  |  |  |  |



#### GROUND ROD DRIVERS & FRAMING JACK

ground Rod drivers are 60" (1.52 m) long and drives 5/8" (1.6 cm) ground rods deep by concentrating impact directly to the rod.

Light-weight and easy-to-use. Drives 1/2" (1.3 cm) ground rods with less effort than conventional methods. Discs surrounding the handle protect hands from walls, shrubbery, and the sliding parts. Measures 26" (66 cm) long with a 14" (35.6 cm) stroke.

**adapters** for 5/8" (1.6 cm) and 3/4" (1.9 cm) ground rods are available.

The **Framing Jack** is designed to lift the largest poles with ease and safety. The framing jack slips under a pole lying flat on the ground and raises it without danger of it toppling over. Measures 15" (38.1 cm) long.

WLL at 2:1 - 3,000 lbs. (1357 kgs)



1350

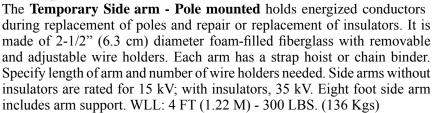
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| Cat. No.        | Description           | Length       | Weight<br>lbs. ( kgs ) |
|-----------------|-----------------------|--------------|------------------------|
| GROUND RO       | OD DRIVERS            |              |                        |
| 1350            | Ground Rod Driver     | 60" (1.52 m) | 45 (20.40 )            |
| 1350001         | Ground Rod Driver     | 26" (0.66 m) | 15 (6.80 )             |
| <b>ADAPTERS</b> |                       |              |                        |
| 1350058A        | For 5/8" (1.6 cm) Gro | und Rods     | 1/2 (0.21 )            |
| 1350034A        | For 3/4" (1.9 cm) Gro | und Rods     | 1/2 (0.21 )            |
| FRAMING J       | ACK                   |              |                        |
| 640001          | Framing Jack with Ra  | tchet Wrench | 58 (26.38 )            |
| 6400B           | Ratchet Wrench Only   |              | 1 (0.45)               |
|                 |                       |              |                        |

#### **TEMPORARY SIDE ARMS & TRANSFER ARMS**

The **Temporary Transfer arm** is used to change crossarms, insulators, or poles on short spans up to and including 15 kV phase to phase. The mast (Cat. No. 1306M) is 2-1/2" in diameter by 6 feet (1.82 m) long. The horizontal arm (Cat. No. 1340WHF8) is 2-1/2" in diameter by 8 feet (2.44 m) long. The arm has a balanced load rating of 600 lbs. (272 kgs); unbalanced at 150 lbs. (68 kgs). These units are mounted to the pole using chain binders (Cat. No. 1304D) and are rated for 15 kV without insulators and 35 kV with insulators.





| Cat. No.   | Number of Wire Holders | Arm<br>Length | Weight<br>lbs. ( kgs ) |  |  |  |  |  |
|--|------------------------|---------------|------------------------|--|--|--|--|--|
| TEMPORARY SIDE ARM - POLE MOUNTED Nylon Strap Binder with Insulators |                        |               |                        |  |  |  |  |  |
| 156024   | <b>VI</b> 2            | 4' (1.22 m)   | 17 ( 7.71 )            |  |  |  |  |  |
| Nylon Strap Binder without Insulators                                |                        |               |                        |  |  |  |  |  |
| 156024   | <b>l</b> 2             | 4' (1.22 m)   | 16 (7.26)              |  |  |  |  |  |

| Cat. No.    | Weight<br>lbs. ( kgs ) |  |
|-------------|------------------------|--|
| WIRE HANG   |                        |  |
| 1309DI      | 3 ( 1.36 )             |  |
| Without Ins | ulators                |  |
| 1309D       | 2.5 ( 1.13 )           |  |
|             |                        |  |



The 6 foot (1.83 m) side-mounted **Temporary Side arm - Cross arm mounted** has 2 wire holders and is used as a temporary conductor holder while replacing or repairing existing conductors or insulators. Made from 21/2" diameter foam- filled fiberglass. Both wire holders are adjustable and removable. Units without insulators are rated for 15 kV and 35 kV with insulators.

WLL: 300 LBS. (136 KGS) OR 150 LBS. (68 KGS) PER WIRE HOLDER.

| Cat. No.   | For Cross Arm Size              | Weight<br>lbs. ( kgs ) |  |  |  |  |  |
|--|---------------------------------|------------------------|--|--|--|--|--|
| TEMPORARY SIDE ARM - CROSS ARM MOUNTED With Insulators |                                 |                        |  |  |  |  |  |
| 1544661  | 4 1/4" x 63/4" (10.3 x 17.1 cm) | 23 ( 10.43 )           |  |  |  |  |  |
| 15466I   | 6" x 6" (15.2 x 15.2 cm)        | 23 ( 10.43 )           |  |  |  |  |  |
| Without Ins  | Without Insulators              |                        |  |  |  |  |  |
| 154466   | 4 1/4" x 63/4" (10.3 x 17.1 cm) | 20 ( 9.07 )            |  |  |  |  |  |
| 154666   | 6" x 6" (15.2 x 15.2 cm)        | 20 ( 9.07 )            |  |  |  |  |  |

1340WHI

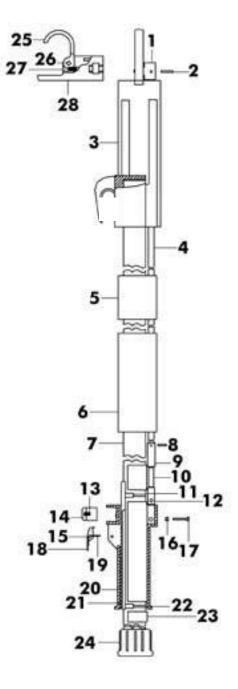
1304D

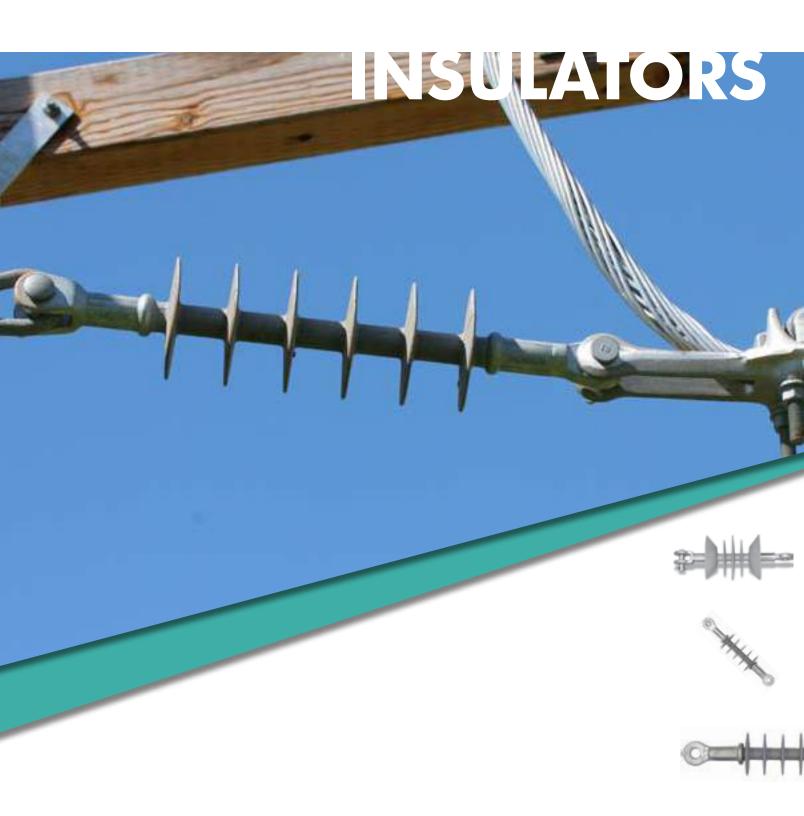
130681

#### FIBERGLASS HOT CLAMPSTICKS REPAIR PARTS LIST

#### **EXTERNAL ROD**

| Ref. No. | Cat. No. |   | Description                        |  |  |  |  |
|----------|----------|---|------------------------------------|--|--|--|--|
|          |          |   |                                    |  |  |  |  |
| 1        | 20178    |   | Guide Assembly                     |  |  |  |  |
| 2        | 20260    | Roll Pin .12                              | 5" Dia. x .5" Lg. ( 3.2 x 13mm )   |  |  |  |  |
| 3        | 20174    | Ferrule                                   |                                    |  |  |  |  |
| 4*       | 20265-1  |   | Operating Rod                      |  |  |  |  |
| 5*       | 20381    | C   | perating Rod Guide                 |  |  |  |  |
| 6        | 20250    |   | Handguard Sleeve                   |  |  |  |  |
| 7        | 20114    | Hot Stic                                  | k Blank 1.25" Dia. (32mm)          |  |  |  |  |
| 8        | 20262    | Roll Pin .12                              | 5 Dia. x .56 Lg. ( 3.2 x 14mm )    |  |  |  |  |
| 9        | 20251    | Оре                                       | erating Rod Connector              |  |  |  |  |
| 10       | 20258    | Hex Sock                                  | et Set Screw .375-16 x 1.25        |  |  |  |  |
| 11       | 20257    | Flat Head Screw                           | 10-32 x 1.125 Lg. ( 254-813 x 29 ) |  |  |  |  |
| 12       | 20253    |   | Adjustment Block                   |  |  |  |  |
| 13       | 20254    | (   | Compression Spring                 |  |  |  |  |
| 14       | 20139    |   | Button                             |  |  |  |  |
| 15       | 20263    | Roll Pin .125 Dia. x .75 Lg. ( 3.2 x 19 ) |                                    |  |  |  |  |
| 16       | 20445    |   | 10-32 Hex Jam Nut                  |  |  |  |  |
| 17       | 20443    | Hex Head                                  | Machine Screw 10-32 x 1.25         |  |  |  |  |
| 18       | 20140    |   | Trigger                            |  |  |  |  |
| 19       | 20255    |   | Torsion Spring                     |  |  |  |  |
| 20       | 20141    |   | Handgrip                           |  |  |  |  |
| 21       | 20142    |   | Rack for Handgrip                  |  |  |  |  |
| 22       | 20257    | Flat Head Screw                           | 10-32 x 1.125 Lg. ( 254-813 x 29 ) |  |  |  |  |
| 23       | 20252    |   | Handgrip Sleeve                    |  |  |  |  |
| 24       | 1959     |   | End Cap                            |  |  |  |  |
| 25       | 20176    |   | Jaw Hook                           |  |  |  |  |
| 26       | 20332    | Roll Pin                                  | .25 Dia. x .47 Lg. ( 6 x 12 )      |  |  |  |  |
| 27       | 20470    |   | Hook Spring                        |  |  |  |  |
| 28       | 20177    |   | Hook Holder                        |  |  |  |  |
|          |          |   |                                    |  |  |  |  |
| Assembl  | y No.    | Description                               | Consist of Parts                   |  |  |  |  |
| 4317     |          | Hook Assembly                             | 28, 29, 30, 31                     |  |  |  |  |





