Grounding Equipment

Warranty - Material

Hubbell Power Systems, Inc. warrants all products sold by it to be merchantable (as such term is defined in the Uniform Commercial Code) and to be free from defects in material and workmanship. Buyer must notify the Company promptly of any claim under this warranty. The Buyer's exclusive remedy for breach of this warranty shall be the repair or replacement, F.O.B. factory, at the Company's option, of any product defective under the warranty which is returned to the Company within one year from the date of shipment. NO OTHER WARRANTY, WHETHER EXPRESS OR ARISING BY OPERATION OF LAW, COURSE OF DEALING, USAGE OF TRADE OR OTHERWISE IMPLIED, SHALL EXIST IN CONNECTION WITH THE COMPANY'S PRODUCTS OR ANY SALE OR USE THEREOF. The Company shall in no event be liable for any loss of profits or any consequential or special damages incurred by Buyer. The Company's warranty shall run only to the first Buyer of a product from the Company, from the Company's distributor, or from an original equipment manufacturer reselling the Company's product, and is non-assignable and non-transferable and shall be of no force and effect if asserted by any person other than such first Buyer. This warranty applies only to the use of the product as intended by Seller and does not cover any misapplication or misuse of said product.

Warranty - Application

Hubbell Power Systems, Inc. does not warrant the accuracy of and results from product or system performance recommendations resulting from any engineering analysis or study. This applies regardless of whether a charge is made for the recommendation, or if it is provided free of charge.

Responsibility for selection of the proper product or application rests solely with the purchaser. In the event of errors or inaccuracies determined to be caused by Hubbell Power Systems, Inc., its liability will be limited to the re-performance of any such analysis or study.

NOTICE: For latest revision of our Catalog and Literature, please visit our web site: *www.hubbellpowersystems.com*

NOTE: Because Hubbell has a policy of continuous product improvement, we reserve the right to change design and specifications without notice.

www.hubbellpowersystems.com
E-mail: hpsliterature@hps.hubbell.com

Temporary Grounding Equipment

Safe Working Practices

Reasons for temporary grounding to protect personnel working on de-energized lines include these five:

1. Induced voltage from adjacent energized lines,
2. Fault-current feedover from adjacent lines,
3. Lightning strikes anywhere on the circuit,
4. Switching-equipment malfunction or human error,
5. Accident-initiated contact with adjacent lines.

Since any one of the above could result in re-energizing the circuit, most utilities treat these potential dangers as ever-present and impose strict temporary-grounding work rules. Their crews' experience often voices these watch-words for the wise to heed:

"If you can't see both ends, it's hot."

and

"If it isn't grounded, it isn't dead."

Vital Procedure Recommendations

• Step One: Testing

With a test instrument, confirm the circuit to be worked has been de-energized intentionally before ground sets are applied.

• Step Two: Cleaning

For a good connection, scrub oxides and contaminants from conductor, buswork or lattice contact points. Chance universal wire brushes make this easy. Serrated-jaw clamps also aid by penetrating surface contaminants.

• Step Three: Connecting

Chance insulated clampsticks are the proper tools to apply grounding clamps. To help achieve correct connection tightness, various clampstick lengths and styles are available in Catalog Section 2100, "Insulated Hand Tools."

To indicate energized conditions on overhead lines, (from left) Chance **Auto Ranging Voltage Indicator, Digital Voltage Detector** and **Multi-Range Voltage Detector**. At far right, **Energized Cable Sensor** performs the same function on URD cable with an exposed concentric neutral and elbows without test points.

See Catalog Section 2450, "Instruments and Meters," for details and ordering information.

General Practices

On de-energized distribution lines, Chance recommends Double-Point grounding (**at both structures adjacent to worksite:** jumpering all three phases together and grounding) **plus** a personal ground at the worksite (from any one phase to a grounded cluster bar well below the worker's feet). On a system without a neutral, Chance recommends connecting down leads to screw ground rods installed at least 20 feet from all structures and barricaded. Only for maintenance tasks during which grounds need **not** be replaced does Chance find acceptable the Single-Point grounding method (**at only the worksite:** jumpering all phases together and grounding plus personal ground, as above).

Where adequate phase-to-phase clearances permit, Chance accepts the practice of grounding only the phase being worked (in the same manner as personal ground, above).

Reference:

Derived from ASTM F 855, Standard Specifications for Temporary Protective Grounds to be Used on De-energized Electric Power Lines and Equipment

Grounding Set Ratings

Short Circuit Properties[A]								
Withstand Rating, Symmetrical kA RMS, 60 Hz			Ultimate Rating/Capacity,[B] Symmetrical kA RMS, 60 Hz				Continuous Current Rating, A RMS, 60 Hz	Minimum Cable Size with Ferrule Installed Equal or Larger Than
15 cycles (250 MS)	30 cycles (500 MS)	Copper Cable Size	6 cycles (100 MS)	15 cycles (250 MS)	30 cycles (500 MS)	60 cycles (1 S)		
14	10	#2	29	18	13	9	200	#2
21	15	1/0	48	30	21	15	250	1/0
27	20	2/0	61	38	27	19	300	2/0
34	25	3/0	76	48	34	24	350	3/0
43	30	4/0	96	60	43	30	400	4/0
54	39	250 kcmil or two 2/0	114	72	51	36	450	250 kcmil or two 2/0
74	54	350 kcmil or two 4/0	159	101	71	50	550	350 kcmil or two 4/0

[A] Withstand and ultimate short circuit properties are based on performance with surges not exceeding 20% asymmetry factor (see Appendices X3 and X4, ASTM F 855).
[B] Ultimate rating represents a symmetrical current which the clamp shall carry for the specified time.

Safety Reviews

On a regular basis, each utility needs to re-examine its temporary grounding practices. **As part of the total maintenance program, schedule such routine reviews apart from sessions to set new practices for system upgrades and additions.** Among others, include on your review checklist these basics:

1. Clamp designs specific to each application,
2. Cable sized for fault-current potential (see table on page 3002) and minimum-slack lengths,
3. How construction affects placement of grounds,
4. Work procedures outlined above,
5. Inspect and test each grounding set.

Ideal for this function is the Chance **Grounding-Set Tester.**

It checks the resistance in a protective ground set and can help locate problems often remedied by simple repairs. A how-to video is included with the tester.

See Catalog Section 2450, "Instruments and Meters," for details and ordering information.

Selecting grounding clamps and cable

To serve your particular needs, the Chance grounding line comprises both ready-made sets and separate components for your specifications. Among the options and criteria to consider:

- Functional fit—Sizes of the clamp types in this section appear in ascending order of maximum-main-line size. By design, many clamps serve a wide size range for their conductor type (cable, bus or tower).
- Adequate capacity—Published ratings for both clamps and cable must withstand maximum-potential system fault-current magnitude and full-time duration. Certified test reports are available on request.
- Coordinated connectors—Terminal (either pressure-type or threaded-type) selected for clamps dictates the cable ferrule type (either plain or threaded) to match.
- On-site handling—Application clearances and fit (for overhead conductors and ground wires, transmission tower shapes, URD apparatus or substation buswork) affect clamp and cable dimensions.

How to order a Grounding Set

In addition to the specifying criteria above, each part of a grounding set requires certain choices:

1. Clamps

•ASTM designations for Type, Class and Grade given for clamps shown in this section.

2. Ferrules

•Copper or aluminum. •Plain or threaded.

3. Cable

•Length required to reach application distances.

•ASTM Type I with black or yellow elastomer jackets for temperatures from -40°F (-40°C) through +194°F (+90°C).

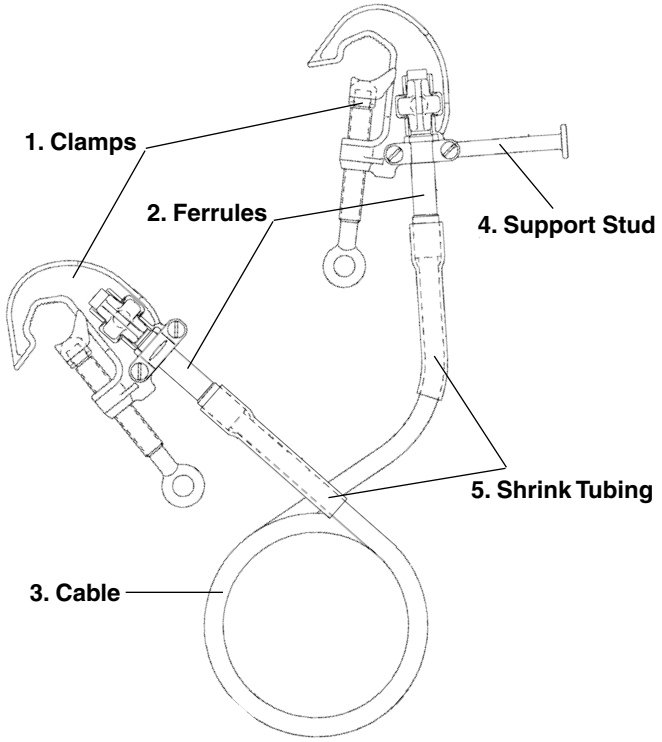
•ASTM Type III with clear thermoplastic jacket for temperatures from +14°F (-10°C) through +140°F (+60°) should be used only in well-ventilated areas.

4. Support Stud

•This option recommended on only one clamp to help control lifting the set to the first clamp attachment point.

5. Shrink Tubing

•This translucent option recommended for stress relief and inspection of cable strands between ferrule and jacket.



Installation information

Several training aids available on request — Chance videotapes and technical manuals — provide more details on proper installation. Consult your Chance representative for any additional assistance.

C-Type Grounding Clamps

T6000465
Bronze body, Smooth jaws, Bronze eyescrew with fine threads, Tapped for 5/8-11 UNC threaded ferrule or T6000466, Drilled for 5/8-11 UNC threaded ferrule

T6000790
Bronze body, Smooth jaws, Bronze T-handle/eyescrew with fine threads, Tapped for 5/8-11 UNC threaded ferrule

C6002271
Bronze body, Smooth jaws, Bronze eyescrew with fine threads, Tapped for 5/8-11 UNC threaded ferrule

C6001959
Bronze body, Smooth jaws, Bronze T-handle/eyescrew with fine threads, Tapped for 5/8-11 UNC threaded ferrule

C6001754
Aluminum body, Smooth jaws, Bronze eyescrew with Acme threads, Tapped for 5/8-11 UNC threaded ferrule

C6002275
Aluminum body, Smooth jaws, Bronze eyescrew with Acme threads, Bronze pressure-type terminals

C6002276
Aluminum body, Serrated jaws, Bronze eyescrew with Acme threads, Bronze pressure-type terminals

T6002708
Aluminum body, Serrated jaws, Bronze eyescrew with Acme threads, Tapped for 5/8-11 UNC threaded ferrule

C6001743
Aluminum body, Smooth jaws, Bronze eyescrew with fine threads, Tapped for 5/8-11 UNC threaded ferrule

Catalog Number	C6001959 T6000465 T6000466 T6000790	C6002271	C6001754	C6002275	C6002276	T6002708	C6001743
ELECTRICAL RATINGS							
Continuous Current (AMPS)	250	400	350	400	400	400	400
Fault Current - 15 Cycles (AMPS)	21,000	43,000	27,000	43,000	43,000	43,000	43,000
Fault Current - 30 Cycles (AMPS)	15,000	30,000	20,000	30,000	30,000	30,000	30,000
MECHANICAL RATINGS							
Recommended Torque (in.-lb.)	200	250	250	250	250	250	250
Main Line Range - Max.	477 kcmil ACSR (0.814")	1033 kcmil ACSR (1.25")	750 kcmil Str. Cu. 636 kcmil ACSR (0.998")	1033 kcmil ACSR (1.25")	1033 kcmil ACSR (1.25")	1033 kcmil ACSR (1.25")	1000 kcmil Cu. 1590 kcmil ACSR (1.50")
Main Line Range - Min.	#6 Sol. Cu. (0.162")	#6 Sol. Cu. (0.162")	#8 Sol. Cu. (0.128")	#8 Sol. Cu. (0.128")	#8 Sol. Cu. (0.128")	#8 Sol. Cu. (0.128")	#6 Sol. Cu. (0.162")
Jumper Range - Max.	1/0 Grd. Cable w/Threaded Stud	4/0 Grd. Cable w/Threaded Stud	2/0 Grd. Cable w/Threaded Stud	4/0 Grd. Cable w/Plain Plug	4/0 Grd. Cable w/Plain Plug	4/0 Grd. Cable w/Threaded Stud	4/0 Grd. Cable w/Threaded Stud
Jumper Range - Min.	#2 Grd. Cable w/Threaded Stud	#2 Grd. Cable w/Threaded Stud	#2 Grd. Cable w/Threaded Stud	#2 Grd. Cable w/Plain Plug	#2 Grd. Cable w/Plain Plug	#2 Grd. Cable w/Threaded Stud	#2 Grd. Cable w/Threaded Stud
Weight Each	1 1/2 lb./0.7kg.	2 lb./0.9kg.	1 lb./0.5kg.	1 1/4 lb./0.6 kg.	1 1/4 lb./0.6kg.	1 1/4 lb./0.6kg.	1 1/2 lb./0.7kg.
ASTM Designation	Type I Class A Grade 2	Type I Class A Grade 5	Type I Class A Grade 3	Type I Class A Grade 5	Type I Class B Grade 5	Type I Class B Grade 5	Type I Class A Grade 5

