Material Info

Cadmium Plating Information
Cadmium plated parts have a minimum of 0.0003” plating thickness. Cadmium plating conforms to UL standards for connecting dissimilar materials. Cadmium connections to copper, aluminum, stainless steel, magnesium, lead, wrought iron, galvalum, zinc and zinc plated steel all have an electrochemical potential under 0.60 V to minimize corrosion due to electrochemical action.

Tin Plating Information
Our tinned copper parts are hot dipped and have a minimum thickness of 0.0001”. Tinned copper parts conform to UL 96 requirements for use in corrosive environments.

Lead Plating Information
Our lead dipped or plated parts have a minimum of 0.0001” thick lead coating.

Stainless Steel Fasteners
Our fasteners are standard 18-8 stainless steel fasteners and are dimensioned per ASME B18.2.1. Our tek screws are 400 series, magnetizable stainless steel. Manufacturer torque suggestions are found in the table at the right.

Copper
Our copper parts are made from electrical grade copper. All copper parts can be custom plated with cadmium, nickel, lead, or tin.

Aluminum
Our aluminum parts are made from electrical grade aluminum.

Copper Alloys
We use three bronze or brass alloys for our cast copper parts. We use 85 red brass for our ground rod clamps, 131 bronze for part No. 47 and No. 44, and 81 red brass for all other cast copper parts. All bronze or brass parts can be custom plated with cadmium, nickel, lead or tin.

Aluminum Alloys
We use two aluminum alloys for our cast aluminum parts. We use 356 aluminum for part No. A47 and No. A44 and 319 aluminum for all other cast aluminum parts.

Stainless Steel Alloy
We use 304 stainless steel (18/8) in all our stainless steel parts.
ALUMINUM CONDUCTORS
(For Main Conductor Use)

STANDARD OF THE INDUSTRY FOR
STRUCTURES 75’ HIGH OR LESS

Cat. No. A1 – 26 strands of 14 gauge bare aluminum wire in basket weave configuration, 1/2” diameter, 106,800 circular mil cross section, (#1/0 AWG). Weight of aluminum – 102 pounds per 1,000’ minimum.

Available on 250’ and 500’ spools.

OTHER SMOOTH WEAVE OR BASKET WEAVE
ALUMINUM CABLES AVAILABLE ON
250’ AND 500’ SPOOLS

Cat. No. A2 – 28 strands of 14 gauge bare aluminum wire, 9/16” diameter, 115,000 circular mil cross section. Weight of aluminum – 112 pounds per 1,000’ minimum.

Cat. No. A3 – 24 strands of 14 gauge bare aluminum wire, 1/2” diameter, 98,600 circular mil cross section. Weight of aluminum – 95 pounds per 1,000’ minimum.

STANDARD OF THE INDUSTRY FOR
STRUCTURES OVER 75’ HIGH

Cat. No. A604 – 31 strands of 0.0783" diameter bare aluminum wire in basket weave configuration, 9/16” diameter, 192,000 circular mil cross section (#4/0 AWG). Weight of aluminum – 191 pounds per 1,000’ minimum.

Available on 250’ and 500’ spools.
COPPER CONDUCTORS
(For Main Conductor Use)

STANDARD OF THE INDUSTRY FOR STRUCTURES 75’ HIGH OR LESS

Cat. No. 1 - 32 strands of 17 gauge bare copper wire in basket weave configuration, 7/16” diameter, 65,500 circular mil cross section. Weight of copper — 201 pounds per 1,000’ minimum.

Available on 250’ and 500’ spools.

OTHER BASKET WEAVE COPPER CABLES AVAILABLE ON 500’ SPOOLS

Cat. No. 2 – 34 strands of 17 gauge bare copper wire, 7/16” diameter, 69,600 circular mil cross section. Weight of copper — 214 pounds per 1,000’ minimum.

Cat. No. 3 – 36 strands of 17 gauge bare copper wire, 7/16” diameter, 73,700 circular mil cross section. Weight of copper — 227 pounds per 1,000’ minimum.

Cat. No. 6 – 30 strands of 17 gauge bare copper wire, 7/16” diameter, 61,400 circular mil cross section. Weight of copper — 188 pounds per 1,000’ minimum.

TINNED COPPER CONDUCTOR
(For Use on White or Light Colored Buildings)

Cat. No. 1T – 32 strands of 17 gauge tinned copper wire in basket weave configuration, 7/16” diameter, 65,500 circular mil cross section. Weight — 202 pounds per 1,000’ minimum.

Cat. No. 6T – 30 strands of 17 gauge tinned copper wire, 7/16” diameter, 61,400 circular mil cross section. Weight of copper 188 pounds per 1,000’ minimum.
COPPER CONDUCTORS
(For Main Conductor Use)

STANDARD OF THE INDUSTRY FOR
STRUCTURES OVER 75’ HIGH

Cat. No. 604 — 28 strands of 14 gauge (.064) bare copper wire in rope lay configuration, 7/16” diameter, 115,000 circular mil cross section. Weight of copper – 375 pounds per 1,000’.

Available on 250’ spools.

OTHER ROPE LAY COPPER CABLES —
AVAILABLE ON 250’ SPOOLS

Cat. No. 601 — 25 strands of .065 diam. bare copper wire, 7/16” diameter, 105,500 circular mil cross section (#1/0 AWG). Weight of copper – 334 pounds per 1,000’. (Not for use on structures over 75’.)

Cat. No. 602 — 28 strands of .0689 diam. bare copper wire, 7/16” diameter, 132,900 circular mil cross section (#2/0 AWG). Weight of copper – 420 pounds per 1,000’.

Cat. No. 603 — 19 strands of .095 diam. bare copper wire in concentric configuration, 1/2” diameter, 171,475 circular mil cross section (#3/0 AWG). Weight of copper – 518 pounds per 1,000’.

TINNED COPPER CONDUCTORS
(For Use on White or
Light Colored Buildings)

Cat. No. 602T — 28 strands of .0689 diam. tinned copper wire in rope lay configuration, 7/16” diameter, 132,900 circular mil cross section (#2/0 AWG). Weight of copper – 421 pounds per 1,000’.

Cat. No. 604T — 28 strands of 14 gauge tinned copper wire in rope lay configuration, 7/16” diameter, 115,000 circular mil cross section. Weight of copper – 376 pounds per 1,000’.
COPPER AND ALUMINUM CONDUCTORS
(For Special Purpose Systems of Lightning Protection and Grounding)

Cat. No. 605 – 37 strands of 0.0756" bare copper wire in concentric configuration, 1/2” diameter, 211,500 circular mil cross section, (#4/0 AWG) - Weight of copper – 653 pounds per 1,000’.

Cat. No. 605T – 37 strands of 0.0756” tinned copper wire in concentric configuration, 1/2” diameter, 211,500 circular mil cross section, (#4/0 AWG) - Weight of copper – 657 pounds per 1,000’.

Cat. No. 250MCM – 37 strands of 0.0822” bare copper wire in concentric configuration, 9/16” diameter, 250,000 circular mil cross section. Weight of copper – 772 pounds per 1,000’.

Cat. No. 500MCM – 37 strands of 0.116” bare copper wire in concentric configuration, 13/16” diameter, 498,000 circular mil cross section. Weight of copper – 1,544 pounds per 1,000’.
ALUMINUM CONDUCTORS
(For Secondary Bonding Use)

Cat. No. A10 — 14 strands of 14 gauge aluminum wire in smooth weave configuration, 5/16” diameter, 57,000 circular mil cross section, (exceeds #4 AWG). Weight of aluminum – 58 pounds per 1,000’.

Cat. No. A11 — 22 strands of 14 gauge aluminum wire in smooth weave configuration, 7/16” diameter, 90,000 circular mil cross section, (exceeds #2 AWG). Weight of aluminum – 90 pounds per 1,000’.

Cat. No. A11A — 11 strands of 14 gauge aluminum wire in concentric configuration, 1/4” diameter, 45,000 circular mil cross section, (#4 AWG). Weight of aluminum – 47 pounds per 1,000’.

All Secondary Conductors available in 25’, 50’, 100’ or 500’ coils or spools.

Cat. No. A11C — Aluminum #4 AWG bare wire, soft drawn, 41,500 circular mil cross section. Weight of aluminum – 40 pounds per 1,000’.

Cat. No. A11D — Aluminum #2 AWG bare wire, soft drawn, 66,400 circular mil cross section. Weight of aluminum – 60 pounds per 1,000’.
COPPER CONDUCTORS
(For Secondary Bonding Use)

Cat. No. 10 – 14 strands of 17 gauge bare copper wire in smooth weave configuration, 1/4” diameter, 28,600 circular mil cross section (#6 AWG). Weight of copper – 90 pounds per 1,000’.

Cat. No. 11 – 22 strands of 17 gauge bare copper wire in smooth weave configuration, 5/16” diameter, 45,000 circular mil cross section (#4 AWG). Weight of copper – 141 pounds per 1,000’.

Cat. No. 11A – 11 strands of 14 gauge bare copper wire in concentric configuration, 5/16” diameter, 45,000 circular mil cross section (#4 AWG). Weight of copper – 140 pounds per 1,000’.

Cat. No. 10C – Copper #6 AWG bare wire, soft drawn, 26,000 circular mil cross section. Weight of copper – 80 pounds per 1,000’.

Cat. No. 11C – Copper #4 AWG bare wire, soft drawn, 41,500 circular mil cross section. Weight of copper – 127 pounds per 1,000’.

TINNED COPPER CONDUCTORS
(For Secondary Bonding Use)

Cat. No. 10T – 14 strands of 17 gauge tinned copper wire in smooth weave configuration, 1/4” diameter, 28,600 circular mil cross section (#6 AWG). Weight of cable – 92 pounds per 1,000’.

Cat. No. 11AT – 11 strands of 14 gauge tinned copper wire in concentric configuration, 5/16” diameter, 45,000 circular mil cross section (#4 AWG). Weight of cable – 142 pounds per 1,000’.

Cat. No. 11DT – Tinned copper #2 AWG soft drawn wire, 66,400 circular mil cross section. Weight of wire – 206 pounds per 1,000’.
ALUMINUM FLAT CONDUCTORS
(For Main and Secondary Use)

FOR MAIN CONDUCTORS ON STRUCTURES
LESS THAN 75' HIGH

Cat. No. A16 — Flat, bare aluminum strip conductor, 1” wide by 12 gauge thick, soft drawn for easy forming. Approx. 94,000 circular mil cross section. Weight of aluminum — 96 pounds per 1,000’.

FOR SECONDARY CONDUCTOR USE

Cat. No. A14 — Flat, bare aluminum strip conductor, 5/8” wide by .053 thick, soft drawn for easy forming. Approx. 45,000 circular mil cross section. Weight of aluminum — 38 pounds per 1,000’.

COPPER FLAT CONDUCTORS

FOR SECONDARY CONDUCTOR USE

Cat. No. 14 — Flat, bare copper strip conductor, 1/2” wide by .032 thick, soft drawn for easy forming. Approx. 32,000 circular mil cross section. Weight of copper — 100 pounds per 1,000’.

Flat conductors available in 25’, 50’, 100’ or 500’ coils.
TINNED COPPER FLAT CONDUCTORS
(For Main and Secondary Use)

FOR MAIN CONDUCTORS ON STRUCTURES
LESS THAN 75' HIGH

Cat. No. 17—Tinned flat copper strip conductor, 1”
wide by 14 gauge thick, soft drawn for easy forming.
Approx. 73,000 circular mil cross section. Weight of
copper — 254 pounds per 1,000’.

Flat conductors available in 25’, 50’, 100’ or 500’ coils.
COPPER ROD CONDUCTORS
(For Main Conductor Use)

Cat. No. 12 — Solid copper rod, 1/2” diameter, hard drawn. May be substituted for stranded cable where needed to prevent mechanical damage or to bridge open spaces. Weight – 761 pounds per 1,000’.

Available in lengths 144” or shorter – each end threaded 1/2” – 13 NC for coupling.

Cat. No. 13 — Solid copper rod, 3/8” diameter, hard drawn. May be substituted for stranded cable where needed to prevent mechanical damage or to bridge open spaces. Weight – 428 pounds per 1,000’.

Available in lengths 144” or shorter – each end threaded 3/8” – 16 NC for coupling.

3/8” = 12’ Lengths
1/2” = 7’ Lengths

ALUMINUM ROD CONDUCTORS
(For Main Conductor Use)

Cat. No. A12 — Solid aluminum rod, 1/2” diameter, hard drawn. May be substituted for stranded cable where needed to prevent mechanical damage or to bridge open spaces. Weight – 240 pounds per 1,000’.

Available in lengths 84” or shorter – each end threaded 1/2” – 13 NC for coupling.

Cat. No. A13 — Solid aluminum rod, 5/8” diameter, hard drawn. May be substituted for stranded cable where needed to prevent mechanical damage or to bridge open spaces. Weight – 135 pounds per 1,000’.

Available in lengths 144” or shorter – each end threaded 3/8” – 16 NC for coupling.
EXTRA FLEXIBLE BRAID CONDUCTORS
(For use in Bonding and Grounding of Moving or Vibrating Machinery, Equipment, Doors, Platforms and Cover Plates.)
Multiple stranded conductors allow maximum flexibility and extended life over standard cables.

Flexible braid conductors are available in cut lengths with one-hole flat lug on each end. Standard lengths shown — other lengths available on request.

Cat. No. 607 — Tinned copper flexible strap of 1/8” thick by 15/16” wide multi-strand braid (#2 AWG) with flat lug on each end. Holes to fit 1/4” diameter bolt or screw, 10” on centers. 3.4 oz.

Cat. No. 607A — Tinned copper flexible strap of 1/8” thick by 15/16” wide multi-strand braid (#2 AWG) with flat lug on each end. Holes to fit 1/4” diameter bolt or screw, 12” on centers. 3.8 oz.

Cat. No. 607B — Tinned copper flexible strap of 1/8” thick by 15/16” wide multi-strand braid (#2 AWG) with flat lug on each end. Holes to fit 1/4” diameter bolt or screw, 16” on centers. 5 oz.

Cat. No. 607C — Tinned copper flexible strap of 1/8” thick by 15/16” wide multi-strand braid (#2 AWG) with flat lug on each end. Holes to fit 1/4” diameter bolt or screw, 24” on centers. 7.5 oz.

EXTRA FLEXIBLE BRAID CONDUCTORS
(Bulk Coils or Reels)
(For use in Bonding and Grounding of Moving or Vibrating Machinery, Equipment, Doors, Platforms and Cover Plates.)
Multiple stranded conductors allow maximum flexibility and extended life over standard cables. Flexible braid conductors are available in bulk coils up to 500’ long or in cut lengths.

Cat. No. 840 — Tinned copper flexible multi-strand braid, 1/8” thick by 1-1/4” wide (#1/0 AWG). Weight of copper — 355 pounds per 1,000’.

Cat. No. 842 — Tinned copper flexible multi-strand braid, 1/8” thick by 15/16” wide (#2 AWG). Weight of copper — 220 pounds per 1,000’.

Cat. No. 844 — Tinned copper flexible multi-strand braid, 3/32” thick by 1” wide (#4 AWG). Weight of copper — 130 pounds per 1,000’.

Cat. No. 846 — Tinned copper flexible multi-strand braid, 3/32” thick by 1/2” wide (#6 AWG). Weight of copper — 80 pounds per 1,000’.

ROBBINS LIGHTNING, INC.

124 EAST SECOND STREET  PHONE (660) 582-3156  FAX (660) 582-3039  P.O. BOX 440  MARYVILLE, MISSOURI 64468-0440
COPPER BUS BAR

RAW BAR
High conductivity copper bus bar – hard drawn for use with minimum support – may be formed cold or with little heat – available in standard mil lengths of 12 feet or less. Copper conductivity 100%. 2 mounting holes std.

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Thickness/Width</th>
<th>Weight/ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>608</td>
<td>1/16&quot; x 1&quot;</td>
<td>3.9 oz/ft.</td>
</tr>
<tr>
<td>609</td>
<td>1/8&quot; x 1&quot;</td>
<td>7.8 oz/ft.</td>
</tr>
<tr>
<td>609A</td>
<td>1/8&quot; x 3/4&quot;</td>
<td>5.8 oz/ft.</td>
</tr>
<tr>
<td>609B</td>
<td>1/8&quot; x 1-1/2&quot;</td>
<td>11.6 oz/ft.</td>
</tr>
<tr>
<td>609C</td>
<td>1/8&quot; x 2&quot;</td>
<td>15.5 oz/ft.</td>
</tr>
<tr>
<td>610</td>
<td>1/4&quot; x 1&quot;</td>
<td>15.5 oz/ft.</td>
</tr>
<tr>
<td>610A</td>
<td>1/4&quot; x 3/4&quot;</td>
<td>11.6 oz/ft.</td>
</tr>
<tr>
<td>610B</td>
<td>1/4&quot; x 1-1/2&quot;</td>
<td>7 oz/ft.</td>
</tr>
<tr>
<td>610C</td>
<td>1/4&quot; x 2&quot;</td>
<td>1 lb. - 15 oz/ft.</td>
</tr>
<tr>
<td>610D</td>
<td>1/4&quot; x 3&quot;</td>
<td>2 lbs. - 15 oz/ft.</td>
</tr>
<tr>
<td>610E</td>
<td>1/4&quot; x 4&quot;</td>
<td>3 lbs. - 14 oz/ft.</td>
</tr>
<tr>
<td>610F</td>
<td>1/4&quot; x 6&quot;</td>
<td>5 lbs. - 13 oz/ft.</td>
</tr>
<tr>
<td>610G</td>
<td>1/4&quot; x 8&quot;</td>
<td>7 lbs. - 12 oz/ft.</td>
</tr>
</tbody>
</table>

STANDARD DRILL
2 Holes for 3/8" clearance - Up to 24" long
3 Holes for 3/8" clearance - Up to 36" long
4 Holes for 3/8" clearance - Up to 48" long

COPPER BUS BAR
W/MOUNTING KIT

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Dimensions</th>
<th>Weight/ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CB-A-12</td>
<td>1/4&quot; x 1&quot; x 12&quot;</td>
<td>1 lb. - 8 oz.</td>
</tr>
<tr>
<td>CB-A-24</td>
<td>1/4&quot; x 1&quot; x 24&quot;</td>
<td>2 lbs. - 7 oz.</td>
</tr>
<tr>
<td>CB-A-36</td>
<td>1/4&quot; x 1&quot; x 36&quot;</td>
<td>3 lbs. - 7 oz.</td>
</tr>
<tr>
<td>CB-A-48</td>
<td>1/4&quot; x 1&quot; x 48&quot;</td>
<td>4 lbs. - 6 oz.</td>
</tr>
<tr>
<td>CB-C-12</td>
<td>1/4&quot; x 2&quot; x 12&quot;</td>
<td>2 lbs. - 7 oz.</td>
</tr>
<tr>
<td>CB-C-24</td>
<td>1/4&quot; x 2&quot; x 24&quot;</td>
<td>4 lbs. - 6 oz.</td>
</tr>
<tr>
<td>CB-C-36</td>
<td>1/4&quot; x 2&quot; x 36&quot;</td>
<td>6 lbs. - 5 oz.</td>
</tr>
<tr>
<td>CB-C-48</td>
<td>1/4&quot; x 2&quot; x 48&quot;</td>
<td>8 lbs. - 4 oz.</td>
</tr>
<tr>
<td>CB-E-12</td>
<td>1/4&quot; x 4&quot; x 12&quot;</td>
<td>4 lbs. - 6 oz.</td>
</tr>
<tr>
<td>CB-E-24</td>
<td>1/4&quot; x 4&quot; x 24&quot;</td>
<td>8 lbs. - 4 oz.</td>
</tr>
<tr>
<td>CB-E-36</td>
<td>1/4&quot; x 4&quot; x 36&quot;</td>
<td>12 lbs. - 2 oz.</td>
</tr>
<tr>
<td>CB-E-48</td>
<td>1/4&quot; x 4&quot; x 48&quot;</td>
<td>16 lbs.</td>
</tr>
</tbody>
</table>

NOTE: Special ground bars can be fabricated from standard bus bar stock with any combination of holes drilled or drilled and tapped.
BUS BAR ACCESSORIES

STAND-OFF INSULATORS
Insulator of reinforced polyester for use in mounting bus bar away from wall to allow clamping or bolting of lugs and terminals to bar – 3/8” threaded inserts – maximum stand-off 4” recommended.

Cat. No. 619 – 1-1/2” high, 1-3/4” diameter - 3.8 oz.
Cat. No. 619A – 2” high, 1-3/4” diameter - 5.8 oz.

Other sizes available upon request.

STAND-OFF BRACKETS
Bracket made of 1/8” thick by 1” wide stainless steel stock for mounting bus bar away from wall to allow clamping or bolting of lugs and terminals to bar – 3/8” holes for mounting with screws or masonry anchors. Stand-off distance 1-1/2” – ears 1” wide. May be used alone or with insulator.

