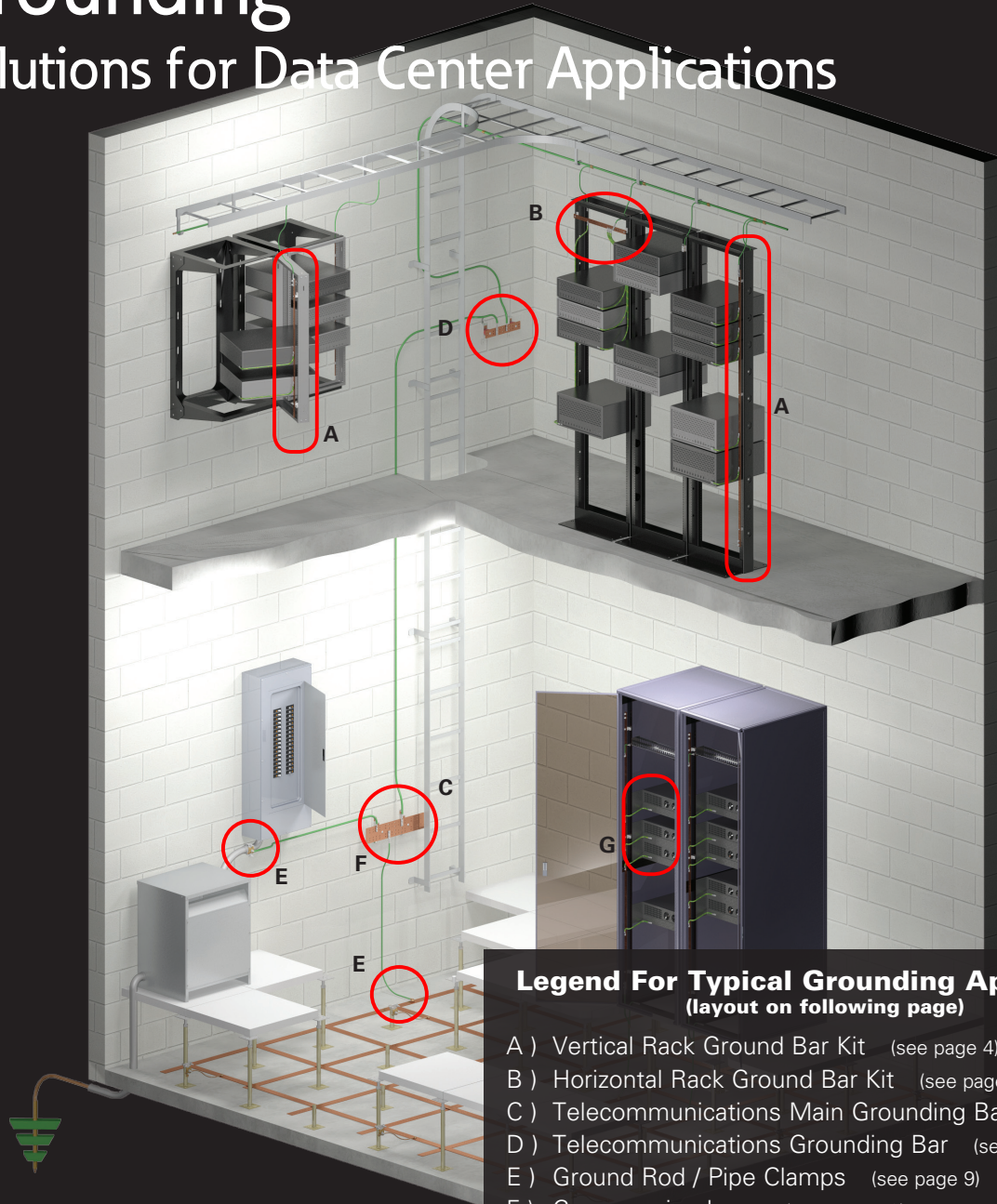# Grounding
Solutions for Data Center Applications