C-Type Grounding Clamps

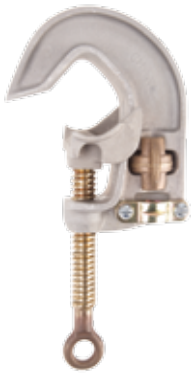
C6002281
Aluminum body,
Smooth jaws,
Bronze eyescrew
with Acme threads
Bronze pressure-type terminal

C6002255
Aluminum body,
Smooth jaws,
Bronze eyescrew
with Acme threads,
Tapped for 5/8-11 UNC threaded ferrule

C6002282
Aluminum body,
Serrated jaws,
Bronze eyescrew
with Acme threads
Bronze pressure-type terminal

C6002256
Aluminum body,
Serrated jaws,
Bronze eyescrew
with Acme threads,
Tapped for 5/8-11 UNC threaded ferrule

C6000386
***Mounted Clamp**
Aluminum body,
Serrated jaws,
Bronze eyescrew
with Acme threads,
Bronze pressure-type terminal



G36051
Aluminum body,
Smooth jaws,
Bronze eyescrew
with Acme threads,
Bronze pressure-type terminal

T6003203
Aluminum body,
Smooth jaws,
Bronze eyescrew
with Acme threads,
Tapped for 5/8-11 UNC threaded ferrule

T6000658
Aluminum body,
Smooth jaws,
Bronze eyescrew
with Acme threads,
Drilled for 5/8-11 UNC threaded ferrule

Catalog Number	C6002281	C6002255	C6002282	C6002256	*C6000386	G36051	T6003203	T6000658
ELECTRICAL RATINGS								
Continuous Current (amps)	400	400	400	400	400	400	400	400
Fault Current - 15 Cycles (amps)	43,000	43,000	43,000	43,000	43,000	43,000	43,000	43,000
Fault Current - 30 Cycles (amps)	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
MECHANICAL RATINGS								
Recommended Torque (in.-lb.)	250	250	250	250	250	250	250	250
Main Line Range - Max.	2" O.D. Bus	2" O.D. Bus	2" O.D. Bus	2" O.D. Bus	2" O.D. Bus	2" O.D. Bus	2" O.D. Bus	2" O.D. Bus
Main Line Range - Min.	#6 Sol. Cu. (0.162")	#6 Sol. Cu. (0.162")	#6 Sol. Cu. (0.162")	#6 Sol. Cu. (0.162")	#6 Sol. Cu. (0.162")	#6 Sol. Cu. (0.162")	#6 Sol. Cu. (0.162")	#6 Sol. Cu. (0.162")
Jumper Range - Max.	4/0 Grd. Cable w/Plain Plug	4/0 Grd. Cable w/Threaded Stud	4/0 Grd. Cable w/Plain Plug	4/0 Grd. Cable w/Threaded Stud	4/0 Grd. Cable w/Plain Plug	4/0 Grd. Cable w/Plain Plug	4/0 Grd. Cable w/Threaded Stud	4/0 Grd. Cable w/Threaded Stud
Jumper Range - Min.	#2 Grd. Cable w/Plain Plug	#2 Grd. Cable w/Threaded Stud	#2 Grd. Cable w/Plain Plug	#2 Grd. Cable w/Threaded Stud	#2 Grd. Cable w/Plain Plug	#2 Grd. Cable w/Plain Plug	#2 Grd. Cable w/Threaded Stud	#2 Grd. Cable w/Threaded Stud
Weight Each	2 lb./0.9kg.	1¾ lb./0.8kg.	2 lb./0.9kg.	1¾ lb./0.8kg.	*	1¾ lb./0.8kg.	1¾ lb./0.8kg.	1¾ lb./0.8kg.
ASTM Designation	Type I Class A Grade 5	Type I Class A Grade 5	Type I Class B Grade 5	Type I Class B Grade 5	Type II Class B Grade 5	Type I Class A Grade 5	Type I Class A Grade 5	Type I Class A Grade 5

***C6000386 has 1¼" x 6' Epoxiglas® Pole and total weight of 3¾ lb. (1.7 kg.).**

Chance grounding clamps, ferrules and cable meet ASTM F 855.

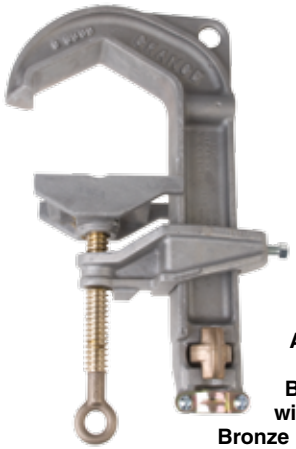
C-Type Grounding Clamps

G33672
Aluminum body,
Smooth jaws,
Bronze eyescrew
with Acme threads,
Bronze pressure-type threads

C6001733
Aluminum body,
Smooth jaws,
Bronze eyescrew
with Acme threads,
Tapped for 5/8-11 UNC threaded ferrule

C6000375
Aluminum body,
Serrated jaws,
Bronze eyescrew
with Acme threads,
Dual drilled for 5/8-11 UNC threaded ferrule

Bus-Bar Grounding Clamps:



G3369
Aluminum body,
Smooth jaws,
Bronze eyescrew
with Acme threads,
Bronze pressure-type terminal

C6000337
Aluminum body,
Smooth jaws,
Bronze eyescrew
with Acme threads,
Bronze pressure-type terminal

Catalog Number	G33672	C6001733	C6000375	G3369	C6000337
ELECTRICAL RATINGS					
Continuous Current (AMPS)	400	400	400	400	400
Fault Current - 15 Cycles (AMPS)	43,000	43,000	†70,000	43,000	43,000 †60,000
Fault Current - 30 Cycles (AMPS)	30,000	30,000	†50,000	30,000	30,000 †60,000
MECHANICAL RATINGS					
Recommended Torque (in.-lb.)	250	250	300	300	300
Main Line Range - Max.	2 1/2" O.D. Bus	2 1/2" O.D. Bus	3" O.D. Bus	4" x 4" Square 4.5" O.D. Bus	6 5/8" O.D. Bus
Main Line Range - Min.	#4 Str. Cu. (0.232")	#4 Str. Cu. (0.232")	0.50" O.D. Bus	4/0 Str. Cu. (0.500")	3 1/2" O.D. Bus
Jumper Range - Max.	4/0 Grd. Cable w/Plain Plug	4/0 Grd. Cable w/Threaded Stud	4/0 Grd. Cable w/Threaded Stud	4/0 Grd. Cable w/Plain Plug	4/0 Grd. Cable w/Plain Plug
Jumper Range - Min.	#2 Grd. Cable w/Plain Plug	#2 Grd. Cable w/Threaded Stud	#2 Grd. Cable w/Threaded Stud	#2 Grd. Cable w/Plain Plug	#2 Grd. Cable w/Plain Plug
Weight Each	2 3/8 lb./1.1kg.	2 3/8 lb./1.1kg.	3 lb./1.4kg.	5 1/4 lb./2.4kg.	6 lb./2.7 kg.
ASTM Designation	Type I Class A Grade 5	Type I Class A Grade 5	Type I Class B Grade 7	Type I Class A Grade 5	Type I Class A Grade 6

†Rating with twin-grounding cables.

Snap-On (Duckbill-type) Grounding Clamps

G18102
Aluminum body,
Bronze upper jaw,
Smooth jaws,
Bronze eyescrew
with fine threads,
Bronze pressure-type terminal

G36221
Aluminum body,
Smooth jaws,
Bronze eyescrew
with fine threads,
Bronze pressure-type terminal

HG37061
***Mounted Clamp**
Aluminum body,
Smooth jaws,
Bronze eyescrew
with fine threads,
Bronze pressure-type terminal

T6000806
Aluminum body,
Serrated jaws,
Bronze eyescrew
with fine threads,
Bronze pressure-type terminal

Catalog Number	G18102	G36221	*HG37061	T6000806
ELECTRICAL RATINGS				
Continuous Current (AMPS)	300	400	400	400
Fault Current - 15 Cycles (AMPS)	27,000	43,000	34,000	43,000
Fault Current - 30 Cycles (AMPS)	20,000	30,000	25,000	30,000
MECHANICAL RATINGS				
Recommended Torque (in.-lb.)	250	250	300	300
Main Line Range - Max.	250 kcmil Str. Cu. 4/0 ACSR (0.574")	566 kcmil Cu. 900 kcmil ACSR (1.162")	566 kcmil Cu. 900 kcmil ACSR (1.162")	1590 kcmil ACSR (1.625")
Main Line Range - Min.	#6 Sol. Cu. (0.162")	#6 Sol. Cu. (0.162")	#6 Sol. Cu. (0.162")	0.5"
Jumper Range - Max.	2/0 Grd. Cable w/Plain Plug	4/0 Grd. Cable w/Plain Plug	4/0 Grd. Cable w/Plain Plug	4/0 Grd. Cable w/Plain Plug
Jumper Range - Min.	#2 Grd. Cable w/Plain Plug	#2 Grd. Cable w/Plain Plug	#2 Grd. Cable w/Plain Plug	#2 Grd. Cable w/Plain Plug
Weight Each	1 1⁄2 lb./0.6 kg.	1 1⁄2 lb./0.6 kg.	*	13⁄4 lb./0.8 kg.
ASTM Designation	Type I Class A Grade 3	Type I Class A Grade 5	Type II Class A Grade 4	Type I Class B Grade 5

***HG37061 has 1¼" x 6' Epoxiglas® Pole and total weight of 3½ lb. (1.6 kg.).**

Snap-On (Duckbill-type) Grounding Clamps

C6001734
Aluminum body,
Smooth jaws,
Bronze eyescrew
with fine threads,
Tapped for 5/8-11 UNC threaded ferrule

C6000198
***Mounted Clamp**
Aluminum body,
Serrated jaws,
Bronze eyescrew
with Acme threads,
Tapped for 5/8-11 UNC threaded ferrule

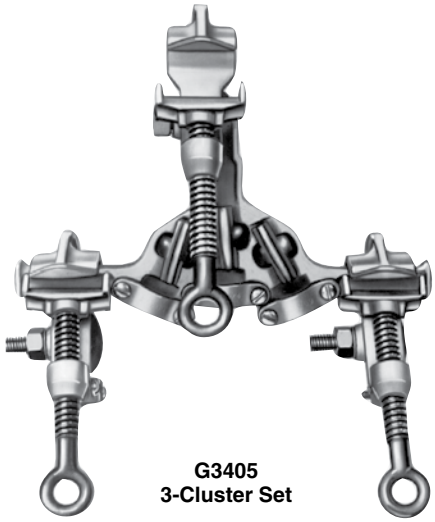
C6000197
Aluminum body,
Serrated jaws,
Bronze eyescrew
with Acme threads,
Tapped for 5/8-11 UNC threaded ferrule

C6000434
Aluminum body,
Serrated jaws,
Bronze eyescrew
with fine threads,
Bronze pressure-type terminal