Cat. No. 469 - 2.9 oz.
Cat. No. 469-4 - 3.4 oz.
Same as above except 4” across top, for mounting 4” wide bus bar.

Other sizes available on special order.

BUS NAME PLATES
Clear acrylic nameplate for mounting on bus bars. Specify size and message when ordering.
Cat. No. COV
BUS BAR ACCESSORIES

GROUNDING STUD
Machined brass stud for use in static ground receptacle or as grounding point on copper bus bar – standard 1/2” knob for spring clip or battery type clip – threaded 5/16” NC — furnished plain as shown (No. 880) or with 5/16” nut and lock washer (No. 880A).

Typical use on bus bar

Cat. No. 880 - 1.2 oz.
Cat. No. 880A - 1.4 oz.

FIBER SPACER
Bus bar spacer of impact resistant, non-conductive fiber — for use in holding bar away from wall to allow clamping or bolting of lugs and terminals to bar – 3/8” ID and 3/4” OD — for use on bus bar to 1-1/2” wide — maximum stand-off 2” recommended.

Typical use as bus bar spacer

Cat. No. 617 – 1/2” long - 0.1 oz.
Cat. No. 617A – 3/4” long - 0.15 oz.
Cat. No. 617B – 1” long - 0.21 oz.
Cat. No. 617C – 1-1/2” long - 0.3 oz.
Cat. No. 617D – 2” long - 0.4 oz.

ANCHOR SPACER ASSEMBLY
Assembly for mounting bus bar consists of No. 617 series fiber spacer, No. 86 lead anchor and proper length of 1/4” diameter screw.

Cat. No. 618 – 1/2” spacer, 1-1/4” screw - 0.87 oz.
Cat. No. 618A – 3/4” spacer, 1-1/2” screw - 0.97 oz.
Cat. No. 618B – 1” spacer, 1-3/4” screw - 1.1 oz.
Cat. No. 618C – 1-1/2” spacer, 2-1/4” screw - 1.3 oz.
Cat. No. 618D – 2” spacer, 2-3/4” screw - 1.5 oz.
ALUMINUM POINTS — STANDARD

Aluminum points made from solid rod, drawn to a sharp point, threaded to fit bases. Specify thread size when ordering. Shipped with 1/2” threads for use on Class I systems, or 5/8” threads for use on Class II systems.

Standard sizes available from stock:

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Diameter x Length</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>A25</td>
<td>1/2” x 10”</td>
<td>2.7 oz</td>
</tr>
<tr>
<td>A24</td>
<td>1/2” x 12”</td>
<td>3.3 oz</td>
</tr>
<tr>
<td>A23</td>
<td>1/2” x 15”</td>
<td>4.2 oz</td>
</tr>
<tr>
<td>A22</td>
<td>1/2” x 18”</td>
<td>5.1 oz</td>
</tr>
<tr>
<td>A21A</td>
<td>1/2” x 24”</td>
<td>7 oz</td>
</tr>
<tr>
<td>A20A</td>
<td>1/2” x 30”</td>
<td>8.8 oz</td>
</tr>
<tr>
<td>A19A36</td>
<td>1/2” x 36”</td>
<td>10.6 oz</td>
</tr>
<tr>
<td>A19A48</td>
<td>1/2” x 48”</td>
<td>14.3 oz</td>
</tr>
<tr>
<td>A19A60</td>
<td>1/2” x 60”</td>
<td>1 lb. - 2 oz</td>
</tr>
<tr>
<td>A25B</td>
<td>5/8” x 10”</td>
<td>4.8 oz</td>
</tr>
<tr>
<td>A24B</td>
<td>5/8” x 12”</td>
<td>5.7 oz</td>
</tr>
<tr>
<td>A23B</td>
<td>5/8” x 15”</td>
<td>7.1 oz</td>
</tr>
<tr>
<td>A22B</td>
<td>5/8” x 18”</td>
<td>8.6 oz</td>
</tr>
<tr>
<td>A21C</td>
<td>5/8” x 24”</td>
<td>11.4 oz</td>
</tr>
<tr>
<td>A20C</td>
<td>5/8” x 30”</td>
<td>14.3 oz</td>
</tr>
<tr>
<td>A19C36</td>
<td>5/8” x 36”</td>
<td>1 lb. - 1 oz</td>
</tr>
<tr>
<td>A19C48</td>
<td>5/8” x 48”</td>
<td>1 lb. - 7 oz</td>
</tr>
<tr>
<td>A19C60</td>
<td>5/8” x 60”</td>
<td>1 lb. - 13 oz</td>
</tr>
</tbody>
</table>

Points also available with blunt tips. (Add -BT to part numbers shown.)
Add 0.4 oz. for 1/2”
Add 0.5 oz. for 5/8”

SPECIAL POINT INFORMATION

The above listed points are carried in stock for immediate shipment — other points of special lengths and diameters are available, including 3/4” and 1” diameters.

Lengths over 144” are made by coupling an extension rod to points listed above. Extension rods available in 1/2”, 5/8”, 3/4” and 1” diameters and lengths up to 144”.

**NOTE:** Spring Point Assemblies also available — see page 17.
COPPER POINTS — STANDARD

Bare copper points made from solid rod, drawn to a sharp point, and threaded to fit bases. Standard threads on 5/8” diameter points are 1/2”, 5/8” threads available on special order. Also available in leaded (up to 48”) or nickel plated (up to 72”) - add “-L” or “-NP” to catalog number when ordering.

Standard sizes available from stock:

| Cat. No. 25A | 3/8” diameter x 10” long | 5.4 oz. |
| Cat. No. 24A | 3/8” diameter x 12” long | 6.6 oz. |
| Cat. No. 23A | 3/8” diameter x 15” long | 8.3 oz. |
| Cat. No. 22A | 3/8” diameter x 18” long | 10 oz. |
| Cat. No. 21B | 3/8” diameter x 24” long | 13.4 oz. |
| Cat. No. 20B | 3/8” diameter x 30” long | 1 lb. - 1 oz. |
| Cat. No. 19B36 | 3/8” diameter x 36” long | 1 lb. - 4 oz. |
| Cat. No. 19B48 | 3/8” diameter x 48” long | 1 lb. - 11 oz. |
| Cat. No. 19B60 | 3/8” diameter x 60” long | 2 lbs. - 2 oz. |
| Cat. No. 25 | 1/2” diameter x 10” long | 9 oz. |
| Cat. No. 24 | 1/2” diameter x 12” long | 11 oz. |
| Cat. No. 23 | 1/2” diameter x 15” long | 14 oz. |
| Cat. No. 22 | 1/2” diameter x 18” long | 1 lb. - 1 oz. |
| Cat. No. 21A | 1/2” diameter x 24” long | 1 lb. - 7 oz. |
| Cat. No. 20A | 1/2” diameter x 30” long | 1 lb. - 13 oz. |
| Cat. No. 19A36 | 1/2” diameter x 36” long | 2 lbs. - 3 oz. |
| Cat. No. 19A48 | 1/2” diameter x 48” long | 3 lbs. |
| Cat. No. 19A60 | 1/2” diameter x 60” long | 3 lbs. - 6 oz. |
| Cat. No. 25B | 5/8” diameter x 10” long | 13.4 oz. |
| Cat. No. 24B | 5/8” diameter x 12” long | 1 lb. - 1 oz. |
| Cat. No. 23B | 5/8” diameter x 15” long | 1 lb. - 5 oz. |
| Cat. No. 22B | 5/8” diameter x 18” long | 1 lb. - 10 oz. |
| Cat. No. 21C | 5/8” diameter x 24” long | 2 lbs. - 4 oz. |
| Cat. No. 20C | 5/8” diameter x 30” long | 2 lbs. - 13 oz. |
| Cat. No. 19C36 | 5/8” diameter x 36” long | 3 lbs. - 5 oz. |
| Cat. No. 19C48 | 5/8” diameter x 48” long | 4 lbs. - 10 oz. |
| Cat. No. 19C60 | 5/8” diameter x 60” long | 5 lbs. - 13 oz. |

Points also available with blunt tips. (Add -BT to part numbers shown.)

Add 0.4 oz. for 3/8”
Add 0.5 oz. for 1/2”
Add 0.7 oz. for 5/8”

SPECIAL POINT INFORMATION

The above listed points are carried in stock for immediate shipment — other points of special lengths and diameters are available, including 3/4” and 1” diameters.

Lengths over 144” are made by coupling an extension rod to points listed above. Extension rods available in 1/2”, 5/8”, 3/4” and 1” diameters and lengths up to 144”.

Extension Rod
Coupling
No. 203-2F2F
Point

NOTE: Spring Point Assemblies also available — see page 17.
SPRING-TYPE POINT

Special purpose spring type point for use where window washing or other movable equipment may require temporary movement of point. May be used with any type of point base. Spring point assembly consists of bare copper or aluminum with a heavy stainless steel spring that allows 90° tilt in any direction. Stainless steel retainer cable attaches to point base with lug for 1/4” bolt. Length indicated below is overall height. Nickel plated copper points are available upon request. Add -NP to part number when ordering.

Copper
Cat. No. 24-SP — 1/2” diam. x 12” long - 13.8 oz.
Cat. No. 23-SP — 1/2” diam. x 15” long - 1 lb. - 3 oz.
Cat. No. 22-SP — 1/2” diam. x 18” long - 1 lb. - 6 oz.
Cat. No. 21A-SP — 1/2” diam. x 24” long - 1 lb. - 12 oz.

Cat. No. 24B-SP — 5/8” diam. x 12” long - 1 lb. - 2 oz.
Cat. No. 23B-SP — 5/8” diam. x 15” long - 1 lb. - 8 oz.
Cat. No. 22B-SP — 5/8” diam. x 18” long - 1 lb. - 12 oz.
Cat. No. 21C-SP — 5/8” diam. x 24” long - 2 lbs. - 6 oz.

Aluminum
Cat. No. A24-SP — 1/2” diam. x 12” long - 7.4 oz.
Cat. No. A23-SP — 1/2” diam. x 15” long - 8.2 oz.
Cat. No. A22-SP — 1/2” diam. x 18” long - 9.2 oz.
Cat. No. A21A-SP — 1/2” diam. x 24” long - 11 oz.

Cat. No. A24B-SP — 5/8” diam. x 12” long - 8.2 oz.
Cat. No. A23B-SP — 5/8” diam. x 15” long - 10 oz.
Cat. No. A22B-SP — 5/8” diam. x 18” long - 11.8 oz.
Cat. No. A21C-SP — 5/8” diam. x 24” long - 15.4 oz.

Points also available with blunt tips. (Add -BT to part numbers shown.)

Typical use on parapet wall cap.
CHIMNEY AIR TERMINALS

Chimney air terminals consist of a bare, solid copper or aluminum point with heavy cast bronze or aluminum base, which come in three types — straight, tee or combination. For use with main sized cables.

Note: Codes require copper points used on chimneys to be lead covered to protect against corrosion for a distance of 2 feet below top of chimney. For chimneys with flue size over 24", lead jacket required 1/16" thick. For chimney’s with flue size 24" or less, lead-dipped point may be used.

Copper — Lead Dipped

Cat. No. 38A-42 — 1/2" diam. x 4' long with No. 42 Base - 3 lbs. - 5 oz.
Cat. No. 38A-42A — 1/2" diam. x 4' long with No. 42A Base - 3 lbs. - 9 oz.
Cat. No. 38A-42B — 1/2" diam. x 4' long with No. 42B Base - 3 lbs. - 6 oz.
Cat. No. 39A-42 — 1/2" diam. x 3' long with No. 42 Base - 2 lbs. - 9 oz.
Cat. No. 39A-42A — 1/2" diam. x 3' long with No. 42A Base - 2 lbs. - 13 oz.
Cat. No. 39A-42B — 1/2" diam. x 3' long with No. 42B Base - 2 lbs. - 11 oz.
Cat. No. 38B-42 — 3/8" diam. x 4' long with No. 42 Base - 2 lbs. - 1 oz.
Cat. No. 38B-42A — 3/8" diam. x 4' long with No. 42A Base - 2 lbs. - 4 oz.
Cat. No. 38B-42B — 3/8" diam. x 4' long with No. 42B Base - 2 lbs. - 2 oz.
Cat. No. 39B-42 — 3/8" diam. x 3' long with No. 42 Base - 1 lb. - 10 oz.
Cat. No. 39B-42A — 3/8" diam. x 3' long with No. 42A Base - 1 lb. - 13 oz.
Cat. No. 39B-42B — 3/8" diam. x 3' long with No. 42B Base - 1 lb. - 11 oz.

Copper — Lead Jacket

Cat. No. 38-42 — 1/2" diam. x 4' long with No. 42 Base - 5 lbs.
Cat. No. 38-42A — 1/2" diam. x 4' long with No. 42A Base - 3 lbs. - 3 oz.
Cat. No. 38-42B — 1/2" diam. x 4' long with No. 42B Base - 5 lbs. - 2 oz.
Cat. No. 39-42 — 1/2" diam. x 3' long with No. 42 Base - 4 lbs. - 5 oz.
Cat. No. 39-42A — 1/2" diam. x 3' long with No. 42A Base - 4 lbs. - 8 oz.
Cat. No. 39-42B — 1/2" diam. x 3' long with No. 42B Base - 4 lbs. - 8 oz.
Cat. No. 38C-42 — 3/8" diam. x 4' long with No. 42 Base - 3 lbs. - 8 oz.
Cat. No. 38C-42A — 3/8" diam. x 4' long with No. 42A Base - 3 lbs. - 11 oz.
Cat. No. 38C-42B — 3/8" diam. x 4' long with No. 42B Base - 3 lbs. - 10 oz.
Cat. No. 39C-42 — 3/8" diam. x 3' long with No. 42 Base - 3 lbs. - 1 oz.
Cat. No. 39C-42A — 3/8" diam. x 3' long with No. 42A Base - 3 lbs. - 4 oz.
Cat. No. 39C-42B — 3/8" diam. x 3' long with No. 42B Base - 3 lbs. - 3 oz.

Aluminum

Cat. No. A38A-A42L — 1/2" diam. x 4' long with No. A42L Base - 1 lb. - 3 oz.
Cat. No. A38A-A42A — 1/2" diam. x 4' long with No. A42A Base - 1 lb. - 2 oz.
Cat. No. A38A-A42B — 1/2" diam. x 4' long with No. A42B Base - 1 lb. - 1 oz.
Cat. No. A39A-A42L — 1/2" diam. x 3' long with No. A42L Base - 14.9 oz.
Cat. No. A39A-A42A — 1/2" diam. x 3' long with No. A42A Base - 14 oz.
STANDARD CONCEALED POINTS

Concealed Point Assembly of bare copper or aluminum. Consists of 10” point length with balance threaded for roof insert. Nuts and washers draw tight to prevent leak. Base No. 42A for horizontal direction of cable run. Available in nickel plated copper on request (Add -NP to copper part numbers shown). For use with main sized cables.

Copper
Cat. No. 34-18  —  1/2” diameter x 18” long - 1 lb. - 10 oz.
Cat. No. 34-24  —  1/2” diameter x 24” long - 1 lb. - 14 oz.
Cat. No. 34-30  —  1/2” diameter x 30” long - 2 lbs. - 3 oz.
Cat. No. 34A-18 — 3/8” diameter x 18” long - 1 lb. - 3 oz.
Cat. No. 34A-24 — 3/8” diameter x 24” long - 1 lb. - 5 oz.
Cat. No. 34A-30 — 3/8” diameter x 30” long - 1 lb. - 9 oz.
Cat. No. 34B-18 — 5/8” diameter x 18” long - 2 lbs. - 8 oz.
Cat. No. 34B-24 — 5/8” diameter x 24” long - 3 lbs. - 2 oz.
Cat. No. 34B-30 — 5/8” diameter x 30” long - 3 lbs. - 12 oz.

Aluminum
Cat. No. A34-18  —  1/2” diameter x 18” long - 9.4 oz.
Cat. No. A34-24  —  1/2” diameter x 24” long - 11 oz.
Cat. No. A34-30  —  1/2” diameter x 30” long - 12.6 oz.
Cat. No. A34B-18 — 5/8” diameter x 18” long - 14.7 oz.
Cat. No. A34B-24 — 5/8” diameter x 24” long - 1 lb. - 2 oz.
Cat. No. A34B-30 — 5/8” diameter x 30” long - 1 lb. - 4 oz.

Typical application on ridged roof
Points also available with blunt tips. (Add -BT to part numbers shown.)
SPECIAL POINTS

TAPERED GOVERNMENT POINT
Cast bronze or aluminum point with full length taper – 1/2” male thread to fit all point bases – available in bronze finish (No. 26), nickel plated bronze (No. 26A) or aluminum (No. A26) – length from hub – 16”.

Cat. No. 26 – Copper - 1 lb.
Cat. No. 26A – Copper - 1 lb.
Cat. No. A26 – Aluminum - 5 oz.

TUBULAR POINT WITH DOWEL ADAPTER
Tubular copper or aluminum point with dowel adapter securely clamped to lower end with male thread for all point bases – copper points bright nickel tipped. For Class I only.

Copper - 5/8” diameter x 0.032” thick
Cat. No. 27 – 12” long - 6.3 oz.
Cat. No. 27A – 15” long - 7.2 oz.
Cat. No. 27B – 18” long - 8.1 oz.
Cat. No. 27C – 24” long - 10 oz.

Aluminum - 0.84” diameter x 0.109” thick
Cat. No. A27 – 12” long - 5.5 oz.
Cat. No. A27A – 15” long - 6.6 oz.
Cat. No. A27B – 18” long - 7.1 oz.
Cat. No. A27C – 24” long - 10.1 oz.

DOWEL ADAPTER
Brass or aluminum dowel adapter for use with tubular points – 1/2” male thread.

Cat. No. 720 – Copper - 2.6 oz.
Cat. No. A720 – Aluminum - 0.8 oz.
SPECIAL POINTS

TUBULAR POINT WITH TEE POINT BASE
Tubular copper or aluminum point with tee point base securely clamped to lower end with crimp fitting for cable attachments — copper points bright nickel tipped.

Copper - 5/8” diameter x 0.032” thick
- Cat. No. 19 – 36” - 1 lb.
- Cat. No. 20 – 30” - 13.6 oz.
- Cat. No. 21 – 24” - 11.3 oz.

Aluminum - 0.84” diameter x 0.109” thick
- Cat. No. A19 – 36” - 5.7 oz.
- Cat. No. A20 – 30” - 5 oz.
- Cat. No. A21 – 24” - 4.3 oz.

TUBULAR POINT BASE
Stamped copper or aluminum point base for use with tubular points. Copper base 0.064” thick - aluminum base - 0.100” thick. Overall dimensions - 2 - 1/4” x 3”

- Cat. No. 202 – Copper - 2 oz.
- Cat. No. A202 – Aluminum - 1.3 oz.
SPECIAL PURPOSE POINTS

BAYONET TYPE POINT
Bayonet type point of cast bronze or aluminum. Low profile total length 11”. Furnished with 1/2” male end for all point bases. Available in Bronze finish (#31), Chrome Plated Bronze (#31A), or Satin Aluminum (#A31).

Cat. No. 31 — Copper - 7 oz.
Cat. No. 31A — Chromed Copper - 7 oz.
Cat. No. A31 — Aluminum - 2.2 oz.

Typical use on Ridge Base

TUBULAR VENT POINT
Tubular Vent Point of 5/8” diameter x 0.032” thick copper or 0.84” diameter x 0.109” thick aluminum. Provides 3 square inch contact surface and 10 inch point length. Fasten to metal surface with metal screws or bolts and nuts.

Cat. No. 37 — Copper - 4.4 oz.

Typical use on metal cone top vent
ALL THREAD ROD AND
POINT EXTENSION ROD

ALL THREAD ROD
All thread rod with standard N.C. threads.
Available in lengths up to 144”. Standard sizes 12”, 18”, 24”, 36”.

Copper
Cat. No. 220 – 3/8” dia. 0.57 oz./in.
Cat. No. 221 – 1/2” dia. 1 oz./in.
Cat. No. 222 – 5/8” dia. 1.6 oz./in.

Aluminum
Cat. No. A221 – 1/2” dia. 0.3 oz./in.
Cat. No. A222 – 5/8” dia. 0.48 oz./in.

Stainless Steel
Cat. No. 220SS – 3/8” dia. 0.5 oz./in.
Cat. No. 221SS – 1/2” dia. 0.89 oz./in.

POINT EXTENSION ROD
Solid copper or aluminum rod for extending length of points – standard N.C. thread both ends – available in lengths to 144”. May also be substituted for stranded cable to prevent mechanical damage or to bridge open spaces.

Specify exact length required, such as Cat. No. 212 (1/2” x 48”).

Copper
Cat. No. 212 – 1/2” dia. 1 oz./in.
Cat. No. 213 – 3/8” dia. 0.57 oz./in.
Cat. No. 214 – 5/8” dia. 1.6 oz./in.

Aluminum
Cat. No. A212 – 1/2” dia. 0.3 oz./in.
Cat. No. A214 – 5/8” dia. 0.48 oz./in.