# INSULATORS

## **NEW**

#### **IMPROVED 23613 DEAD END/SUSPENSION INSULATOR**

Salisbury's Improved 23613 Dead End/Suspension Insulator has aluminum end fittings. These new end fittings create a lightweight product that is easier to handle and provides a 15,000 pound ultimate tensile strength. The new aluminum end fittings withstands corrosion better than the previous galvanized steel SI series insulators, adding to the life of the insulator. 100% proof testing ensures trouble-free installation.

The insulator was tested in accordance with ANSI C29 and IEC1109.

See page J-4 for more information.

#### SALVAR® & SILICONE INSULATORS

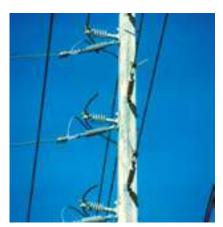
SalvaR® & Silicone Composite Insulators combine the technologies of fiberglass reinforced rod, metal fittings and our extensive knowledge of elastomeric insulation to produce a high quality composite insulator. Since 1980 thousands of SALVAR® and Silicone Insulators have been installed by utilities worldwide in a variety of environments. Continued outstanding performance is proof of their superior quality and design.

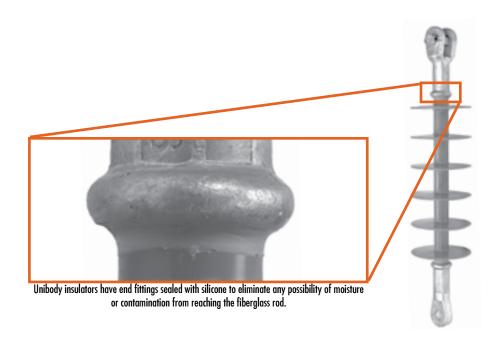
design: Two designs are used to manufacture SALVAR® and Silicone Insulators: Unibody and Modular. Unibody Design insulators are one-piece injection molded directly to the rod and sealed to the end fittings with a bead of silicone to give the insulator high dielectric strength and protect it from all environmental conditions. This design is used for standard distribution dead end/suspension insulators.

Fiberglass Rod: A high quality fiberglass reinforced rod is the core of every insulator with ultimate mechanical strength at least twice the maximum working load.

**End Fittings:** Standard distribution dead/end suspension units are supplied with clevis and tongue fittings meeting ANSI C29-2 specifications. Ball, socket, and eye fittings are also available. All are made of hot dipped galvanized high strength carbon steel and have an ultimate tensile strength rating of 15,000 pounds. All end fittings on dead/ end suspension insulators are attached by compression. *Every* insulator is proof tested to verify the crimp.







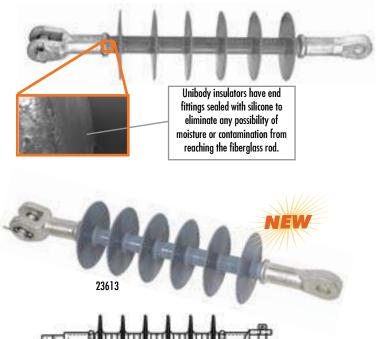
#### SI SERIES SILICONE INSULATOR & NEW ALUMINUM OPTION

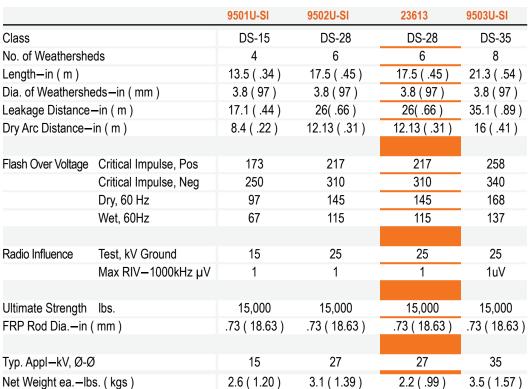
# 15KV TO 35KV DEAD END/SUSPENSION, TONGUE & CLEVIS

The SI Series of Silicone Insulators features a silicone formulation weathershed material. Salisbury combined the excellent hydrophobic and electrical qualities of silicone with an optimum weathershed design and corrosion resistant fiberglass rod to produce a state-of-theart insulator which meets or exceeds industry requirements. The insulators were tested in accordance with ANSI C29 and IEC1109. End fittings are hot dipped galvanized high strength carbon steel, providing a 15,000 pound ultimate tensile strength. 100% proof testing ensures trouble-free installation. RuS accepted.

Salisbury's Improved 23613 dead End/Suspension Insulator has aluminum end fittings. These new end fittings create a lightweight product that is easier to handle and provides a 15,000 pound ultimate tensile strength. The new aluminum end fittings withstands corrosion better than the previous galvanized steel SI series insulators, adding to the life of the insulator. 100% proof testing ensures trouble-free installation. This insulator includes the same silicone weathershed material as th SI Series

The insulator was tested in accordance with ANSI C29 and IEC1109.





#### THE 9502L-EP SILICONE INSULATOR

#### **27KV**

The 95021-EP Silicone Insulator combines two essential characteristics:

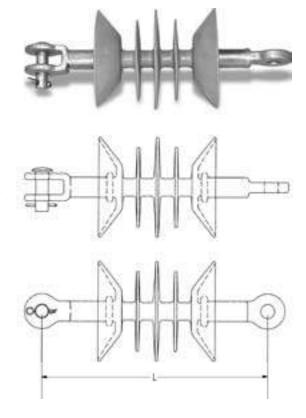
PERFORmanCE - The 9502L-EP is the only composite insulator manufactured as a replacement for two 10" (254mm) porcelain disks. Installation is limited to horizontal dead-end applications only.

**InnOvaTIOn** - Unlike any other insulator on the market, the unique shed design of the 9502L-EP minimizes the material content without compromising electrical or dimensional requirements.

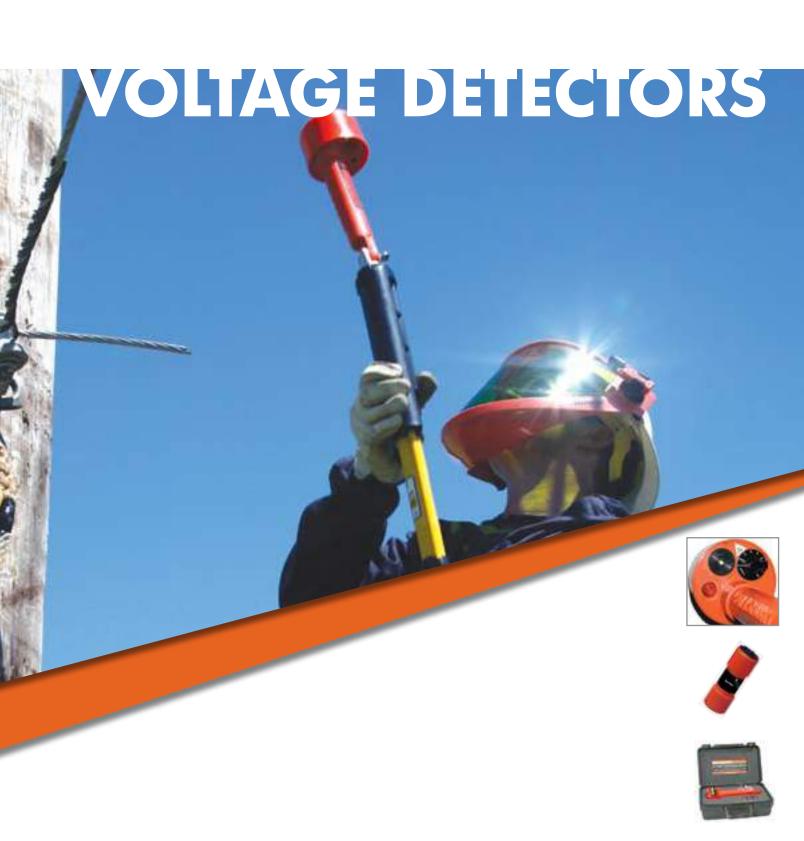
End fittings are hot dipped galvanized high strength carbon steel.

Must be used as a dead end insulator only.

#### RuS accepted.



|                   |                   | 9502L-EP     |
|-------------------|-------------------|--------------|
| No. of Weather    | sheds             | 5            |
| Length-in ( m     | )                 | 11.5 (. 29 ) |
| Dia. of Weathe    | rsheds-in ( mm )  | 5 ( 127 )    |
| Leakage Distar    | nce-in ( m )      | 22 ( .56 )   |
|                   |                   |              |
| Electrical        | Critical Impulse  | 189          |
| Ratings           | Dry, 60 Hz        | 116          |
| kV                | Wet, 60 Hz        | 92           |
|                   |                   |              |
| Radio             | TestkV Ground     | 20           |
| Influence         | Max RIV1000Hz μV  | 1            |
|                   |                   |              |
| Typ. ApplkV, Ø    | <b>0-</b> Ø       | 27           |
| Ultimate Streng   | gth-SML- lbs / kN | 15000 / 70   |
| Net Weight ea.    | -lbs ( kgs )      | 2.8 (1.3)    |
| ivot vvolgitt ea. | iba ( kga )       | 2.0 (1.0)    |



# **VOLTAGE DETECTORS**

## **FAQ**

Q: Are there any precautions, besides wearing the proper safety equipment, when using voltage detectors?