Catalog Number	C6001734	*C6000198	C6000197	C6000434
ELECTRICAL RATINGS				
Continuous Current (AMPS)	400	400	400	400
Fault Current - 15 Cycles (AMPS)	43,000	43,000	43,000	43,000
Fault Current - 30 Cycles (AMPS)	30,000	30,000	30,000	30,000
MECHANICAL RATINGS				
Recommended Torque (in.-lb.)	250	250	250	250
Main Line Range - Max.	566 kcmil Cu. 900 kcmil ACSR (1.162")	950 kcmil Cu. 1510 kcmil ACSR (1.506")	950 kcmil Cu. 1510 kcmil ACSR (1.506")	950 kcmil Cu. 1510 kcmil ACSR (1.506")
Main Line Range - Min.	#6 Sol. Cu. (0.162")	#6 Sol. Cu. (0.162")	#6 Sol. Cu. (0.162")	#6 Sol. Cu. (0.162")
Jumper Range - Max.	4/0 Grd. Cable w/Threaded Stud	4/0 Grd. Cable w/Threaded Stud	4/0 Grd. Cable w/Threaded Stud	4/0 Grd. Cable w/Plain Plug
Jumper Range - Min.	#2 Grd. Cable w/Threaded Stud	#2 Grd. Cable w/Threaded Stud	#2 Grd. Cable w/Threaded Stud	#2 Grd. Cable w/Plain Plug
Weight Each	1 1⁄2 lb./0.7 kg.	*	1 1⁄2 lb./0.7 kg.	1 1⁄2 lb./0.7 kg.
ASTM Designation	Type I Class A Grade 5	Type II Class B Grade 5	Type I Class B Grade 5	Type I Class B Grade 5

***C6000198 has 1¼" x 6' Epoxiglas® Pole and total weight of 3½ lb. (1.6 kg.).**

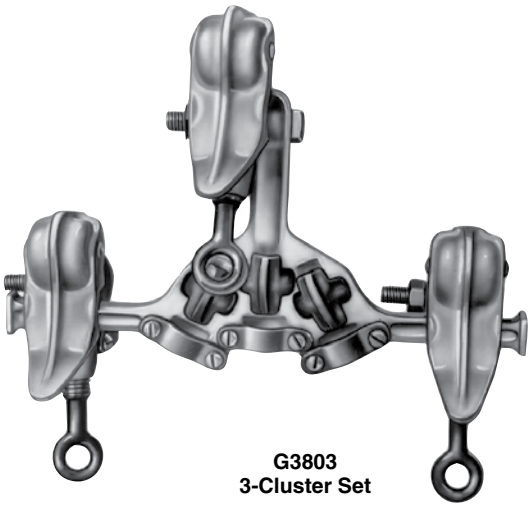
Cluster Grounding Clamps



G3405
3-Cluster Set

with C-Type Aluminum-body clamps,

Smooth jaws, Bronze eyescrews with Acme threads, and 3-phase Aluminum cluster bar with Bronze Pressure-type terminals



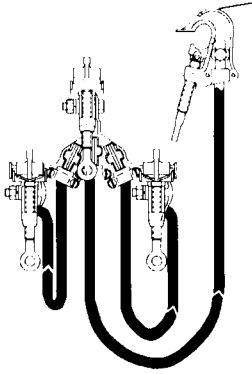
G3803
3-Cluster Set

with Snap-On (Duckbill-type) Aluminum-body clamps,

Smooth jaws, Bronze eyescrews with fine threads, and 3-phase Aluminum cluster bar with Bronze Pressure-type terminals

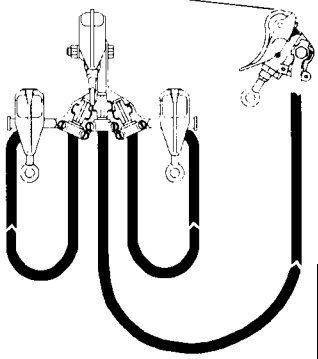
Important Note:
Cluster Sets are furnished as shown above. The center clamp is bolted to the cluster bar.

Typical fourth ground clamp (not included in 3-Cluster Set, must be ordered as separate item)



These drawings illustrate how Cluster Sets are to be connected, with **grounding cable and a fourth clamp which must be ordered separately.**

For cable and ferrules, see page 3018-3019.



Catalog Number	G3405	G3803
ELECTRICAL RATINGS		
Continuous Current (AMPS)	350	400
Fault Current - 15 Cycles (AMPS)	27,000	34,000
Fault Current - 30 Cycles (AMPS)	20,000	25,000
MECHANICAL RATINGS		
Recommended Torque (in.-lb.)	250	250
Main Line Range - Max.	400 kcmil Str. Cu. 636 kcmil ACSR (.998")	566 kcmil Cu. 900 kcmil AC
Main Line Range - Min.	#8 Sol. Cu. (0.12")	#6 Sol. Cu. (0.162")
Jumper Range - Max.	2/0 Grd. Cable w/Plain Plug	4/0 Grd. Cable w/Plain Plug
Jumper Range - Min.	#2 Grd. Cable w/Plain Plug	#2 Grd. Cable w/Plain Plug
Weight Each	4 ½ lb./2 kg.	6 ⅝ lb./3 kg.
ASTM Designation	Type I Class A Grade 3	Type I Class A Grade 4

Tower & Flat-Face Grounding Clamps

C6002232
Bronze body,
Serrated jaws,
Bronze eyescrew
with Acme threads,
Drilled for 5/8-11 UNC threaded ferrule

G33633SJ
Aluminum body,
Serrated jaws,
Bronze eyescrew
with fine threads,
Bronze pressure-type terminal

C6001735
Aluminum body,
Serrated jaws,
Bronze eyescrew
with fine threads,
Tapped for 5/8-11 UNC threaded ferrule

C6002231
Bronze body,
Serrated jaws,
Bronze T-handle
with Acme threads,
Drilled for 5/8-11 UNC threaded ferrule

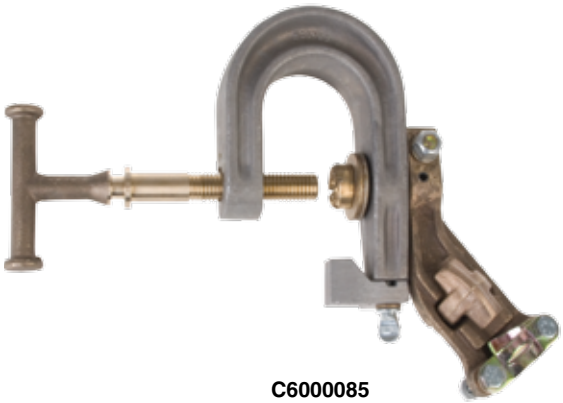
G33634SJ
Aluminum body,
Serrated jaws,
Bronze T-handle
with fine threads,
Bronze pressure-type terminal

T6001798
Aluminum body,
Serrated jaws,
Bronze T-handle
with Acme threads,
Tapped for 5/8-11 UNC threaded ferrule

Catalog Number	C6002232	G33633SJ	C6001735	C6002231	G33634SJ	T6001798
ELECTRICAL RATINGS						
Continuous Current (AMPS)	400	400	400	400	400	400
Fault Current - 15 Cycles (AMPS)	43,000	27,000	27,000	43,000	27,000	27,000
Fault Current - 30 Cycles (AMPS)	30,000	20,000	20,000	30,000	20,000	20,000
MECHANICAL RATINGS						
Recommended Torque (in.-lb.)	250	250	250	250	250	250
Main Line Range - Max.	1½" Angles 1½" Flat	1½" Angles 1½" Flat	1½" Angles 1½" Flat	1½" Angles 1½" Flat	1½" Angles 1½" Flat	1½" Angles 1½" Flat
Main Line Range - Min.	⅛"	⅛"	⅛"	⅛"	⅛"	⅛"
Jumper Range - Max.	4/0 Grd. Cable w/Threaded Stud	2/0 Grd. Cable w/Plain Plug	2/0 Grd. Cable w/Threaded Stud	4/0 Grd. Cable w/Threaded Stud	2/0 Grd. Cable w/Plain Plug	2/0 Grd. Cable w/Threaded Stud
Jumper Range - Min.	#2 Grd. Cable w/Threaded Stud	#2 Grd. Cable w/Plain Plug	#2 Grd. Cable w/Threaded Stud	#2 Grd. Cable w/Threaded Stud	#2 Grd. Cable w/Plain Plug	#2 Grd. Cable w/Threaded Stud
Weight Each	2 lb./0.9 kg.	1⅝ lb./0.7 kg.	1½ lb./0.7 kg.	2 lb./0.9 kg.	1⅝ lb./0.7 kg.	1½ lb./0.7kg.
ASTM Designation	Type I Class B Grade 5	Type I Class B Grade 3	Type I Class B Grade 3	Type III Class B Grade 5	Type III Class B Grade 3	Type III Class B Grade 3

Tower & Flat-Face Grounding Clamps

G33631
Bronze body,
Serrated jaws,
Bronze eyescrew
with fine threads,
Bronze pressure-type terminal



C6000085
Aluminum body and retainer,
Bronze scrubber-type contact pads,
Bronze T-handle
with fine threads,
Bronze pressure-type terminal

G33632
Bronze body,
Serrated jaws,
Bronze T-handle
with fine threads,
Bronze pressure-type terminal

C6001783
Bronze body,
Serrated jaws and retainers,
Tapped for 5/8-11 UNC threaded ferrule

Catalog Number	G33631	G33632	C6000085	C6001783
ELECTRICAL RATINGS				
Continuous Current (AMPS)	400	400	400	400
Fault Current - 15 Cycles (AMPS)	27,000	27,000	43,000	43,000
Fault Current - 30 Cycles (AMPS)	20,000	20,000	30,000	30,000
MECHANICAL RATINGS				
Recommended Torque (in.-lb.)	250	250	250	300
Main Line Range - Max.	1½" Angles 1½" Flat	1½" Angles 1½" Flat	4" Structural Angles	¾" x 5"Angles or Flats ⅝" Rod
Main Line Range - Min.	⅛"	⅛"	2" Structural Angles	⅛"
Jumper Range - Max.	2/0 Grd. Cable w/Plain Plug	2/0 Grd. Cable w/Plain Plug	4/0 Grd. Cable w/Plain Plug	4/0 Grd. Cable w/Threaded Stud
Jumper Range - Min.	#2 Grd. Cable w/Plain Plug	#2 Grd. Cable w/Plain Plug	#2 Grd. Cable w/Plain Plug	#2 Grd. Cable w/Threaded Stud
Weight Each	2½ lb./1.1 kg.	2½ lb./1.1 kg.	3¾ lb./1.1 kg.	5 lb./2.25 kg.
ASTM Designation	Type I Class B Grade 3	Type III Class B Grade 3	Type III Class B Grade 5	Type III Class B Grade 5

All-Angle Grounding Clamps

Aluminum Bodies with Serrated Jaws

For installation ease, jaws pivot 75° left or right.

G42291SJ
***Pressure Terminal**

†HG42296SJ
***Bronze Pressure Terminal**
(Clamp same as G42291SJ)

* For adapter to convert to threaded terminal, see Page 3019.

Catalog Number	G42291SJ	†HG42296SJ
ELECTRICAL RATINGS		
Continuous Current (AMPS)	400	400
Fault Current - 15 Cycles (AMPS)	43,000	43,000
Fault Current - 30 Cycles (AMPS)	30,000	30,000
MECHANICAL RATINGS		
Recommended Torque (in.-lb.)	250	250
Main Line Range - Max.	954 kcmil ACSR (1.196")	954 kcmil ACSR (1.196")
Main Line Range - Min.	#2 Cu. (.258")	#2 Cu. (.258")
Jumper Range - Max.	4/0 Grd. Cable w/Plain Plug	4/0 Grd. Cable w/Plain Plug
Jumper Range - Min.	#2 Grd. Cable w/Plain Plug	#2 Grd. Cable w/Plain Plug
Weight Each	2 lb./0.9 kg.	4 ¼ lb./2.0 kg.
ASTM Designation	Type I Class B Grade 5	Type II Class B Grade 5

†Mounted Clamps supplied with 1¼" x 6' Epoxiglas® Pole.

G422810SJ
***Bronze Pressure Terminal**

†HG422816SJ
***Bronze Pressure Terminal**
(Clamp same as G4228-10SJ)

T6001693
Tapped for ⅝-11 UNC threaded ferrule
(Two single serrated jaws, for pothead and bus applications)

C6001732
Tapped for ⅝-11 UNC threaded ferrule

* For adapter to convert to threaded terminal, see Page 3019.