SAFETY BALLS
Machined brass or aluminum safety tip, 1-1/2” diameter, with internal threads – to be used on copper or aluminum extension rods in place of standard sharp points where safety to workers or pedestrians is a concern.

Cat. No. 110F – Copper - 2.2 oz.
Cat. No. A110F – Aluminum - 0.8 oz.
Cat. No. 110 – Copper - 7.7 oz.
Cat. No. A110 – Aluminum - 2.4 oz.

Specify diameter of threads – 3/8”, 1/2” or 5/8”.

SAFETY SLEEVE WITH SET SCREW
Cat. No. 110C – Copper - 4 oz.
Cat. No. A110C – Aluminum - 1.5 oz.

Specify diameter of point.
### COUPLINGS AND ADAPTERS FOR POINTS

#### ROD COUPLINGS
Coupings made of brass or aluminum hex rod for extending point lengths and adapting points to various special purpose bases. Overall length 1 1/2”.

**Copper**
- Cat. No. 203-2F2F – 1/2” Female to 1/2” Female 2.2 oz.
- Cat. No. 203-3F3M – 3/8” Female to 3/8” Male 1.8 oz.
- Cat. No. 203-2F3F – 1/2” Female to 3/8” Female 2.6 oz.
- Cat. No. 203-5F5F – 5/8” Female to 5/8” Female 1.8 oz.
- Cat. No. 203-2F5F – 1/2” Female to 5/8” Female 2.1 oz.

**Aluminum**
- Cat. No. A203-2F2F – 1/2” Female to 1/2” Female 0.8 oz.
- Cat. No. A203-5F5F – 5/8” Female to 5/8” Female 0.6 oz.
- Cat. No. A203-2F5F – 1/2” Female to 5/8” Female 0.6 oz.

**Cat. No.**
- Cat. No. 203-2M2M – 1/2” Male to 1/2” Male 1.8 oz.
- Cat. No. 203-2M3M – 1/2” Male to 3/8” Male 1.4 oz.
- Cat. No. 203-5M5M – 5/8” Male to 5/8” Male 2.2 oz.
- Cat. No. 203-2M5M – 1/2” Male to 5/8” Male 2.1 oz.

**Base Center Set**
Machined brass or aluminum fittings for use on all strap type point bases or for adapting points to metal surface up to 1/8” thick. Nut drilled and tapped with 3/8”, 1/2” or 5/8” NC thread – bolt has 1/2” or 5/8” NC thread.

**NOTE:** When ordering aluminum base center set, No. A143L stainless steel lockwasher should also be ordered for tightening.

**Copper**
- Cat. No. 803-2 – 1/2” nut 1.4 oz.
- Cat. No. 803-3 – 3/8” nut 1.6 oz.
- Cat. No. 803-5 – 5/8” nut 1.4 oz.

**Aluminum**
- Cat. No. A803-2 – 1/2” nut 0.4 oz.
- Cat. No. A803-5 – 5/8” nut 0.4 oz.

**Cat. No.**
- Cat. No. A804-2 – 1/2” bolt 0.21 oz.
- Cat. No. A804-5 – 5/8” bolt 0.15 oz.
DOUBLE SWIVEL ADAPTERS

Double swivel adapters for use with standard points and bases to alter direction of point — each end threaded or drilled and tapped for desired use. Overall dimensions - 3-1/4” long x 1” diameter.

HEAVY CAST SWIVEL

Copper
Cat. No. 836-2F2F — 1/2” Female to 1/2” Female - 8.3 oz.
Cat. No. 836-2F2M — 1/2” Female to 1/2” Male - 10.2 oz.
Cat. No. 836-2F3F — 1/2” Female to 3/8” Female - 8.5 oz.
Cat. No. 836-2M3F — 1/2” Male to 3/8” Female - 10.4 oz.
Cat. No. 836-3F3F — 3/8” Female to 3/8” Male - 9.8 oz.

Aluminum
Cat. No. A836-2F2F — 1/2” Female to 1/2” Female - 3 oz.
Cat. No. A836-2F2M — 1/2” Female to 1/2” Male - 3.7 oz.
Cat. No. A836-5F5F — 5/8” Female to 5/8” Female - 3 oz.
Cat. No. A836-5F5M — 5/8” Female to 5/8” Male - 4 oz.

MACHINED SWIVEL MADE OF HEX BRASS OR ALUMINUM

Copper
Cat. No. 837-2F2F — 1/2” Female to 1/2” Female - 5.4 oz.
Cat. No. 837-2F2M — 1/2” Female to 1/2” Male - 5.3 oz.
Cat. No. 837-2F3F — 1/2” Female to 3/8” Female - 5.4 oz.
Cat. No. 837-2M3F — 1/2” Male to 3/8” Female - 5.6 oz.
Cat. No. 837-3F3F — 3/8” Female to 3/8” Female - 5.8 oz.
Cat. No. 837-3F3M — 3/8” Female to 3/8” Male - 5.3 oz.
Cat. No. 837-2F5F — 1/2” Female to 5/8” Female - 5 oz.
Cat. No. 837-2M5F — 1/2” Male to 5/8” Female - 5.3 oz.
Cat. No. 837-5F5F — 5/8” Female to 5/8” Female - 4.8 oz.
Cat. No. 837-5F5M — 5/8” Female to 5/8” Male - 5.6 oz.

Aluminum
Cat. No. A837-2F2F — 1/2” Female to 1/2” Female - 2.1 oz.
Cat. No. A837-2F2M — 1/2” Female to 1/2” Male - 2.1 oz.
Cat. No. A837-2F5F — 1/2” Female to 5/8” Female - 2.1 oz.
Cat. No. A837-2M5F — 1/2” Male to 5/8” Female - 1.8 oz.
Cat. No. A837-5F5F — 5/8” Female to 5/8” Female - 2.2 oz.
Cat. No. A837-5F5M — 5/8” Female to 5/8” Male - 2.1 oz.
STRAIGHT POINT BASE

Heavy cast bronze or aluminum straight point base for use when cable extends in line with point. One end drilled and tapped to receive point - one end to receive cable. Two 1/4" set screws for pressure on cable. Available in No. 42 small size for copper cables No. 1, No. 2 and No. 6 with points 3/8" and 1/2" diameter. Large size No. 42L and No. A42L for main sized cables with points 3/8", 1/2" or 5/8" diameter. 42 series dimensions - 3-1/4" x 3/4". 42L series dimensions - 5" x 1".

Specify diameter of point – 3/8", 1/2" or 5/8".

Cat. No. 42 – Copper - 5.8 oz.
Cat. No. 42L – Copper - 10.4 oz.
Cat. No. A42L – Aluminum - 4 oz.
TEE POINT BASE

Heavy cast bronze or aluminum tee point base for use when cable run is perpendicular to point position. Top end is threaded to receive point. Two anchor holes for fasteners. Bolt tension cable holder with 2-1/2” contact for main sized cables through No. 605. Overall dimensions - 2-1/2” x 2-3/4”

Specify diameter of point – 3/8” or 1/2”. Adapter required for 5/8” threads.

Cat. No. 42A – Copper - 8.8 oz.
Cat. No. A42A – Aluminum - 3 oz.

Typical use on Chimney
TEE POINT BASE

Heavy cast bronze or aluminum tee point base for use when cable run is perpendicular to point position. Top end is threaded to receive point. Two anchor holes for fasteners. Bolt tension cable holder with 2 - 1/2" contact for main sized cables through No. 605. Overall dimensions - 2-1/2" x 2 - 3/4".

Specify diameter of point – 3/8", 1/2" or 5/8".

Cat. No. 42H – Copper - 11.1 oz.
Cat. No. A42H – Aluminum - 4.2 oz.

Typical use on Chimney
COMBINATION POINT BASE

Heavy cast bronze or aluminum combination point base for use on vertical and/or horizontal cable run. Top end is threaded for 3/8” or 1/2” diameter points. Bolt tension cable holder with 1 - 3/4” contact both directions. Two anchor holes for fasteners. For main sized cables through No. 604.
Overall dimensions - 1 - 3/4” x 3 - 1/2”.

Specify diameter of point – 3/8” or 1/2”.
Adapter required for 5/8” threads.

Cat. No. 42B – Copper - 8.2 oz.
Cat. No. A42B – Aluminum - 2.6 oz.
CAST RIDGE OR FLAT POINT BASE

Heavy cast bronze or aluminum point base for use on ridge, flat or sloping roof — shipped flat but may be formed to fit roof — four anchor holes for nail or screw — bolt tension cable holder with 2-1/2 inch contact for main sized cables through No. 605. Overall dimensions of 44 - 3-1/4” x 10-1/4”. Overall dimensions of 44L - 3-3/4” x 13 - 1/4”.

Specify diameter of point – 3/8” or 1/2”. Adapter required for 5/8” threads.

Cat. No. 44 – Copper - 14.6 oz.
Cat. No. A44 – Aluminum - 4.6 oz.
Cat. No. 44L – Copper - 1 lb. - 5 oz.
STRAP RIDGE POINT BASE

Strap copper or aluminum point base for use on ridge, flat or sloping roof — shipped flat but may be formed to fit roof — copper base 0.064” thick, aluminum base 0.100” thick – 2-1/2” wide, 12” long – four anchor holes for nails or screws — bolt tension cable holder with 2-1/2” contact for main sized cables through No. 605.

Specify diameter of point – 3/8”, 1/2” or 5/8”.

Cat. No. 45 – Copper - 13.6 oz.
Cat. No. A45 – Aluminum - 6.2 oz.
Cat. No. 45T – Tinned Copper - 13.6 oz.

Adhesive Type — Adhesive contact area - 30 in²
Cat. No. 45A – Copper - 13.2 oz.
Cat. No. A45A – Aluminum - 6 oz.
Cat. No. 45AT – Tinned Copper - 13.2 oz.
STRAP RIDGE POINT BASE

Copper or aluminum strap point base for use on ridge, flat or sloping roof — shipped formed for roll ridge but may be formed easily to fit roof — copper base 0.064” thick, aluminum base 0.100” thick — 2-1/2” wide, 12” long — four anchor holes for nails or screws — crimp type cable holder with 2” contact for cables. For main sized cables.

Specify diameter of point – 3/8”, 1/2”, or 5/8”.

Cat. No. 45B — Copper - 12.6 oz.
Cat. No. A45B — Aluminum - 5.6 oz.

Typical use on ridge vent
CONCEALED RIDGE POINT BASE

Copper or aluminum strap type point base with compression cable holder under center — for installation on ridge where cable is run exactly at ridge under asphalt or wood roof shingles — copper 0.064” thick, aluminum 0.100” thick — base 2-1/2” wide, 12” long with cable holder contact 2-1/2” long. For main sized cables.

Specify diameter of point — 3/8”, 1/2”, or 5/8”.

Cat. No. 45BX – Copper - 13.6 oz.
Cat. No. A45BX – Aluminum - 6.9 oz.

Typical use on ridged roof
STANDING SEAM POINT BASE

Heavy cast bronze or aluminum base for use on standing seam roof. Will accept seam width up to 3/4". Adjustable for cable run in either direction. Rubber caps included on bolts to prevent damage to roof. Swivel adapter adjusts to alter direction of point for sloping roofs. Bolt tension cable holder with 1-1/2” contact for main sized cables through No. 605. Overall dimensions - 3-1/2” x 2” x 3-3/4”. Maximum recommended torque on mounting bolts: 15 in / lbs.

Specify diameter of point - 3/8”, 1/2” or 5/8”

Cat. No. 649 – Copper - 1 lb. - 2 oz.
Cat. No. A649 – Aluminum - 6.6 oz.
TOP MOUNT POINT BASE

Heavy cast bronze or aluminum metal point base — over 8 square inches of contact surface — 1-1/2” cable contact. May be fastened to flat surfaces with metal screws, wood screws, bolts and nuts or may be brazed. For main sized cable through No. 605. Overall dimensions - 2-1/4” x 4”.

Specify diameter of point – 3/8” or 1/2”.
Adapter required for 5/8” threads.

Cat. No. 656P – Copper - 11.6 oz.
Cat. No. A656P – Aluminum - 4 oz.

Typical use on metal surface
SIDE RIDGE POINT BASE

Heavy cast bronze or aluminum side ridge point base for use on back side of roof to hide mounting from view. May be set below ridge cap or ridge vent with point extending 10” minimum above ridge. Shipped for 5:12 pitch roof but may be formed for other roof pitch – two anchor holes for nail or screw – bolt tension cable holder with 2-1/2” contact – for main sized cables through No. 605 – for points 3/8” or 1/2” diameter. Overall dimensions - 2-1/2”x7-1/2”.

Specify diameter of point – 3/8” or 1/2”.
Adapter required for 5/8” threads.

Cat. No. 47 – Copper - 11.4 oz.
Cat. No. A47 – Aluminum - 3.7 oz.
TILE ROOF POINT BASE AND CABLE FASTNER

TILE ROOF POINT BASE
Copper or aluminum strap point base for “no hole” installation on Spanish tile ridge cap or glazed tile wall cap – 2-1/2” wide with two 1” bolts to draw tight to tile – cable contact 2-1/2” for main sized cables through No. 605. Overall dimensions - 2-1/2” x 11-1/2”.

Standard length for 12” tile — longer span length available upon request.

Specify diameter of point – 3/8”, 1/2”, 5/8”.

Cat. No. 48A – Copper - 1 lb. - 6 oz.
Cat. No. A48A – Aluminum - 6.9 oz.

TILE ROOF CABLE HOLDER
Copper or aluminum strap cable holder for “no hole” installation on Spanish tile ridge cap or glazed tile wall cap – 5/8” wide with 1” bolt to draw tight to tile. Includes No. 72 loop. For main and secondary sized cables through No. 604. Overall dimensions - 5/8” x 11-1/2”.

Standard length for 12” tile — longer span length available upon request.

Cat. No. 76X – Copper - 3.2 oz.
Cat. No. A76X – Aluminum - 1.2 oz.
FLUE LINER POINT BASE

Heavy cast bronze or aluminum point base for use on rim of clay tile or glazed tile flue liner. Draws tight with two 1/4” set screws on tile thickness to 1-1/4” — cable contact 1-1/2” with two 1/4” set screws for pressure. For main sized cables through No. 605 and for points 3/8” and 1/2” in diameter. Copper base can be lead covered to prevent corrosion from flue gases. Overall dimensions - 3” x 3” x 1”. Maximum recommended torque on mounting bolts: 25 in / lbs.

Specify diameter of point – 3/8” or 1/2”. Adapter required for 5/8” threads.

Cat. No. 49 – Bare Copper - 8.8 oz.
Cat. No. 49L – Leaded Copper - 10.1 oz.
Cat. No. A49 – Aluminum - 3.8 oz.

Typical use on flue liner tile
COMBINATION POINT BASE

Heavy cast bronze or aluminum combination point base for side mount or top mount applications. Point base can be threaded for 3/8”, 1/2” or 5/8” point. Bolt tension cable holder with 1-1/2” contact. Three anchor holes for fasteners. For main sized cables through No. 605. Over 8 in² surface area contact. Overall dimensions - 3-1/2” x 2-3/8”.

Specify diameter of point - 3/8”, 1/2” or 5/8”.

No. 637A or A637A

Copper
Cat. No. 637A – Vertical side mount - 13.4 oz.
Cat. No. 637B – Horizontal top mount - 13.4 oz.

No. 637B or A637B

Aluminum
Cat. No. A637A – Vertical side mount - 4.8 oz.
Cat. No. A637B – Horizontal top mount - 4.8 oz.

Side mount application with vertical cable run

Top mount application

Side mount application
FLAT SURFACE POINT BASE

Heavy cast bronze or aluminum flat surface point base for mounting on masonry, wood or metal—four anchor holes for nails or screws—two holes only required on masonry—1-1/2" bolt tension cable contact for main sized cables through No. 605. Overall dimensions - 6-1/4" x 6-1/4".

Specify diameter of point – 3/8" or 1/2". Adapter required for 5/8" threads.

Cat. No. 120 – Copper - 11.4 oz.
Cat. No. A120 – Aluminum - 3.7 oz.

Typical application on masonry wall
Typical application on metal deck
CONVE VENT POINT BASE

Heavy cast bronze or aluminum point base for use on metal vent with cone shaped top—three anchor holes for metal screws or bolts and nuts—top threaded to receive 3/8” or 1/2” point—2-1/2” bolt tension cable contact for main sized cables through No. 605. Overall dimensions - 3” x 5” diameter.

Specify diameter of point – 3/8” or 1/2”.
Adapter required for 5/8” threads.

Cat. No. 624 — Copper - 1 lb. - 3 oz.
Cat. No. A624 — Aluminum - 5.8 oz.

Typical use on gravity vent
SPECIAL GOVERNMENT
AIR TERMINAL BASE, SUPPORT
AND CABLE HOLDER

POINT BASE
Heavy cast bronze or aluminum point base to fit securely on galvanized “V” iron support – four bolts for tension on cable and support – for main sized cables through No. 605.
Note: Copper is not UL approved for use on galvanized steel. Overall dimensions - 2” x 5” x 3”.

Specify diameter of point – 3/8”, 1/2” or 5/8”.

Cat. No. 625 – Copper - 2 lbs. - 10 oz.
Cat. No. A625 – Aluminum - 13.6 oz.

BASE SUPPORT
Heavy galvanized steel point base support to stand off ridge – made of 3/16” thick, 2-1/2” wide steel – holes in feet for 3/8” lag screws or bolts.

Cat. No. 612 - 6 lbs.

CABLE HOLDER SUPPORT
Heavy galvanized steel cable holder support to stand off ridge – made of 3/16” thick, 2-1/2” wide steel – holes in feet for 3/8” lag screw or bolt – center hole for cable clamp No. 74B or No. A74B.

Cat. No. 614 - 5 lbs.
PIPE AND HANDRAIL POINT BASE

Heavy cast bronze or aluminum clamp-type point base for use on pipes and handrails—draws tight under bolt tension—may be used with or without cable run on pipes with sidewall thickness 0.064 in. minimum—1-1/2” contact along axis of pipe—for use with main sized cables through No. 604. Overall dimensions - 631A 2-1/2” x 1-3/4” - 631B 4-1/4” x 1-1/2” - 631C 5-1/2” x 1-1/2”.

Copper
Cat. No. 631A — for 3/4” to 1-1/2” OD pipes - 11.2 oz.
Cat. No. 631B — for 1-3/4” to 2-1/2” OD pipes - 1 lb. - 3 oz.
Cat. No. 631C — for 2-1/2” to 4-1/2” OD pipes - 1 lb. - 4 oz.

Aluminum
Cat. No. A631A — for 3/4” to 1-1/2” OD pipes - 4 oz.
Cat. No. A631B — for 1-3/4” to 2-1/2” OD pipes - 6.6 oz.
Cat. No. A631C — for 2-1/2” to 4-1/2” OD pipes - 7.2 oz.

Specify diameter of point — 3/8”, 1/2”, or 5/8”.

Typical use on horizontal pipe
ADJUSTABLE POINT BASE

Heavy cast bronze or aluminum adjustable point base — for horizontal, vertical or pitched roof mounting — three 5/16” mounting holes for 1/4” anchors — any combination of two will provide support in masonry or metal — cable contact 2-1/2” for main sized cables through No. 605. Overall dimensions: 3-1/2” x 3-1/2” x 2-3/4”.

Specify diameter of point – 3/8”, 1/2”, or 5/8”.

Cat. No. 636 – Copper - 1 lb. - 4 oz.
Cat. No. A636 – Aluminum - 6.6 oz.

Typical Installation
Vertical Mounting
Underside Mounting
Pitched Roof Mounting
CAST ADHESIVE POINT BASE

Heavy cast bronze or aluminum adhesive point base for mounting on flat or gently sloping roofs — used where no holes can be made in mounting surface, such as built-up tar and gravel or membrane roofing. Cable contact 1-1/2” for main sized cables through No. 605 — base should be set with application of hot roof pitch or compatible adhesive compound. Overall dimensions - 3-1/2” x 4-1/4”. Overall adhesive contact area - 14.875 in².

Specify diameter of point —
3/8”, 1/2”, or 5/8”.

Cat. No. 638N – Copper - 1 lb. - 4 oz.
Cat. No. A638N – Aluminum - 6.4 oz.

Typical applications on built-up tar and gravel surfaces.
CAST ADHESIVE POINT BASE
WITH CAST SWIVEL

Heavy cast bronze or aluminum adhesive point base for mounting on flat or gently sloping roofs — used where no holes can be made in mounting surface, such as built-up tar and gravel or membrane roofing — adjustable point holder. Cable contact 2-1/2" for main sized cables through No. 605. Base should be set with application of hot roof pitch or compatible adhesive compound. Overall dimensions - 3-1/2" x 4-5/16" x 2-3/4". Overall adhesive contact area - 15.1 in².

Specify diameter of point — 3/8", 1/2", or 5/8".