Legend For Typical Grounding Application
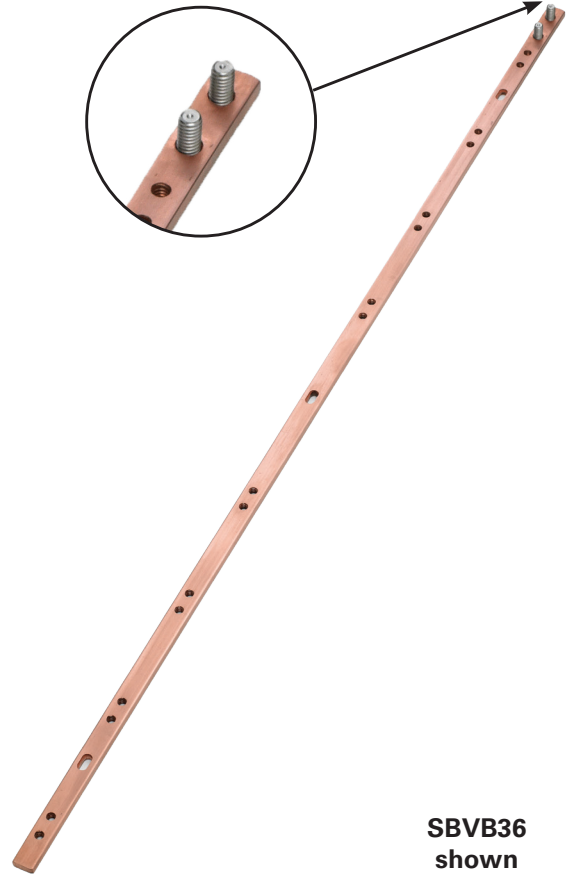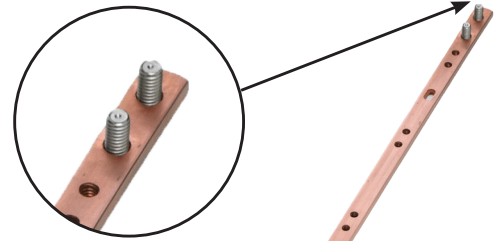#### (layout on following page)

A) Vertical Rack Ground Bar Kit   (see page 4)
B) Horizontal Rack Ground Bar Kit   (see page 5)
C) Telecommunications Main Grounding Bar   (see page 7)
D) Telecommunications Grounding Bar   (see page 8)
E) Ground Rod / Pipe Clamps   (see page 9)
F) Compression Lugs   (see page 10)
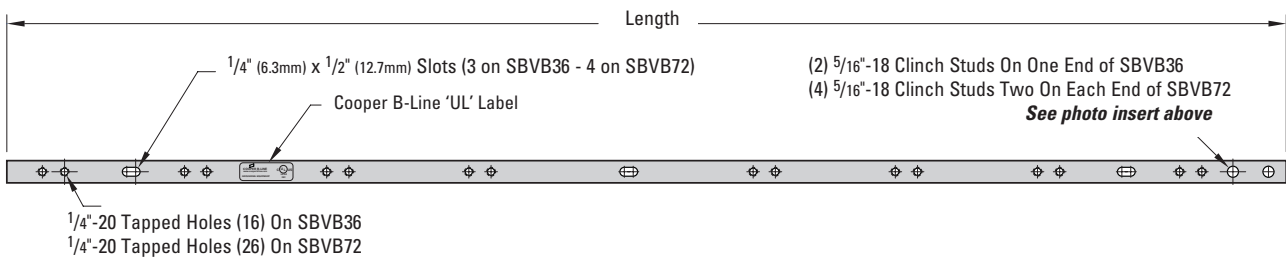G) Unit Bonding Conductors   (see page 11)

E·T·N
Powering Business Worldwide

Vertical Rack Ground Bar & Kits

- Provides a vertical ground path between equipment mounted on the rack

- Typically used on two post or four post racks

- Blank end and studded end can be attached together to splice bars

- Isolators may be used to separate bar from rack (or omitted depending on application grounding scheme)

- Kit includes
  - 1 - Vertical rack ground bar
  - 3 - Insulators
  - 1 - #2 compression lug
  - 8 - $1/4$"-20 x $1/2$" SS4 hex bolts & lock washers
  - 4 - $5/16$"-18 SS4 hex nut & lock washers
  - 3 - #12-24 x $5/8$" yellow zinc hex washer bolts

- Material: $1/4$" x $5/8$" copper bar

Hardware Kit

UL LISTED

SBVB36 shown

Length

$1/4$" (6.3mm) x $1/2$" (12.7mm) Slots (3 on SBVB36 - 4 on SBVB72)

Cooper B-Line 'UL' Label

(2) $5/16$"-18 Clinch Studs On One End of SBVB36
(4) $5/16$"-18 Clinch Studs Two On Each End of SBVB72
See photo insert above

$1/4$"-20 Tapped Holes (16) On SBVB36
$1/4$"-20 Tapped Holes (26) On SBVB72

| Part Number	Includes	Length		Wt./Ea.	
		in.	mm	lbs.	kg
SBVB36	Ground Bar Only	36"	914	2.0	0.91
SBVB36K	Bar & Hardware Kit	36"	914	2.2	1.00
SBVB72	Ground Bar Only	72"	1828	3.7	1.69
SBVB72K	Bar & Hardware Kit	72"	1828	3.9	1.77