A: Do not assume conductors that have been tested de-energized will stay de-energized. Always install proper grounding devices before working. Failure to do so may result in serious injury or death.

#### **VOLTAGE DETECTORS**

#### **SELF TESTING AUDIO / VISUAL**

#### THE SALISBURY ADVANTAGE

Salisbury's **Self-Testing** voltage detectors allow testing to be continuous and automatic. An intermittent flash and beep confirms the detector is functioning properly.

Self-Testing voltage detectors are used to verify live or de-energized conductors. These testers may be used with rubber insulating gloves or hot sticks using the splined universal end fitting. Testers indicate the presence of voltage with an extra bright LED light and a distinctive audible signal. It is recommended that the tester be moved closer to the conductor until a warning is indicated, or it touches the conductor, apparatus, or elbow test point. Each tester requires three "C" batteries (included).



#### **WARNING**

Do not assume conductors that have been tested de-energized will stay de-energized. Always install proper grounding devices before working. Failure to do so may result in serious injury or death.





| Cat. No. | Dimensions in. ( mm )        | 9-   |               |  |  |
|----------|------------------------------|--|---------------|--|--|
| 4544     | 11 x 3.5 ( 279.4 x 89 )      | Off / 240V / 4.2kV / 15kV/25kV/35kV/69kV/115kV/230kV                         | 15oz. ( .43 ) |  |  |
| 4644     | 11 x 3.5 ( 279.4 x 89 )      | Off / 240V / 4.2kV /35kV/69kV/115kV/230kV/345kV/500kV                        | 15oz. ( .43 ) |  |  |
| 4744     | 11 x 3.5 ( 279.4 x 89 )      | Off / Test-240V / Battery / URD:15kV/25kV/35kV                               | 15oz. ( .43 ) |  |  |
|          |                              | Overhead: 4.2kV / 15kV/25kV/35kV/46kV/69kV                                   |               |  |  |
| 4745     | 11 x 3.5 ( 279.4 x 89 )      | Off / Test-240V / Battery / URD:4.8kV/7.2kV/16kV                             | 15oz. ( .43 ) |  |  |
|          | Overhead:                    | $2.4/4.2 kV \ / \ 4.8/8.3 kV \ / \ 8.0/13.8-7.2/12.5 kV \ / \ 14.4/25-16/27$ | .6kV / 44kV   |  |  |
| COMPLI   | ETE VIT                      |  |               |  |  |
| 4556     |                              | 240V to 230kV, 1-21517 Case, 1-2500 Shotgun Adapter                          | 2 ( .91 )     |  |  |
| 4667     | 1-4644 Tester                | 240V to 500kV, 1-21517 Case, 1-2500 Shotgun Adapter                          | 2 ( .91 )     |  |  |
| 4769     | 1-4744 Tester                | 240V to 69kV, 1-21517 Case, 1-2500 Shotgun Adapter                           | 2 ( .91 )     |  |  |
|          |                              |  |               |  |  |
| 2500     |                              | Shotgun Adapter  | .4 ( .2 )     |  |  |
| 21517    | 12 x 8 x 4.5 ( 305 x 203 x 1 | 114) Storage Case  | 1 ( .45 )     |  |  |

#### VOLTAGE DETECTORS

#### **AUDIO / VISUAL**

**voltage detectors** are used to verify live or de-energized conductors. These testers may be used with rubber insulating gloves or hot sticks using the splined universal end fitting. Testers indicate the presence of voltage with an extra bright LED light and a distinctive audible signal. It is recommended that the tester be moved closer to conductor until warning is indicated, or it touches

conductor, apparatus, or test point. Test the unit on 21517 a nearby energized conductor. Each tester requires three "C" batteries (included).

The 4445 voltage detector Tester provides the most convenient and reliable means of verifying operation of Salisbury Voltage Detectors. The tester features instant push-button operation and requires a standard 9-volt battery (included). It's portable and lightweight. To operate, push the button and move the tester toward the voltage detector being verified. The tester generates an electric field that activates the detector verifying the audible and visual signals are operational.



#### **Test Procedures**

#### Test Procedures

To assure unit is in operable condition switch tester into "Test-240V" position. The tester may now be tested in several different ways.

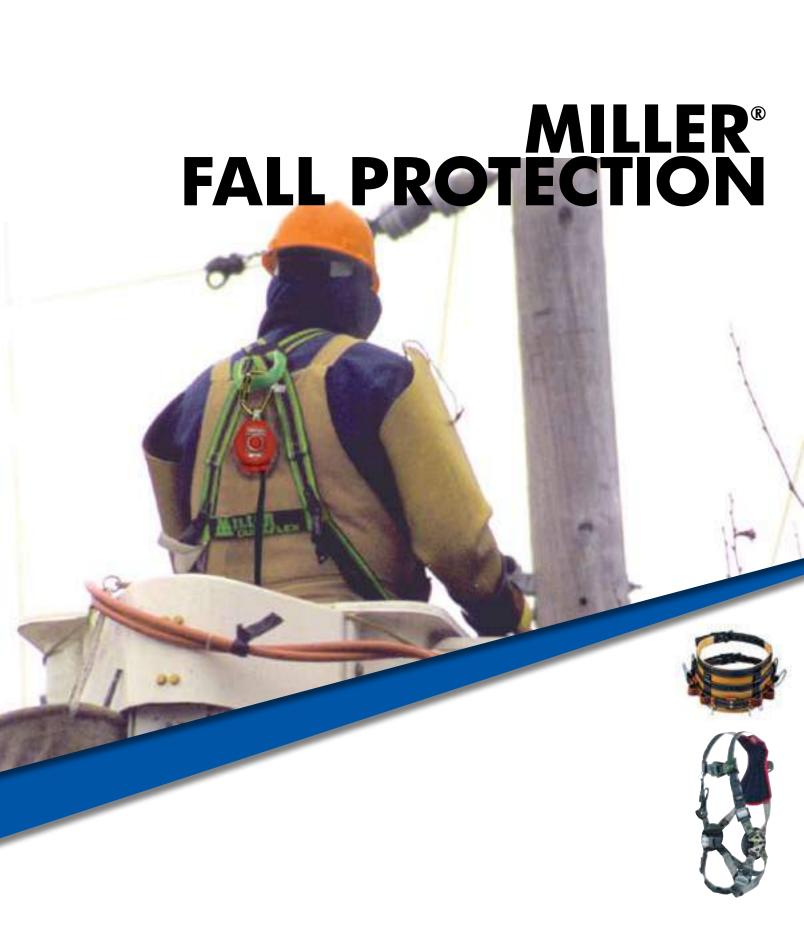
- 1. Place head as marked against live wire outlet or equivalent above 110V A.C.
- 2. Rub the head as marked on cloth or clothing to obtain static charge. Unit will only indicate intermittently.



#### **WARNING**

Do not assume conductors that have been tested de-energized will stay de-energized. Always install proper grounding devices before working. Failure to do so may result in serious injury or death.

| Cat. No.               | Dimensions in. ( mm )                | Settings phase to phase   | Weight ea.<br>lbs. ( kgs ) |
|------------------------|--------------------------------------|---|----------------------------|
| 4244                   | 11 x 3.5 ( 279.4 x 89 )              | Off / 240V / 4.2kV / 15kV/25kV/35kV/69kV/115kV/230kV  | 15oz. ( .43 )              |
| 4344                   | 11 x 3.5 ( 279.4 x 89 )              | Off / 240V / 4.2kV /35kV/69kV/115kV/230kV/345kV/500kV   | 15oz. ( .43 )              |
| 4444                   | 11 x 3.5 ( 279.4 x 89 )              | Off / Test-240V / Battery / URD:15kV/25kV/35kV  | 15oz. ( .43 )              |
|                        |                                      | Overhead: 4.2kV / 15kV/25kV/35kV/46kV/69kV  |                            |
| COMPLE                 | TE KIT                               |   |                            |
| COMPLE<br>4356<br>4367 | 1-4244 Tester 24                     | 40V to 230kV, 1-21517 Case, 1-2500 Shotgun Adapter<br>40V to 500kV, 1-21517 Case, 1-2500 Shotgun Adapter                    | 2 ( .91 )                  |
| 4356<br>4367           | 1-4244 Tester 2-<br>1-4344 Tester 2- | , , , ,   | , ,                        |
| 4356<br>4367<br>4469   | 1-4244 Tester 2-<br>1-4344 Tester 2- | 40V to 500kV, 1-21517 Case, 1-2500 Shotgun Adapter  | 2 ( .91 )                  |
| 4356                   | 1-4244 Tester 2-<br>1-4344 Tester 2- | 40V to 500kV, 1-21517 Case, 1-2500 Shotgun Adapter<br>240V to 69kV, 1-21517 Case, 1-2500 Shotgun Adapter<br>Shotgun Adapter | 2 ( .91 )                  |



# MILLER® FALL PROTECTION

#### MILLER® FALL PROTECTION

**Innovative Products and Services for the utilities Industry.** The Miller® brand of fall protection products has been meeting market demands for fall protection equipment for over 60 years.

We have built a reputation for delivering superior quality products with exceptional customer service, enabling our customers to prevent accidents and injuries, while maintaining on-the-job effi ciencies.

Today, we take particular pride in bringing to the market innovative solutions that not only enhance safety and productivity, but increase user acceptance and lower overall cost.