Cat. No. 638 — Copper - 1 lb. - 13 oz.
Cat. No. A638 — Aluminum - 8 oz.

Typical applications on built-up tar and gravel surfaces.
UNIVERSAL POINT BASE

Heavy cast bronze or aluminum combination point base for all mounting applications. Swivel can be threaded for 3/8", 1/2" or 5/8" point. Bolt tension cable holder with 1-1/2" contact and three anchor holes for fasteners. When used in an adhesive application, the base should be set with compatible adhesive compound. We recommend using additional bracing when using points taller than 18" with this base. For main sized cables through No. 605. Overall dimensions - 2-5/16" x 3-5/8". Overall adhesive contact area - 8.3 in²

Specify diameter of point – 3/8", 1/2", or 5/8".

Cat. No. 637U – Copper - 1 lb. - 3 oz.
Cat. No. A637U – Aluminum - 7 oz.

Side mount application with vertical cable run.

Adhesive Application

ROBBINS LIGHTNING, INC.
STAMPED ADHESIVE POINT BASE

Bare copper or aluminum strap point base for adhesive mounting where no holes can be made in mounting surface such as membrane roofing — copper base 0.064” thick, aluminum base 0.100” thick — bolt tension cable holder with 2-1/2” cable contact for main sized cables through No. 605. Base should be set with application of hot roof pitch or adhesive compatible with roofing material. Overall dimensions - 2-1/2” x 9”. Overall adhesive contact area - 22.5 in².

Specify diameter of point – 3/8”, 1/2”, 5/8”.

Cat. No. 646A – Copper - 10.2 oz.
Cat. No. A646A – Aluminum - 4.6 oz.

Typical Application
METAL MOUNT POINT BASE

Bare copper, tinned copper, or aluminum strap point base for use on metal surface 3/16” thick or more where bottom of metal object uses bonding plate. May be used on metal fans, vents, hoods, evaporative coolers and like equipment less than 3/16” thick, but cable connection is required. Shipped flat but may be formed for sloping metal. Base contact surface exceeds 8 square inches. Copper base 0.064” thick; Aluminum base 0.100” thick – 2-1/2” wide, 5-1/2” long – four holes for sheet metal screws.

Specify diameter of point – 3/8”, 1/2”, or 5/8”.

Cat. No. 645 – Copper - 6.9 oz.
Cat. No. 645T – Tinned Copper - 6.9 oz.
Cat. No. A645 – Aluminum - 3 oz.
NARROW WALL POINT BASE

Bare copper, tinned copper, or aluminum strap point base for use on narrow masonry or metal capped wall or roof equipment – shipped flat but may be formed to fit various wall designs – Copper base 0.064" thick; Aluminum base 0.100" thick – four anchor holes for nails or screws, two anchor holes for bolts – bolt tension cable holder with 2-1/2” contact for main sized cables through No. 605.

Specify diameter of point – 3/8”, 1/2”, or 5/8”.

2-1/2” wide, 7-1/2” long
Cat. No. 646 – Copper - 10.2 oz.
Cat. No. 646T – Tinned Copper - 10.2 oz.
Cat. No. A646 – Aluminum - 4.6 oz.

2 - 1/2 " wide, 5 - 1/8 " long
Cat. No. 646N – Copper - 8.6 oz.
Cat. No. 646TN – Tinned Copper - 8.6 oz.
Cat. No. A646N – Aluminum - 3.7 oz.
OFFSET WALL POINT BASE

Heavy cast bronze or aluminum offset wall point base – point adapter offset 2” from mounting surface – four 5/16” mounting holes for 1/4” anchors – any combination of two will provide support in masonry or metal – cable contact 1-1/2” for main sized cables through No. 605. Overall dimensions - 2-3/4” x 2-3/4” x 4-1/2”.

Specify diameter of point – 3/8”, 1/2”, or 5/8”.

Cat. No. 642 – Copper - 1 lb. - 2 oz.
Cat. No. A642 – Aluminum - 6 oz.

Typical applications on masonry wall
SPECIAL PURPOSE POINT BASE
AND CABLE HOLDER

RIDGEm POINT BASE
Ridge point base, used to hold point away from roof – made of 2-1/2” wide strip – copper base 0.064” thick, aluminum base 0.100” thick – 1-1/2” cable contact – may be formed to fit slope of roof. For main sized cables.

Specify diameter of point – 3/8” or 1/2”. Adapter required for 5/8” threads.

Cat. No. 613B – Copper - 1 lb. - 3 oz.
Cat. No. A613B – Aluminum - 8.6 oz.

RIDGEm CABLE HOLDER
Ridge cable support, made of 2-1/2” wide copper or aluminum strip – 1-1/2” cable contact – for use in holding cable away from roof – may be formed to fit slope of roof. For main sized cables.

Cat. No. 614C – Copper - 1 lb. - 1 oz.
Cat. No. A614C – Aluminum - 8.5 oz.
FIBERGLASS MAST POLE

Heavy mast pole assembly consisting of a length of fiberglass mast pole, threaded rod, pipe caps, exothermically cable tap to the bottom of the threaded rod, and a 24" lightning rod. For main sized cables through No. 605. Overall dimensions - 2" OD x length.

Cat. No. 10F – Copper 10’ - 19 lbs.
Cat. No. 14F – Copper 14’ - 22 lbs. - 5 oz.
Cat. No. 16F – Copper 16’ - 26 lbs.
Cat. No. 20F – Copper 20’ - 40 lbs.
PIPE AND HANDRAIL POINT BASE

Tinned copper or aluminum strap point base for use on pipe or handrail where cable run is not required — draws tight to pipe under bolt tension — bronze or aluminum point holder will accept 3/8", 1/2" or 5/8" points — base has 2-1/2" contact along axis of pipe — available in all pipe sizes upon request.

Used on hand rails that are at least 0.064" thick or greater. Minimum contact area - 13 in².

Specify diameter of point —
3/8", 1/2", or 5/8".

Copper
Cat. No. 672A — for 1.660" O.D. Pipe - 8.9 oz.
Cat. No. 672B — for 1.90" O.D. Pipe - 9.2 oz.
Cat. No. 672C — for 2.375" O.D. Pipe - 9.6 oz.
Cat. No. 672D — for 2.875" O.D. Pipe - 10.1 oz.
Cat. No. 672E — for 4.5" O.D. Pipe - 11.6 oz.

Aluminum
Cat. No. A672B — for 1.90" O.D. Pipe - 4.5 oz.
Cat. No. A672C — for 2.375" O.D. Pipe - 4.7 oz.
Cat. No. A672E — for 4.5" O.D. Pipe - 5.8 oz.

Typical use on horizontal pipe
SPRING-TYPE POINT BASE

Special purpose spring type offset point base for use on building perimeter air terminals where window washing machines may require temporary movement of point – ball holding point with tilt over 90° from perpendicular in any direction, then spring tension will return point to upright position – spring of stainless steel for long life – retainer chain prevents point and ball from loss if torn loose – requires 2-1/4” clearance on inside face of wall. For use with points up to 5/8” dia. and 24” long only. For use with main sized cables.

Specify diameter of point – 3/8” or 1/2”. Adapter required for 5/8” threads.

Cat. No. 686 – Copper - 1 lb. - 15 oz.

Typical use on parapet wall
TOP MOUNT POINT BASE

Heavy cast bronze or aluminum point base for mounting on narrow precast masonry wall, on metal roof surface or flat handrail. Provided with two anchors for masonry or metal – bolt tension cable holder with 2-1/4” contact for main sized cables through No. 605. Overall dimensions - 2-1/4” x 2-1/4” x 1-3/4”.

Specify diameter of point – 3/8” or 1/2”.
Adapter required for 5/8” threads.

Copper
Cat. No. 687 – with No. 86 masonry anchors - 14.2 oz.
Cat. No. 687A – with 1/4” bolts and nuts for metal - 13.2 oz.

Aluminum
Cat. No. A687 – with No. 86 masonry anchors - 6.4 oz.
Cat. No. A687A – with 1/4” bolts and nuts for metal - 5.4 oz.

Typical use on metal

Typical use on masonry wall
METAL OR OUTLET POINT BASE

Heavy cast bronze or aluminum point base to mount directly on steel beam or on top wall terminal outlet No. 643 and No. A643 – over 3 square inches of surface contact – four holes for mounting with 1/4" diameter screws. Overall dimensions - 2-1/4" x 2-1/4" x 1".

Specify diameter of point – 3/8” or 1/2".
Adapter required for 5/8” threads.

Cat. No. 688 – Copper - 7 oz.
Cat. No. A688 – Aluminum - 2.2 oz.
TRIPOD POINT BRACE

Three leg point brace made of galvanized steel or bare copper with 1/4" diameter legs and heavy washers. For use with nails, screws or bolts. Available with adhesive shoes for use on built-up tar and gravel or membrane roofing.

Specify diameter of point used with brace – 3/8", 1/2" or 5/8".

Typical Application on built-up roof

Typical Application on ridge roof

Cat. No. 43-18G — Galvanized, 18" long - 11.5 oz.
Cat. No. 43-18C — Copper, 18" long - 14.2 oz.
Cat. No. 43-24G — Galvanized, 24" long - 1 lb. - 2 oz.
Cat. No. 43-24C — Copper, 24" long - 1 lb. - 3 oz.
Cat. No. 43-36G — Galvanized, 36" long - 1 lb. - 10 oz.
Cat. No. 43-36C — Copper, 36" long - 1 lb. - 12 oz.
Cat. No. 43-42G — Galvanized, 42" long - 1 lb. - 14 oz.
Cat. No. 43-42C — Copper, 42" long - 2 lbs.
Cat. No. 43-48G — Galvanized, 48" long - 2 lbs.
Cat. No. 43-48C — Copper, 48" long - 2 lbs. - 5 oz.

NOTE: Add suffix “A” after above Catalog Numbers when adhesive shoes are needed. Add 1 oz. for copper, 0.3 oz. for galvanized braces.

Longer braces available on request.
PIPE CLAMP POINT HOLDER

Heavy cast bronze or aluminum pipe clamp point holder for supporting points on pipe masts, obstruction lights, etc. - 1-1/2” surface contact along axis of pipe. Overall dimensions - 63A-PH 2-1/2” x 1-3/4” - 63B-PH 4-1/4” x 1-1/2” - 63C-PH 5-1/2” x 1-1/2”.

Copper
Cat. No. 63A-PH – For 3/4” to 1-1/2” OD pipe - 9 oz.
Cat. No. 63B-PH – For 1-3/4” to 2-1/2” OD pipe - 1 lb.
Cat. No. 63C-PH – For 2-1/2” to 4-1/2” OD pipe - 1 lb. - 1 oz.

Aluminum
Cat. No. A63A-PH – For 3/4” to 1-1/2” OD pipe - 3.4 oz.
Cat. No. A63B-PH – For 1-3/4” to 2-1/2” OD pipe - 6.1 oz.
Cat. No. A63C-PH – For 2-1/2” to 4-1/2” OD pipe - 6.6 oz.

CONCEALED POINT FLASHING SADDLE

Cat. No. 121FS – Copper - 6.1 oz.
Cat. No. 121FS-G – Galvanized - 3.4 oz.
Cat. No. 121FS-SS – Stainless - 2.4 oz.
Cat. No. A121FS – Aluminum - 1.2 oz.

NOTE: Dimensions for flashing saddle must be specified when ordering.

Standard Size is 3” x 10”
STAND-OFF POINT HOLDER

ADJUSTABLE POINT HOLDER

Cast bronze or aluminum point holder with adjustable threaded rod for irregular surface mounting – 3/8” rigid rod for support with two nuts and washers for locking on mounting surface – 1/4” set screw on point – standard rod length 6” — longer or shorter rod available. Overall holder dimensions - 1” x 1-3/4” + rod length.

Specify diameter of point – 3/8” or 1/2”.

Cat. No. 653 – Copper - 6.1 oz.
Cat. No. A653 – Aluminum - 2.9 oz.
STAND-OFF POINT HOLDER

UNIVERSAL POINT HOLDER

Tinned copper or aluminum strap point holder for use in varying lengths on flat or uneven surfaces – 1/4” bolts draw strap tight around point and secure at mounting – four mounting holes for metal screws or bolts with nuts – made from flat conductor strap No. 17 copper or No. A16 aluminum – stand off lengths over 8” not recommended.

Specify diameter of point – 3/8”, 1/2” or 5/8”

Copper
Cat. No. 659-2 – Copper – 2” stand-off - 3.8 oz.
Cat. No. 659-4 – Copper – 4” stand-off - 5.4 oz.
Cat. No. 659-6 – Copper – 6” stand-off - 6.2 oz.
Cat. No. 659-8 – Copper – 8” stand-off - 8.8 oz.

Aluminum
Cat. No. A659-2 – Aluminum – 2” stand-off - 2.2 oz.
Cat. No. A659-4 – Aluminum – 4” stand-off - 2.9 oz.
Cat. No. A659-6 – Aluminum – 6” stand-off - 3.4 oz.
Cat. No. A659-8 – Aluminum – 8” stand-off - 4.5 oz.

Typical use on curved vent cover

Typical use on metal hood
THRU-ROOF AND THRU-WALL ASSEMBLIES

The following pages show various thru-roof and thru-wall assemblies using threaded rods, nuts, and washers, along with a combination of connectors as described below and as indicated by the letters added to the part number. (For complete description of the connectors listed, refer to index for catalog page on each item being considered). Cable connectors are for main sized cable.

“CP” means copper base center nut No. 803
(specify 3/8”, 1/2”, or 5/8” threads for point) - 1.6 oz.

“AP” means aluminum base center nut No. A803
(specify 1/2” or 5/8” threads for point) - 0.4 oz.

“CT” means copper tee base No. 42A - 8.8 oz.

“AT” means aluminum tee base No. A42A - 3 oz.

“CD” means copper clamp No. 55D - 6.1 oz.

“AD” means aluminum clamp No. A55D - 2.4 oz.

“CL” means copper lug No. 55B - 8.2 oz.

“AL” means aluminum lug No. A55B - 2.6 oz.

“CS” means copper straight connector No. 42 - (5.8 oz.) or No. 42L - (10.4 oz.)
(specify size of cable being used)

“AS” means aluminum straight connector No. A42L - 3.8 oz.
THRU-ROOF POINT ADAPTERS

Combination connector used for thru-roof air terminal penetration — draws tight to top and bottom of composition or metal roof surfaces. Point adapter nut No. 803 or No. A803 at top along with neoprene washers and cast bronze or aluminum flashing cone No. 100 or No. A100 to provide a moisture seal. Your choice of No. 42A or No. A42A tee connector or No. S5D or No. A55D clamp for bottom end (either fits all main cables through 9/16” diameter). For copper-to-copper connection, all components are copper or bronze except nuts and washers which are stainless steel — for copper-to-aluminum or aluminum-to-aluminum connection, the threaded rod, nuts and washers are stainless steel. Threaded rod 1/2” diameter, standard length 24” – other lengths available upon request.

Cat. No. 742CPCT – Copper Point to Copper
   Tee Connector - 2 lbs. - 7 oz.
Cat. No. 742APCT – Aluminum Point to Copper
   Tee Connector - 2 lbs.
Cat. No. 742APAT – Aluminum Point to Aluminum
   Tee Connector - 1 lb. - 10 oz.

Cat. No. 742CPCD – Copper Point to Copper
   Clamp - 2 lbs. - 4 oz.
Cat. No. 742APCD – Aluminum Point to Copper
   Clamp - 1 lb. - 13 oz.
Cat. No. 742APAD – Aluminum Point to Aluminum
   Clamp - 1 lb. - 11 oz.

Other combination of parts can be made as needed.

Refer to connectors and letter codes as shown on page 62.
THRU-ROOF POINT ADAPTERS

Combination connector used for thru-roof air terminal penetration — draws tight to top and bottom of composition or metal roof surfaces. Neoprene washers are included to provide a moisture seal. Point adapter nut No. 803 or No. A803 at top. Your choice of No. 42A or No. A42A tee connector or No. 55D or No. A55D clamp for bottom end (either fits all main cables through 9/16” diameter). For copper-to-copper connection, all components are copper or bronze except nuts and washers which are stainless steel — for copper-to-aluminum or aluminum-to-aluminum connection, the threaded rod, nuts and washers are stainless steel. Threaded rod 1/2” diameter, standard length 24” — other lengths available upon request.

Cat. No. 745CPCT — Copper Point to Copper
   Tee Connector - 2 lbs. - 2 oz.

Cat. No. 745APCT — Aluminum Point to Copper
   Tee Connector - 1 lb. - 14 oz.

Cat. No. 745APAT — Aluminum Point to Aluminum
   Tee Connector - 1 lb. - 8 oz.

Cat. No. 745CPCD — Copper Point to Copper
   Clamp - 1 lb. - 15 oz.

Cat. No. 745APCD — Aluminum Point to Copper
   Clamp - 1 lb. - 11 oz.

Cat. No. 745APAD — Aluminum Point to Aluminum
   Clamp - 1 lb. - 8 oz.

Other combinations of parts can be made as needed.

Refer to connectors and letter codes as shown on page 62.
THRU-ROOF CABLE CONNECTORS

Combination connector for thru-roof cable penetration—draws tight to top and bottom of composition or metal roof surface. Neoprene washers and a cast bronze or aluminum flashing cone provide a moisture seal. Cable clamp No. 55D or No. A55D, lug No. 55B or No. A55B, or tee connector No. 42A or No. A42A furnished for either end (any of these connectors fits main sized cables through 9/16” diameter). For copper-to-copper connection, all components are copper or bronze except nuts and washer which are stainless steel—if for copper-to-aluminum or aluminum-to-aluminum connection, the threaded rod, nuts and washers are stainless steel. Threaded rod 1/2” diameter, standard length 24” — other lengths available upon request.

Cat. No. 743CDCD — Copper Clamp to Copper Clamp - 2 lbs. - 9 oz.
Cat. No. 743ADCD — Aluminum Clamp to Copper Clamp - 1 lb. - 15 oz.
Cat. No. 743ADAD — Aluminum Clamp to Aluminum Clamp - 1 lb. - 11 oz.

Cat. No. 743CDCT — Copper Clamp to Copper Tee Connector - 2 lbs. - 11 oz.
Cat. No. 743ADCT — Aluminum Clamp to Copper Tee Connector - 2 lbs. - 2 oz.
Cat. No. 743ADAT — Aluminum Clamp to Aluminum Tee Connector - 1 lb. - 12 oz.

Other combination of parts can be made as needed.

Refer to connectors and letter codes as shown on page 62.
Combination connector for thru-wall or thru-roof penetration giving rigid attachment on both surfaces — assemblies may be used in masonry construction with one end concealed. Neoprene washers are included to provide a moisture seal. Cable clamp No. 55D or No. A55D, lug No. 55B or No. A55B, or tee connector No. 42A or No. A42A furnished for either end (any of these connectors fit main sized cables through 9/16” diameter). For copper-to-copper connection, all components are copper or bronze except nuts and washers which are stainless steel — for copper-to-aluminum or aluminum-to-aluminum connection, the threaded rod, nuts and washers are stainless steel. Threaded rod 1/2” diameter, standard length 24” — other lengths available upon request.

Cat. No. 744CDCD – Copper Clamp to Copper Clamp - 2 lbs. - 3 oz.
Cat. No. 744ADCD – Aluminum Clamp to Copper Clamp - 1lb. - 13 oz.
Cat. No. 744ADAD – Aluminum Clamp to Aluminum Clamp - 1lb. - 10 oz.

Cat. No. 744CDCT – Copper Clamp to Copper Tee Connector - 2 lbs. - 8 oz.
Cat. No. 744ADCT – Aluminum Clamp to Copper Tee Connector - 2 lbs.
Cat. No. 744ADAT – Aluminum Clamp to Aluminum Tee Connector - 1lb. - 10 oz.

Other combination of parts can be made as needed.

Refer to connectors and letter codes as shown on page 62.
THRU-WALL OR THRU-ROOF CABLE CONNECTORS

Combination connector for thru-wall or thru-roof penetrations giving rigid attachment on both surfaces — assemblies may be used in masonry construction with one end concealed. PVC sleeve is included to be adhered to roofing membrane to provide a water tight seal. Cable clamp No. 55D or No. A55D, lug No. 55B or No. A55B, or tee connector No. 42A or No. A42A furnished for either end (any of these connectors fit main sized cables through 9/16” diameter). For copper-to-copper connections, all components are copper or bronze except nuts and washers, which are stainless steel. For copper-to-aluminum or aluminum-to-aluminum connections, the threaded rod, nuts and washers are stainless steel. Threaded rod 1/2” diameter, standard length 24” — other lengths available upon request.

Cat. No. 746CDCD – Copper Clamp to Copper Clamp - 2 lbs. - 8 oz.
Cat. No. 746ADCD – Aluminum Clamp to Copper Clamp - 2 lbs. - 3 oz.
Cat. No. 746ADAD – Aluminum Clamp to Aluminum Clamp - 1 lb. - 15 oz.