Catalog Number	G422810SJ	†HG422816SJ	T6001693	C6001732
ELECTRICAL RATINGS				
Continuous Current (AMPS)	400	400	400	400
Fault Current - 15 Cycles (AMPS)	43,000	43,000	43,000	43,000
Fault Current - 30 Cycles (AMPS)	30,000	30,000	30,000	30,000
MECHANICAL RATINGS				
Recommended Torque (in.-lb.)	250	250	250	250
Main Line Range - Max.	2 1⁄2 IPS (2.88")	2 1⁄2 IPS (2.88")	2 1⁄2 IPS (2.88")	2½ IPS (2.88")
Main Line Range - Min.	#2 Cu. (.258")	#2 Cu. (.258")	#2 Cu. (.258")	#2 Cu. (.258")
Jumper Range - Max.	4/0 Grd. Cable w/Plain Plug	4/0 Grd. Cable w/Plain Plug	4/0 Grd. Cable w/Threaded Stud	4/0 Grd. Cable w/Threaded Stud
Jumper Range - Min.	#2 Grd. Cable w/Plain Plug	#2 Grd. Cable w/Plain Plug	#2 Grd. Cable w/Threaded Stud	#2 Grd. Cable w/Threaded Stud
Weight Each	3¼ lb./1.5 kg.	5¼ lb./2.4 kg.	3¼ lb./1.5 kg.	3 ¼ lb./1.5 kg.
ASTM Designation	Type I Class B Grade 5	Type II Class B Grade 5	Type I Class B Grade 5	Type I Class B Grade 5

†Mounted Clamps supplied with 1¼" x 6' Epoxiglas® Pole.

Apparatus Grounding Clamps

Ball-and-socket design for multiple uses

For restricted-space applications and as a truck-grounding system, this compact design delivers a high-current rating usually associated with only large clamps.

It applies to a wide range of switching equipment, including:

Industrial metalclad gear,
Substations — indoors and out,
Distribution — overhead and underground.

For trucks, a *ball stud permanently mounts on each body. For three-phase livefront set, see page 3015.

Two clamp styles and three ball-stud lengths adapt to many applications. Clamp bodies, eyescrews and *ball-studs are bronze alloy. Tin-plated ball-studs have nominal 1"-diameter ball and stud to fit NEMA terminal pads. Lockwasher and nut are silicone bronze.

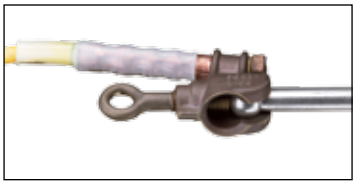
ASTM Designation of Type I, Class A, Grade 5 for any of these clamps is met if associated grounding-cable sets are fitted with ⅝" copper ferrules as on page 3019.

Fault Current Ratings 43,000 Amps — 15 cycles
30,000 Amps — 30 cycles

Recommended Installing Torques:
Eyescrew 250 inch-pounds ***Ball Stud** 300 inch-pounds

Long stud shank accepts most types of grounding clamps

Socket clamps provide multi-angle attachment of grounds

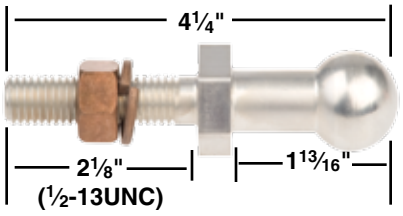


Clamp C6002100
Drilled for ⅝-11 UNC threaded ferrule
or
Clamp C6002101
Tapped for ⅝-11 UNC threaded ferrule
for threaded stud ferrule on #2 to 4/0 grounding cable

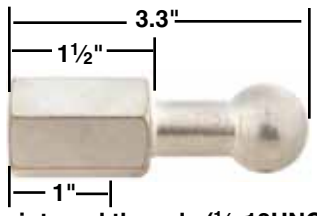
Clamp T6002320
Tapped for ⅝-11 UNC threaded ferrule
for threaded stud ferrule on #2 to 4/0 grounding cable

Clamp C6002300
with pressure terminal
for plain-plug ferrule on #2 to 4/0 grounding cable

Weight, each clamp on this page: 1 lb. / 0.45 kg.

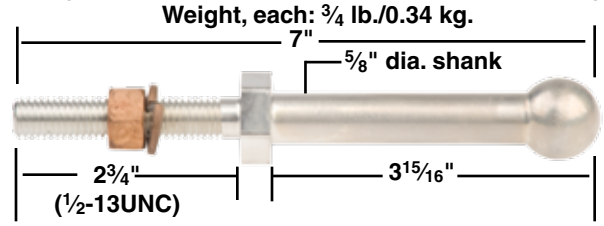


***Standard Ball Stud C6002102**
⅝" dia. shank
Weight, each: ½ lb. / 0.23 kg.



***Female-Thread Ball Stud T6002867**
⅝" dia. shank
Weight, each: ½ lb./0.23 kg.

***Long Ball Stud T6002364** **3" nominal shank length**
Weight, each: ¾ lb./0.34 kg.



*Ball-studs do not interchange with system on page 3014.

Grounding Stud Cover – fits onto 1" ball-studs of Apparatus Grounding Clamps above

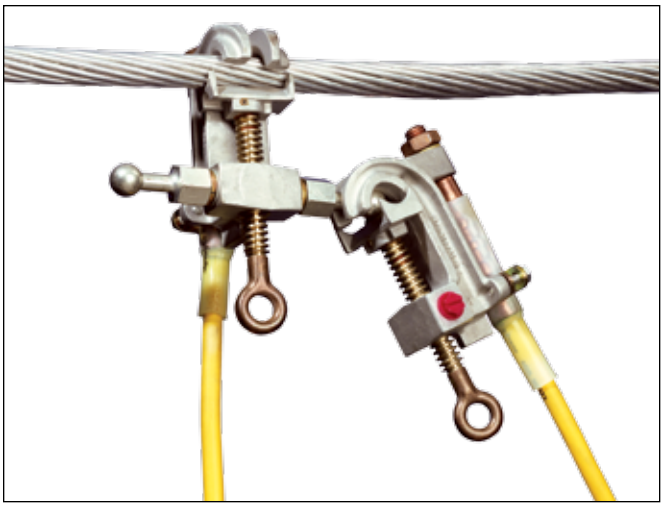
This flexible cover fits **only** C6002102 or T6002364 ball-studs. Of the same material as Chance line hose, nonconductive cover may help prevent flashover on ball studs installed in enclosed switchgear, switchyards or substations.

An environmental protector to reduce corrosion and contamination on the ball-stud when energized cover is not intended for personnel protection and should not be considered as insulative cover-up equipment. Resilient ozone/corona-resistant thermo-plastic elastomer does not absorb water. Special formulation resists aging/checking and retains high-visibility orange color.

Catalog No.	Description	Weight
C4060416	Grounding Stud Cover	1 oz. (28 g.)

Snap-fit keeps cover in place. The ⅝"-I.D. loop at top permits hot-line tools to "pop" it on and off. Chance silicone lubricant C4002320 or C4170287 may ease installation and removal.

Three-Way Grounding Clamp for *ball-stud, conductors, busbars



By supporting other clamps in three-phase sets, ball studs reduce installation labor. This can contribute to safety and minimize the number of clamp connections per conductor in an overhead grounding scheme.

***Ball -studs mount without furnished washers in holes of lower clamp boss. The tapped holes ship with plastic plugs.**

Clamp terminal is tapped for ⅝"-11 UNC threaded-stud ferrules on grounding cable from #2 through 4/0.

Clamp Main Line Range:

- Bare Conductors from #8 Sol. Cu. through 636 ACSR
- Flat Busbar through ¼" x 1¼" maximum
- Ball-Stud 20mm (0.788") only

Versatile clamp serves such temporary-grounding uses as a truck-grounding system; on industrial metalclad switchgear; substation buswork — indoors and out; overhead, underground and substation switches; and three-phase ground sets with special, multi-angle *ball studs. Compact design delivers a high-current rating usually associated with only large clamps.

For grounding trucks or other equipment, *ball stud permanently mounts on each body with furnished lockwasher, flat washer and nut. Removable stud has recessed-hex end fitting for through-mounting versatility.

Clamp body is aluminum. Acme-threaded eyescrew and *ball-stud are bronze alloy. Tin-plated ball-stud has 20mm (0.788") diameter ball, ⅞"-hex fitting and 1½"-long ½"-13 threads to fit NEMA terminal pads.

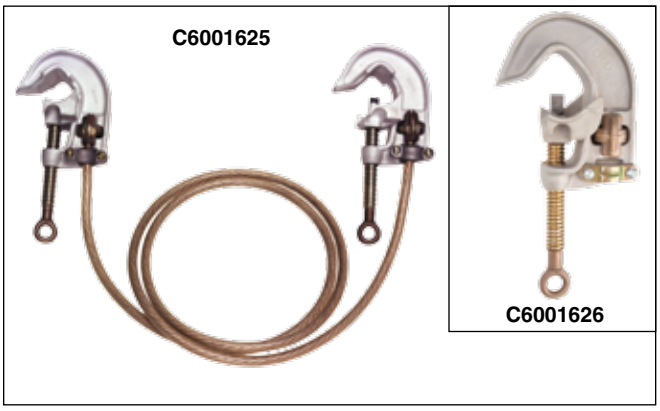
ASTM Designation of Type I, Class A, Grade 5 is met if associated grounding-cable sets are fitted with copper ferrules as on page 3018.

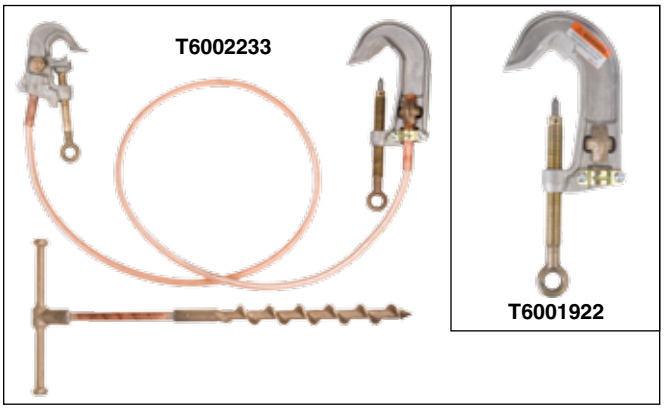
Fault current ratings: 43,000 amps — 15 cycles
30,000 amps — 30 cycles

Recommended Installing Torques:
Eyescrew 250 inch-pounds ***Ball Stud** 300 inch-pounds

Catalog No.	Description	Weight, each
C6002316	Three-Way Clamp Body only	1½ lb./0.68 kg.
C6002317	*20mm (0.788") diameter Ball Stud with flat washer, lockwasher and nut	⅜ lb./0.2 kg.

*Ball-stud does not interchange with system on page 3013.





Penetrator clamps, ground sets for underground cable

For temporary grounding of underground distribution cable with jacket over concentric neutral, special clamps help ensure contact with center conductor.

Chisel-point clamp main-line capacity is 1½". C-Type clamp in Chisel Sets fits conductors from #6 (0.162") to 636 kcmil ACSR (0.998").

Spike-point clamp main-line capacity is 2½". C-type clamp in Spike Set fits conductors from #6 (0.162") to 2" O.D. bus.

Each set includes 6-ft. of #2 copper clear-jacket ground cable and ferrules, a penetrator clamp (choice of hardened-steel ½"-wide chisel or conical spike) and C-type grounding clamp.

Screw-type copper-clad ground rod in sets indicated is 24" long for easy handling. The helix (spiral) and handle are bronze.

Catalog No.	Description	Weight, each
C6001626	Chisel Clamp **only**	1¾ lb./0.8 kg.
P6001623P	Replacement Chisel Point	2 oz./0.09 kg.
T6002234	Chisel Set **with** Ground Rod	9¾ lb./4.4 kg.
C6001625	Chisel Set **without** Ground Rod	4½ lb./2 kg.
T6001922	Spiked Clamp **only**	1¾ lb./0.8 kg.
P6001969P	Replacement Spike Point	2 oz./0.09 kg.
T6002233	Spiked Set **with** Ground Rod	8 lb./3.6 kg.

Underground Distribution Grounding Sets

Grounded Parking Bushing Sets for Single- or Three-Phase Switches & Transformers

This set includes a loadbreak bushing and bronze ground clamp T6000466 connected by a 4-ft. yellow 1/0 cable. A tin-plated copper connector joins the cable to the bushing. A threaded copper ferrule connects the cable to the clamp.