#### **PERSONAL FALL ARREST SYSTEM**

#### **KEy SySTEm COmPOnEnTS**

Three key components of the Personal Fall Arrest System (PFAS) must be in place and properly used to provide maximum worker protection.

Individually these components will not provide protection from a fall. However, when used properly and in conjunction with each other, they form a Personal Fall Arrest System that becomes vitally important for safety on the job site.



#### **LINEMEN'S EQUIPMENT**

#### **BELTS, LANYARDS & LADDER**

#### miller linemen's belts: Full-Floating belts.

Full-floating belts allow for lateral movement of the D-saddle with D-rings during use. As a lineman changes position on a pole, the D-rings easily adjust to the movement. As a result, the pole strap rubs against the pole less frequently and receives less wear. Any load or pull does not bind tools to the tool loops.

#### all belts feature:

- Side positioning D-rings Tape thong
- Leather tool loops
- · Accessory snap
- Support belt rings
- Accessory ring

#### linemen's belt Sizing

The degree of comfort a lineman receives from a belt depends on the construction of the belt and the location of the D-rings. For best fit, order by D-size. The D-size is the distance between the heels of the D-rings. When wearing a belt, the D-rings should be located 1 inch (25 mm) in front of the hip bones. To determine proper D-size, measure across the back from hip bone to hip bone and add 2 inches (51 mm). This measurement is the D-size.





#### LINEMEN'S BELT SIZING CHART

| D-Size | D18     | D19     | D20     | D21     | D22     | D23     | D24     | D25     | D26     | D27     | D28     | D29     | D30     |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Min.   | 32-in.  | 33-in.  | 34-in.  | 35-in.  | 36-in.  | 38-in.  | 40-in.  | 42-in.  | 44-in.  | 46-in.  | 47-in.  | 48-in.  | 49-in.  |
| (mm)   | (813)   | (838)   | (864)   | (889)   | (914)   | (965)   | (1,016) | (1,067) | (1,118) | (1,168) | (1,194) | (1,219) | (1,245) |
| Max.   | 42-in.  | 43-in.  | 44-in.  | 45-in.  | 46-in.  | 48-in.  | 50-in.  | 52-in.  | 54-in.  | 56-in.  | 57-in.  | 58-in.  | 59-in.  |
| (mm)   | (1,067) | (1,092) | (1,118) | (1,143) | (1,168) | (1,219) | (1,270) | (1,321) | (1,372) | (1,422) | (1,448) | (1,473) | (1,499) |

| Cat. No.  | Width            | Description   | Weight ea.<br>lbs. ( kgs ) |
|-----------|------------------|---|----------------------------|
| SAL88N    | 9-in. (229 mm)   | Leather back-saver body pad with a D-saddle & 1-3/4-in. (44 mm) waist strap                           | 5.6 ( 2.5)                 |
| SAL844    | 9 5-in. (127 mm) | "Black Beauty" leather, cushioned body pad with 1-3/4-in. (44 mm) leather D-saddle & waist strap      | 4.5 ( 2.0 )                |
| SAL88N-1  | 9-in. (229 mm)   | Leather back-saver body pad with a D-saddle, 1-3/4-in. (44 mm) waist strap & scaffolding D-ring       | 5.6 ( 2.5 )                |
| SAL8449-1 | ,                | "Black Beauty" leather, cushioned body pad with (44 mm) leather D-saddle, waist strap & scaffolding I | 4.5 ( 2.0 )<br>O-ring      |

SKU numbers are listed without a size. You must add the appropriate size to the end of the SKU by referencing the Linemen's Belt Sizing Chart. For models SAL88N and SAL88N-1, you must add a forward slash plus size (Ex: SAL88N/D18, SAL88N-1/D25). For models SAL8449 and SAL8449-1, you must add a forward slash plus size plus BK (Ex: SAL8449/D27BK, SAL8449-1/D24BK).

#### LANYARD, LADDER & BUCKET KIT

miller bandit<sup>TM</sup> Tool lanyards. Prevent tools from dropping that can cause serious injuries on the job site. Lanyard conveniently attaches to the user's belt. Tools are attached with the carabiner or by cinching the cord around tool.

miller aerial lift Rescue ladder. The Miller Aerial Lift Self-Rescue Ladder is a portable 15-ft. (4.6 m) web ladder designed and intended to assist with selfrescue for applications such as aerial lifts, bucket trucks, and elevated work surfaces.

In the event of a fall, the user releases the ladder by pulling on the drawstring and then climbs back to the work surface.

#### miller aerial bucket Kit

The Miller Aerial Bucket Kit offers a complete personal fall arrest system for bucket truck applications.

#### The kit includes:

- DuraFlex® Utility Harness (SALE752/UGN)
- Manyard® II Shock-Absorbing Lanyard (SAL233M/6FTGN)
- Aerial Lift Boom Strap (SAL6404/50INYL)



SAL9077X/12



SAL9058/15FT



SAL8112L/UGN

| Cat. No.     | Description  |  |  |  |  |  |  |
|--------------|--|--|--|--|--|--|--|
| SAL9077X/12  | Consists of a box of 12 Bandit Tool Lanyards                                 |  |  |  |  |  |  |
| SAL9058/15FT | 15-ft. (4.6 m) Self-rescue ladder  |  |  |  |  |  |  |
| SAL8112L/UGN | Includes full-body harness, shock-absorbing lanyard & aerial lift boom strap |  |  |  |  |  |  |

#### STOPFALL™ FALL RESTRAINT SYSTEM

The Miller StopFall System provides a user-friendly and reliable work positioning and fall arrest system for climbing wooden poles. The StopFall System is specifically designed with a 75-in. (1,905 mm) pole strap (maximum length) and features a 21-in. (533 mm) security strap with unique gaffs that "bite" into wooden poles. Meets CSA Standard Z259.14-99 for Type A and Type AB.

- The polyester pole strap comprises:
  - An integral steel reinforcement band, which prevents "hourglassing" and maintains shape
  - A rugged neoprene wear pad for increased service life
  - Double-locking snap hooks and length adjuster assembly
  - Two-piece spring assembly to prevent a continual electric path
  - Stainless steel dome stops to prevent the security strap from inadvertently sliding off the end of the wear pad
- Specially-designed security strap:
  - Corrosion-resistant, stainless steel hardware
  - Spring-loaded gaffs that provide instant grip on wooden poles
  - Nylon rollers permit free movement of the gaffs and minimize abrasion on the strap
  - A disconnect and length adjuster with a "parking" feature for when the security strap is not in use



SAL7600A/YL/GP-1

| Cat. No.         | Description  |
|------------------|--|
| SAL7600A/YL/GP-1 | StopFall System fi ts wood pole sizes 25-in 50-in. (635 mm - 1270 mm) circumference with friction buckle adjustment and attached Gaff Pullers (SAL7600GP-1) with leather screw-attachment straps |
| SAL7600B/YL/GP-1 | StopFall System fi ts wood pole sizes 25-in 50-in. (635 mm - 1270 mm) circumference with tongue buckle adjustment and attached Gaff Pullers (SAL7600GP-1) with leather screw-attachment straps   |
| SAL7600GP-1      | GAFF PULLER ACCESSORY – For use on existing StopFall units  Gaff Pullers with leather attachments  |

#### **POSITIONING & RESTRAINT LANYARDS**

#### nF Series Safety Strap

A 1-3/4-in. (44 mm) wide, 100% nylon safety strap offers a friction buckle to adjust the length of the strap quickly and easily.

#### yR Series Safety Strap

Strong safety strap, made of a six-ply neoprene, remains fl exible in all types of weather conditions. Tongue buckle adjuster included for quick, safe adjustment.

#### adjustable Rope lanyard

Designed for work positioning while transitioning around obstacles.







| Cat. No.                                 | Length                                |  |  |  |  |
|--|---------------------------------------|--|--|--|--|
| SAL6NFLS/6FTYL                           | NF Series Safety Strap 6-ft. (1.8 m)  |  |  |  |  |
| SAL6YRLS/6FTBR                           | YR Series Safety Strap 6-ft. (1.8 m)  |  |  |  |  |
| SALARL-100-Z7/8FT                        | Adjustable Rope Lanyard 8-ft. (2.4 m) |  |  |  |  |
| All Have Locking Span Hooks — 3/4-in (19 | mm) aate onenina                      |  |  |  |  |

#### MILLER REVOLUTION™ ARC-RATED HARNESS

#### **GUARDS AGAINST ARC-FLASH & ARC-BLAST EXPOSURE**

The miller Revolution arc-Rated Harness is designed to protect workers from falls caused by electric arc-fl ash and arc-blast exposure when working at heights or in confi ned space applications near energized electrical sources.

Rated to 400 lbs. (181.4 kg) Capacity. Meets ASTM F887-05 Arc Flash Standards.

**Kevlar®/nomex® miller dualT ech**<sup>TM</sup> **Webbing** Patent-pending 10,000 lb. tensile strength webbing is engineered with permanent fi re retardant (FR) properties. The webbing offers the durability and FR properties of Kevlar on the outer side, with softer FR Nomex on the inside of the webbing for greater comfort. The webbing assures are protection and durability that eclipses any nylon webbing.

Leather insulators under all metal hardware offer additional protection for the worker.



Kevlar Web loop back Pad allows for a "metalless" connection when used with a Kevlar shockabsorbing lanyard with a choke-off loop. Bright Red Pad Stitching for easy identification as an arcrated product.

#### leather utility bag

Specialty tool bag features multiple compartments and durable, oil-tanned leather construction. Designed to attach directly to the Miller Revolution harness by simply snapping on or off.

| Cat. No.     | Description         |
|--------------|---------------------|
| SALRIA-T11/1 | Leather Utility Bag |





SALRIA-T11/1

| Cat. No.        | Size | Leg Strap<br>Buckles | Rescue<br>Loops | Special Features.                      |
|-----------------|------|----------------------|-----------------|--|
| SALRKNAR-QC/UBK | U    | Quick-Connect        | No              | Leather insulators / web back D-ring26 |

SKU number listed is for Universal (Lg./XL) size. Harness is also available in small/medium, XXL and XXXL, by replacing the "U" in the SKU number with "S/M", "XXL" or "XXXL" (Ex: SALRKNAR-QC/XXLBK).