Cat. No. 746CDCT – Copper Clamp to Copper Tee Connector - 2 lbs. - 14 oz.
Cat. No. 746ADCT – Aluminum Clamp to Copper Tee Connector - 2 lbs. - 6 oz.
Cat. No. 746ADAT – Aluminum Clamp to Aluminum Tee Connector - 2 lbs.

Other combination of parts can be made as needed.

Refer to connectors and letter codes as shown on page 62.
THRU-WALL OR THRU-ROOF CABLE CONNECTORS

Combination connector for thru-wall or thru-roof cable penetration — draws tight to top and bottom of PVC cap to be installed on PVC conduit stubbed through the wall or up through the roof. A neoprene washer is provided to draw tight to top of PVC cap and provides a moisture seal. Cable clamp No. 55D or No. A55D, lug No. 55B or No. A55B, or tee connector No. 42A or No. A42A furnished for the top end — straight connector 42 for bottom end to be concealed in 1" PVC — straight connector 42L or A42L for bottom end to be concealed in 1-1/4" PVC. For copper-to-copper connection, all components are copper or bronze except nuts and washers which are stainless steel — for copper-to-aluminum or aluminum-to-aluminum connection, the threaded rod, nuts and washers are stainless steel — threaded rod 1/2” diameter. Overall dimensions - 1.930” x 5.25”.

For 1” PVC Conduit
Cat. No. 747CDCS – Copper Clamp to Copper Straight Connector - 14.8 oz.
Cat. No. 747ADCS – Aluminum Clamp to Copper Straight Connector - 11.6 oz.
Cat. No. 747ADAS – Aluminum Clamp to Aluminum Straight Connector - 9.2 oz.

For 1-1/4” PVC Conduit
Cat. No. 748CDCS – Copper Clamp to Copper Straight Connector - 15 oz.
Cat. No. 748ADCS – Aluminum Clamp to Copper Straight Connector - 11.8 oz.
Cat. No. 748ADAS – Aluminum Clamp to Aluminum Straight Connector - 9.4 oz.
FLASHING CONE

Heavy cast bronze or aluminum flashing cone for use on thru-roof penetrations to provide moisture seal. Overall dimensions - 1-1/4" x 3" diameter.

Cat. No. 100 – Copper - 5 oz.
Cat. No. A100 – Aluminum - 1.4 oz.

FLASHING BOOTS

Flashing boots made of long life, flexible, weatherproof gray EPDM rubber. Corrosion-resistant aluminum base with pleated cone conforms to any roof pitch or configuration.

1-3/4" high, 3-1/2" base diameter, for use with No. 34 or No. A34 concealed point assemblies.

Cat. No. 1910 - 1.4 oz.

3" high, 4-3/4" base diameter, for use with assemblies using No. 100 or No. A100 flashing cones.

Cat. No. 3910 - 2.2 oz.

4" high, 7-3/4" base diameter, for use with assemblies using No. 684T or No. 684CT tubular pitch pans.

Cat. No. 9910 - 8 oz.
PITCH PANS OR PITCH POCKETS

TUBULAR PITCH PAN
Tubular type pitch pan of galvanized steel or copper — for use with thru-roof cable or rod assemblies — tubular section 3/4” ID for all cables through No. 605 and rods through 5/8” diameter — tube 4” high soldered to 8” square plate. Other sizes available on request.

Cat. No. 684T – Galvanized Steel - 7.8 oz.
Cat. No. 684CT – Copper - 1 lb. - 3 oz.

BOX TYPE PITCH PAN
Box type pitch pan of galvanized steel, copper or aluminum — for use on cable, rod or conduit roof penetration — box section 2” high, 4” square, riveted to 12” square base plate — hole in base 9/16” diameter, but may be cut larger. After penetration complete, fill with roofing pitch.

Cat. No. 684 – Galvanized Steel - 1 lb. - 3 oz.
Cat. No. 684C – Copper - 2 lbs. - 5 oz.

Cat. No. 684PVC – Tubular PVC Pitch Pan (not shown). Various sizes available on request. - 5.9 oz.
EMBEDDED CABLE OUTLET

Heavy cast bronze cable outlet for use in poured concrete or pre-cast concrete columns or walls – 2-1/4” contact surface for cable – 3” distance between face of plates – four 1/4” bolts for tension on main sized cables through No. 605. Overall dimensions -5” x 2-1/4” x 2-1/4”.

Not recommended for walls less than 6” thick.

Cat. No. 641 – Copper - 1 lb. - 11 oz.
Cat. No. A641* – Aluminum - 9 oz.

*When used with aluminum exposed cable, this part is provided with one aluminum cover plate, stainless steel bolts and shim for bimetal connection.

Typical use in concrete column
EMBEDDED TERMINAL OUTLET

Heavy cast bronze terminal outlet for use in concrete wall or floor – 2-1/4” contact surface for main sized cables through No. 605 – surface plate will accept 1/4” or 3/8” bolts with thread depth of 1/2” – shipped with four bolts 3/4” long. Overall dimensions - 2-1/4” x 2-1/4” x 4-1/2”.

Cat. No. 643-3 – Copper – 3/8” threaded - 1 lb. - 8 oz.
Cat. No. 643-4 – Copper – 1/4” threaded - 1 lb. - 8 oz.
Cat. No. A643-4* – Aluminum – 1/4” threaded - 8.8 oz.

*When used with aluminum air terminal mounting, this part is provided with stainless steel bolts and shim for bimetal connection.

Typical use for concealed air terminal mounting.
PARALLEL CABLE SPLICERS

Heavy cast bronze or aluminum cable splicer with two 1/4” bolts for tension on cable — for straight cable run splice or tee splice by bending cable. Two sizes available — No. 52 for main sized copper cables only through No. 601, 3” long — No. 52A and No. A52A for main sized copper cables No. 601 through No. 605 and all main sized aluminum cables 4” long. Overall dimensions - 4” x 1-1/2”.

Cat. No. 52 — Copper - 8.6 oz.
Cat. No. 52A — Copper - 12.6 oz.
Cat. No. A52A — Aluminum - 4.2 oz.

Heavy cast bronze or aluminum cable splicer — one bolt tension — for any combination of main sized cables – 1-1/2” cable contact. Overall dimensions - 1-1/2” x 1-3/4”.

Cat. No. 52S — Copper - 5 oz.
Cat. No. A52S — Aluminum - 2.1 oz.

TEE CABLE SPLICERS

Heavy cast bronze or aluminum cable splicer with four 1/4” bolts for tension on cable – 3” cable contact each direction — for main sized cables through No. 605. Overall dimensions - 1-3/4” x 2-3/8”.

Cat. No. 664A — Copper - 6.2 oz.
Cat. No. A664A — Aluminum - 2.2 oz.

Cat. No. 664 — Copper - 11 oz.
Cat. No. A664 — Aluminum - 4 oz.
CABLE SPLICERS

COMBINATION SPLICERS

Heavy cast bronze or aluminum splicer for main cable through No. 605 to secondary wire or cable through 1/4" diameter – 4" long – two bolt tension on cable. Overall dimensions - 4" x 1-1/4".

Cat. No. 53 – Copper - 10.6 oz.
Cat. No. A53 – Aluminum - 3.7 oz.

Heavy cast bronze or aluminum splicer for main cable through No. 605 to secondary wire or cable through 1/4" diameter – 2" long – one bolt tension on cable. Overall dimensions - 2" x 1-1/4".

Cat. No. 53A – Copper - 5.3 oz.
Cat. No. A53A – Aluminum Class I - 1.8 oz.
Cat. No. A53AL – Aluminum Class II - 1.8 oz.

SECONDARY WIRE SPLICERS

Heavy cast bronze or aluminum splicer for secondary wires and miniature cables through 1/4" diameter – 4" long – two bolt tension on cable. Overall dimensions - 4" x 1-1/4".

Cat. No. 58 – Copper - 7.7 oz.
Cat. No. A58 – Aluminum - 2.9 oz.

Heavy cast bronze or aluminum splicer for secondary wires and miniature cables through 1/4" diameter – 2" long – one bolt tension on cable. Overall dimensions - 2" x 1-1/4".

Cat. No. 58A – Copper - 3.8 oz.
Cat. No. A58A – Aluminum - 1.4 oz.
CABLE TO ROD OR PIPE CLAMPS

Heavy cast bronze or aluminum bolt tension clamp for connecting cable to rod, pipe or tube. Cable and rod contact 4” long – for main sized cables through No. 605 – pipe sizes from 1/4” OD to 1-1/4” OD. May also be used as ground rod clamps. Overall dimensions - 4” x 1-1/2”.

Copper
Cat. No. 59 – for 1/4” rod - 11 oz.
Cat. No. 59A – for 3/8” rod - 13 oz.
Cat. No. 59B – for 1/2” rod - 11.7 oz.
Cat. No. 59C – for 5/8” rod - 13.3 oz.
Cat. No. 59E – for 1” rod - 1 lb. - 13 oz.
Cat. No. 59F – for 1-1/4” rod - 2 lbs.

Cat. No. 60 – for 3/8” OD pipe - 13 oz.
Cat. No. 60A – for 1/2” OD pipe - 11.7 oz.
Cat. No. 60B – for 3/4” OD pipe - 13.3 oz.
Cat. No. 60C – for 1” OD pipe - 1 lb. - 13 oz.
Cat. No. 60D – for 1-1/4” OD pipe - 2 lbs.

Aluminum
Cat. No. A59 – for 1/4” rod - 3.5 oz.
Cat. No. A59A – for 3/8” rod - 3.8 oz.
Cat. No. A59B – for 1/2” rod - 4.2 oz.
Cat. No. A59C – for 5/8” rod - 4.5 oz.
Cat. No. A59D – for 3/4” rod - 4.3 oz.
Cat. No. A59E – for 1” rod - 4.6 oz.
Cat. No. A59F – for 1-1/4” rod - 5 oz.

Cat. No. A60 – for 3/8” OD pipe - 3.8 oz.
Cat. No. A60A – for 1/2” OD pipe - 4.2 oz.
Cat. No. A60B – for 3/4” OD pipe - 4.3 oz.
Cat. No. A60C – for 1” OD pipe - 4.6 oz.
Cat. No. A60D – for 1-1/4” OD pipe - 5 oz.
ECONOMY CABLE SPLICERS

Stamped copper or aluminum cable splizers made from highest quality sheet metal—copper 0.064” thick, aluminum 0.100” thick—copper splizers available lead coated for corrosion resistance. For main sized cables.

DOUBLE SPLICER

Typical use on parallel splice

Overall dimensions - 2-1/2” x 1-1/4”.
Cat. No. 66 – Copper - 2.1 oz.
Cat. No. 66T – Copper - Tinned Copper - 2.1 oz.
Cat. No. A66 – Aluminum - 0.8 oz.

STRAIGHT SPLICER

Typical use on straight splice

Overall dimensions - 3-3/4” x 1/2”
Cat. No. 65 – Copper - 1.6 oz.
Cat. No. 65T – Tinned Copper - 1.6 oz.
Cat. No. A65 – Aluminum - 0.6 oz.

TEE SPLICER

Typical use on tee splice

Overall dimensions - 2-1/2” x 2”
Cat. No. 64 – Copper - 1.8 oz.
Cat. No. 64T – Tinned Copper - 1.8 oz.
Cat. No. A64 – Aluminum - 0.8 oz.
UNIVERSAL CABLE SPLICER

Heavy cast bronze or aluminum universal cable splicer with 5/16" diameter bolt for tension— for use with all combinations of cable or wire from 1/8" to 3/4" diameter. May also be used for bonding of reinforcing rod. Available in 4” contact length (No. 68 and No. A68) or 2” length (No. 68A or No. A68A). Overall dimensions - 4” x 2” or 2” x 2”.

Cat. No. 68 – Copper - 11 oz.
Cat. No. A68 – Aluminum - 4.8 oz.

Cat. No. 68A – Copper - 5.4 oz.
Cat. No. A68A – Aluminum - 2.4 oz.

THREE WAY SPLICER

Heavy cast bronze or aluminum splicer for three-way cable splice — two bolt tension on each cable – 4” contact length — for main sized cables No. 1 through No. 605. Overall dimensions - 4” x 2-1/2”.

Cat. No. 61 – Copper - 1 lb. - 4 oz.
Cat. No. A61 – Aluminum - 7.4 oz.
CABLE SPLICERS

CROSS RUN CABLE SPLICERS

Heavy cast bronze or aluminum cable splicer with four 1/4" bolts for tension on cables — used when two cables cross in continuing runs — for main sized copper or aluminum cables through 1/2" diameter, 4" contact both cables. Overall dimensions - 3-1/2" x 3-1/2".

Cat. No. 635 — Copper - 1 lb. - 1 oz.
Cat. No. A635 — Aluminum - 5.6 oz.

Heavy cast bronze or aluminum cable splicer with four bolt tension on cables — for use when two cables cross in continuing runs — for main sized cables through 1/2" diameter — 2-1/4" contact on both cables.

Cat. No. 635A — Copper - 12.6 oz.
Cat. No. A635A — Aluminum - 3.8 oz.

STRAIGHT SPLICER

Heavy cast bronze or aluminum cable splicer for straight run — two 1/4" bolts for tension on each cable end — 5" total length (2-1/2" contact each cable) — for all main sized cables through No. 605. Overall dimensions - 5" x 1" diameter.

Cat. No. 65A — Copper - 11.2 oz.
Cat. No. A65A — Aluminum - 3.8 oz.
BIMETALLIC CONNECTORS

STRAIGHT BIMETALLIC CONNECTOR

Cast combination bronze and aluminum connector for making transition from copper cable to aluminum cable. Molded and cast together to exclude moisture from joint. For use with main sized copper cable through No. 605 and main sized aluminum cable through No. A604. Overall dimensions - 5" x 1" diameter.

Cat. No. A341 - 7.4 oz.

PARALLEL BIMETALLIC CONNECTOR

Zinc plated connector for making parallel transition from main sized copper cable through No. 605 to main sized aluminum cable through No. A604. For concealed use only where moisture is permanently excluded from the connection. Overall dimensions - 1-1/2" x 4".

Cat. No. A340 - 12.2 oz.
BONDING LUGS

Heavy cast bronze or aluminum bonding lug with 3 square inches of surface contact on flat metal — cable contact 1-1/2” under bolt tension — anchor bolt hole for 3/8” diameter bolt — available with hole for 1/2” bolt on special request — fits all main sized cables through No. 605. May be used for extra cable runs from a thru-wall or thru-roof connector on Class I or Class II systems. Overall dimensions 2-1/4” x 2-3/4”.

Cat. No. 55B — Copper - 8.2 oz.
Cat No. A55B — Aluminum - 2.6 oz.

Typical use on equipment support

Heavy cast bronze or aluminum bonding lug for flat metal surface — cable contact over 2” long with two 1/4” bolt pressure on cable — for use with main sized cables through No. 605 with hole for 5/8” bolt. Overall dimensions 4” x 1-1/4”.

Cat. No. 55 — Copper - 5.8 oz.
Cat No. A55 — Aluminum - 2.1 oz.

Typical use of No. 55 on angle iron

Typical use of No. 55 on column anchor bolt
BONDING LUG

Heavy cast bronze or aluminum bonding lug with 3 square inches of surface contact on flat metal — two-way cable contact, 1-1/2", under one-bolt tension — anchor bolt hole for 3/8" diameter bolt, available with hole for 1/2" bolt on special request. Fits all main sized cables through No. 605. Overall dimensions - 1-1/2" x 3-1/2".

Cat. No. 57 – Copper - 9.6 oz.
Cat. No. A57 – Aluminum - 3.4 oz.
MINIATURE BONDING LUG (HEAVY DUTY)

Heavy cast copper or aluminum bonding lug for flat metal surface — 1-1/2 square inch contact surface — cable contact 1-1/4" long with two 1/4" bolt pressure on cable — will take all secondary cables, wires and miniature cables through 1/4" diameter — 1/4" bolt hole in lug end. Overall dimensions - 2-3/4" x 3/4".

Cat. No. 655 — Copper - 3.2 oz.
Cat. No. 655C — Cadmium Plated Copper - 3.2 oz.
Cat. No. 655T — Tinned Copper - 3.2 oz.
Cat. No. A655 — Aluminum - 1.2 oz.

Stainless steel shim included with 655 when requested.
BONDING PLATE

Strap copper, tinned copper or aluminum bonding plate for small metal objects, flat or curved, requiring 3 square inches of contact surface — cable contact 2-1/2" long crimp type — two holes for metal screws or bolts with nuts — copper 0.064" thick — aluminum 0.08" thick. For all main sized cables. Overall dimensions - 2-1/4" x 2-3/4".

Cat. No. 56 — Copper - 2.1 oz.
Cat. No. 56T — Tinned Copper - 2.1 oz.
Cat. No. A56 — Aluminum - 1 oz.

Typical use on insulation vent

Typical use on metal vent with continuing cable run
BONDING PLATE

Heavy cast bronze or aluminum metal bonding plate — over 8 square inches of contact surface — 1-1/2" cable contact. May be fastened to metal surface with bolts and nuts, “C” clamps or may be brazed. For main sized cables through No. 605. Overall dimensions - 2-1/4” x 4”.

Cat. No. 656 – Copper - 10.2 oz.
Cat. No. A656 – Aluminum - 3.4 oz.

NOTE: Also available with 16 square inches of contact surface. Overall dimensions - 4” x 4”

Cat. No. 656-16 – Copper - 15 oz.
Cat. No. A656-16 – Aluminum - 6.6 oz.

Typical use on channel iron

Typical use with “C” clamps on column
BONDING PLATE

Heavy cast bronze or aluminum metal bonding plate — over 8 square inches of contact surface and 1-1/2” cable contact. Cap may be rotated for alternate cable position. May be fastened to metal surface with bolts and nuts or may be brazed. For main sized cables through No. 605. Overall dimensions - 2-1/4” x 4”.

Cat. No. 656N — Copper - 11.4 oz.
Cat. No. A656N — Aluminum - 3.8 oz.

Typical use on steel column showing both cap positions for standard and side run cable.
BONDING PLATE

Heavy cast bronze or aluminum metal bonding plate — over 8 square inches of contact surface and 1-1/2” cable contact. Cap may be rotated for alternate cable position. Provided with 2 cast, “C” clamps to fasten to steel surface. For main sized cables through No. 605. Overall dimensions - 2-1/4” x 4”.

Cat. No. 656C — Copper - 1 lb. - 1.6 oz.
Cat. No. A656C — Aluminum - 10.4 oz.

Typical use on steel column showing both cap positions.
BONDING PLATE

Stamped copper, tinned copper, or aluminum bonding plate for metal surface, flat or curved — over 8 square inches of contact on surface and 2-1/2" long crimp type contact on cable — four mounting holes for metal screws or bolts with nuts — copper 0.064" thick — aluminum 0.080" thick. For main sized cables. Overall dimensions - 2-1/2" x 5".

Cat. No. 56B — Copper - 6 oz.
Cat. No. 56BT — Tinned Copper - 6 oz.
Cat. No. A56B — Aluminum - 2.9 oz.

Typical use on metal siding

FOR CLASS I STRUCTURES ONLY
BONDING PLATE

Strap copper, tinned copper, or aluminum bonding plate for metal surface, flat or curved — over 8 square inches of contact on surface and 2-1/2” long contact under bolt tension on cable — four mounting holes for metal screws or bolts with nuts — copper 0.064” thick — aluminum 0.080” thick — for main sized cables through No. 605. Overall dimensions - 2-1/2” x 5”.

Cat. No. 56C – Copper - 6.1 oz.
Cat. No. 56CT – Tinned Copper - 6.1 oz.
Cat. No. A56C – Aluminum - 2.9 oz.
PIPE BONDING CLAMP

Adjustable pipe bonding clamp of tinned copper or aluminum strap – 2-1/2” wide for full contact along axis of pipe – 2-1/2” cable contact. For all main sized cables through No. 605. Shipped flat, to be formed at the jobsite for exact pipe size.

Copper
Cat. No. 62 – For 1” through 1-1/2” OD pipe - 14.6 oz.
Cat. No. 62-3 – For 1-1/2” through 3” OD pipe - 1lb. - 1 oz.
Cat. No. 62-4 – For 3” through 4” OD pipe - 1lb. - 4 oz.
Cat. No. 62-6 – For 4” through 6” OD pipe - 1lb. - 7 oz.
Cat. No. 62-10 – For 8” through 10” OD pipe - 1lb. - 13 oz.

Aluminum
Cat. No. A62 – For 1” through 1-1/2” OD pipe - 7.4 oz.
Cat. No. A62-3 – For 1-1/2” through 3” OD pipe - 8.8 oz.
Cat. No. A62-4 – For 3” through 4” OD pipe - 10 oz.
Cat. No. A62-6 – For 4” through 6” OD pipe - 12.6 oz.
Cat. No. A62-10 – For 8” through 10” OD pipe - 14.6 oz.