Horizontal Rack Ground Bar Kit

- Used to consolidate grounds on the equipment rack
- Typically used on two post or four post racks
- Isolators may be used to separate bar from rack (or omitted depending on application grounding scheme)
- Kit includes
  - 1 - Horizontal rack ground bar
  - 2 - White insulators
  - 4 - #12-24 x $5/8$" (15.9mm) zinc plated screws & flat washers
  - 20 - #12-24 x $1/2$" (12.7mm) zinc plated screws
  - 2 - Ground labels
- Material: $3/16$" (4.7mm) x 1" (25.4mm) copper bar
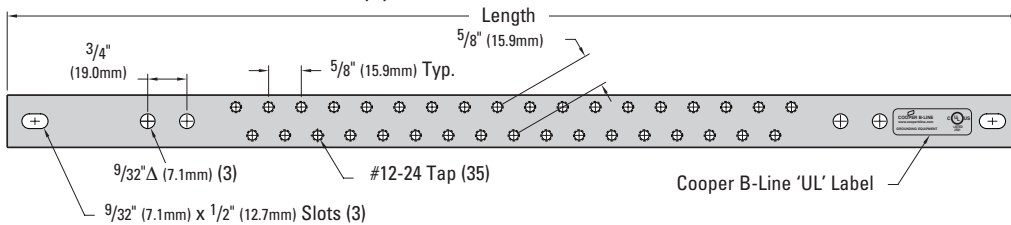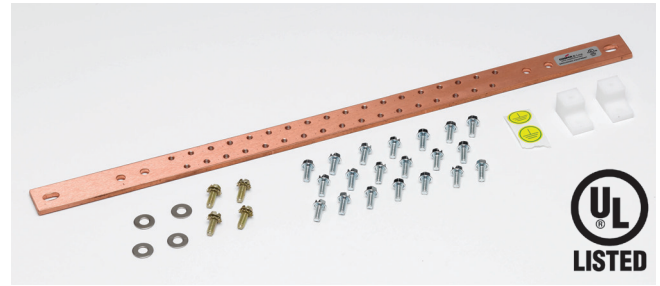
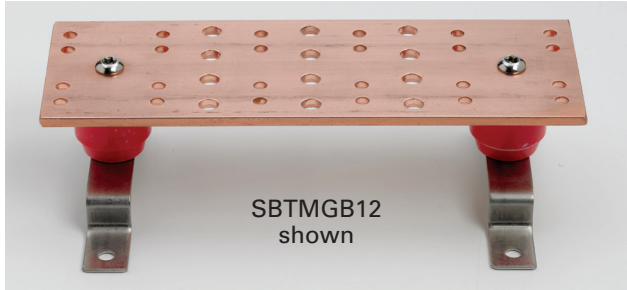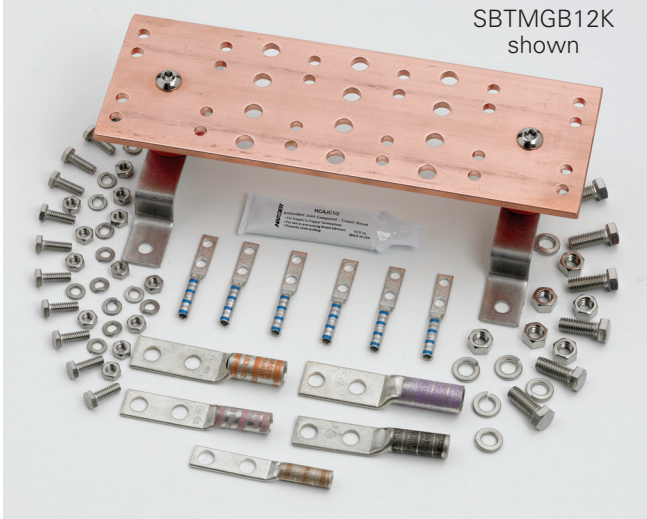| Part Number | Rack Width | | Includes | Length | | Wt./Ea. | |
	in.	mm		in.	mm	lbs.	kg
SBHB119K	19"	482	Bar & Hardware Kit	19 $3/8$"	492	3.0	1.36

Universal Grounding Bar

- Used as a rack mounted equipment grounding bus
- Kit includes
  - 1 - Ground bar
  - 1 - Splice plate
  - 2 - #12-24 x $3/4$" (19.0mm) yellow zinc plated screws
  - 2 - #12 yellow zinc plated lock washers
  - 2 - $1/4$" yellow zinc plated flat washers
- Material: $3/16$" (4.7mm) x $3/4$" (19.0mm) copper bar