Kevlar® is a registered trademark of E.I. DuPont.

#### ARC-RATED HARNESS, LANYARD & STRAP

#### **Heavy-duty arc-Rated Harness**

- Rugged black Kevlar® webbing for harsh welding environments
- Meets ASTM F887 Arc-Test requirements and is rated for arc exposure
- Quick-connect buckles on the chest strap for easy/fast donning
- · Leather insulators
- Web back D-ring

Cat. No.



SAL650KQC/UBK

| Cat. No.      | Size       | Back<br>D-Ring | Front D-Ring | Side<br>D-Rings | Chest Strap<br>Buckle | Shoulder Strap<br>Buckles | Leg Strap<br>Buckles | Sub-Pelvic<br>Strap | Special<br>Features   |
|---------------|------------|----------------|--------------|-----------------|-----------------------|---------------------------|----------------------|---------------------|-----------------------|
| SAL650KQC/UBN | <b>(</b> U | Yes            | Option       | No              | Quick-Connect         | Friction                  | Quick-Connec         | t Yes               | Pull-up<br>adjustment |

SKU number listed is for Universal (Lg./XL) size. Harness is also available in small/medium, XXL and XXXL, by replacing the "U" in the SKU number with "S/M", "XXL" or "XXXL" (Ex: SAL650KQC/XXLBK).

For front D-ring vest-style option, add "FD" to the harness SKU number (Ex: SAL650KQCFD/UBK).

#### arc-Rated Shock-absorbing lanyards

- Meets stringent ASTM F887-05 arc-flash standards
- Designed to protect workers from electric arc-flash and arc-blast exposure
- Available with Kevlar choke-off loop for a "metal-less" connection

**Material** 



**Harness Anchorage Standard** Connection Connection Length

SAL933K/6FTBK Kevlar webbing Lanyard w/SofStop Choke-off loop Locking snap hook 6-ft. (1.8 m) shock absorber

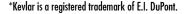
Style

Meets all applicable OSHA, ANSI A10.32 and CSA requirements. Note: Locking Snap Hook -3/4-in. (19 mm) gate opening.

#### arc-Rated Cross-arm anchorage Strap

• Features Kevlar webbing with 2-in. (51 mm) D-ring and choke-off loop.







SAL8185K/6FTBK

miller duraFlex utility Harnesses are uniquely designed with minimal hardware above the waist to reduce electrical conductivity. In addition, all harness materials are independently thermal-arc tested to ensure superior performance.

Patented Miller DuraFlex Harnesses feature speciallyformulated elastomer webbing that stretches to maximize comfort, improve safety and increase productivity.

Rated to 400 lbs. (181.4 kg) Capacity.



#### Web loop lanyard attachment

- Reduces the chance of electric shock near high-voltage sources
- Minimizes harness weight for added comfort



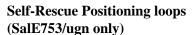
#### **Chest Strap with Protective Pads**

- Holds shoulder straps in place
- Pads keep chest strap in place and protect user from potential shock and injury



#### adjustable belt loops

- Allow for attachment of linemen's belts
- Adjustable to fit most manufacturer models



- For use with bucket escape systems
- Provides a positioning attachment point







SALE753/UGN

| Cat. No.    | Size | Back<br>D-Ring | Front D-Ring | Side<br>D-Rings | Chest Strap<br>Buckle | Leg Strap<br>Buckles | Sub-Pelvic<br>Strap | Special<br>Features   |
|-------------|------|----------------|--------------|-----------------|-----------------------|----------------------|---------------------|---|
| SALE752/UGN | U    | Web Loop*      | No           | No              | Mating                | Mating               | Yes                 | Chest strap adjustment / protective pads / adjustable belt loops                                |
| SALE753/UGN | U    | Web Loop*      | No           | No              | Mating                | Mating               |                     | Chest strap adjustment / protective pads / adjustable belt loops / elf-rescue positioning loops |

<sup>\*</sup>In Canada, utility harnesses include a back D-ring extension in place of the web loop to meet CSA requirements.

SKU numbers listed are for Universal (Lg./XL) size. Harnesses are also available in small/medium, XXL and XXXL, by replacing the "U" in the SKU number with "S/M", "XXL" or "XXXL" (Ex: SALE752/XXLGN).

#### **NON-STRETCH UTILITY HARNESS**

Traditional non-stretch full-body harness in lightweight, durable, yellow polyester webbing. Rated to 400-lbs. (181.4 kg) capacity. Accommodates linemen's belts

#### Web loop lanyard attachment

- Reduces the chance of electric shock near high-voltage sources
- Minimizes harness weight for added comfort



| Cat. No.   | Size | Back<br>D-Ring | Front D-Ring | Side<br>D-Rings | Chest Strap<br>Buckle | Leg Strap<br>Buckles | Sub-Pelvic<br>Strap | Special<br>Features                  |
|------------|------|----------------|--------------|-----------------|-----------------------|----------------------|---------------------|--------------------------------------|
| SAL752/UYK | U    | Web Loop       | No           | No              | Mating                | Mating               | Yes                 | Adjustable linemen's belt attachment |

SKU number listed is for Universal (Lg./XL) size. Harness is also available in small/medium, XXL and XXXL, by replacing the "U" in the SKU number with "S/M", "XXL" or "XXXL" (Ex: SAL752/XXLYK).

#### RELIEF STEP™ SAFETY DEVICE & MANYARD® LANYARDS

The miller Relief Step Safety device alleviates the effects of orthostatic intolerance, also known as suspension trauma.

- OSHA states that potentially fatal suspension trauma can occur within minutes while waiting for rescue after a fall
- Average fall rescue time is 15 minutes
- When used, the Relief Step Safety Device provides support and enhances blood circulation until rescue – permitting the ability to move and flex leg muscles
- Small and lightweight; the Relief Step Safety Device attaches to any brand full-body
- Utilizing two (2) Relief Steps (one for each leg/foot) assures greater comfort until rescue is completed
- Low profile design eliminates hindrances or hang-ups

| Cat. No.    | Description  |
|-------------|--|
| SAL9099X/12 | Consists of a box of 12 Relief Step Safety Devices |





SAL9099X/12



#### miller manyard® Shock-absorbing lanvards

- Specially-woven shock-absorbing inner core smoothly expands to reduce fall arrest forces
- After a fall occurs, a warning flag is released
- Meets ANSI Z359 requirements



SAL233TWLS-Z7/6FTGN



SAL233TWRS-Z7/6FTGN

| Cat. No.            | Material  | Number of Legs | Harness<br>Connection | Anchorage<br>Connection | Standard<br>Length |
|---------------------|-----------|----------------|-----------------------|-------------------------|--------------------|
| SAL233TWLS-Z7/6FTGN | Green web | One            | Web choke-off loop    | Locking snap hook       | 6-ft. (1.8 m)      |
| SAL233TWRS-Z7/6FTGN | Green web | One            | Web choke-off loop    | Locking rebar hook      | 6-ft. (1.8 m)      |

Note: Locking snap hook -3/4-in. (19 mm) gate opening. Locking rebar hook -2-1/2-in. (64 mm) gate opening. Meets all applicable OSHA, ANSI and CSA requirements.

#### TURBOLITE™ PERSONAL FALL LIMITER

Never need a shock-absorbing lanyard again! The cost-effective and competitively priced Miller TurboLite Personal Fall Limiter will make shock-absorbing lanyards obsolete on the job site. Workers will no longer need to "switch-out" equipment to maintain a safe fall distance.

- Extremely compact and lightweight provides 6-ft. (1.8 m) working capacity lifeline; unit attaches directly to the harness back D-ring for greater mobility and versatility
- Engineered webbing for greater abrasion resistance and long service life
- High-strength, impact-resistant nylon housing for maximum durability
- Built-in swivel prevents lifeline from twisting
- Rated for up to a 400 lb. (181.4 kg) user
- No annual factory recertifi cation required
- Meets ANSI Z359 requirements





SALMFL-1-Z7/6FT

Cat. No. Description and Lanyard Unit Connector End Connector

SALMFL-1-Z7/6FT TurboLite with steel twist-lock carabiner Locking snap hook

Note: Locking snap hook — 3/4-in. (19 mm) gate opening.

Meets all applicable OSHA, ANSI A10.32, ANSI Z359 and CSA requirements.

#### **RETRACTABLE LANYARD, ANCHOR CONNECTORS & BEAM**

**The Side Winder Retractable Web lanyard** is a positioning device designed to allow linesmen to bypass obstructions safely in pole climbing applications. The length is easily adjustable up to 8-ft. (2 m) and includes a carabiner and attachment bracket for installation on linemen's belts.

| Cat. No.        | Description  | Weight            |
|-----------------|--|-------------------|
| SAL8327SW/8FTYL | Compact, retractable lanyard with up to 8-ft. (2 m) of polyester webbing | 3.7 lbs. (1.7 kg) |



Stainless steel **Wire Hook anchor** connects to various approved anchorages including railings, small I-beams, angle iron and scaffolding. Simply squeeze the springloaded hook and slip the large opening over the approved structure. 400-lbs. (181.4 kg) maximum capacity.

| Cat. No. | Description      |
|----------|------------------|
| SAL470/  | Wire Hook Anchor |

# miller Permanent anchorage Connector. D-Bolt Anchor for up to 4-in. (102 mm)

working thickness includes a 5/8-in. (16 mm) diameter bolt with lockwasher and nut.

| Cat. No. | Description                |
|----------|----------------------------|
| SAL416/  | Permanent Anchor Connector |

**aerial lift boom Strap.** Made of 2-in. (51 mm) nylon webbing. Includes a sliding D-ring for proper placement on booms and an adjustable buckle that easily tightens into position.

| Cat. No.       | Description       |
|----------------|-------------------|
| SAL6404/50INYL | Aerial Boom Strap |



#### Extension Pole & Hook anchor.

The 20-ft. (6 m) fi berglass pole and spring-loaded hook is ideal for use with climbing ladders and towers. Installs fall arrest systems up to 20-ft. (6 m) from ground level to angle iron, piping and related structures. 400-lbs. (181.4 kg) maximum capacity.



| Cat. No. | Description        |
|----------|--------------------|
| SAL475/  | Pole & Hook Anchor |

**Steel Twist-lock Carabiner.** Meets ANSI Z359. 400-lbs. (181.4 kg) maximum capacity.

|  | Cat Na    | Description         |
|--|-----------|---------------------|
|  | Cat. No.  | Description         |
|  | SAL17D-1/ | 1" (25mm) Carabiner |
|  | SAL18D-1/ | 2" (51mm) Carabiner |
| A STATE OF THE STA |           |                     |



**The miller Fixed beam anchor** connects horizontally to a wide range of I- and H-beam fl anges from 4-in. (102 mm) to 12-in. (305 mm) wide and up to 1-1/4-in. (32 mm) thick.