Special size are also available upon request.
BONDING CLAMP

SILL COCK CLAMP
Cast bronze sill cock grounding clamp fits most standard flanges - adjusts with two 1/4" screws - cable lug of stamped copper, lead coated, for use with copper or aluminum cables - 2 - 1/2" cable contact - tabs must be hammered over flange for positive contact - for main sized cables through No. 605. Class I only.

Cat. No. 63 – Copper - 5.6 oz.

PIPE BONDING STRAP
Adjustable strap - type pipe bonding assembly - consists of tinned copper or bare aluminum strap 1” wide - copper 0.064” thick; aluminum 0.080” thick - with No.56 or No. A56 securely bolted to strap - for main sized cables through No. 605 - sized for 4” pipe. Other sizes available on request. Shipped flat, to be formed at the jobsite for exact pipe size. Class I only.

Cat. No. 67 – Copper - 9.6 oz.
Cat. No. A67 – Aluminum - 5 oz.
PIE BONDING CLAMP

Heavy cast bronze or aluminum pipe bonding clamp with 1/4” bolt tension – 1-1/2” cable contact along axis of pipe. Available in three sizes for a range of pipe sizes. Bronze clamps may be lead coated, on request, to prevent corrosion when used on water pipes. Add “L” to part numbers shown. For use with main sized cables. Overall dimensions - 63A 2-1/2” x 1-3/4” - 63B 4-1/4” x 1-1/2” - 63C 5-1/2” x 1-1/2”.

Copper
Cat. No. 63A – For 3/4” to 1-1/2” OD pipe - 9 oz.
Cat. No. 63B – For 1-3/4” to 2-1/2” OD pipe - 1lb.
Cat. No. 63C – For 2-1/2” to 4-1/2” OD pipe - 1lb. - 2 oz.

Aluminum
Cat. No. A63A – For 3/4” to 1-1/2” OD pipe - 3.4 oz.
Cat. No. A63B – For 1-3/4” to 2-1/2” OD pipe - 6.1 oz.
Cat. No. A63C – For 2-1/2” to 4-1/2” OD pipe - 6.6 oz.
BONDING LUG

BONDING LUG — LIGHT DUTY FOR MAIN CABLES
Stamped copper, tinned copper or aluminum bonding lug for main size cable to flat metal surface — over 1 square inch contact surface — compression type cable holder with 2-1/2” contact length — copper 0.064” thick, aluminum 0.100” thick — 1/4” bolt hole in lug end. Overall dimensions: 3-3/4” x 1-1/4”.

Cat. No. 85 — Copper - 1.6 oz.
Cat. No. 85T — Tinned Copper - 1.6 oz.
Cat. No. A85 — Aluminum - 0.8 oz.

Typical use on metal skylight frame
BONDING CLAMPS

GUTTER BONDING CLAMP
Stamped copper, tinned copper or aluminum gutter bonding clamp for round or square edge metal gutters — compression type contact 2” long on gutter and 1-1/2” long on cable — copper 0.064” thick, aluminum 0.100” thick. For main sized cable. Overall dimensions - 2-1/2” x 2”.

Cat. No. 87 — Copper - 1.8 oz.
Cat. No. 87T — Tinned Copper - 1.8 oz.
Cat. No. A87 — Aluminum - 0.8 oz.

GUTTER BONDING CLAMP OR CABLE HOLDER
Cast bronze or aluminum clamp for use in bonding metal gutters or supporting cable on metal column or rib — may be used on round or square edge gutters and column edge to 1/2” thick — compression type cable holder for main sized cables through No. 605 — 1” contact length on metal. Overall dimensions - 1-1/4” x 2” x 1-1/2”.

Cat. No. 77 — Copper - 3.7 oz.
Cat. No. 77L — Lead covered - 3.8 oz.
Cat. No. A77 — Aluminum - 1 oz.

ROBBINS LIGHTNING, INC.
124 EAST SECOND STREET  PHONE (660) 582-3156  FAX (660) 582-3039  P.O. BOX 440  MARYVILLE, MISSOURI 64468-0440
TEMPORARY COLUMN AND BEAM BONDING CLAMP

Heavy cast bronze or aluminum column or beam bonding clamp — no holes required in iron — over 8 square inches of pressure contact surface — four inch cable contact for main sized cables through No. 605 – 3/8” threaded brass or stainless steel take-up rod — end grips for flange thickness to 5/8”.

Standard span 10”, longer or shorter upon request.

Cat. No. 660 – Copper - 2 lbs. - 6 oz.

NOTE: Bonding plate is used without C-Clamps in situations where only a temporary bond is required (e.g. fuel trucks, semi’s, job trailers).

Typical application on vertical column
TEMPORARY ANGLE AND CHANNEL BONDING CLAMP

Heavy cast bronze or aluminum angle iron or channel iron bonding clamp — no holes required in iron — over 8 square inches of pressure contact surface — four inch cable contact for main sized cables through No. 605 – 3/8” threaded brass or stainless steel take-up rod.

Standard Span 10”, longer or shorter available upon request.

Cat. No. 661 — Copper - 2 lbs. - 3 oz.
Cat. No. A661 — Aluminum - 12 oz.

NOTE: Bonding plate is used without C-Clamps in situations where only a temporary bond is required (e.g. fuel trucks, semi’s, job trailers).
Adjustable strap-type pipe bonding assembly — consists of tinned copper or bare aluminum strap 1" wide — copper 0.064" thick; aluminum 0.080" thick — with No. 55B or No. A55B lug securely bolted to strap — for main sized cables through No. 605 — 1/4" x 1" take-up bolt with nut. Standard sizes shown — other sizes available on request. For main sized cables. Shipped flat, to be formed at the jobsite for exact pipe size.

Copper
Cat. No. 677-4 — for 2" through 4" pipe - 1 lb.
Cat. No. 677-6 — for 4-1/2" through 6" pipe - 1lb. - 2 oz.
Cat. No. 677-8 — for 6-1/2" through 8" pipe - 1lb. - 4 oz.

Aluminum
Cat. No. A677-4 — for 2" through 4" pipe - 7 oz.
Cat. No. A677-6 — for 4-1/2" through 6" pipe - 7.8 oz.
Cat. No. A677-8 — for 6-1/2" through 8" pipe - 9 oz.
PIPE BONDING STRAP

Adjustable strap-type pipe bonding assembly — consists of tinned copper or bare aluminum strap 1” wide — copper 0.064” thick; aluminum 0.080” thick — with No. 52S or No. A52S universal cable connector — for main sized cables through No. 605 — 1/4” x 1” take-up bolt with nut. Standard sizes shown — other sizes available on request. For main sized cables. Shipped flat, to be formed at the jobsite for exact pipe size.

Copper
Cat. No. 677D-4 — for 2” through 4” pipe - 12.8 oz.
Cat. No. 677D-6 — for 4-1/2” through 6” pipe - 14.2 oz.
Cat. No. 677D-8 — for 6-1/2” through 8” pipe - 1 lb. - 1 oz.

Aluminum
Cat. No. A677D-4 — for 2” through 4” pipe - 6.1 oz.
Cat. No. A677D-6 — for 4-1/2” through 6” pipe - 7 oz.
Cat. No. A677D-8 — for 6-1/2” through 8” pipe - 8 oz.
PIPE BONDING STRAP

Adjustable strap-type pipe bonding assembly — consists of tinned copper or bare aluminum strap 1” wide — copper 0.064” thick; aluminum 0.080” thick — with No. 655 or No. A655 lug for secondary bonding with wires and miniature cables through 1/4” diameter — 1/4” x 1” take-up bolt with nut.

Standard sizes shown — other sizes available on request. For secondary cables and wires up to 1/4” in diameter. Shipped flat, to be formed at the job site for exact pipe size.

Copper
Cat. No. 677S-4 — for 2” through 4” pipe - 10.8 oz.
Cat. No. 677S-6 — for 4-1/2” through 6” pipe - 12.4 oz.
Cat. No. 677S-8 — for 6-1/2” through 8” pipe - 15 oz.

Aluminum
Cat. No. A677S-4 — for 2” through 4” pipe - 5.3 oz.
Cat. No. A677S-6 — for 4-1/2” through 6” pipe - 6.2 oz.
Cat. No. A677S-8 — for 6-1/2” through 8” pipe - 7 oz.
REBAR OR PIPE BONDING CLAMP

Heavy cast bronze or aluminum pipe or rebar bonding clamp with 1/4” bolt tension - 1-1/2” of cable contact length - 1-1/2” contact along axis of pipe or rebar with approximately 1.8 sq. in. contact area. For pipes and rebar with approximately 1/2” through 1-1/4” outside diameter. For all main sized cables through No. 605. Overall dimensions - 2-1/4” x 1-3/8” x 1-1/2”.

Cat. No. 69 – Copper - 11.4 oz.
Cat. No. A69 – Aluminum - 4.5 oz.

PRE-ASSEMBLED REBAR BOND

Pre-assembled copper cable pigtail exothermically welded to an 18” long #4 rebar. Standard copper cable length provided is 36”. Special lengths available upon request.

Cat. No. RB-1 – #1 Copper cable (32 Str., X 17 Ga. - 2 AWG.) - 12.2 oz.
Cat. No. RB-604 – #604 Copper cable (28 Str., X 14 Ga.) - 1 lb. - 12 oz.
Cat. No. RB-605 – #605 Copper cable (37 Str., - 4/0 AWG.) - 2 lbs. - 11 oz.
METAL BONDING CLAMP AND CABLE HOLDER

Heavy cast bronze or aluminum clamp for bonding to metal surface or for use as cable holder to edge of column or beam — bolt tension on surface and cable — universal capacity from secondary bonding wire through 3/4” cable and flat surface to 5/8” thick — two sizes available — No. 68X and No. A68X — 2” long with 1-1/2 square inches of surface contact or No. 68X-3 and No. A68X-3 with 3 square inches of surface contact. Overall dimensions - 68X: 2” x 2-1/4” - 68X-3: 4” x 2-1/4”.

Cat. No. 68X — Copper - 5 oz.
Cat. No. A68X — Aluminum - 1.8 oz.

Cat. No. 68X-3 — Copper - 7.0 oz.
Cat. No. A68X-3 — Aluminum - 3.0 oz. (for cable holder only)

Cat. No. 68X-3 — Copper - 7.0 oz.
Cat. No. A68X-3 — Aluminum - 3.0 oz. (for bonding on Class 1 structures only)

PLATE HOLDERS

Cast iron “C” clamp for holding metal bonding plate to metal structural member — opens 11/16” for heavy column section or closes to 3/16” for thin metal sections — throat depth 15/16” — screw sets firm for permanent installation. Overall dimensions - 1-1/2” x 1-3/8”.

Cat. No. 156 - 4 oz.

Typical use to hold bonding plate.
SLATE ROOF CABLE HOLDER

Tinned copper or aluminum strap cable holder for use under flat slate roof sections — made of 1" wide strap 12" long with loop, bolt and nut to secure cable — simply slips under slate to hook on existing nail — for all cables.

Cat. No. 76A — Copper - 4.5 oz.
Cat. No. A76A — Aluminum - 1.6 oz.

SPLIT BOLT CONNECTORS

Used For Fence Grounding or Wire Mesh

High strength bronze split bolt connectors, completely tinfoiled for use with copper, aluminum or steel wires — spacer allows separation of dissimilar metals — contact paste recommended when used with aluminum wire — for use in attaching home service protectors, grounding fence wire fabric and other grounding work — not recommended for use as splice for Lightning Protection system circuits.

Copper
Cat. No. 124A — Maximum wire diameter 0.217" - 1.4 oz.
Cat. No. 124B — Maximum wire diameter 0.271" - 1.8 oz.
Cat. No. 124C — Maximum wire diameter 0.385" - 3 oz.
Cat. No. 124D — Maximum wire diameter 0.443" - 4.8 oz.
PIPE AND HANDRAIL CABLE HOLDERS

Strap type cable or point holder for use on vertical or horizontal pipe run — copper holder made of tinned copper strap 1” wide, 0.064” thick – aluminum holder made of aluminum strap 1” wide, 0.080” thick – furnished with 1” long bronze or stainless steel bolt and nut for tension on pipe – for main sized cables through No. 605 and point diameters 3/8” to 5/8” – various pipe sizes available on request.

Copper
Cat. No. 821A – for 1.660” O.D. Pipe - 3 oz.
Cat. No. 821B – for 1.90” O.D. Pipe - 3.4 oz.
Cat. No. 821C – for 2.375” O.D. Pipe - 3.8 oz.
Cat. No. 821D – for 2.875” O.D. Pipe - 4.2 oz.
Cat. No. 821E – for 4.5” O.D. Pipe - 6.2 oz.

Aluminum
Cat. No. A821A – for 1.660” O.D. Pipe - 1.7 oz.
Cat. No. A821B – for 1.90” O.D. Pipe - 1.8 oz.
Cat. No. A821C – for 2.375” O.D. Pipe - 1.9 oz.
Cat. No. A821E – for 4.5” O.D. Pipe - 2.3 oz.

Strap type cable or point holder for use on vertical or horizontal pipe run — copper holder made of tinned copper strap 1” wide, 0.064” thick – aluminum holder made of aluminum strap 1” wide, 0.080” thick – stand-off distance 1” from wall of pipe – furnished with 1” long bronze or stainless steel bolt and nut for tension on pipe – for main sized cables through No. 605 and point diameters 3/8” to 5/8” – various pipe sizes available on request.

Copper
Cat. No. 822A – for 1.660” O.D. Pipe - 2.6 oz.
Cat. No. 822B – for 1.90” O.D. Pipe - 3.7 oz.
Cat. No. 822C – for 2.375” O.D. Pipe - 4 oz.
Cat. No. 822D – for 2.875” O.D. Pipe - 4.2 oz.
Cat. No. 822E – for 4.5” O.D. Pipe - 5.2 oz.

Aluminum
Cat. No. A822B – for 1.90” O.D. Pipe - 2.1 oz.
Cat. No. A822C – for 2.375” O.D. Pipe - 2.2 oz.
Cat. No. A822D – for 2.875” O.D. Pipe - 2.3 oz.
Cat. No. A822E – for 4.5” O.D. Pipe - 2.6 oz.
ADHESIVE CABLE HOLDERS

Adhesive cable holder of heavy cast bronze or aluminum. Should be placed on flat or gently sloping roof surface in a bed of hot pitch or approved adhesive. For main sized cables through 604. Overall dimensions - 2-3/4” x 2-1/4”. Adhesive contact area - 6.19 in².

Cat. No. 682 – Copper - 6.4 oz.
Cat. No. A682 – Aluminum - 2.2 oz.

Typical use on built-up roof

Adhesive cable holder of stamped and formed copper or aluminum. Should be placed on flat or gently sloping roof surface in a bed of hot pitch or approved adhesive. For main and secondary cables and wires. Overall dimensions - 3” x 2-1/2”. Adhesive contact area - 7.5 in².

Cat. No. 683 – Copper - 1 oz.
Cat. No. A683 – Aluminum - 0.4 oz.
Cat. No. 683N – Copper - 1 oz.
Cat. No. A683N – Aluminum - 0.4 oz.

Typical use on built-up roof

Adhesive cable holder of stamped and formed copper or aluminum. Should be placed on flat or gently sloping roof surface in a bed of hot pitch or approved adhesive. For main and secondary cables and wires. Overall dimensions - 1-3/4” x 4”. Adhesive contact area - 7 in².

Cat. No. 683LARGE – Copper - 1.5 oz.
Cat. No. A683LARGE – Aluminum - 0.6 oz.
CABLE HOLDERS

Cast bronze or aluminum clamp for use in supporting cable on metal column or rib — may be used on column edge to 1/2” thick — compression type cable holder for main sized cable through No. 605 — with one 1/4” bolt for tension on column or rib. Rubber caps included on bolts to prevent damage to roof. Recommended torque on mounting bolt: 15 in./lbs. maximum. Overall dimensions - 1-1/4” x 1-1/4” x 1-1/2”.

Cat. No. 77X – Copper - 2.1 oz.
Cat. No. A77X – Aluminum - 0.6 oz.

STANDING SEAM CABLE HOLDERS

Cast bronze or aluminum cable holder for use on standing seams, steel beams, etc., where no penetration of metal is desired or permitted. Consists of No. 77X or No. A77X clamp with No. 72 or No. A72 loop, two 1/4” stainless bolts. Rubber caps included on bolts to prevent damage to roof. Recommended torque on mounting bolt: 15 in./lbs. maximum. For main and secondary cables and wires. Overall dimensions - 1-1/4” x 1-1/4” x 2”.

Cat. No. 75 – Copper - 2.6 oz.
Cat. No. A75 – Aluminum - 1 oz.

Machined brass or aluminum hexagonal holder for use on standing seams, steel beams, etc. where no penetration of metal is desired or permitted. Comes with No. 72 or No. A72 loop, which can be attached to either of two 1/4” stainless bolts depending on direction of seam, 1/4” stainless nut for tightening loop. Rubber caps included on bolts to prevent damage to roof. For main and secondary cables and wires.

Cat. No. 79 – Copper - 2.2 oz.
Cat. No. A79 – Aluminum - 1 oz.
CABLE FASTENERS

LOOP FASTENER (SMALL)
Strap copper or aluminum loop type cable fastener requiring one nail or screw — 1/2” wide, copper 0.032” thick, aluminum 0.051” thick for main and secondary cables 1/4” through 1/2” diameter — for nail or screw to No. 10 (3/16”) diameter.

Cat. No. 72A — Copper - 0.26 oz.
Cat. No. A72A — Aluminum - 0.1 oz.
Cat. No. 72AT — Tinned Copper - 0.26 oz.

LOOP FASTENER (LARGE)
Strap copper or aluminum loop type cable fastener requiring one nail or screw — 5/8” wide, copper 0.032” thick, aluminum 0.051” thick — for cables 3/8” through 5/8” diameter — for screw or bolt to 1/4” diameter. For main and secondary cables and wires. Add “X” after the part number to indicate use with 4/0 AWG cables.

Cat. No. 72 — Copper - 0.29 oz.
Cat. No. A72 — Aluminum - 0.15 oz.
Cat. No. 72T — Tinned Copper - 0.29 oz.

STRAP FASTENER
Strap copper or aluminum two-hole cable fastener — copper strap 0.032” thick, aluminum strap 0.051” thick. Strap 1/2” wide for cables 1/4” through 1/2” diameter — for nail or screw to No. 10 (3/16”) diameter. For main sized cables.

Cat. No. 72C — Copper - 0.26 oz.
Cat. No. A72C — Aluminum - 0.1 oz.
Cat. No. 72CT — Tinned Copper - 0.26 oz.
CABLE FASTENERS

STAND-OFF CABLE HOLDER
Heavy cast bronze or aluminum stand-off cable holder – two bolt tension on cable – 1” to 2” stand-off distance – for main sized cables through No. 605 – available without fastener (No. 74 or No. A74), with No. 86A lead anchor (No. 74A or No. A74A) or with two 3/8” nuts and washers (No. 74B or No. A74B). Overall dimensions - 1-3/4" x 2-3/4".

Copper
- Cat. No. 74 - 3/8” threaded end - 4 oz.
- Cat. No. 74A - with lead anchor - 6.2 oz.
- Cat. No. 74B - with nuts and washers - 4.8 oz.

Aluminum
- Cat. No. A74 - 3/8” threaded end - 1.4 oz.
- Cat. No. A74A - with lead anchor - 3.4 oz.
- Cat. No. A74B - with nuts and washers - 2.2 oz.

STAND-OFF CABLE HOLDER
(COMPRESSION TYPE)
Heavy cast bronze or aluminum compression type stand-off cable holder – 1” to 2” stand-off distance – for main sized cables through No. 605 – available without fastener (No. 73A or No. A73A), with No. 86A lead anchor (No. 73B or No. A73B) or with two 3/8” nuts and washers (No. 73C or No. A73C). (For Class 1 structures only.)

Copper
- Cat. No. 73A - 3/8” threaded end - 1.6 oz.
- Cat. No. 73B - with lead anchor - 3.8 oz.
- Cat. No. 73C - with nuts and washers - 2.4 oz.

Aluminum
- Cat. No. A73A - 3/8” threaded end - 0.4 oz.
- Cat. No. A73B - with lead anchor - 2.4 oz.
- Cat. No. A73C - with nuts and washers - 1.2 oz.
MASONRY ANCHOR
Complete masonry anchor assembly consisting of No. 72 copper or No. A72 aluminum loop with 1/4” x 1” stainless steel bolt and No. 86 lead expansion anchor. For main and secondary cables and wires.

Cat. No. 82 – Copper - 1 oz.
Cat. No. A82 – Aluminum - 0.8 oz.

Typical use on concrete wall

MASONRY ANCHOR
Complete masonry anchor assembly consisting of No. 72 copper or No. A72 aluminum loop with No. 86Z nail-in anchor. For main and secondary cables and wires.

Cat. No. 82Z – Copper - 0.64 oz.
Cat. No. A82Z – Aluminum - 0.48 oz.