SB57903 shown
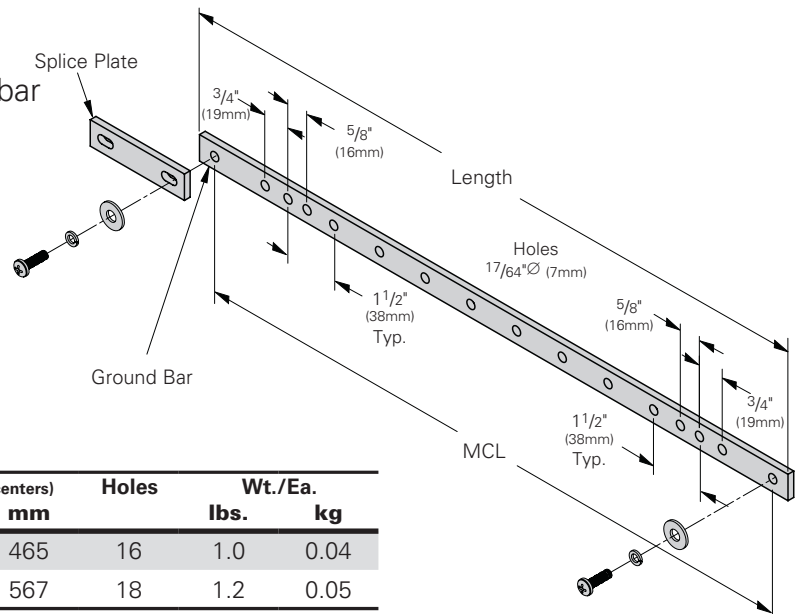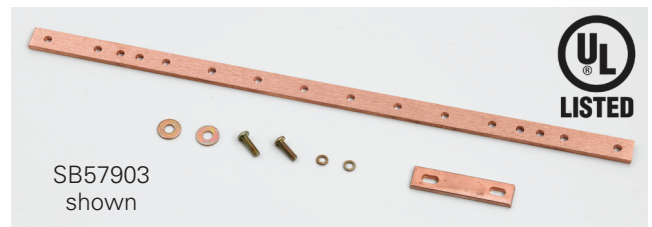
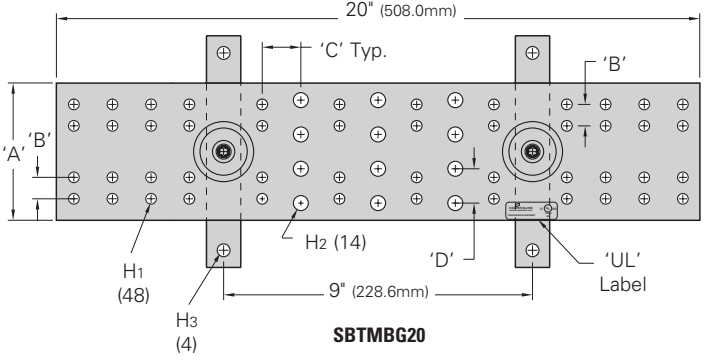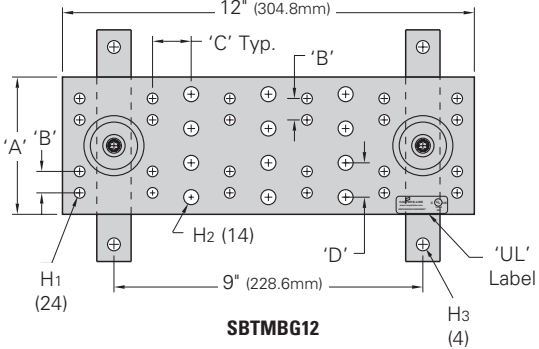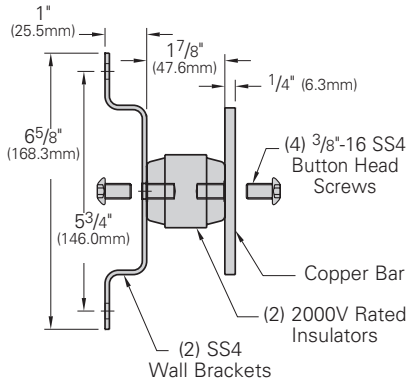| Part Number | Rack Width | | Length (overall) | | MC (mtg. centers) | | Holes | Wt./Ea. | |
	in.	mm	in.	mm	in.	mm		lbs.	kg
SB57903	19"	482	19 $5/16$"	490	18 $5/16$"	465	16	1.0	0.04
SB57904	23"	584	23 $5/16$"	592	22 $5/16$"	567	18	1.2	0.05

3

Telecommunications Main Grounding Bar

- Used as a central consolidation point for telecommunications and other low voltage systems within the room

- Typically located on wall or entry room where exterior ground enters building

- Kit includes
  - 1 - Grounding bar assembly
  - 6 - #6 compression lugs
  - 1 each - #2, 1/0, 2/0, 3/0 compression lugs
  - 12 each - $1/4$"-20 x $3/4$" (19.0mm) SS4 hex bolts, hex nuts & lock washers
  - 6 each - $3/8$"-16 x 1" (25.4mm) SS4 hex bolts, hex nuts & lock washers

SBTMGB12K shown

SBTMGB12 shown

UL LISTED

Dimensional Data

A = 4" (101.6mm)
B = $5/8$" (15.8mm)
C = $1 1/4$" (31.7mm)
D = 1" (25.4mm)
H_1 = $5/16$"$\varnothing$ (7.9mm)
H_2 = $7/16$"$\varnothing$ (11.1mm)
H_3 = $3/8$"$\varnothing$ (9.5mm)