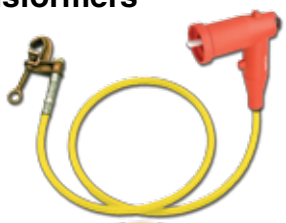
Fault current rating for each set: 10,000 amps for 10 cycles

Catalog No.	*Application	Weight, each
T6003091	15kV	8 lb. / 3.6 kg.
T6003092	25 & 35kV small interface	9 lb. / 4.09 kg.

Grounding Elbow Sets for Single- or Three-Phase Switches & Transformers

Each set includes an orange-jacketed elbow *for the voltage-class indicated below*, 6 feet of 1/0 copper grounding cable with yellow jacket and bronze ground clamp T6000466.

Fault current rating for each set: 10,000 amps for 10 cycles



C6000729	15kV set	4 lb./1.80 kg.
T6002131	25 & 35kV small interface set	6 lb./2.7 kg.
C6001927	35 kV large interface set	8 lb./3.63 kg.

Three-Phase Grounding Elbow Sets for Switches & Transformers

Each of these sets consists of a three-way terminal block assembly, three 6-ft. lengths of 1/0 copper ground cable with yellow jacket, a bronze ground clamp T6000466 and three orange elbows.

Fault current rating for each set: 10,000 amps for 10 cycles

C6003102	15kV set	14.5 lb./6.5 kg.
C6003103	25 & 35kV small interface set	15 lb./6.75 kg.

Replacement Parts: Grounding Elbow ONLY

215GEHSG	15kV - elbow only	1.9 lb./0.88 kg.
225GEHSG	25 & 35kV small interface - elbow only	2.0 lb./0.9 kg.
235GEHSG	35 kV large interface - elbow only	4.0 lb./1.8 kg.

All Copper Connector ONLY

200LUGC6	for 1/0 Grounding Cable	1.8 oz./40 g.
200LUGC7	for 2/0 Grounding Cable	1.8 oz./40 g.

Elbow Probes ONLY

215LBP	15 kV Probe	5.3 oz./150.3 g.
225LBP	25 kV Probe	7.0 oz./198.4 g.
235LBP	35 kV Probe	1.0 lb./0.45 kg.

Temporary Grounding Sets for Live-Front Switches and Transformers

C6000758	C-Clamp Set	15 lb./6.8 kg.

Fault current ratings: 21,000 amps for 15 cycles
or 15,000 amps for 30 cycles

C-clamps are Cat. No. T600-0466.

Each C-Clamp set includes a three-way copper terminal block, four bronze ground clamps and three 6-ft. lengths of 1/0 copper clear-jacket ground cable with threaded-stud ferrules.

C6000758
ASTM Type I, Class A, Grade 2

T6002246	Ball Socket Set	16.5 lb./7.4 kg.

Fault current ratings: 27,000 amps for 15 cycles
or 20,000 amps for 30 cycles

(Ball-studs are included.) Ball-studs and clamps are C6002102 and C6002100.

Each Ball-Stud set includes a three-way copper terminal block, four bronze ground clamps and three 6-ft. lengths of 2/0 copper clear-jacket ground cable with threaded-stud ferrules.

T6002246
ASTM Type I, Class A, Grade 3

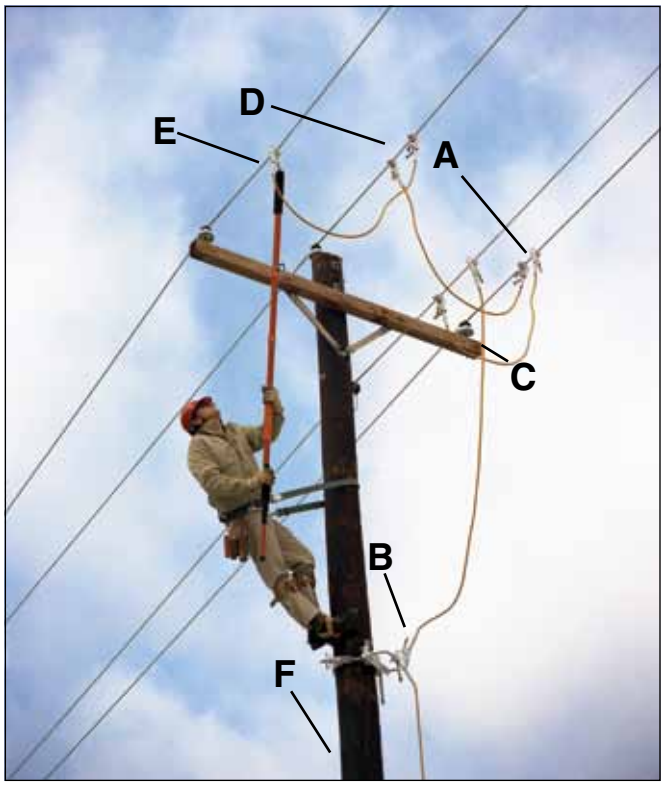
T6002375	Flat-Face Clamp Set	15.5 lb./7 kg.

Fault current ratings: 21,000 amps for 15 cycles
or 15,000 amps for 30 cycles

Includes a four-way bronze terminal block, one 6-ft. and three 4-ft. lengths of 1/0 copper clear-jacket ground cable with shrouded plain-plug copper ferrules, three aluminum ground clamps with bronze eyescrews (G33633SJ) and one with bronze T-handle (G3363-4SJ).

T6002375
ASTM Type III, Class B, Grade 2

For storage bag T6000865, see page 3021.



Chance grounding clamps, ferrules and cable meet ASTM F 855.

C6002276
Main Line Range

Maximum	1033 kcmil ACSR (1.25")
Minimum	#8 Solid Copper (0.128")

G3626

G3370

T6001549

Overhead Distribution Grounding Sets with Pressure-Type Terminals

These complete sets of ground clamps, cable and accessories give all the equipment needed for many types of distribution structures in easy-to-use kits. The ferrules are factory crimped to the grounding cable. Each kit comes with C6002276 clamps so it can be used on conductors ranging from #8 to 1033 kcmil ACSR.

These kits were designed for use on the following types of structures:

7.2/12.5 kV.....A1 through C24
14.4/24.9 kV.....VA1 through VC9-3
46 kV .....TP1 through TP5
69 kV .....TS1 through TS3-2

The tables below list the components **completely assembled** in each of the Distribution Grounding Sets.

#2 Grounding Cable Set* (44 lb./20 kg.) Catalog No. T6000641 consists of:

Item	Description	Quantity	Information
A	Serrated jaw, "C" Clamp Cat. No. C6002276	10	For Plain Plug ferrules
B	Ground Cluster Support	1	Cat. No. T6001549
C	#2 Copper Ground Cable Cat. No. S6449	60 ft.	3 Cables 6 ft. long 1 Cable 12 ft. long 1 Cable 30 ft. long
D	#2 Plain Plug Ferrules	10	Cat. No. C6002626
E	Clamp Support Stud	3	Cat. No. G3626
F	Screw Ground Rod	1	Cat. No. G3370

1/0 Grounding Cable Set* (58 lb./26 kg.) Catalog No. T6003094 consists of:

A	Serrated jaw, "C" Clamp Cat. No. C6002276	10	For Plain Plug ferrules
B	Ground Cluster Support	1	Cat. No. T6001549
C	1/0 Copper Ground Cable Cat. No. S7568	60 ft.	3 Cables 6 ft. long 1 Cable 12 ft. long 1 Cable 30 ft. long
D	1/0 Plain Plug Ferrules	10	Cat. No. C6002627
E	Clamp Support Stud	3	Cat. No. G3626
F	Screw Ground Rod	1	Cat. No. G3370

2/0 Grounding Cable Set* (60 lb./27 kg.) Catalog No. T6003095 consists of:

A	Serrated jaw, "C" Clamp Cat. No. C6002276	10	For Plain Plug ferrules
B	Ground Cluster Support	1	Cat. No. T6001549
C	2/0 Copper Ground Cable Cat. No. S6450	60 ft.	3 Cables 6 ft. long 1 Cable 12 ft. long 1 Cable 30 ft. long
D	2/0 Plain Plug Ferrules	10	Cat. No. C600-2628
E	Clamp Support Stud	3	Cat. No. G3626
F	Screw Ground Rod	1	Cat. No. G3370

4/0 Grounding Cable Set* (77 lb./35 kg.) Catalog No. T6003096 consists of:

A	Serrated jaw, "C" Clamp Cat. No. C6002276	10	For Plain Plug ferrules
B	Ground Cluster Support	1	Cat. No. T6001549
C	4/0 Copper Ground Cable Cat. No. S6451	60 ft.	3 Cables 6 ft. long 1 Cable 12 ft. long 1 Cable 30 ft. long
D	4/0 Plain Plug Ferrules	10	Cat. No. C6002629
E	Clamp Support Stud	3	Cat. No. G3626
F	Screw Ground Rod	1	Cat. No. G3370

**For storage bag T600-0865, see page 3021.*

Cutout Grounding Clamps

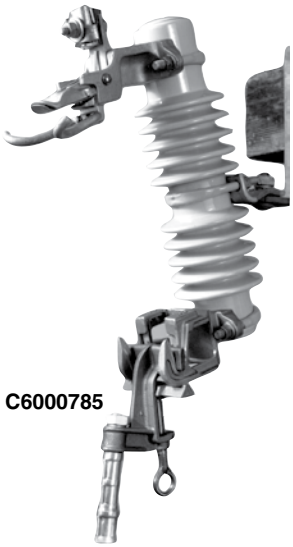
Bronze clamp is used to ground the bottom hinge contact on cutouts used on distribution riser poles or where grounding is required. It fits these cutouts: Chance F2, F3, and C Cutouts; Westinghouse LDX, Southern States B-80; Southern States Series 63; Joslyn; S&C Type SX; McGraw-Edison LMO, and GE Durabute.

Clamp can be installed with or without grounding cable to aid as a warning and possibly avoid accidental closing of cutout.

Clamp's drilled terminal accepts threaded-stud cable ferrules. It also accepts threaded L-Stud and T-Stud Terminals (¾" diameter bronze) for use with conventional ground-clamp cable sets.

Fault Current rating: 20,000 amps for 30 cycles

C600-0785
with T-Stud



C6000785

T6002408
T-Stud Terminal

C6000862

C6000841
L-Stud Terminal

Catalog No.	Description	Weight, each
C6000785	Cutout Clamp	2 lb./0.9 kg.
C6000862	Cutout Clamp with L-Stud	3 lb./1.4 kg.
C6000841	L-Stud Terminal only	1 lb./0.5 kg.
T6002408	T-Stud Terminal only	1½ lb./0.68 kg.

Switch Blade Grounding Clamps

Bronze clamp attaches temporary ground to open switch during de-energized maintenance. Designed to help keep ground lead away from energized switch jaw, clamp is shaped to fit specifically the blades of such switches as Chance Type M3 Disconnect.

Clamp's drilled terminal accepts threaded-stud ferrules on grounding cable from #2 through 4/0. It also accepts threaded L-Stud Terminal (¾" diameter bronze) for use with conventional ground-clamp cable sets.

ASTM Designation: Type I, Class A, Grade 5
Fault Current ratings: 30,000 amps for 30 cycles
43,000 amps for 15 cycles
with L-Stud Terminal: 20,000 amps for 30 cycles
Recommended torque: 250 inch pounds
Main Line Range: ¾" x ⅛" flat through 2½" x ¼" flat

C6002145
Plain Eyescrew

C6002146
T-handle/eyescrew

Catalog No.	Description	Weight, each
C6002145	Plain eyescrew Switch Clamp	3½ lb./1.7 kg.
C6002146	T-handle/eyescrew Clamp	3½ lb./1.7 kg.
C6000841	L-Stud Terminal only	1 lb./0.5 kg.

Substation Grounding Sets

with Pressure-Type Terminals

This is a complete tool set for grounding substation bus, when de-energized for maintenance. Features of this set make the workmen's job safer and easier.

Large capacity bus clamps are available in mounted versions to reach any manageable height. To increase the worker's lifting capabilities, a plastisol coated, Shepherd Hook Lift Stick, with block and rope assembly reduce the capacity clamps on the overhead bus.