Typical use on concrete wall
CABLE FASTENERS

CABLE CLIP
Cast bronze or aluminum clip for main sized holding cables through 9/16” diameter — anchor hole for nail, screw or bolt to 1/4” diameter — heel of clip exerts positive pressure on cable. Overall dimensions 1-1/4” x 3/4”.

Cat. No. 81B — Copper - 0.48 oz.
Cat. No. A81B — Aluminum - 0.1 oz.

MASTERY ANCHOR CLIPS
Complete masonry anchor assembly consisting of cast bronze or aluminum clips shown on this page with 1/4” x 1” brass or stainless steel bolt and No. 86 lead expansion anchor. For main sized cables through 9/16” diameter.

Cat. No. 81C — Copper - 1.2 oz.
Cat. No. A81C — Aluminum - 0.8 oz.

WIRE OR MINIATURE CABLE CLIP
Cast bronze or aluminum clip for holding secondary wire or miniature cable through 3/8” diameter — anchor hole for nail, screw or bolt to 1/4” diameter.

Cat. No. 81 — Copper - 1 oz.
Cat. No. A81 — Aluminum - 0.16 oz.
SPECIAL PURPOSE FASTENERS

SILO BAND DRIVE FASTENER
Cast bronze or aluminum drive fastener for use on steel bands of silos — one piece malleable construction for compression holding of cable — for main sized cables through No. 605.

Cat. No. 150 — Copper - 0.16 oz.
Cat. No. A150 — Aluminum - 0.48 oz.

STAND-OFF CABLE HOLDER
Cast bronze or aluminum stand-off cable holder for use with No. 86 lead expansion anchor in masonry or with No. A80E-4 nut on metal surface — cable located 1” off surface — pinch type closure — for main sized cable through No. 604. Overall dimensions - 2-1/2” x 1”.

Cat. No. 73 — Copper - 1.2 oz.
Cat. No. A73 — Aluminum - 0.16 oz.

PINCH TYPE CABLE HOLDER
Cast bronze or aluminum stand-off cable holder for use with 3/16” diameter nail, wood screw or metal screw — for main sized cables through No. 605.

Cat. No. 81A — Copper - 0.64 oz.
Cat. No. A81A — Aluminum - 0.01 oz.
“U” BOLT FASTENERS

Point to pipe or handrail U-Bolt clamp type fastener. U-Bolt clamps available in 3/8”, 1/4” or 5/16” diameter stainless steel. Weights shown below are for 3” O.D. pipe.

NOTE: Specify pipe O.D. when ordering.

Cat. No. 80-U-4SS – 1/4” Stainless - 2.1 oz.
Cat. No. 80-U-3SS – 3/8” Stainless - 4.2 oz.
Cat. No. 80-U-5SS – 5/16” Stainless - 3 oz.
FASTENERS

MACHINE SCREWS
High quality bronze or stainless steel machine screws for use in fastening system components — all screws have N.C. threads — note stainless steel screws may be used with copper or aluminum materials.

Copper (Bronze)
- Cat. No. 80-12 — 1/4" diam. x 1/2" long
- Cat. No. 80-34 — 1/4" diam. x 3/4" long
- Cat. No. 80-10 — 1/4" diam. x 1" long
- Cat. No. 80-15 — 1/4" diam. x 1-1/2" long
- Cat. No. 80-20 — 1/4" diam. x 2" long

Stainless Steel
- Cat. No. A80-12 - 0.18 oz.
- Cat. No. A80-34 - 0.22 oz.
- Cat. No. A80-10 - 0.26 oz.
- Cat. No. A80-15 - 0.34 oz.
- Cat. No. A80-20 - 0.45 oz.

MACHINE BOLT
Flat head machine bolt of stainless steel — may be used with copper or aluminum materials.

- Cat. No. A80F-10 — Stainless Steel — 1/4" diam. x 1" long - 0.21 oz.

WOOD SCREWS
Slotted wood screws — note that stainless steel screws may be used with copper or aluminum materials.

- Cat. No. 84C — Brass — #10 size x 1-1/2" long (Round Head) - 0.18 oz.
- Cat. No. A84C — Stainless — #10 size x 1-1/2" long (Round Head) - 0.16 oz.
- Cat. No. A84F — Stainless — #14 size x 1-1/4" long (Flat Head) - 0.21 oz.

METAL SCREWS
Slotted sheet metal screw of bright finished stainless steel — may be used with copper or aluminum materials.

- Cat. No. 84B-1 — #10 size x 1" long (Pan Head) - 0.12 oz.
- Cat. No. 84B-3 — #10 size x 3/4" long (Pan Head) - 0.08 oz.
- Cat. No. 84BF — #14 size x 1-1/4" long (Flat Head) - 0.22 oz.
# FASTENERS

## MACHINE SCREW NUTS
High quality bronze or stainless steel hexagon nuts for use on machine screws, points or all thread rod — all nuts have N.C. threads — note stainless steel may be used with copper or aluminum materials.

<table>
<thead>
<tr>
<th>Copper (Bronze)</th>
<th>Size</th>
<th>Stainless Steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cat. No. 80E-4</td>
<td>1/4” thread size</td>
<td>Cat. No. A80E-4 - 0.12 oz.</td>
</tr>
<tr>
<td>Cat. No. 80E-5</td>
<td>5/16” thread size</td>
<td>Cat. No. A80E-5 - 0.16 oz.</td>
</tr>
<tr>
<td>Cat. No. 80E-6</td>
<td>3/8” thread size</td>
<td>Cat. No. A80E-6 - 0.22 oz.</td>
</tr>
<tr>
<td>Cat. No. 80E-8</td>
<td>1/2” thread size</td>
<td>Cat. No. A80E-8 - 0.58 oz.</td>
</tr>
<tr>
<td>Cat. No. 80E-10</td>
<td>5/8” thread size</td>
<td>Cat. No. A80E-10 - 1.1 oz.</td>
</tr>
<tr>
<td>Cat. No. 80E-12</td>
<td>3/4” thread size</td>
<td>Cat. No. A80E-12 - 1.8 oz.</td>
</tr>
</tbody>
</table>

## METAL FLAT WASHERS AND LOCK WASHERS
High quality bronze or stainless steel washers for use on machine screws, points or threaded rod — **NOTE:** stainless steel may be used with copper or aluminum materials.

<table>
<thead>
<tr>
<th>Copper (Bronze)</th>
<th>Size</th>
<th>(Stainless Steel)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cat. No. 140</td>
<td>1/4” flat washer</td>
<td>Cat. No. A140 - 0.06 oz.</td>
</tr>
<tr>
<td>Cat. No. 140L</td>
<td>1/4” lock washer</td>
<td>Cat. No. A140L - 0.05 oz.</td>
</tr>
<tr>
<td>Cat. No. 141</td>
<td>5/16” flat washer</td>
<td>Cat. No. A141 - 0.08 oz.</td>
</tr>
<tr>
<td>Cat. No. 141L</td>
<td>5/16” lock washer</td>
<td>Cat. No. A141L - 0.06 oz.</td>
</tr>
<tr>
<td>Cat. No. 142</td>
<td>3/8” flat washer</td>
<td>Cat. No. A142 - 0.14 oz.</td>
</tr>
<tr>
<td>Cat. No. 142L</td>
<td>3/8” lock washer</td>
<td>Cat. No. A142L - 0.1 oz.</td>
</tr>
<tr>
<td>Cat. No. 143</td>
<td>1/2” flat washer</td>
<td>Cat. No. A143 - 0.24 oz.</td>
</tr>
<tr>
<td>Cat. No. 143L</td>
<td>1/2” lock washer</td>
<td>Cat. No. A143L - 0.21 oz.</td>
</tr>
<tr>
<td>Cat. No. 144</td>
<td>5/8” flat washer</td>
<td>Cat. No. A144 - 0.37 oz.</td>
</tr>
<tr>
<td>Cat. No. 144L</td>
<td>5/8” lock washer</td>
<td>Cat. No. A144L - 0.38 oz.</td>
</tr>
<tr>
<td>Cat. No. 145</td>
<td>3/4” flat washer</td>
<td>Cat. No. A145 - 0.98 oz.</td>
</tr>
<tr>
<td>Cat. No. 145L</td>
<td>3/4” lock washer</td>
<td>Cat. No. A145L - 0.62 oz.</td>
</tr>
</tbody>
</table>

## NEOPRENE WASHERS
Neoprene flat washers for sealing against moisture penetration under bolts, screws or all thread rod. Washers up to 3/8” size are 1/16” thick, larger washers are 1/8” thick.

| Cat. No. 205N   | 3/16” bolt - 0.005 oz. |
| Cat. No. 206N   | 1/4” bolt - 0.02 oz.   |
| Cat. No. 207N   | 3/8” bolt - 0.02 oz.   |
| Cat. No. 208N   | 1/2” bolt - 0.08 oz.   |
FASTENERS

STANDARD NAILS
Roofing and siding nails of copper or galvanized steel for corrosion resistant fastening — barbed construction for long lasting grip. Large head nails for base anchoring, small head nails for cable anchoring.

Copper
Cat. No. 84 — Large Head Copper — 2” long — 0.15 oz.
Cat. No. 84A — Small Head Copper — 1-1/2” long — 0.08 oz.

Galvanized
Cat. No. A84G — Large Head Galvanized — 1-3/4” long — 0.09 oz.

NAIL-IN ANCHOR
One-piece nail drive expansion anchor made of special zinc alloy with stainless steel nail.

Cat. No. 86Z — Copper - 0.38 oz.

EXPANSION ANCHOR
Standard machine screw anchor with threaded rust-proof zinc alloy cone and special hardened lead sleeve.

Cat. No. 86 — 1/4” lead expansion anchor - 0.48 oz.
Cat. No. 86A — 3/8” lead expansion anchor - 2.1 oz.
Cat. No. 86C — 5/16” lead expansion anchor - 1 oz.
Cat. No. 86D — 1/2” lead expansion anchor - 2.6 oz.

TOGGLE BOLTS
Spring wing type toggle bolt, steel plated to prevent corrosion — round head slotted — for use on hollow block or tile surfaces.

Cat. No. 78 — 1/4” diam. x 3” long - 0.8 oz.
Cat. No. 78A — 1/4” diam. x 4” long - 1 oz.
FASTENERS

METAL ROOF NAIL, SCREWS AND SEALING WASHER

Self-tapping tek screws, hex washer head with neobond weather seal — for use on metal roofing and siding — 410 stainless steel, zinc plated.

Cat. No. 83ST-1 — Size #10, 1” long - 0.16 oz.
Cat. No. 83ST-2 — Size #10, 1-1/2” long - 0.18 oz.
Cat. No. 83ST-3 — Size #10, 2-1/2” long - 0.26 oz.

Stainless steel ring shank nail with metal washer and attached neobond weather seal for use with metal roofing and siding on wood structure.

Cat. No. 83 — Size #10, 2” long - 0.32 oz.

Sealing washer assembly consisting of cone type stainless steel washer with attached neobond sealing washer — for nails to 1/8” diameter.

Cat. No. 210 - 0.06 oz.

Self-tapping screw with hex washer head, Size #8.

Cat. No. 83NP-4 — Stainless Steel, 1” long - 0.11 oz.
Cat. No. 83NP-3 — Stainless Steel, 3/4” long, Type A - 0.08 oz.
Cat. No. 83NP-2 — Zinc Plated, 1/2” long - 0.08 oz.

ADHESIVE COMPOUND

NOTE: Before using any type of adhesive compound, it is important to consult the roof manufacturer to determine compatibility with roofing material. Improper use may affect roof warranty.

Cat. No. 690M-1 - 1 lb. - 1 oz.

Structural adhesive/sealant manufactured by ChemLink. M-1 is a moisture cure product designed for use in difficult bonding and sealing applications. 1 Tube - Cont. Net 300 ml (10.1 Fl. Oz.). One tube is normally adequate for approximately 10 bases or 25 cable holders. Please specify color when ordering. Information and MSDS sheets are included at the beginning of this catalog. Colors: white, gray, black, lime stone upon request.
CABLE PROTECTORS

Cable protectors of penta-treated wood, copper pipe, polyvinylchloride (PVC) pipe. For guarding cable near ground from mechanical damage. Install one foot below grade to 6' or more above grade.

COPPER PIPE — 6'-8”
Cat. No. C93A — 5/8” I.D. x long - 2 lbs. - 4 oz.

PVC PIPE
Cat. No. 93A — 1/2” I.D. x 10’ long - 1 lb. - 6 oz.
Cat. No. 93B — 3/4” I.D. x 10’ long - 2 lbs. - 7 oz.
Cat. No. 93C — 1” I.D. x 10’ long - 3 lbs. - 1 oz.
Cat. No. 93D — 1-1/4” I.D. x 10’ long - 4 lbs.

WOOD
Cat. No. 96 — 8’ long for cables to 3/4” diameter - 3 lbs. - 2 oz.

Typical Pipe Protector
Typical Wood Protector
FASTENERS FOR PROTECTORS

WOOD PROTECTOR STRAP
Heavy galvanized steel strap formed to fit tight on Cat. No. 96 wood molding protector — available as strap only to be used with nails, wood screws or metal screws or with screws and expansion anchors for masonry.

Galvanized
Cat. No. 71M — Strap Only - 1 oz.
Cat. No. 71G — Strap with masonry anchors - 2.6 oz.

PIPE PROTECTOR STRAP (TWO BOLT)
Heavy copper strap 1” wide of 0.064” thick metal formed to fit metal pipe or PVC pipe protectors — holes punched to receive bolts, screws, or nails to 1/4” diameter.

Copper
Cat. No. 71B-1 — for 1/2” PVC cable protector #93A - 1.3 oz.
Cat. No. 71B-5 — for 5/8” copper cable protector #C93A - 1.2 oz.
Cat. No. 71B-3 — for 3/4” PVC cable protector #93B - 1.4 oz.
Cat. No. 71B-4 — for 1” PVC cable protector #93C - 2.0 oz.
Cat. No. 71B-6 — for 1-1/4” PVC cable protector #93D - 2.0 oz.

PIPE PROTECTOR LOOP (ONE BOLT)
Heavy copper loop 1” wide of 0.064” thick metal formed to fit metal pipe or PVC pipe protectors — hole punched to receive bolt to 1/4” diameter.

Copper
Cat. No. 71-1 — for 1/2” PVC cable protector #93A - 1.8 oz.
Cat. No. 71-5 — for 5/8” copper cable protector #C93A - 1.5 oz.
Cat. No. 71-3 — for 3/4” PVC cable protector #93B - 1.8 oz.
Cat. No. 71-4 — for 1” PVC cable protector #93C - 3.0 oz.
Cat. No. 71-6 — for 1-1/4” PVC cable protector #93D - 3.0 oz.

Aluminum
Cat. No. A71-1 — for 1/2” PVC cable protector #93A - 0.6 oz.
Cat. No. A71-5 — for 5/8” copper cable protector #C93A - 0.7 oz.
Cat. No. A71-3 — for 3/4” PVC cable protector #93B - 0.61 oz.
Cat. No. A71-4 — for 1” PVC cable protector #93C - 0.6 oz.
Cat. No. A71-6 — for 1-1/4” PVC cable protector #93D - 0.8 oz.
LEAD TUBING AND WEDGES

LEAD TUBING
Pure lead tubing for use in covering copper or aluminum cable or points to prevent contact with dissimilar metals or to prevent corrosion from nearby acids — may be field swaged to point for use on copper points — wall 1/16” thick — each size listed is oversize to slip over exact diameter of point or cable. Maximum length is 120”.

Cat. No. 460 – 3/8” Inside Diameter - 0.62 oz./in.
Cat. No. 460A – 1/2” Inside Diameter - 0.75 oz./in.
Cat. No. 460B – 5/8” Inside Diameter - 1.1 oz./in.

LEAD WEDGE
Combination lead and tin wedge to be used in tubing or pipe to wedge cable against wall for making cable electrically continuous with metal at top and bottom of protector pipe or conduit run — each wedge is 1” long — available in size ranges for cables 3/8” to 1/2” diameter.

Cat. No. 461 – for 1/2” conduit or pipe - 1.6 oz.
Cat. No. 461A – for 3/4” conduit or pipe - 2.2 oz.
Cat. No. 461B – for 1” conduit or pipe - 3.7 oz.
Cat. No. 461C – for 1-1/4” conduit or pipe - 6.6 oz.
GROUND RODS

COPPERCLAD - STANDARD
Our copperclad ground rods meet standards UL 467, ANSI C33.8 RUS, and are approved for use in lightning protection per UL 96 and UL 96A. Copper cladding is a minimum of 0.010 inches thick.

Cat. No. 90-8 — 1/2” diam. x 8’ long - 5 lbs. - 8 oz.
Cat. No. 91-10 — 1/2” diam. x 10’ long - 7 lbs.
Cat. No. 94-8 — 5/8” diam. x 8’ long - 7 lbs.
Cat. No. 94-10 — 5/8” diam. x 10’ long - 9 lbs.
Cat. No. 97-8 — 3/4” diam. x 8’ long - 10 lbs.
Cat. No. 97-10 — 3/4” diam. x 10’ long - 13 lbs.
Cat. No. 97-12 — 3/4” diam. x 12’ long - 15 lbs.
Cat. No. 97C-10 — 1” diam. x 10’ long - 18 lbs.

COPPERCLAD - SECTIONAL
(Threaded both ends)
Cat. No. 90-8S — 1/2” diam. x 8’ long - 5 lbs. - 8 oz.
Cat. No. 91-10S — 1/2” diam x 10’ long - 7 lbs.
Cat. No. 94-8S — 5/8” diam. x 8’ long - 7 lbs.
Cat. No. 94-10S — 5/8” diam. x 10’ long - 9 lbs.
Cat. No. 97-8S — 3/4” diam. x 8’ long -10 lbs.
Cat. No. 97-10S — 3/4” diam. x 10’ long - 13 lbs.
Cat. No. 97-12S — 3/4” diam. x 12’ long - 15 lbs.
Cat. No. 97C-10S — 1” diam. x 10’ long - 18 lbs.

SOLID COPPER
Cat. No. 90-8-C — 1/2” diam. x 8’ long - 6 lbs. - 6 oz.
Cat. No. 91-10-C — 1/2” diam. x 10’ long - 8 lbs.
Cat. No. 94-8-C — 5/8” diam. x 8’ long - 10 lbs.
Cat. No. 94-10-C — 5/8” diam. x 10’ long - 12 lbs. - 8 oz.
Cat. No. 97-8-C — 3/4” diam. x 8’ long - 14 lbs. - 6 oz.
Cat. No. 97-10-C — 3/4” diam. x 10’ long - 18 lbs.
Cat. No. 97C-10-C — 1” diam. x 10’ long - 32 lbs.

STAINLESS STEEL
Cat. No. 90-8ST — 1/2” diam. x 8’ long - 5 lbs. - 11 oz.
Cat. No. 91-10ST — 1/2” diam. x 10’ long - 7 lbs. - 2 oz.
Cat. No. 94-8ST — 5/8” diam. x 8’ long - 9 lbs.
Cat. No. 94-10ST — 5/8” diam. x 10’ long - 11 lbs.
Cat. No. 97-8ST — 3/4” diam. x 8’ long -12 lbs. - 13 oz.
Cat. No. 97-10ST — 3/4” diam. x 10’ long - 16 lbs.
Cat. No. 97C-8ST — 1” diam. x 8’ long - 22 lbs. - 11 oz.
Cat. No. 97C-10ST — 1” diam. x 10’ long - 27 lbs.
Copper
Cat. No. 98 – for 1/2” Rod - 4.8 oz.
Cat. No. 98A – for 5/8” Rod - 6.4 oz.
Cat. No. 98B – for 3/4” Rod - 7.8 oz.

BUS TYPE GROUND CLAMP
Heavy cast bronze bus type ground rod clamp with 5/16” bronze bolt tension on rod. All clamps have 2-1/4” contact length along axis of rod and 4” cable contact. For main sized cables through No. 605. Suggested torque: 150 in./lbs.

Copper
Cat. No. 99B – for 1/2” Rod - 1 lb. - 1 oz.
GROUND ROD COUPLINGS

Made of strong copper alloy.

Cat. No. 203-G2 — for 1/2" Ground Rod - 2.2 oz.
Cat. No. 203-G5 — for 5/8" Ground Rod - 3.8 oz.
Cat. No. 203-G6 — for 3/4" Ground Rod - 4.8 oz.
Cat. No. 203-G8 — for 1" Ground Rod - 13.3 oz.

GROUND ROD DRIVING STUD

For use with couplings to protect threads.
Made of high strength steel.

Cat. No. 232-G2 — for 1/2" Coupling - 1.8 oz.
Cat. No. 232-G5 — for 5/8" Coupling - 3 oz.
Cat. No. 232-G6 — for 3/4" Coupling - 5.3 oz.
Cat. No. 232-G8 — for 1" Coupling - 9.8 oz.

GROUND ROD DRIVING SLEEVE

For use on standard ground rods to prevent top from mushrooming.
Made of high strength steel.