1" (25.5mm)
$1 7/8$" (47.6mm)
$1/4$" (6.3mm)
$6 5/8$" (168.3mm)
$5 3/4$" (146.0mm)
(4) $3/8$"-16 SS4 Button Head Screws
Copper Bar
(2) 2000V Rated Insulators
(2) SS4 Wall Brackets

12" (304.8mm)
'C' Typ.
'B'
'A' 'B'
H_2 (14)
'D'
'UL' Label
H_1 (24)
9" (228.6mm)
H_3 (4)
SBTMBG12

20" (508.0mm)
'C' Typ.
'B'
'A' 'B'
H_2 (14)
'D'
'UL' Label
H_1 (48)
9" (228.6mm)
H_3 (4)
SBTMBG20

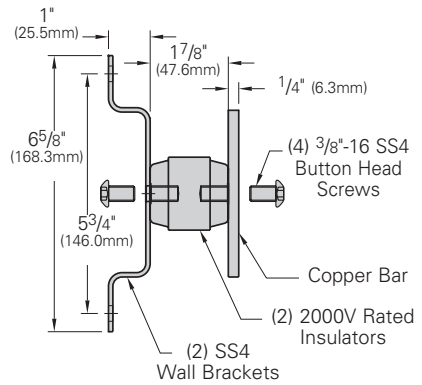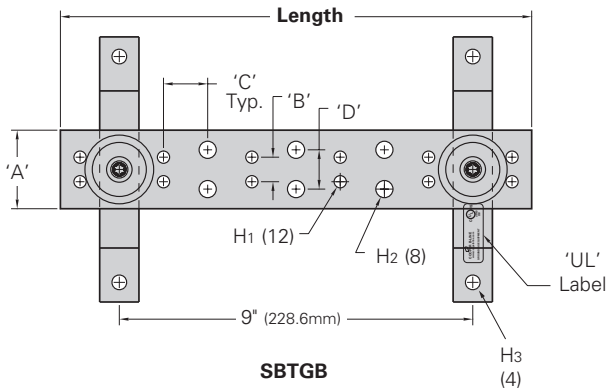| Part Number	Includes	Length		Wt./Ea.	
		in.	mm	lbs.	kg
SBTMGB12	Grounding Bar Assy	12"	305	4.7	2.13
SBTMGB12K	Bar Assy & Hardware Kit	12"	305	7.7	3.49
SBTMGB20	Grounding Bar Assy	20"	508	7.1	3.22
SBTMGB20K	Bar Assy & Hardware Kit	20"	508	10.1	4.58

Telecommunications Grounding Bar Kit

- Provides a common grounding point within the telecommunications room
- Typically is located on wall of data room
- Kit includes
    1 - Grounding bar assembly
    6 - #6 compression lugs
    1 each - #2, 1/0, 2/0, 3/0 compression lugs
    12 each - $1/4$"-20 x $3/4$" (19.0mm) SS4 hex bolts, hex nuts & lock washers
    6 each - $3/8$"-16 x 1" (25.4mm) SS4 hex bolts, hex nuts & lock washers
- Material: Copper bar & SS4 wall brackets

SBTGBK shown

SBTGB shown
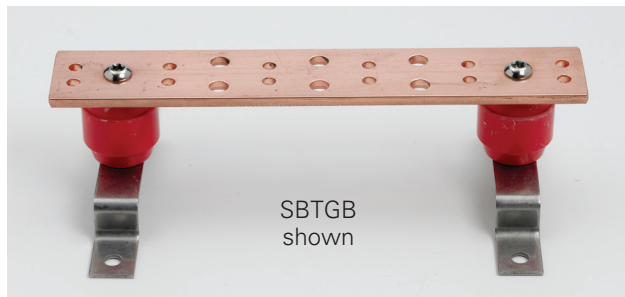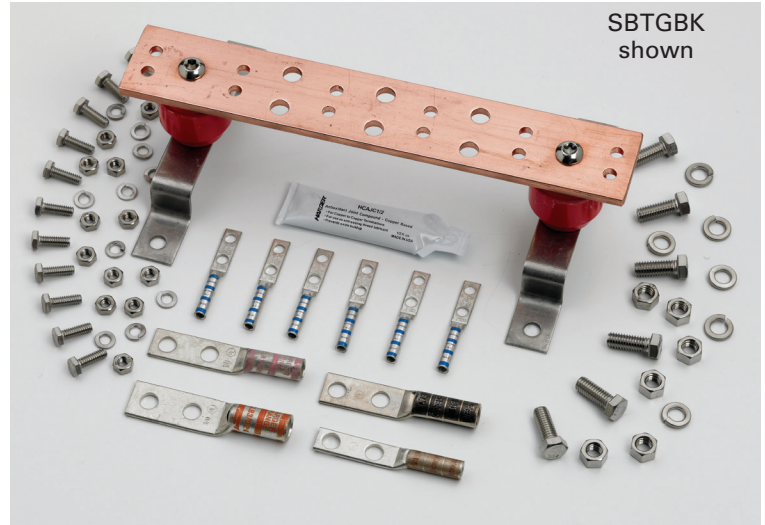
Dimensional Data