Two sizes of mounted clamps are available. The C6000618 has a 6⅝" bus capacity, utilizing a C6000337 ground clamp mounted on a 1¼" x 9 ft. Epoxiglas® Pole.

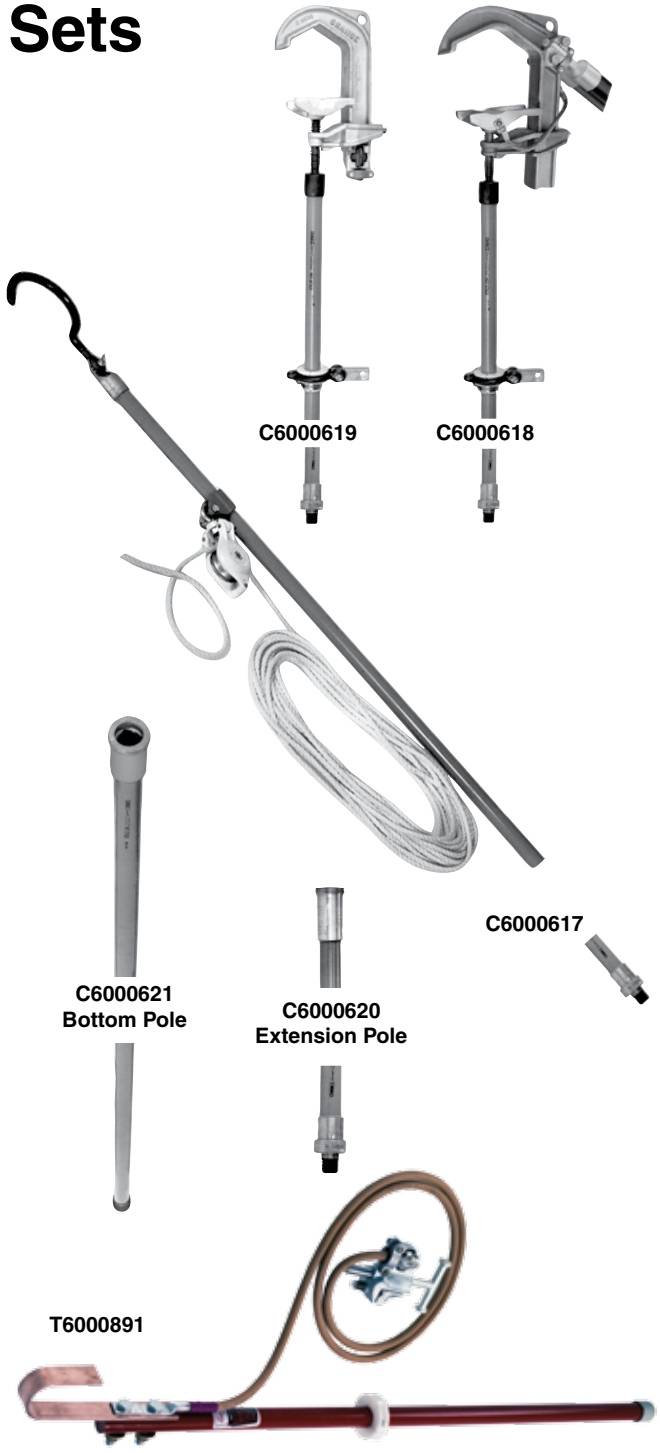
The C6000619 has a 4" bus capacity, utilizing a G3369 ground clamp mounted on a 1¼" x 8'10" Epoxiglas® Pole.

Cables, ferrules and small grounding clamps should be ordered separately.

Accessories

C6000617 — Lift Hook Assembly, 1¼" x 8'8" Epoxiglas® pole, includes block and rope assembly.
C6000620 — 1¼" x 12' Extension Pole (middle section).
C6000621 — 1¼" x 8' Bottom Pole.

Catalog Number	C6000618	C6000619
ELECTRICAL RATINGS		
Continuous Current (AMPS)	400	400
Fault Current - 15 Cycles (AMPS)	43,000	43,000
Fault Current - 30 Cycles (AMPS)	30,000	30,000
MECHANICAL RATINGS		
Recommended Torque (in.-lb.)	250	250
Main Line Range - Max.	6⅝" Angles	4½" Angles
Main Line Range - Min.	4½" Round Bus	1/0 Str. Copper (0.368")
Jumper Range - Max.	4/0 Grd. Cable w/Plain Plug	4/0 Grd. Cable w/Plain Plug
Jumper Range - Min.	#2 Grd. Cable w/Plain Plug	#2 Grd. Cable w/Plain Plug
Weight Each	10 lb./4.5 kg.	9¼ lb./4.2 kg.
ASTM Designation	Type II Class A Grade 5	Type II Class A Grade 5



Electro-Static Precipitator Grounding Tool Set

Simple Safety Procedures

By design, this tool set provides a reliable means of draining off static charges that remain on collector plates after electrostatic-precipitator pollution-control equipment is de-energized for servicing.

With the electrical system of the precipitator de-energized, first secure the tool's grounding clamp to a known ground. Then use the insulated handle to bring the Copper hook in contact with the precipitator collector plates. The Contact hook hangs from the collector plates (with the grounding clamp still attached to ground) while service is performed on the precipitator.

When maintenance is completed, use the insulated handle to remove the contact hook from the collector plates. Then remove the ground clamp before re-energizing the precipitator.

Pre-assembled for Ready Use

Epoxiglas® handle (42" x 1¼") meets OSHA electrical requirements, gives operator sufficient added reach needed to make contacts. Contact hook of 98%-conductive Copper is double-bolted to handle. T-handle Aluminum grounding clamp with serrated flat-face jaw assures proper bonding. Jaws open to 1½" for attachment to grounded structural angles, flats or rods. Extra-flexible (1638 strands) Copper grounding cable, 7 ft., with clear jacket fitted with Copper terminal at each end gives high current-carrying capability.

Catalog No.	Description	Weight, each
T6000891	Electrostatic Grounding Set	7 lb./3.2 kg.

Grounding Ferrules

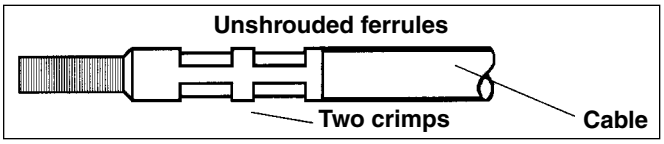
Selection criteria

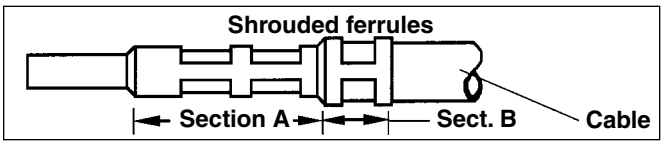
Shrouded ferrules overlap onto the grounding cable jacket for stress relief to the terminal. Two crimps secure the ferrule against the bare strands and one crimp applies on the jacket.

Unshrouded ferrules are available with shrink tubing that overlaps the bare cable conductor and jacket for stress relief.

Available either factory-installed in pairs on any cable length specified or as separate individual units, the ferrules install simply with a hydraulic crimping tool. Complete illustrated installation instructions come with the ferrules and include a table for the crimping die sizes to use.

See ordering tables for crimping-die sizes applicable.





Copper ferrules

Plain-plug type for pressure-type grounding-clamp terminals

Shrouded plain copper ferrules

1 unit each, not installed Catalog No.	Burndy Die No.† or equivalent		Cable Size, AWG
	Sect. A	Sect. B	
C6002630	U165	U166	#2
C6002631	U165	U168	“1/0”
C6002632	U165	U-L	“2/0”
C6002633	U166	U-L	“4/0”

Unshrouded plain copper ferrules

1 unit each, not installed Catalog No.	Burndy Die No.† or equivalent	Cable Size, AWG
C6002614	U165	#2
C6002615	U165	“1/0”
C6002616	U165	“2/0”
C6002617	U166	“4/0”

Threaded-stud type for tapped or drilled grounding-clamp terminals

Shrouded threaded copper ferrules

C6002622	U165	U166	#2
C6002623	U165	U168	“1/0”
C6002624	U165	U-L	“2/0”
C6002625	U166	U-L	“4/0”

Unshrouded threaded copper ferrules

C6002606	U165	#2
C6002607	U165	“1/0”
C6002608	U165	“2/0”
C6002609	U166	“4/0”

Tin-Plated Copper ferrules

Plain-plug type for pressure-type grounding-clamp terminals

Shrouded plain tin-plated copper ferrules

C6003119	U165	U166	#2
C6003120	U165	U168	“1/0”
C6003121	U165	U-L	“2/0”
C6003122	U166	U-L	“4/0”

Unshrouded plain tin-plated copper ferrules

C6003111	U165	#2
C6003112	U165	“1/0”
C6003113	U165	“2/0”
C6003114	U166	“4/0”

Threaded-stud type for tapped or drilled grounding-clamp terminals

Shrouded threaded tin-plated copper ferrules

C6003115	U165	U166	#2
C6003116	U165	U168	“1/0”
C6003117	U165	U-L	“2/0”
C6003118	U166	U-L	“4/0”

Unshrouded threaded tin-plated copper ferrules

C6003107	U165	#2
C6003108	U165	“1/0”
C6003109	U165	“2/0”
C6003110	U166	“4/0”

†Anderson die-less VERSA-CRIMP™ compression tools require no dies and are capable of making these crimped connections. If using another crimp tool brand, contact that manufacturer for Burndy die equivalents.

Copper Grounding Cable

Copper Grounding Cable is available in black, yellow and clear, is extra-flexible for handling ease yet strong and tough for long wear. Jacketing is smooth, abrasion, weather and oil resistant in accordance with applicable ASTM Specifications, marked with AWG size approximately every 4 feet.

Yellow and black jackets are T-prene rubber compound with -20°F recommended low temperature. Clear jackets (which allow visual inspection of strand conditions) are ultraviolet-inhibited Poly Vinyl Chloride (PVC). Recommended low temperature for PVC-jacketed cable is 0°F.

Extra-flexible cables, because of their extra-fine strands, require termination ferrules when used with ground clamps.

Either aluminum or copper ferrules may be used with copper cable.

Catalog Number	Size AWG	Strands*	Diameter (Inches)	Approx. O.D. (Inches)	Approx. Wt. (lb./1,000 ft.)
Yellow-Jacket Copper Cable					
S6116	#2	665	0.32	0.55	280
S6117	“1/0”	1045	0.41	0.66	425
S6118	“2/0”	1330	0.47	0.73	520
S6119	“4/0”	2109	0.59	0.87	760
Clear-Jacket Copper Cable					
S6449	#2	665	0.344	0.53	289
S7568	“1/0”	1050	0.445	0.63	520
S6450	“2/0”	1323	0.487	0.70	546
S6451	“4/0”	2107	0.616	0.84	841
Black-Jacket Copper Cable					
S3713	#2	665	0.32	0.55	280
S3715	“1/0”	1045	0.41	0.66	425
S3712	“2/0”	1330	0.47	0.73	510
S3714	“4/0”	2109	0.59	0.87	760

**Varies with manufacturer.*

Aluminum ferrules

Plain-plug type for pressure-type grounding-clamp terminals

Shrouded plain aluminum ferrules

1 unit each, not installed Catalog No.	Burndy Die No.† or equivalent		Cable Size, AWG
	Sect. A	Sect. B	
C6002626	U165	U166	#2
C6002627	U165	U168	1/0
C6002628	U165	U-L	2/0
C6002629	U249	U-L	4/0

Factory-crimped, above

Visual inspection of cable condition through clear heat-shrink tube determines breakage or corrosion that otherwise requires continuity test. Factory-assembled units expose ½" of cable strands at junction point.

Unshrouded plain aluminum ferrules

1 unit each, not installed Catalog No.	Burndy Die No.† or equivalent	Cable Size, AWG
C6002610	U165	#2
C6002611	U165	1/0
C6002612	U165	2/0
C6002613	U249	4/0

Shrink tubing for plain ferrules

Clear heat-shrink tubes provide corrosion-inhibitor by excluding moisture and stress-relief for cable jacket and ferrule-to-stranding connection.

Part No.	Lengths
P6001593P	5"
P6001982P	7"
P6002069P	9"

†Anderson die-less VERSA-CRIMP® compression tools require no dies and are capable of making these crimped connections. If using another crimp tool brand, contact that manufacturer for Burndy die equivalents.