This unit is designed to be tightened horizontally or vertically, fi rmly gripping the beam or column to provide a temporary or permanent anchorage attachment.



SAL8815-12/

| Cat. No.    | Description  | Fits Flange Sizes                  |
|-------------|--|------------------------------------|
| SAL8815-12/ | Lightweight, fi xed beam anchor stainless steel & high-strength aluminum | 4-in. to 12-in. (102 mm to 305 mm) |

#### DURAHOIST™ PORTABLE CONFINED SPACE SYSTEMS

Miller DuraHoist Portable Confined Space Systems provide safe, lightweight and portable solutions for a variety of confined space applications, including confi ned space entry, rescue, positioning and personnel/material handling.

- Lightweight, high-strength aluminum construction for easy handling and long service life
- No tools required for assembly
- Modular design allows the use of components in various configurations and applications, lowering cost of ownership and providing effective safety solutions

**Floor mount Sleeve** is a fi xed base for the One-piece Adjustable Mast (SALDH-3/). Mounts to horizontal concrete or steel structures.

**Wall mount Sleeve** is a fi xed base for the One-piece Adjustable Mast (SALDH-3/). Mounts to vertical concrete or steel structures. Compact design creates minimal intrusion into work space.



| Cat. No.        | Description  | Weight            |
|-----------------|--|-------------------|
| SALDH-2/        | Four-piece system without ManHandler® hoist/winch  | 91 lbs. (41.3 kg) |
| SALDH-3/        | One-piece Adjustable Mast: 12-in. (305 mm) to 29-in. (737 mm) offset   | 29 lbs. (13.2 kg) |
| SALDH-4/        | Three-piece Portable Base, lightweight, powder-coated aluminum. Features adjustable aluminum screws and a built-in level indicator for easy set-up on uneven surfaces. No tools required for assembly. | 61 lbs. (27.7 kg) |
| SALDH-19-MILLER | Complete bracket assembly for mounting a Miller ManHandler hoist/winch or a Miller MightEvac® SRL to the DuraHoist Portable Confi ned Space System   | 3.1 lbs. (1.4 kg) |
| SALDH-7ZP/      | Zinc-plated, mild steel  | 13 lbs. (5.9 kg)  |
| SALDH-8ZP/      | Zinc-plated, mild steel  | 12 lbs. (5.4 kg)  |

Meets all applicable OSHA and ANSI requirements.

#### DURAHOIST™ PORTABLE FALL ARREST POST

The duraHoist Portable Fall arrest Post provides three independent swivel tie-off points for fall arrest anchorage. Three-stage/four-position telescoping design and aluminum construction for easy transportation and set-up. The leveling screws allow the system to be plumbed to vertical for proper working stability on inclines up to 15 degrees. Adjustable from 32.75-in (832 mm) to 57.25-in. (1,454 mm).

Fixed anchor Plate for the Portable Fall Arrest Post. Designed to be permanently welded to existing structures in locations of frequent work, or where the use of a portable base is impractical.

Rescue/material Handling davit arm attaches quickly and easily to the Portable Fall Arrest Post for rescue and material handling applications. Lightweight aluminum construction makes the Davit Arm easy to transport and set-up.

Complete adapter Plate w/bracket assembly is used to mount a ManHandler Hoist/Winch or a MightEvac SRL to the Rescue/Material Handling Davit Arm.



| Cat. No.     | Description                               | Weight              |
|--------------|---|---------------------|
| SALDH-AP-1/  | Portable Fall Arrest Post                 | 38 lbs. (17.2 kg)   |
| SALDH-AP-4/  | Fixed anchor plate with tie-off anchor    | 11.8 lbs. (5.4 kg)  |
| SALDH-AP-9/  | Portable I-beam anchor base               | 56 lbs. (25.4 kg)   |
| SALDH-AP-3/  | Rescue/Material Handling Davit Arm        | 20.5 lbs. (9.3 kg)  |
| SALDH-AP-11/ | Complete Adapter Plate w/Bracket Assembly | y 2.7 lbs. (1.2 kg) |

Meets all applicable OSHA and ANSI requirements.



#### **RESCUE SYSTEM & RETRIEVAL HOIST**

# The miller Confined Space and Rescue System includes:

- 7-ft. (2 m) lightweight aluminum tripod and MightEvac mounting bracket
- Miller MightEvac Unit w/ 50-ft. (15 m) of 3/16-in. (4.8 mm) galvanized wire rope
- ManHandler Hoist/Winch with 65-ft. (20 m) of 3/16-in. (4.8 mm) galvanized wire rope
- Pulley, carabiner and two heavy-duty equipment bags
- Meets ANSI Z359 requirements

SALMR50GCM-Z7/50FT



SALMR50GCM-Z7/50FT

| Cat. No. | Description |
|----------|-------------|
|          |             |

Meets all applicable OSHA, ANSI and CSA requirements. For stainless steel wire rope, change the "G" to an "S" in the corresponding model number (Ex: SALMR50GCM-Z7/50FT becomes SALMR50SCM-Z7/50FT).

The miller mightEvac® Self-Retracting lifeline w/ Emergency Retrieval Hoist combines the superior performance and reliability of the best-selling MightyLite<sup>TM</sup> Self-Retracting Lifeline Series with a quick-activating retrieval mechanism for emergency evacuation.

- No annual factory recertification required\*
- 20% lighter than competitive models
- Corrosion-resistant stainless steel/aluminum housing and internal components
- Promotes quick and easy rescue with a 4:1 mechanical advantage (average speed of 25 ft. [7.6 m] per minute)



#### SALMR50GB-Z7/50FT

Miller Confined Space & Rescue System

- Convenient, heavy-duty carrying handle
- 310 lb. (140.6 kg) working capacity; rated to 400 lbs. (181.4 kg) working capacity when using a SofStop shock absorber (SAL928LS/18INBK)
- For emergency evacuation only
- SALMR50GB-Z7/50FT meets ANSI Z359

| Cat. No.          | Description   | Weight            |
|-------------------|---|-------------------|
| SALMR50GB-Z7/50FT | Miller MightEvac w/50-ft. (15 m) of 3/16-in. (4.8 mm) galvanized wire rope, mounting bracket & carabiner    | 39 lbs. (17.7 kg) |
| SALMR40KB/40FT    | Miller MightEvac w/40-ft. (12 m) of 3/16-in. (4.8 mm) polyester Spectra® rope, mounting bracket & carabiner | 37 lbs. (16.8 kg) |

Meets all applicable OSHA, ANSI and CSA requirements. Spectra is a registered trademark.

<sup>\*</sup>Does not apply to Canada due to CSA Z259.2.2-98 requirements. Must be inspected by a Miller authorized service center if involved in a fall or if fails user visual or functional inspection.

#### MILLER MANHANDLER® HOIST

The **miller manHandler Hoist** is the perfect solution for a range of applications including confi ned space entry, rescue, positioning and personnel/material handling.

- Compact, durable steel construction
- Smooth, controlled winding action
- Effortless lifting and lowering with a 5:1 gear ratio
- Built-in mounting bracket
- Anti-backlash crank handle braking system prevents freewheeling
- 400 lbs. (181.4 kg) working capacity
- Meets ANSI Z359 requirements



SAL8442-Z7/65FT

| Cat. No.        | Description   | Weight              |
|-----------------|---|---------------------|
| SAL8442-Z7/65FT | ANSI Z359-2007 Compliant ManHandler personnel-rated hoist w/65-ft. (20 m) of 3/16-in. (4.8 mm) galvanized steel cable | 40.1 lbs. (18.2 kg) |

Meets all applicable OSHA, ANSI and CSA requirements.



# **ACCESSORIES**

# **ALSO AVAILABLE**

Salisbury offers an entire line of Arc Flash Protective Clothing and Equipment ranging from 8 cal/cm<sup>2</sup> to 100 cal/cm<sup>2</sup>.

Ask your local Salisbury representative for a copy of our Arc Flash Protection Catalog or download it from our website at salisburybyhoneywell.com.

#### Salisbury also offers Salisbury Insulated Tools and Tool Kits.

These tools are all tested to 10,000 VAC for use up to 1,000 VAC. These tools meet or exceed ASTM F1505-01 and IEC 900 Standards for Insulated Hand Tools and will help you to be compliant with OSHA 1910.333 (c)(2), and NFPA 70E 2009. Ask your local Salisbury representative for more information or visit our website at salisburybyhoneywell.com.

#### CANVAS BUCKETS AND BAGS



Salisbury Tool buckets are constructed of extra-heavy-duty canvas duck and reinforced with a one-piece formed leather bottom with a 3" (76mm) cuff for rugged service and long life. The standard tool buckets, 30 and 40, are both collapsible for easy storage and feature a poly braid rope handle. The 30 features a 6" x 8" interior pocket. The oval tool bucket, 50, designed to attach to aerial baskets, features 6 inner tool pockets and two plastic hanging hooks.