A = 2" (50.8mm)
B = $5/8$" (15.8mm)
C = $1 1/4$" (31.7mm)
D = 1" (25.4mm)
H_1 = $5/16$"$\varnothing$ (7.9mm)
H_2 = $7/16$"$\varnothing$ (11.1mm)
H_3 = $3/8$"$\varnothing$ (9.5mm)

UL LISTED

SBTGB

| Part Number	Includes	Length		Wt./Ea.	
		in.	mm	lbs.	kg
SBTGB	Grounding Bar Assy	12"	305	2.91	1.32
SBTGBK	Bar Assy & Hardware Kit	12"	305	4.91	2.23

5

Ground Rod / Pipe Clamps

- Used to attach ground wire to raised floor pedestals
- Ground wire system inside floor can be used to ground Flextray™ F.A.S.T. System trays
- Sized for ground wires 6 AWG stranded through 250MCM
- $5/16"$ hardware included
- Material: SS4 U-bolt and hardware - tinned bronze casting

SBPC050075
closed
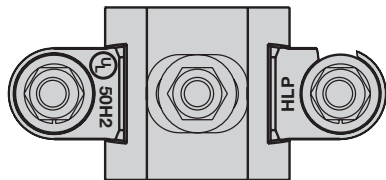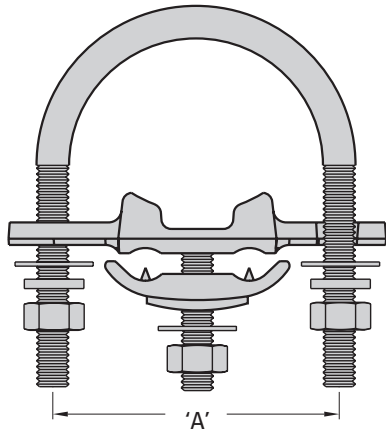
SBPC050075
open

| Part Number	Pipe Size (nominal)		A		Wt./Ea.	
	in.	mm	in.	mm	lbs.	kg
SBPC050075	$1/2"$ - $3/4"$	15 - 20	1.57"	39.9	0.47	0.21
SBPC100125	1" - $1 1/4"$	25 - 32	2.03"	51.5	0.79	0.36
SBPC150200	$1 1/2"$ - 2"	40 - 50	2.75"	69.8	0.75	0.34
SBPC250300	$2 1/2"$ - 3"	65 - 80	3.87"	98.3	0.95	0.43
SBPC350400	$3 1/2"$ - 4"	90 - 100	4.87"	123.7	1.21	0.55
SBPC500600	5" - 6"	125 - 150	7.00"	177.8	1.70	0.77

Two-Hole Mechanical Lug

- Use for connection of electric wire to grounding bus
- Setscrew may be either allen head or hex head
- Includes: silicon bronze hardware
- Additional sizes available
- Sold individually
- Material: Copper alloy
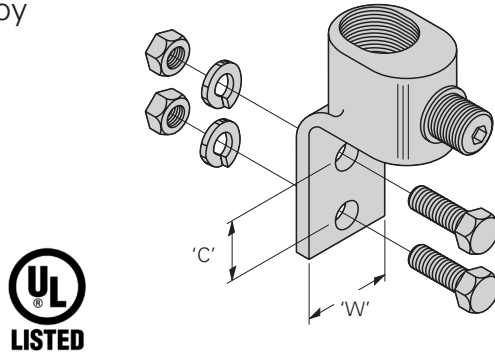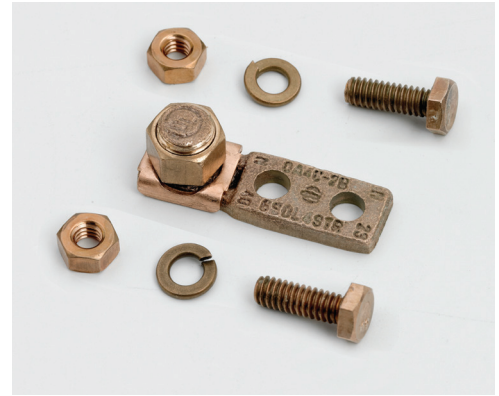
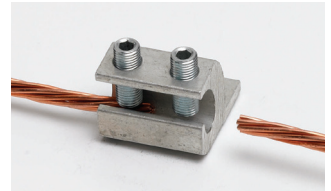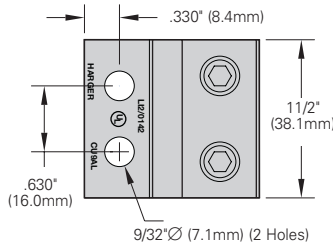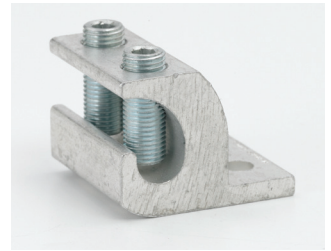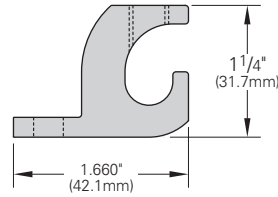| Part Number	Wire Size	'C'		'W'		Bolt Size	Wt./Ea.	
		in.	mm	in.	mm		lbs.	kg
SB47801	#14 to #8	$5/8$"	16	$1/2$"	13	#10-24	0.05	0.02
SB47802	#8 to #4	$5/8$"	16	$1/2$"	13	$1/4$"-20	0.07	0.03
SB47803	#4 to #1	$3/4$"	19	$5/8$"	16	$1/4$"-20	0.14	0.06
SB47804	#1 to 2/0	1"	25	$13/16$"	20	$3/8$"-16	0.23	0.10