Cat. No. 233-G2 — for 1/2" Ground Rod - 1lb. - 11 oz.
Cat. No. 233-G5 — for 5/8" Ground Rod - 1lb. - 11 oz.
Cat. No. 233-G6 — for 3/4" Ground Rod - 1lb. - 9 oz.
COPPER FLAT PLATES
Copper ground plates for installation in place of ground rods where shallow top soil is encountered — for soil depth of 1 ft. to 2 ft. use No. 88 (two square feet) plate — for soil depth less than 1 ft. use No. 88A (nine square feet) plate — copper thickness 0.032” — for main sized cables through No. 605.

Copper
Cat. No. 88 — 12” x 24” - 3 lbs. - 7 oz.
Cat. No. 88A — 24” x 24” - 6 lbs. - 5 oz.
Cat. No. 88B — 36” x 36” - 13 lbs. - 13 oz.

Typical use on downlead cable

No. 88A with (2) cable connections

No. 88 with (1) cable connection
PVC GROUND ACCESS WELLS

Ground Access Wells of Schedule 40 PVC – 1/4” thick galvanized steel lid.

Optional configuration includes 4 slots, equally spaced, 15/16” wide, 1/2 the total length of the ground well. Custom sizes and configurations available upon request.

Cat. No. 89A-18 – 6” I.D. x 18” long - 10 lbs. - 9 oz.
Cat. No. 89A-24 – 6” I.D. x 24” long - 12 lbs. - 3 oz.
Cat. No. 89A-36 – 6” I.D. x 36” long - 16 lbs. - 3 oz.

Cat. No. 89B-18 – 8” I.D. x 18” long - 16 lbs. - 6 oz.
Cat. No. 89B-24 – 8” I.D. x 24” long - 19 lbs. - 6 oz.
Cat. No. 89B-36 – 8” I.D. x 36” long - 25 lbs. - 6 oz.

Cat. No. 89C-18 – 10” I.D. x 18” long - 25 lbs.
Cat. No. 89C-24 – 10” I.D. x 24” long - 29 lbs. - 1 oz.
Cat. No. 89C-36 – 10” I.D. x 36” long - 36 lbs. - 13 oz.

Cat. No. 89D-18 – 12” I.D. x 18” long - 33 lbs. - 15 oz.
Cat. No. 89D-24 – 12” I.D. x 24” long - 38 lbs. - 16 oz.
Cat. No. 89D-36 – 12” I.D. x 36” long - 48 lbs. - 6 oz.
CABLE DISCONNECTOR

Heavy cast bronze or aluminum cable disconnector with separate bolt tension cable clamps — 1-1/2" cable contact surface. For use to test ground resistance or for use on movable equipment. For cables No. 1 through No. 605. Overall dimensions - 2" x 3-3/4".

No. 694 and No. A694 do not have anchor bolts.

No. 695 and No. A695 are furnished with two 1/4" flat head bolts and two 1/4" lead expansion anchors.

Cat. No. 694 — Copper - 10.8 oz.
Cat. No. A694 — Aluminum - 3.7 oz.

Cat. No. 695 — Copper - 12.4 oz.
Cat. No. A695 — Aluminum - 5.3 oz.
Copperclad steel aircraft tie-down anchor rod with copper sleeve compressed on rod – eye radius 1-1/2". These rods meet ASTM-B-371 specifications. While UL 467 does not cover tie-down rods, these rods meet UL’s bending test. Rods are manufactured from 3/4” nominal, industry standard ground rods.

**Total Length**

| Cat. No. 94 - 6TD | 5/8” diameter, 6’ Long | 5’7” | 5 lbs. |
| Cat. No. 94 - 8TD | 5/8” diameter, 8’ Long | 7’7” | 7 lbs. |
| Cat. No. 94 - 10TD | 5/8” diameter, 10’ Long | 9’7” | 9 lbs. |
| Cat. No. 97 - 8TD | 3/4” diameter, 8’ Long | 7’7” | 12 lbs. |
| Cat. No. 97 - 10TD | 3/4” diameter, 10’ Long | 9’7” | 15 lbs. |

**PLASTIC DEPRESSION FORM**

Cat. No. 761 - 2.1 oz.

Plastic depression form – snaps over loop on tie-down anchor rod to form depression approximately 6” long by 4” wide by 3” deep around standard 5/8” or 3/4” diameter anchor rod.

**COPPERCLAD ANCHOR**

A copperclad helix anchor, for use with aircraft tie-down rods.

| Cat. No. 95A | for 5/8” rods - 2 lbs. - 15 oz. |
| Cat. No. 95B | for 3/4” rods - 2 lbs. - 15 oz. |
STATIC GROUNDING RECEPTACLES
(Aircraft Type)

Cat. No. 680 — Copper - 1 lb. 11 oz.
Cast bronze aircraft type static grounding receptacle. Cover attached with strong linked chain. Replaceable stud for standard 1/2” grounding connector. Base threaded to receive 3/4” sectional ground rod or extension rod. Overall dimensions - 2-15/16” x 3-15/16”. Inside dimension: 2-1/4” diameter.

Cat. No. 680A — Copper - 2 lbs.
Same as No. 680 described at left except cable connector No. 68A added. Cable capacity No. 6 AWG through No. 250 MCM AWG. Overall dimensions: 2-15/16” diameter x 3-15/16”. Inside dimension: 2-1/4” diameter.

Cat. No. 681 — Copper - 3 lbs.
Same as No. 680 described at left except with dimensions as follows: Overall dimensions: 4-1/2” diameter x 3-7/16”. Inside dimension: 1-15/16” diameter.

Typical use with ground rod only
Typical use with welded connection to cable in slab
Typical use with clamped connection to cable in slab
STATIC GROUNDING RECEPTACLES AND EXTENSION RODS

Cast bronze aircraft type static grounding receptacle for use on vertical masonry wall. Cover attached with strong linked chain and spring clip to retain lid. Replaceable stud for standard 1/2” grounding connector – base threaded to receive 3/4” sectional ground rod or extension rod. Overall dimensions: 2-15/16” diameter x 3-15/16”. Inside dimension: 2-1/4” diameter.

Cat. No. 680B – Copper - 1 lb. - 11 oz.

Copperclad steel extension rods to assist in positioning receptacles at correct height when pouring concrete or for cable attachment – each rod threaded 3/4” to fit receptacle hub.

Cat. No. 897 – Copper – 4” long - 6.7 oz.
Cat. No. 897A – Copper – 24” long - 2 lbs. - 8 oz.
Cat. No. 897B – Copper – 36” long - 3 lbs. - 12 oz.
HEAVY DUTY STACK CABLES

Standard of the Industry for Commercial Stacks

Cat. No. 604 – 28 strands of 14 gauge (.064) bare copper wire in rope lay configuration, 7/16” diameter, 115,000 circular mil cross section – weight of copper 375 pounds per 1,000’.

Available on 250’ and 500’ spools.

Cat. No. 605 – 37 strands of 0.0756” bare copper wire in concentric configuration – 1/2” diameter, 211,500 circular mil cross section (#4/0 AWG) – weight of copper 653 pounds per 1,000’.

Available on 250’ and 500’ spools.

Lead Covered Copper Cable for Stack Use

Cat. No. 604L – 28 strands of 14 gauge (.066) bare copper wire in rope lay configuration, 1/8” lead jacket thickness, 121,900 circular mil cross section. Weight of copper – 960 pounds per 1,000’.
HEAVY DUTY STACK POINTS

LEAD COVERED COPPER

Heavy duty stack points of solid copper rod with 1/16” lead jacket to prevent corrosion from stack fumes. Available in copper rod diameters of 1/2”, 5/8” – lengths 18” to 72” standard. All points have standard size 1/2” NC or 5/8” NC threads.

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Diameter</th>
<th>Length</th>
<th>Weight</th>
<th>Ounces</th>
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</thead>
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<td>18”</td>
<td>2 lbs.</td>
<td>2 oz.</td>
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<td>405-5</td>
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<td>18”</td>
<td>3 lbs.</td>
<td>1 oz.</td>
</tr>
<tr>
<td>406-4</td>
<td>1/2”</td>
<td>24”</td>
<td>2 lbs.</td>
<td>10 oz.</td>
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<tr>
<td>406-5</td>
<td>5/8”</td>
<td>24”</td>
<td>4 lbs.</td>
<td>1 oz.</td>
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<td>6 lbs.</td>
<td>2 oz.</td>
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<tr>
<td>409-5</td>
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<td>2 oz.</td>
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<td>3 oz.</td>
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<td>9 lbs.</td>
<td>3 oz.</td>
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<td>10 lbs.</td>
<td>3 oz.</td>
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<td>66”</td>
<td>7 lbs.</td>
<td>4 oz.</td>
</tr>
<tr>
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<td>11 lbs.</td>
<td>3 oz.</td>
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<td>414-5</td>
<td>5/8”</td>
<td>72”</td>
<td>12 lbs.</td>
<td>3 oz.</td>
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</table>
# HEAVY DUTY STACK POINTS

**STAINLESS STEEL**

Heavy duty stack points of solid stainless steel rod with tapered tip – alloy of steel to prevent corrosion from stack fumes. Available in rod diameters of 1/2", 5/8" or 3/4" – lengths 18" to 72" standard. All points have standard 1/2" NC or 5/8" NC threads.

<table>
<thead>
<tr>
<th>Cat. No.</th>
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<th>Length</th>
<th>Weight</th>
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</thead>
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</tr>
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<td>2 lbs. - 4 oz.</td>
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<tr>
<td>456-5</td>
<td>5/8&quot;</td>
<td>24&quot;</td>
<td>2 lbs. - 1 oz.</td>
</tr>
<tr>
<td>456-6</td>
<td>3/4&quot;</td>
<td>24&quot;</td>
<td>3 lbs.</td>
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<td>72&quot;</td>
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<td>72&quot;</td>
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STACK POINT BASE — SIDE MOUNT

Heavy duty cast stainless steel point base for mounting on vertical surface — threaded end to receive 1/2” or 5/8” diameter points — may be used as two-way, three-way or four-way connection — available in series No. 420B for use in masonry concealed, or in series No. 420 or No. 420A for exposed installation — all screws stainless steel to resist corrosion — series No. 420 furnished complete with 3/8” or 1/2” screw and lead expansion anchor in back plate — for metal stack, series No. 420A furnished with 3/8” or 1/2” screw, two nuts and two washers — for use with cables No. 604, No. 605, and No. 604L. Overall dimensions 4-1/2” x 3” - weight is 1 lb. - 5 oz.

Cat. No. 420-44S — for 1/2” point, 1/2” anchor
Cat. No. 420-45S — for 5/8” point, 1/2” anchor
Cat. No. 420-34S — for 1/2” point, 3/8” anchor
Cat. No. 420-35S — for 5/8” point, 3/8” anchor
Cat. No. 420A-44S — for 1/2” point, for metal 1/2”
Cat. No. 420A-45S — for 5/8” point, for metal 1/2”
Cat. No. 420A-34S — for 1/2” point, for metal 3/8”
Cat. No. 420A-35S — for 5/8” point, for metal 3/8”
Cat. No. 420B-4S — for 1/2” point, no anchor
Cat. No. 420B-5S — for 5/8” point, no anchor
STACK POINT BASE — TOP MOUNT

Heavy duty cast stainless steel point base for mounting on top surface of concrete or metal smoke stack — threaded end to receive 1/2” or 5/8” diameter points — may be used as two-way, three-way or four-way connection — available in series No. 421B for use in concealed masonry cap, or in series No. 421 or No. 421A for exposed installation — all screws stainless steel to resist corrosion — series No. 421 furnished complete with 3/8” or 1/2” screw and lead expansion anchor in back plate for masonry stack — for metal stack, series No. 421A furnished with 3/8” or 1/2” screw, two nuts and two washers — for use with cables No. 604, No. 605, and No. 604L. Overall dimensions - 3 - 1/2” x 3” x 2” - weight is 1 lb. - 5 oz.

Cat. No. 421-44S — for 1/2” point, 1/2” anchor
Cat. No. 421-45S — for 5/8” point, 1/2” anchor

Cat. No. 421-34S — for 1/2” point, 3/8” anchor
Cat. No. 421-35S — for 5/8” point, 3/8” anchor

Cat. No. 421A-44S — for 1/2” point, for metal 1/2”
Cat. No. 421A-45S — for 5/8” point, for metal 1/2”

Cat. No. 421A-34S — for 1/2” point, for metal 3/8”
Cat. No. 421A-35S — for 5/8” point, for metal 3/8”

Cat. No. 421B-4S — for 1/2” point, no anchor
Cat. No. 421B-5S — for 5/8” point, no anchor
HEAVY DUTY STACK POINT BASE

Heavy duty cast bronze point base for mounting stack point on vertical surface — threaded end to receive 1/2" or 5/8" diameter points — available in bare bronze series No. 422B for use in masonry concealed, or in 1/16" lead covered series No. 422 for exposed installation — all screws stainless steel to resist corrosion — for use with cables No. 604, No. 605, or No. 604L.

Cat. No. 422-4 — Lead covered, for 1/2" point - 1 lb. - 13 oz.
Cat. No. 422-5 — Lead covered, for 5/8" point - 1 lb. - 12 oz.

Cat. No. 422B-4 — Bare bronze, for 1/2" point - 1 lb.
Cat. No. 422B-5 — Bare bronze, for 5/8" point - 1 lb.
HEAVY DUTY CABLE SPLICERS

Heavy duty cast bronze cable splicer for use in closing lead covered encircling band on stack or for lead covered cable to bare cable connection — each cable end held securely with two bolt tension — Series No. 417 lead covered 1/16" thick, Series No. 418 bare bronze — for use with cables No. 604, No. 605, or No. 604L.

Cat. No. 417 — Lead Covered - 1 lb. - 11 oz.
Cat. No. 418 — Bare Bronze - 11 oz.

Heavy duty cast stainless steel cross run cable splicer — cable held securely by four bolt tension — for use on top 25' of stack and mid-point encircling band — for use with cables No. 401, No. 402, No. 403 or No. 404. Overall dimensions - 3 - 1/2" x 3".

Cat. No. 466S — Stainless Steel - 1 lb. - 5 oz.
POINT AND CABLE HOLDERS

Heavy duty cast bronze point, cable or tubular protector pipe holder — bolt tension cap for positive holding — 3/8" stem diameter — heavy lead covered for use on top 25’ of stack or bare for use on pipe — furnished without anchor (Series No. 433 and No. 433B), with lead expansion anchor (Series No. 439 and No. 439B), and with two stainless steel nuts and washers (Series No. 439A and No. 439C) — lead covered holders for use with points or cables 3/4” OD through 7/8” OD — bare holder for use with 7/8” OD standard protector pipes.

Copper
Cat. No. 433-3 — Lead covered, 3/8” stem, no anchor - 12 oz.
Cat. No. 433B-3 — Bare bronze, 3/8” stem, no anchor - 4 oz.
Cat. No. 439-3 — Lead covered, 3/8” stem and anchor for masonry - 1 lb. - 6 oz.
Cat. No. 439A-3 — Lead covered, 3/8” stem for metal - 1 lb. - 4 oz.
Cat. No. 439B-3 — Bare bronze, 3/8” stem and anchor for masonry - 6 oz.
Cat. No. 439C-3 — Bare bronze, 3/8” stem for metal - 7.9 oz.

NOTE: See base No. 420 details for use of this series as lead covered point holder.
HEAVY DUTY CABLE HOLDERS

COMPRESSION TYPE
Heavy cast bronze cable holder for use in supporting stack cables — compression type cable grip for secure holding — 3/8” stem diameter — furnished without anchor (Series No. 430), with lead expansion anchor (Series No. 436) and with two stainless steel nuts and washers (Series No. 436A) for use with cables No. 604 and No. 605. (For Class I structures only.)

Cat. No. 430-3 — Bare bronze, 3/8” stem, no anchor - 2.1 oz.
Cat. No. 436-3 — Bare bronze, 3/8” stem and anchor for masonry - 4 oz.
Cat. No. 436A-3 — Bare bronze, 3/8” stem for metal - 2.9 oz.

BOLT TENSION TYPE
Heavy cast bronze cable holder for use in supporting stack cables — bolt tension cap for positive holding — 3/8” stem diameter — furnished without anchor (Series No. 431), with lead expansion anchor (Series No. 437) and for metal with two stainless steel nuts and washers (Series No. 437A) — for use with cables No. 604 and No. 605.

Cat. No. 431-3 — Bare bronze, 3/8” stem, no anchor - 4.5 oz.
Cat. No. 437-3 — Bare bronze, 3/8” stem and anchor - 6.4 oz.
Cat. No. 437A-3 — Bare bronze, 3/8” stem for metal - 8.3 oz.
CABLE AND PIPE HOLDERS

Heavy duty cast bronze cable or tubular protector pipe holder — compression type retainer for secure holding — 3/8” stem diameter — heavy lead covered for use on top 25’ of stack or bare for use on pipe — furnished without anchor (Series No. 432 and No. 432B), with lead expansion anchor (Series No. 438 and No. 438B) and with two stainless steel nuts and washers (Series No. 438A and No. 438C) — lead covered holder for use with cables 5/8” OD through 7/8” OD — bare holder for use with 5/8” and 3/4” standard protector pipes.

Cat. No. 432-3 — Lead covered, 3/8” stem, no anchor - 6.1 oz.
Cat. No. 432B-3 — Bare bronze, 3/8” stem, no anchor - 2.1 oz.
Cat. No. 438-3 — Lead covered, 3/8” stem and anchor for masonry - 8 oz.
Cat. No. 438A-3 — Lead covered, 3/8” stem for metal - 6.6 oz.
Cat. No. 438B-3 — Bare bronze, 3/8” stem and anchor for masonry - 4 oz.
Cat. No. 438C-3 — Bare bronze, 3/8” stem for metal - 2.9 oz.
MISCELLANEOUS STACK EQUIPMENT

WELDING STUD
Stainless steel female stud for welding to steel stacks to receive threaded bronze cable and point holders — length of stud 1-1/4”, diameter 5/8” — with 3/8” threads for holders.

Cat. No. 468-3 – 3/8” thread - 2.4 oz.

WELDING BRACKET
Stainless steel bracket for welding to steel stacks to support bronze cable and point holders — may be bolted to steel surface with two 3/8” screws — stand-off distance 1-1/2”, welding ears 1” wide — made of 1/8” x 1” stainless steel stock — hole to receive 3/8” stem on holder of metal mount series.

Cat. No. 469 - 2.6 oz.
WELDING ANGLE
Stainless steel angle for welding to steel stack to support air terminals or cable holders — may be bolted to steel surface with two 3/8" screws — made of 1/8" thick stainless steel 3" wide, 6" vertical leg, 4-5/8" horizontal leg of angle — holes to receive 1/4" anchor bolts on point base of metal mount series.

Cat. No. 470 - 13.8 oz.
STANDARD TREE AIR TERMINALS

Air terminal assemblies consisting of solid copper point with cast bronze bolt tension base attached — furnished complete with wood screw in base — available in 3/8" or 1/2" diameter copper point 36” or 48” long; base No. 42 as described elsewhere in catalog.

Copper
Cat. No. 160-3 – 36” point - 1 lb. - 10 oz.
Cat. No. 160-4 – 48” point - 1 lb. - 1 oz.
MINIATURE TREE AIR TERMINAL

Air terminal assembly consisting of solid copper point and base - for use on lateral secondary branches - furnished with two wood screws and bolt tension cable attachment - point of copper 1/4" diameter, 8" long; point of 3/8" diameter, 8" long — base for all miniature cables and wires through 5/16" diameter.

Cat. No. 161 — Copper - 5.8 oz.
FOR MATURE TREES ONLY WITH BARK 1” THICK OR GREATER.
Cast bronze tree drive, 4” long, for use on main size cables or air terminals — simply drive holder in tree and compress ear around cable — holds firm to cable but allows movement for growth or wind sway — for all cables through No. 605.

Cat. No. 151 — Copper - 8 oz.

NOTE: Use 72 & 83 on Young Trees

FOR MATURE TREES ONLY WITH BARK 1” THICK OR GREATER.
Cast bronze tree drive 3-3/4” long for use on miniature cable secondary runs — simply drive holder in tree and compress ear around cable — holds firm to cable but allows movement for growth or wind sway — for all cables and solid wires through 3/8” diameter.

Cat. No. 152 — Copper - 1 oz.
ORNAMENTAL BALLS AND DIRECTION VANE

ORNAMENTAL BALL
High quality impact resistant plastic ornamental ball for use on all standard 1/2” diameter points. Overall dimensions - 3-1/2” x 3-1/2” diameter.

Cat. No. A104 - 1.8 oz.

Specify color listed below:
Blue
White
Red

NOTE: Ceramic Balls also available – blue and white – 4” diameter – for 1/2” or 5/8” diameter points. - 8 oz.

DIRECTION VANE
Die cast aluminum direction vane to indicate wind direction when only slight breeze – fits standard 1/2” diameter points – rides on nylon bushing.

Shipped for 1/2” point unless otherwise specified.