Threaded-stud type for tapped or drilled grounding-clamp terminals

Shrouded threaded aluminum ferrules

1 unit each, not installed Catalog No.	Burndy Die No.† or equivalent		Cable Size, AWG
	Sect. A	Sect. B	
C6002618	U165	U166	#2
C6002619	U165	U168	1/0
C6002620	U165	U-L	2/0
C6002621	U249	U-L	4/0

Factory-crimped, above

Visual inspection of cable condition through clear heat-shrink tube determines breakage or corrosion that otherwise requires continuity test. Factory-assembled units expose ½" of cable strands at junction point.

Unshrouded threaded aluminum ferrules

1 unit each, not installed Catalog No.	Burndy Die No.† or equivalent	Cable Size, AWG
C6002602	U165	#2
C6002603	U165	1/0
C6002604	U165	2/0
C6002605	U249	4/0

Shrink tubing for threaded ferrules

Clear heat-shrink tubes provide corrosion-inhibitor by excluding moisture and stress-relief for cable jacket and ferrule-to-stranding connection.

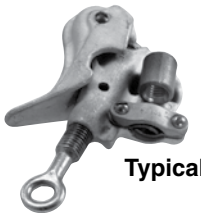
Part No.	Lengths
P6001593P	5"
P6001982P	7"
P6002069P	9"

†Anderson die-less VERSA-CRIMP® compression tools require no dies and are capable of making these crimped connections. If using another crimp tool brand, contact that manufacturer for Burndy die equivalents.

Conversion Terminals

Threaded-terminal adapters for pressure-type grounding-clamp terminals

C6001584



Typical Application

C6001700

Typical Application

Simply retrofit these bolt-on adapters to convert clamps with pressure-type terminals to accept $\frac{5}{8}$-11 UNC threaded ferrules.

Catalog Number	Clamp Applications
C6001584 "eyebolt" style, includes shakeproof washer and nut	C Type, Snap-On Flat-Face
C6001700 includes steel retainer straps for cable	All-Angle Clamps

Storage Bag

for Temporary Grounding Clamps-and-Cable Sets

Easy-to-see, bright-yellow protective bag is made of double vinyl-laminated open-weave nylon cloth…lightweight and durable with nylon stitching throughout. Plywood bottom is covered inside and out with metal skids on bottom of bag. Full-separating closure constructed with heavy-duty snaps and heavy webbing handles.

Dimensions: 18" Long x 12" Wide x 15" Deep.

Catalog No.	Description	Weight
T6000865	Grounding Storage Bag	3 lb.

G3626

G3627

Support Studs

These support studs can be installed on any Ground Clamp, in place of the restraining strap immediately below the terminal. The stud serves as a mechanical parking stand for a second clamp, preventing the clamp from making contact with the conductor or ground. This feature is particularly beneficial in three-phase grounding application.

Catalog No.	Description	Size of Stud	Weight
G3626	Stud for Rear Mount	$\frac{7}{16}$" x 2$\frac{1}{2}$"	$\frac{1}{2}$ lb./.2 kg.
G3627	Stud for Side Mount	$\frac{7}{16}$" x 3"	$\frac{3}{4}$ lb./.3 kg.

Cable Splice

for cables with plain-plug ferrules

Use for splicing grounding cable when extensions are required. Thumb screw makes attachment easy.

Splice fits #2 through 4/0 grounding cable with plain ferrules

Catalog No.	Description	Weight
T6000252	Grounding Cable Splice	1½ lb./0.7 kg.

T6000252

Terminal Blocks, 4-Way

for cables with plain-plug ferrules and threaded ferrules

Chance terminal blocks are used to attach ground leads from grounding clamps to a common ground. These terminal blocks are also ideal where permanent temporary grounding sets are part of a substation emergency equipment. Accommodates 4/0 grounding cables.

Catalog No.	Description	Weight
G47541	4-Way Terminal Blocks for Plain Plug Ferrules	2 lb./0.9 kg.
T6001964	4-Way Terminal Blocks for Threaded Ferrules	1 lb./0.45 kg.

G47541
for four
plain plug ferrules

T6001964
for four ⅝-11 UNC
threaded ferrules

Cluster Support, 1-terminal type

Conveniently hangs grounding sets on the pole to facilitate lifting clamps—one at a time to the conductors. Accepts plain ferrules on #2 to 4/0 grounding cable. Copper bar length is 11".

Catalog No.	Description	Weight
C6000152	Ground Cluster Support	9½ lb./4.3 kg.

C6000152

Cluster Bars

for wood, steel and concrete poles and tower angles

Compact 5" aluminum-alloy bar (⅝" diameter) accepts C-type or duckbill clamps for phase-to-phase grounding technique. Adjustable wheel binder and 36" chain for pole applications. Hook style for attachment to tower angles.

Catalog No.	Description	Weight
T6001549	Pole-Mount Grounding Cluster Bar	7½ lb./4.09 kg.
T6001737	Tower-Mount Grounding Cluster Bar	9 lb./4.09 kg.

T6001549

T6001549
for poles only

T6001737
(For tower angles only)

Storage Reel for Grounding Cable

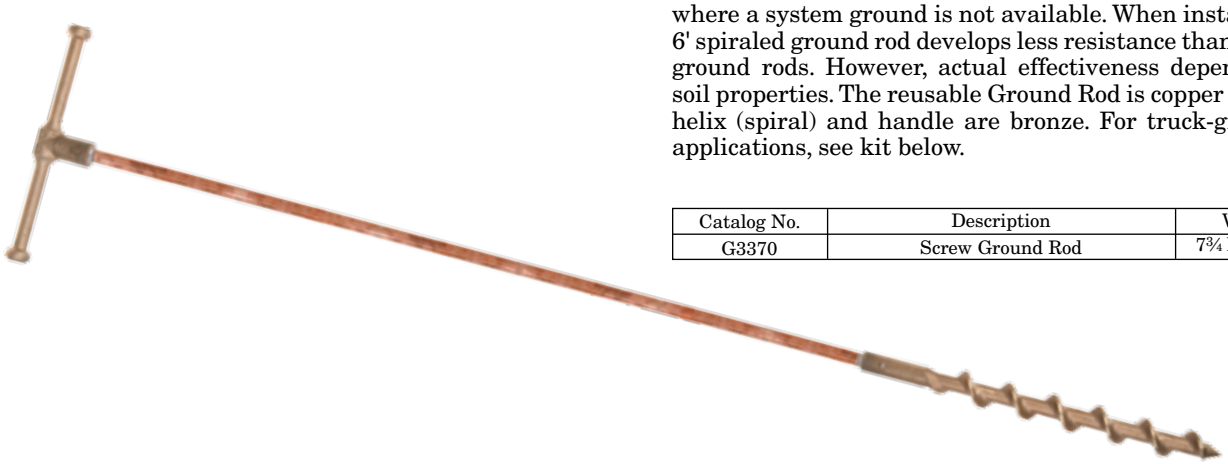
Cable Size	Reel Capacity
#2	225 ft.
1/0	185 ft.
2/0	145 ft.
4/0	100 ft.

Hole in outer flange for cable to feed through. Rewind handle has a galvanized-pipe extension for temporarily parking clamps.

Portable reel quickly pays-out/takes-up, helps keep ground sets clean and neat, ready for use. Handles are comfortable, turned aluminum. Lightweight unit can be carried to remote sites or tubular-steel frame can be U-bolted to deck or truck. Galvanized drum has ribbed flanges to resist flexing and beaded rims to eliminate sharp edges. Reel is for storage only. Cable and clamps should be removed completely from reel before use. Failure to do so could result in a dangerous voltage drop and violent mechanical reactions. A label on the unit gives this warning.

Catalog No.	Description	Weight
C4176086	Portable Cable Reel	18 lb./8 kg.

Temporary Ground Rod



The Chance Screw Ground Rod provides a temporary ground where a system ground is not available. When installed, the 6' spiraled ground rod develops less resistance than straight ground rods. However, actual effectiveness depends upon soil properties. The reusable Ground Rod is copper clad. The helix (spiral) and handle are bronze. For truck-grounding applications, see kit below.

Catalog No.	Description	Weight
G3370	Screw Ground Rod	7¾ lb./3.5 kg.

Truck Grounding Set

Convenient set provides means to drain off capacitance or static charges from winch trucks and aerial devices.

Flat face clamp is for secure attachment to the truck bed at an area cleaned for electrical contact. C-type clamp is for secure attachment to ground rod.

This grounding method should not be considered adequate protection to personnel against conductor contact.

For truck-grounding with ball/socket-clamp, see page 3103.

Truck Grounding Set
Catalog No. T6001971
(total weight 35 lb./15.75 kg.)
consists of:

Component	Qty.	Description
Screw Ground Rod	1	Cat. No. G3370, see above
Flat Face Ground Clamp	1	Cat. No. T6001798, see page 3010
C-Type Ground Clamp	1	Cat. No. C6001754, see page 3004
#2 Copper Grounding Cable	50 ft.	Cat. No. S6116, see page 3018
*Shrouded Alum. Ferrules	2	Cat. No. C6002618, see page 3019
Storage Reel	1	Cat. No. C4176086, see above

*Threaded ferrules are factory-installed on ends of cable.

Truck Safety Barricade

Catalog No.	Description	Weight
T3060006	Truck Safety Barricade	21 lb./9.5 kg.

T3060006

This kit keeps workers and onlookers away from the truck when the truck is being used in proximity to energized conductors. Six rods, made of bright orange Epoxirod®, provide a 6-foot air space around the entire perimeter of the truck. The safety barricade also includes six pieces of 3-inch long steel tubing (to be welded to truck by the customer) to hold the barricade rods, 150 feet of yellow rope and a canvas storage bag. The entire kit requires less storage than traffic cones and can be quickly installed and removed at each job site.

Grounding Simulator Kit

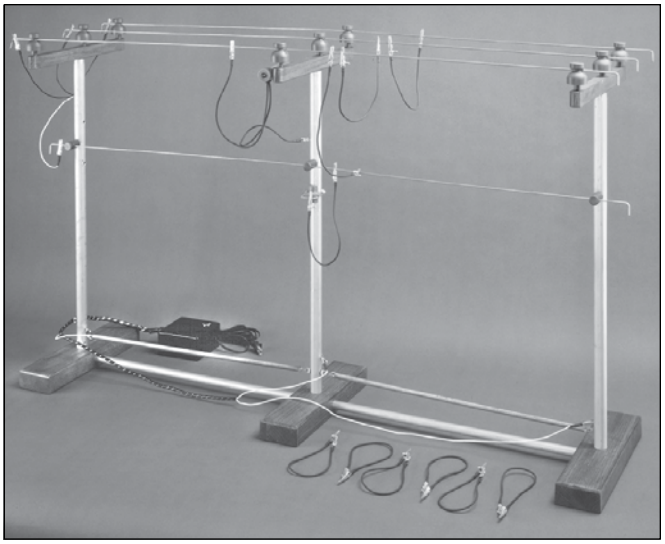
To demonstrate the principles for temporary grounding practices, this portable instructional aid provides a working model of a three-phase system circuit. Powered by a step-down transformer, the kit simply plugs into a 110-volt 60-cycle household source.

A special light/bell unit simulates a lineworker involved in maintenance on a de-energized line. Insulated wires with an alligator clip at each end serve as grounding cable and clamp sets (10 included). A miniature grounding cluster bar is included for pole mounting.

Durable and accurate

Built to last, the poles are aluminum pipe material. Crossarms are wood.

Electrically correct, the aluminum poles effect the conductivity which should be assumed for actual poles. Leads from the poles and the neutral connect to the ground side on the source (transformer).



Modular design quickly sets up and takes down for storage in rugged transport case.

Operation

To quickly test any proposed configuration, just depress the transformer foot switch to energize a fault on the system. If the light glows and the bell sounds on the "worker," this indicates the grounding system in place fails to provide protection. Or, if no such signals occur, the scheme of grounding connections does create a protective zone of equalized potential at the worksite.

To answer a multitude of "what-if" questions from the various personnel concerned with grounding practices, the kit transformer rapidly recycles while you rig the grounding leads for the next test. A "ready" light comes on as soon as the transformer is reset.

Ordering Information

Catalog No.	Description	Weight
C6001950	Grounding Simulator Kit	23 lb. / 10.5 kg.