Salisbury Tool bags are useful for carrying and storing all sorts of equipment and tools. Constructed for long life and rugged service from one piece of #8 natural canvas fastened to a steel frame. The vinyl coated nylon bottom is cemented and double stitched to the bag and protected with steel studs and a reinforcing 3.5" (89mm) cuff. Handles are made from a heavy polypropylene webbing and straps are made of top grain harness leather.

line Hose and blanket bags are convenient for raising and lowering bulky items up and down a pole, as well as for storage. Constructed of #6 duck, sewn with nylon thread, and reinforced with a heavy rubber bottom. Features a top ring to hold the bag open and a strong 1/2" (12.7mm) poly braid rope handle, reinforced with polymer. 8" (178mm) diameter bags are used for conventional style line hose, while the 12" (305mm) diameter bags were designed for Class 4 extended lip line hose.

| Cat. No.       | Dimensions in. ( mm )      | Weight ea.<br>lbs. ( kgs ) |
|----------------|----------------------------|----------------------------|
| STANDA         | ARD TOOL BUCKETS           |                            |
| 30*            | 12 x 16 ( 305 x 406 )      | 3.2 ( 1.45 )               |
| 40*            | 8 x 14 ( 203 x 356 )       | 2 ( .91 )                  |
| OVAL TO        | OOL BUCKET                 |                            |
| 50C*           | 7x14x10 ( 1715x356x254     | ) 2.5 ( 1.14 )             |
| PH55           | yellow vinyl hooks for #50 | .5 ( .23 )                 |
| STANDA         | RD Tool Bags- 5.5" (140mm  | n) wide                    |
| 616            | 16 x 13.5 ( 406 x 343 )    | 3.3 ( 1.5 )                |
| 618            | 18 x 15.5 ( 457 x 394 )    | 3.8 ( 1.73 )               |
| 620            | 20 x 15.5 ( 508 x 394 )    | 4.2 ( 1.91 )               |
| 622            | 22 x 15.5 ( 559 x 394 )    | 4.3 ( 1.95 )               |
| 624            | 24 x 15.5 ( 610 x 394 )    | 4.5 ( 2.04 )               |
| <b>EXTRA V</b> | VIDE Tool Bags-9.5" (241m  | m) wide                    |
| 2419B          | 24 x 19 ( 610 x 483 )      | 4.1 ( 1.86 )               |
| LINE HO        | SE BAGS                    |                            |
| 48*            | 8 x 48 ( 178 x 1219 )      | 2.8 ( 1.27 )               |
| 60*            | 8 x 60 ( 178 x 1524 )      | 3.0 ( 1.36 )               |
| 66*            | 8 x 66 ( 178 x 1676 )      | 3.3 ( 1.5 )                |
| 72*            | 8 x 72 ( 178 x 1829 )      | 3.5 ( 1.59 )               |
| 1248*          | 12 x 48 ( 305 x 1219 )     | 3.8 ( 1.73 )               |
| 1266*          | 12 x 66 ( 305 x 1676 )     | 5.3 ( 2.41 )               |
| BLANKE         | T BAG                      |                            |
| 1230           | 12 x 30 ( 305 x 762 )      | 3.2 ( 1.45 )               |
|                |                            |                            |

\*add suffix "S" if optional iron swivel snap is desired

#### **ACCESSORIES**

**Compound Pots** are made of hard rubber that is nonconductive and breakage resistant. The applicator brush and compound are held in one unit that can be hung from aerial devices or fit into cross arm holes. Offered in single and double compartment styles.

Cable bandages provide temporary insulation for bare conductors and splices. A single thickness of the orange SALCOR® Bandage can withstand 15kV on puncture test. The black neoprene bandage is intended to provide fast and complete temporary cover for cable splicers.

Insulating Saddles are ideal for temporary or emergency line work such as stringing light conductors over short spans. The large 3" (76mm) upper saddle opening will hold bare or insulated conductors in either an upright or inverted position. The IS10 has a voltage rating of 15kV. When necessary to leave energized conductors or jumpers in the saddle for extended periods, it is recommended that they be encased in orange SALCOR® RIB-GRIP® line hose. Molded of hard rubber and furnished with two nylon holding pins supplied with steel loops for easy hot-stick application. A 12" (305mm) orange plastic shoe is affixed to the crossarm opening to help prevent flashover during inclement weather. Designed to fit crossarms with dimensions up to 3.75" x 5" (95mm x 127 mm).



| Cat. No.          |                       | cription<br>( mm )       | Weight ea.<br>lbs. ( kgs ) |
|-------------------|-----------------------|--------------------------|----------------------------|
| COMPOUND POT SIN  | GLE COMPARTMENT       |                          |                            |
| PJB1              | 1pt. w/ bristle brush | 4.5" x 3.5" ( 114 x 89 ) | 1.5 ( .681 )               |
| PJB2              | 1 pt. w/ wire brush   | 4.5" x 3.5 ( 114 x 114 ) | 1.5 ( .681 )               |
| CABLE BANDAGES    |                       |                          |                            |
| 440S              | Orange SALCOR         | 4' ( 1.2m ) w/ strap     | 1 ( .5 )                   |
| 414PG             | Pure Gum Rubber       | 14' ( 4.3m ) w/o strap   | 1 ( .5 )                   |
| 414BN             | Black Neoprene        | 14' ( 4.3m ) w/o strap   | 1 ( .5 )                   |
| INSULATING SADDLE |                       |                          |                            |
| IS10              | 11.25 x 4.75          | 5 ( 286 x 121 )          | 4 ( 1.8 )                  |
| ISP               | Replace               | ement Pin                | .25 ( .1 )                 |

#### **SPECIAL EQUIPMENT**

**bEIT HOOK/bREaK-aWay** is nonconductive yellow nylon hand-line belt hook that will bend or break if suddenly pulled.

Climber guards are manufactured by the dipping process using the same formulation of rubber as our lineman's insulating gloves and sleeves. Climber Guards are furnished un-slit to accommodate any length, regular or adjustable climbers. Sold in pairs only.





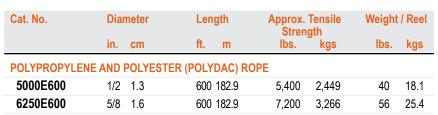
| Cat. No.    | Description / Dimensions in. ( mm ) | Weight ea.<br>lbs. ( kgs ) |  |
|-------------|-------------------------------------|----------------------------|--|
| BELT HOOK / | BREAK-AWAY                          |                            |  |
| H7          | Break-Away Belt Hook                | 1 oz. ( .03 )              |  |
| CLIMBER GUA | ARDS                                |                            |  |
| 21187       | sold in pairs                       | .5 ( .23 )                 |  |

#### HAND LINES, HAND LINE ASSEMBLIES & LINE HOOKS

Premium all-purpose **Hand line** is a light weight and durable three-strand laid rope. Filament polyester yarns are "jacket-wrapped" over mono-filament polypro center yarns, providing excellent abrasion resistance and gripping properties with moderate elongation. When used properly, polydac is perfect for capstans, block and tacklework, and many other rough applications. Other lengths available.

**Hand line assemblies with Polydac Rope** is used for lifting objects to the lineman on the pole. Other lengths are available.

**Hooks** are used for snatch and hand line blocks. **Steel line Hooks** designed to hug the conductor when strain is applied to rope after splicing rope into the eye. Hooks will not damage conductor or fall off, and are easily applied and removed.



| Cat. No.  | Description                               |     | Rope | For P |      | Wei  | ght  |
|-----------|---|-----|------|-------|------|------|------|
|           |   | ft. | m    | lbs.  | kgs  | lbs. | kgs  |
| HAND LINE | ASSEMBLIES WITH POLYDAC ROPE              |     |      |       |      |      |      |
| 1491250   | Standard Hand Line, Fixed Sling           | 100 | 30.5 | 50    | 15.2 | 11   | 4.99 |
| 1492250   | Standard Hand Line, Adjustable Sling      | 100 | 30.5 | 50    | 15.2 | 11   | 4.99 |
| 1492375   | Standard Hand Line, Adjustable Sling      | 150 | 45.8 | 75    | 22.9 | 13   | 5.90 |
| 1494250   | Alternate Hook Assembly, Adjustable Sling | 100 | 30.5 | 50    | 15.2 | 11   | 4.99 |
| 1494375   | Alternate Hook Assembly, Adjustable Sling | 150 | 45.8 | 75    | 22.9 | 13   | 5.90 |
| PARTS     |   |     |      |       |      |      |      |
| 42        | Hand Line Block (only)                    |     |      |       |      | 2    | 0.91 |
| 149H      | Hook for Hand Line (only)                 |     |      |       |      | 1    | 0.45 |
| 149S      | Swivel Snaps (only)                       |     |      |       |      | 1    | 0.45 |

| Cat. No.   | Description  | Opening Size in. ( cm ) | WLL<br>lbs. ( kgs ) | Weight<br>lbs. ( kgs ) |
|------------|--------------|-------------------------|---------------------|------------------------|
| HOOKS      |              |                         |                     |                        |
| 40H        | Pointed Hook | 1,000 ( 454 )           |                     | 1 ( 0.45 )             |
| 40HPP      | Pointed Hook | 1,000 ( 454 )           |                     | 1 ( 0.45 )             |
| 40CH       | Blunt Hook   | 1,000 ( 454 )           |                     | 1 ( 0.45 )             |
| 40SHB      | Swivel Hook  | 1,000 ( 454 )           |                     | 1 ( 0.45 )             |
| LINE HOOKS | S            |                         |                     |                        |
| 27         | Small        | 7/8" (2.2 cm)           | 1,000 (454 )        | 1 ( 0.45 )             |
| 27A        | Medium       | 1-1/2" (3.8 cm)         | 1,325 (601 )        | 2 ( 0.91 )             |
| 27S        | Large        | 2" (5.1 cm)             | 1,650 (748 )        | 3 ( 1.36 )             |



















#### **BLOCKS**

blocks are made of high strength aluminum alloy except for Cat. No. 42PS which is made of high impact plastic. The hand line block has a 5/8" (1.6 cm) diameter rope maximum. "S" denotes side opening block. Other hooks are available.