Compression Lugs (Long Barrel)

- Use for connection of electric grounding wire to grounding bus
- Sold in package of 10 pcs.
- Material: Tinned Copper
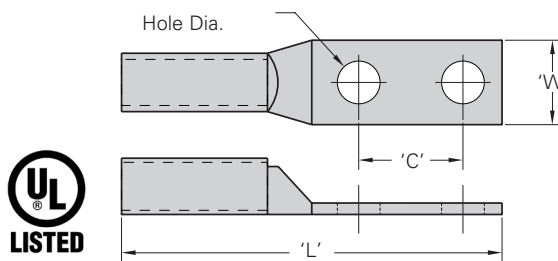
Part Number	Lug Size & # of Holes	Hole Dia.		'W'		'L'		'C'		Wt./Pkg.	
		in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kg
SBCL 1	2/0 - 2 Hole	$13/32$"	10.3	$13/16$"	20.6	3 $21/32$"	92.8	1"	25.4	6.0	2.72
SBCL 2	2/0 - 2 Hole	$17/32$"	13.5	$13/16$"	20.6	4 $7/8$"	123.8	1 $3/4$"	44.4	14.0	6.35
SBCL 3	3/0 - 2 Hole	$9/16$"	14.3	$15/16$"	23.8	3 $3/4$"	95.2	1"	25.4	20.0	9.07
SBCL 4	4/0 - 2 Hole	$9/16$"	14.3	1"	25.4	3 $29/32$"	99.2	1"	25.4	20.0	9.07

Lay-In Lug

- Used to attach ground wires to racks or cabinets
- Sold in package of 10 pcs.
- Setscrews (2): $3/8$"-24 Hex Head Oval Point
- Material: Aluminum - tin plated

1$1/4$"
(31.7mm)

1.660"
(42.1mm)

.330" (8.4mm)

HARGER

L2/0142

CU9/4L

11/2"
(38.1mm)

.630"
(16.0mm)

9/32"∅ (7.1mm) (2 Holes)

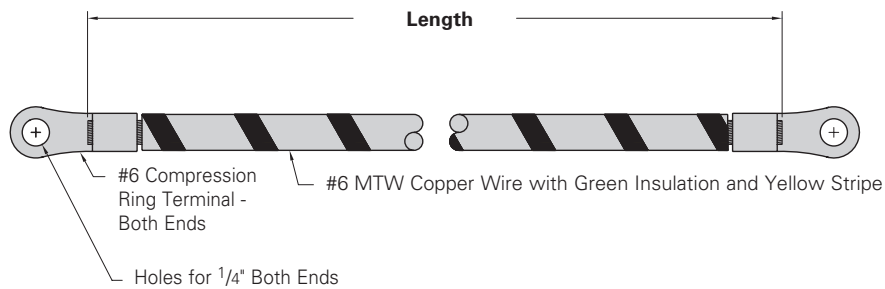| Part Number	Lug Size	Wt./Pkg.	
		lbs.	kg
SBLL 1	2/0 - #14AWG	2.40	1.09

UL LISTED

Unit Bonding Conductor

- Used to bond electronic equipment to vertical or horizontal rack mount busbars
- Sold in packages of 5 with aluminum joint compound
- Material: Copper wire

UL LISTED

SBUBC614K
shown

Length

#6 Compression Ring Terminal - Both Ends

#6 MTW Copper Wire with Green Insulation and Yellow Stripe

Holes for $1/4$" Both Ends

Part Number	Length		Wt./Ea.	
	in.	mm	lbs.	kg
SBUBC614K	14"	355	1.45	0.66
SBUBC618K	18"	457	1.45	0.66
SBUBC632K	32"	813	2.54	1.15