Standard (Orange) Equi-Mat® Personal Protective Ground Grid

Complies with OSHA 1910.269 for equipotential requirements near vehicles, underground gear, overhead switches and in substations

- **Meets ASTM F2715 Standard**

Portable, lightweight, high performance

The Equi-Mat® Personal Protective Ground Grid provides an easy way to help establish an equipotential zone for a lineworker to stand on during various energized and de-energized work practices. Properly applied, it accomplishes compliance with Occupational Safety and Health Administration (OSHA) 1910.269:

> "Equipotential Zone. Temporary protective grounds SHALL be placed at such locations and arranged in such a manner as to prevent each employee from being exposed to hazardous differences in electrical potential."

The Equi-Mat® Personal Protective Ground Grid easily can be taken anywhere needed, is simple to use, maintain and store. It consists of a high-ampacity tinned-copper-braid cable sewn in a grid pattern onto a vinyl/polyester fabric. Cable terminals permit connecting the mat's grid in series with an electrical ground and the subject system component or vehicle. Simply rinsing with water comprises all the care the mat requires. The mat may be folded and stored in a tool bag to help keep it clean and protected. Complete instructions are included with each unit.

. . . continued on the next page . . .

Basic Equi-Mat® Personal Protective Ground Grid
Each Basic Unit includes a Long Ball Stud and illustrated instructions.

Catalog No.	Size	Weight
Single ¼" Perimeter Braid		
PSC6003080* (Bucket)	24" X 24"	5 lb. / 2.3 kg.
C6002850	58" x 58"	8 lb. / 3.6 kg.
C6002851	58" x 120"	13 lb. / 5.9 kg.
C6002852	120" x 120"	20 lb. / 9.1 kg.

*For use in bottom of personnel bucket of lift truck.

Pre-Packaged Kits

Each Pre-Packaged Kit includes Ground Grid (size below with Long Ball Stud and illustrated instructions) plus Ground Set T6002841 and Storage Bag C4170147.

Kit Catalog No.	Equi-Mat® Personal Protective Ground Grid Size	Weight per Kit
C6002989	58" x 58"	19 lb. / 8.6 kg.
C6002990	58" x 120"	27 lb. / 12.2 kg.
C6002991	120" x 120"	30 lb. / 13.6 kg.

Accessory Items

Long Ball Stud T6002364
included with each Basic Equi-Mat® Personal Protective Ground Grid (Catalog page 3013)

Ground Set T6002841 included with Kits only
Consists of 6 ft. long #2 cable with ferrules applied, Ball Socket clamp (C6002100) and C-Type clamp (T6000465)

Storage Bag C4170147
included with Kits only
Catalog pages 2512-13

Standard (Orange) EQUI-MAT®
Personal Protective Ground Grid

Complies with OSHA 1910.269 for equipotential requirements near vehicles, underground gear, overhead switches and in substations

Easy to use, versatile to many applications

• Padmounted Transformers and Switches

Complies with OSHA 1910.269 for protecting workers operating and maintaining padmounted transformers and switchgear. The proper use of EQUI-MAT Personal Protective Ground Grid in these applications creates an equipotential zone just as a cluster bar (chain binder) does in overhead grounding practices.

• Bottom of Personnel Bucket on Lift Truck

Use only 24" x 24" Catalog No. PSC6003080.

• Mechanical Equipment (Vehicles, etc.) Grounding

It also helps provide compliance with OSHA 1910.269 for protecting workers around mechanical equipment which could become energized, such as utility vehicles and portable generators. For proper application, EQUI-MAT Personal Protective Ground Grids are attached to the vehicle (for example) at locations where workers could contact the vehicle. This extends the area of equipotential around the vehicle.

• Overhead Distribution and Transmission Switches

EQUI-MAT Personal Protective Ground Grid can help eliminate step and touch potential. Connect it to the handle of an overhead switch and stand on it when opening or closing the switch.

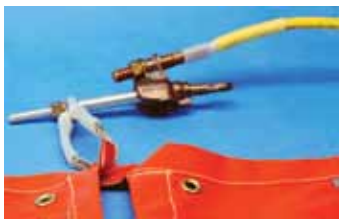
• Line Apparatus Work: Similar uses for installing, maintaining or operating regulators, reclosers, capacitor banks.

• Suspect Substation Grids: If station ground mat integrity is questionable, apply the EQUI-MAT Personal Protective Ground Grid.

Simple to join multiples for larger areas

Cascading (or joining together) two or more mats is easy with the connecting tab and hardware furnished with each mat. So connected in series, the conductive grids become one. Whenever a larger area is needed, simply place lug connector tabs of two adjacent mats on the supplied bolt or threaded shank of a ball stud and secure with supplied washer and nut.

(Left) To join mats, conductive grids simply connect at tabs with bolt, washer and nut included with each mat. Tabs have shrink tube for stress relief. (Right) Ball stud can join mats and connect to ground set clamps.



Long ball stud accepts various grounding clamps as shown below and at right: Ball/Socket, C Type and Duckbill.

Slip-Resistant (Black) EQUI-MAT® Personal Protective Ground Grid

Complies with OSHA 1910.269 for equipotential requirements near vehicles, underground gear, overhead switches and in substations

• Meets ASTM F2715 Standard

Portable, lightweight, high performance

The EQUI-MAT® Personal Protective Ground Grid provides an easy way to help establish an equipotential zone for a lineworker to stand on during various energized and de-energized work practices. Properly applied, it accomplishes compliance with Occupational Safety and Health Administration (OSHA) 1910.269:

> "Equipotential Zone. Temporary protective grounds SHALL be placed at such locations and arranged in such a manner as to prevent each employee from being exposed to hazardous differences in electrical potential."

The EQUI-MAT® Personal Protective Ground Grid easily can be taken anywhere needed, is simple to use, maintain and store. It consists of a high-ampacity tinned-copper-braid cable sewn in a grid pattern onto a vinyl/polyester fabric. Cable terminals permit connecting the mat's grid in series with an electrical ground and the subject system component or vehicle. Simply rinsing with water comprises all the care the mat requires. The mat may be folded and stored in a tool bag to help keep it clean and protected. Complete instructions are included with each unit.

Slip-Resistant material

For rain, snow and ice conditions, the napped surface of the Slip-Resistant (Black) EQUI-MAT® Personal Protective Ground Grid offers superior footing. For dry conditions, consider the Standard (Orange) EQUI-MAT® Personal Protective Ground Grid, available in the same sizes and kits.

. . . continued on the next page . . .

Slip-Resistant EQUI-MAT® Personal Protective Ground Grid Each Unit includes Ground Grid, Long Ball Stud and illustrated instructions.

Catalog No.	Size	Weight
Single ¼" Perimeter Braid		
PSC6003345	58" x 58"	8 lb. / 3.6 kg.
PSC6003346	58" x 120"	13 lb. / 5.9 kg.
PSC6003347	120" x 120"	20 lb. / 9.1 kg.

Pre-Packaged *Slip-Resistant* EQUI-MAT® Kits Each Kit includes Ground Grid (size below with Long Ball Stud and illustrated instructions) plus Ground Set T6002841 and Storage Bag C4170147.

Kit Catalog No.	EQUI-MAT® Personal Protective Ground Grid Size	Weight per Kit
PSC6003348	58" x 58"	19 lb. / 8.6 kg.
PSC6003349	58" x 120"	27 lb. / 12.2 kg.
PSC6003350	120" x 120"	30 lb. / 13.6 kg.

Accessories

Long Ball Stud T6002364 included with each Basic EQUI-MAT® Personal Protective Ground Grid (Catalog page 3013)

Ground Set T6002841 included with Kits only
Consists of 6 ft. long #2 cable with ferrules applied, Ball Socket clamp (C6002100) and C-Type clamp (T6000465)

Storage Bag C4170147 included with Kits only
Catalog pages 2512-13

Slip-Resistant (Black) EQUI-MAT® Personal Protective Ground Grid

Complies with OSHA 1910.269 for equipotential requirements near vehicles, underground gear, overhead switches and in substations

Easy to use, versatile to many applications

• Padmounted Transformers and Switches

Complies with OSHA 1910.269 for protecting workers operating and maintaining padmounted transformers and switchgear. The proper use of EQUI-MAT Personal Protective Ground Grid in these applications creates an equipotential zone just as a cluster bar (chain binder) does in overhead grounding practices.

• Mechanical Equipment (Vehicles, etc.) Grounding

It also helps provide compliance with OSHA 1910.269 for protecting workers around mechanical equipment which could become energized, such as utility vehicles and portable generators. For proper application, EQUI-MAT Personal Protective Ground Grids are attached to the vehicle (for example) at locations where workers could contact the vehicle. This extends the area of equipotential around the vehicle.

• Overhead Distribution and Transmission Switches

EQUI-MAT Personal Protective Ground Grid can help eliminate step and touch potential. Connect it to the handle of

an overhead switch and stand on it when opening or closing the switch.

• Line Apparatus Work: Similar uses for installing, maintaining or operating regulators, reclosers, capacitor banks.

• Suspect Substation Grids: If station ground mat integrity is questionable, apply the EQUI-MAT Personal Protective Ground Grid.

Simple to join multiples for larger areas

Cascading (or joining together) two or more mats is easy with the connecting tab and hardware furninshed with each mat. So connected in series, the conductive grids become one.

Whenever a larger area is needed, simply place lug connector tabs of two adjacent mats on the supplied bolt or threaded shank of a ball stud and secure with supplied washer and nut.

(Left) To join mats, conductive grids simply connect at tabs with bolt, washer and nut included with each mat. Tabs have shrink tube for stress relief. (Right) Ball stud can join mats and connect to ground set clamps.

Long ball stud accepts various grounding clamps as shown below and at right: Ball/Socket, C Type and Duckbill.

CHANCE – CENTRALIA, MISSOURI
JULY 2010

Rotating Ground Adapters for Reels

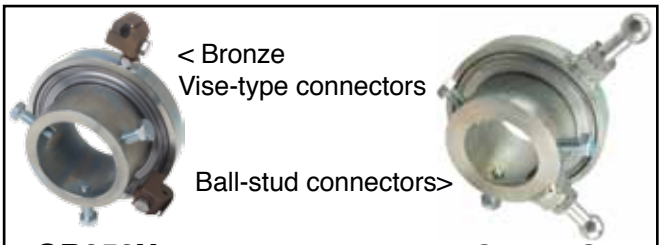
Tested and Meets ASTM F 855 Standard

Application

This unique system helps provide system protection while conductor is pulled from reels for stringing operations. By design, the system adds conductor grounding but does not replace other grounding practices, including items such as Equi-Mat® personal protective ground grids (Chance Catalog Section 3000). System serves as intended path to ground for static discharge and accidental energizing from downed lines, equipment contact, adjacent conductors and lightning.

Installation

Rotating Ground Adapter slides on reel mandrel and three locking bolts secure it. Its outer collar contact connects to the end of the conductor from inside the reel. Adapter's inner collar contact connects to a permanent or screw-in ground rod (not included, see Chance Catalog Section 3000).



GR253X **GR43BS2**

Rotating Ground Adapters

PST6003438

Single Reel Grounding Set

Rotating Ground Adapters for Reels

Ordering Information

Catalog No.	ASTM Grade: Fault Rating	Pipe Dia. Maximum	Connector Type	Connector Range	Weight
Rotating Grounding Adapters					
GR253X	ASTM Grade 1: 14kA @ 15 cycles 10kA @30 cycles	3-3/16"	Bronze Vise Type	3 Sol. to 4/0 Str.	9.8 lb. (4.4 kg.)
GR43BS2	ASTM Grade 5: 43kA @15 cycles 30kA @30 cycles	2-11/16"	Two 1"-diameter Ball Studs	See Ball Stud Clamp in Chance Cat. Section 3000	12.75 lb. (5.8 kg.)
Single Reel Grounding Set			**Assembled Bill of Materials**		
PST6003438	Grade 3: 27kA @15 cycles 20kA @30 cycles (Ratings for this set are limited to those for the 2/0 grounding cable.)	2-11/16"	4 ea. C6001754 C-type ground clamps, 2 ea. T6002320 ball stud ground clamps, 1 ea. GR43BS2 rotating ground adapter, 6 ea. Ferrules (aluminum), 6 ea. Shrink tubes, 63 ft. S6118 yellow neoprene 2/0 cable (1 @ 50 ft., 1 @ 10 ft., 1 @ 3 ft.)		53.75 lb. (24.4 kg.)