Wood Shell blocks are used with polypropylene or synthetic rope. The 4" blocks have a 1/2" (1.3 cm) diameter rope maximum; the 5" blocks a 5/8" (1.6 cm) maximum; and the 6" blocks a 3/4" (1.9 cm) maximum.

Single blocks are fitted with a swivel hook; double and triple block with a loose, flat hook. Swivel hooks are not recommended on double or triple blocks. The double and triple blocks are fitted with a special live line pin so they can easily be handled with an alligator stick (Cat. No. 4FGQ).





| Cat. No. | Description                                | Weight<br>lbs. ( kgs ) | WLL<br>lbs. ( kgs ) |
|----------|--|------------------------|---------------------|
| BLOCKS   |  |                        |                     |
| 40       | Aluminum Hand Line Block                   | 2 ( 0.91 )             | 1,000 ( 454 )       |
| 42A      | Aluminum Hand Line Block with Pointed Hook | 3 ( 1.36 )             | 1,000 ( 454 )       |
| 42S      | Aluminum Snatch Block                      | 2 ( 0.91 )             | 1,000 ( 454 )       |
| 42SA     | Aluminum Snatch Block with Pointed Hook    | 3 ( 1.36 )             | 1,000 ( 454 )       |
| 42PS     | Insulated Plastic Block                    | 3 ( 1.36 )             | 1,000 ( 454 )       |
| WOOD S   | HELL BLOCKS - SINGLE BLOCK WITH SWIVEL H   | OOK & BECKET           |                     |
| 904      | 4" ( 10.2 cm )                             | 2 ( 0.91 )             | 1,000 ( 454 )       |
| 905      | 5" (12.7 cm)                               | 3 ( 1.36 )             | 1,200 ( 544 )       |
| 906      | 6" ( 15.2 cm )                             | 5 ( 2.27 )             | 1,800 (816)         |
| WOOD S   | HELL BLOCKS - DOUBLE BLOCK WITH FLAT HO    | OK & BECKET            |                     |
| 284      | 4" ( 10.2 cm )                             | 3 ( 1.36 )             | 1,400 ( 635 )       |
| 285      | 5" (12.7 cm)                               | 5 ( 2.27 )             | 1,800 (816)         |
| 286      | 6" ( 15.2 cm )                             | 7 ( 3.17 )             | 2,500 ( 1,134 )     |
| WOOD S   | HELL BLOCKS - DOUBLE BLOCK WITH FLAT HO    | OK, BECKET & S         | SWIVEL              |
| 284A     | 4" ( 10.2 cm )                             | 3 ( 1.36 )             | 1,400 (635)         |
| 285A     | 5" (12.7 cm)                               | 5 ( 2.27 )             | 1,800 (816)         |
| 286A     | 6" ( 15.2 cm )                             | 8 ( 3.63 )             | 2,500 ( 1,134 )     |
| WOOD S   | HELL BLOCKS - TRIPLE BLOCK WITH FLAT HOO   | K, BECKET & S          | WIVEL               |
| 284A3    | 4" ( 10.2 cm )                             | 4 ( 1.81 )             | 1,800 ( 816 )       |
| 285A3    | 5" (12.7 cm)                               | 7 ( 3.17 )             | 2,400 ( 1,089 )     |
| 286A3    | 6" ( 15.2 cm )                             | 11 ( 4.99 )            | 3,200 ( 1,451 )     |
|          |  |                        |                     |

#### **BLOCKS & SAFETY HOOKS**

**nylon blocks** are light-weight and self-lubricating. The nylon blocks will handle 1/2" (1.3 cm) diameter rope and smaller.

WARNING: DO NOT EXCEED THE WORKING LOAD LIMIT.



| Cat. No. | Description                            | Weight<br>lbs. ( kgs ) | WLL<br>lbs. ( kgs ) |
|----------|--|------------------------|---------------------|
| NYLON BL | OCKS                                   |                        |                     |
| 3101E    | Single Block with Swivel Hook & Becket | 1 ( 0.45 )             | 500 ( 227 )         |
| 3101W    | Single Block with Flat Hook & Becket   | 1 ( 0.45 )             | 500 ( 227 )         |
| 3102W    | Double Block with Flat Hook & Becket   | 2 ( 0.91 )             | 1,000 ( 454 )       |
| 3103W    | Triple Block with Flat Hook & Becket   | 2 ( 0.91 )             | 1,200 ( 544 )       |

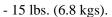
| Cat. No.    | Description            | WLL<br>lbs. ( kgs ) | Weight<br>lbs. ( kgs ) |
|-------------|------------------------|---------------------|------------------------|
| SAFETY HOOK |                        |                     |                        |
| 4003SH      | Conductor Lifting Hook | 2,000 ( 907 )       | 6.2 ( 2.8 )            |

X-8

#### **ARM SLINGS**

Fabricated arm Slings are used as an allpurpose sling for non-energized and live line work, the fabricated arm sling is made to fit snugly over the arm by using the filler plates (included) to adjust the opening. Weight - 6 lbs. (2.7 kgs).

double arm Slings are made for dead ending. Adjustable to cross arms 4" to 5" (10.2 to 12.7 cm) wide and 5" to 6" (12.7 to 15.2 cm) high, the double arm sling can be installed with insulating sticks. Weight





| Cat. No. | Opening Size<br>in. (cm)   | WLL<br>lbs. ( kgs ) |
|----------|----------------------------|---------------------|
| FABRICAT | TED ARM SLINGS             |                     |
| 26E      | 4 x 6 (10.2 x 15.2)        | 2,000 (907)         |
| 26G      | 5 x 6 ( 12.7 x 15.2 )      | 2,000 (907)         |
| 26K      | 6 x 6 ( 15.2 x 15.2 )      | 2,000 (907)         |
| 26H      | 6 1/8 x 8 ( 15.6 x 20.3 )  | 2,000 (907)         |
| DOUBLE A | ARM SLING                  |                     |
| 266      | With 2 Steel Snatch Blocks | 750 ( 340 )         |

#### **POLE ADAPTER KIT & POLE DRAW BAR**

The **Pole adapter Kit** is a mounting bracket that safely attaches a saw to the pole. The saw pivots on a plate which is attached to the side of the saw. The pole adapter has a chain tightening base, and a safety stop to halt the swing of the saw after the cut has been made. Use this adapter kit while cutting off sections of a pole when the pole has to be removed. Chain saw not included.

The **Pole draw bar** attaches to the pole by placing the end stop of the bar against the end of the pole. Secure the bar to the pole with the two chain and screw binders affixed to the bar. The pole draw bar is supplied with lifting handles on each side and a safety loop through which a chain is attached. The oval hole is large enough to fit all hitches. (Check local vehicle safety chain regulations.)

9300 - SAFE TOWING CAPACITY: 10,000 LBS. (4,530 Kgs). 9301 - SAFE TOWING CAPACITY: 15,000 LBS. (6,804 Kgs).









| Cat. No.    | Type of Saw        | Description                  | Weight<br>lbs. ( kgs ) |
|-------------|--------------------|------------------------------|------------------------|
| POLE ADAPTE | R KIT              |                              |                        |
| 3115        | Stihl / Homelite   | Full Adapter Kit             | 14 ( 6.35 )            |
| 3115ES      | Stihl / Homelite > | (L Swivel Plate w/ Stand-Off | 1 ( 0.45 )             |

| Cat. No.       | Description              | Weight lbs. (kgs) |
|----------------|--------------------------|-------------------|
| POLE DRAW BA   | AR                       |                   |
| 9300           | Pole Draw Bar (complete) | 60 (27.21 )       |
| 9301           | Heavy Duty Pole Draw Bar | 78 (35.37 )       |
| Replacement Pa | arts                     |                   |
| 9300C          | Chain, Screw and Snap    | 4 ( 1.81 )        |
| 9300E          | Toggle Handle and Nut    | 1 ( 0.45 )        |
| 9300M          | Pointed Screw            | 3 oz. ( 84 g)     |

# NATIONAL DISASTER RESPONSE PROGRAM

### After Hours Emergency Customer Service







Do you know what to do in times of disaster?

Do you know who to contact in case of emergency?

You can count on Salisbury, to be there when you need it most.

Salisbury understands your safety needs. But, Salisbury also understands that your safety needs don't always happen between 9am and 5pm. This is why Salisbury has developed the National Disaster Response Emergency Contact.

Salisbury's National Disaster Response will be able to help your emergency safety product orders and customer service needs. While facing national disasters and weather related catastrophes, Salisbury will be there.

# NATIONAL DISASTER RESPONSE PROGRAM: After Hours Emergency Customer Service

You can now contact Salisbury after regular business hours during severe emergencies using our new NATIONAL DISASTER RESPONSE Contact Line. This new contact line allows product ordering, even after-hours and weekends. A National Disaster Response Team is ready to fulfill your emergency order requirements around the clock during national and international severe weather or natural disasters such as Winter Ice Storms, Tornadoes, Tropical Storms, Hurricanes and Earthquakes.

Our team is ready to fulfill emergency orders of Personal Protective Equipment and Linemen Utility Products required to (1) Restore electrical power and utilities to U.S. and Global regions as a result of natural disaster and (2) provide Personal Protective Equipment to the Industrial or Utility work force resulting from natural disaster.

National Disaster Response emergency contact for after-hour and weekend emergencies as defined above.

866-957-7515
National Disaster Response After-Hours
Emergency Contact

Department in Bolingbrook, IL during regular business hours:

877-406-4501 Monday - Friday 7:30AM-5:00 PM Central Standard Time





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