Grounding Strap

- Use to provide grounding path
- SB669³/₄x10¹/₂ and SB6691x7³/₄ includes: (1) cable with crimped lugs and ¹/₄"-20 hardware
- SB669³/₈x6³/₄ includes: (1) cable with crimped lugs and ³/₈"-16 hardware
- Material: #6 flexible tin plated copper wire

'A'

SB669³/₈x6³/₄

'B' 'A'

SB669³/₄x10¹/₂
&
SB6691x7³/₄
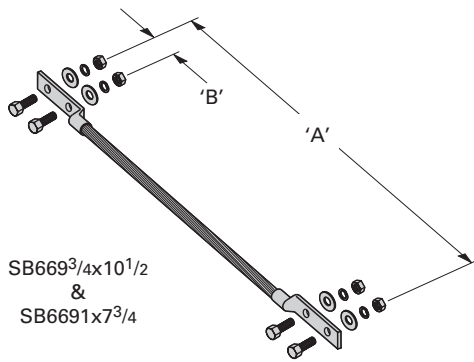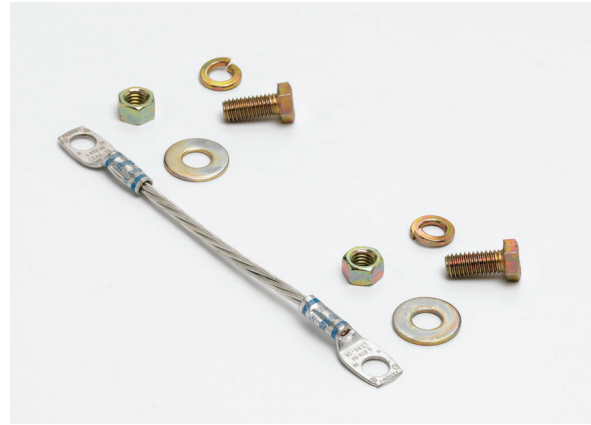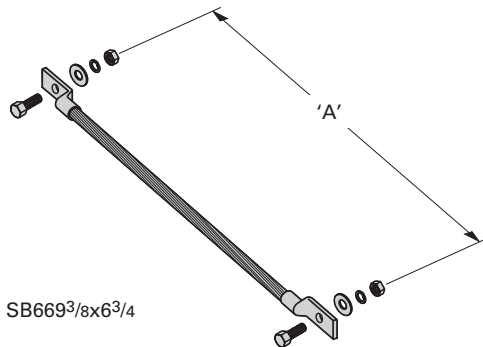
Part Number	'A'		'B'		Wt./Ea.	
	in.	mm	in.	mm	lbs.	kg
SB669³/₄x10¹/₂	10 ¹/₂"	267	³/₄"	19	.36	0.16
SB6691x7³/₄	7 ³/₄"	197	1"	25	.27	0.12
SB669³/₈x6³/₄	6 ³/₄"	171	N/A	N/A	.20	0.09

Crimp Tool

- Used to attach ground lugs to electrical wire
- Sold per piece
- 10$\frac{1}{2}$" (266mm) in length

| Part Number | Wt./Ea. | |
	lbs.	kg
SBTCR	2.00	0.91

Dieless Compression Tool

- Used to attach ground lugs to electrical wire
- Sold per piece
- 24" (609mm) in length

| Part Number | Wt./Ea. | |
	lbs.	kg
SBTCO	5.00	2.27

Joint Compound

- Improves electrical continuity at a grounding or bonding connection
- Sold in packages of 12
- $1/2$ ounce per package

Part Number	Material	Wt./Pkg. lbs.	kg
SBJCA	Aluminum	0.37	0.17
SBJCC	Copper	0.37	0.17

Cross Reference

Part Number	CPI	Panduit
SBCL1	40162-959	LCC2/0-38DW-X
SBCL2	40162-960	LCCX2/0-12-X
SBCL4	40162-961	LCCX4/0-38D-X
SBJCA	40166-812	CMP-300-1
SBJCC	40168-812	CMP-200-1
SBPC050075	40170-001	GPL series
SBPC100125	40170-002	GPL series
SBPC150200	40170-003	GPL series
SBPC250300	40170-004	GPL series
SBPC350400	40170-005	GPL series
SBPC500600	40170-006	GPL series
SBTCO	40165-001	CT-930
SBTCR	40165-002	CT-1700
SBTGB	40156-012	- -
SBTMGB12	40153-012	GB2B0306TPI-1
SBTMGB12K	40158-012	- -
SBTMGB20	40153-020	GB4B0624TPI-1
SBTMGB20K	40158-020	- -
SBVB36	40160-036	- -
SBVB36K	40161-036	- -
SBVB72	40160-072	- -
SBVB72K	40161-072	RGS134-1Y

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