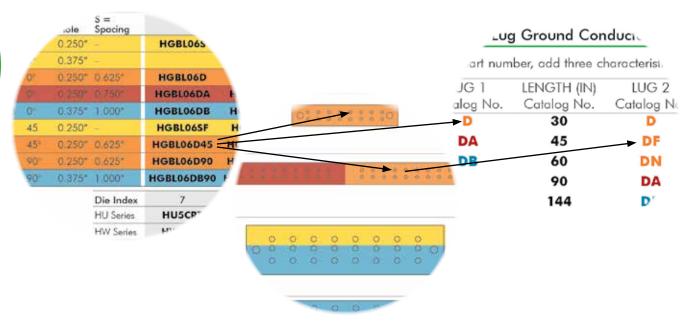


# Grounding and Bonding



Color-coded product mounting dimensions throughout this guide allow for visual matching of lugs and grounding kits to the mounting locations on busbars. From page to page, matching color indicates compatibility.



The colors utilized here do not physically appear on the lugs, busbars or other components. These colors are intended to aid the selection process by organizing the requirements for building a grounding network.



### ANSI/TIA-607-B; September 2011

- · Generic Telecommunications Bonding and Grounding (Earthing) for Customer Premises
- Standards and Publications are adopted by TIA in accordance with the American National Standards Institute (ANSI) patent policy



### ANSI/NECA/BICSI 607-2011; 2011

- Standard for telecommunications bonding and grounding planning and installation methods for commercial buildings
- National Electrical Installation Standards (NEIS<sup>TM</sup>) are designed to improve communication among specifiers, purchasers, and suppliers of electrical construction services. This standard has been prepared by BICSI®/NECA® under joint jurisdiction of BICSI and NECA, and approved by consensus ballot in accordance with the requirements of ANSI. This publication is intended to comply with the edition of the National Electrical Code (NEC®) in effect at the time of publication.



### **NEC Article 250**

• This article covers general grounding and bonding requirements and practices within electrical installations

The above standards differ; refer to the specified standard to ensure compliance for product selection and installation.



# **The Bonding Network**

### **Room Scenario**



TEBC 12ft with double lug HGRKTD144DB

C Ladder tray jumper HGRKTD9D

Ladder to TGB Conductor HGRKTD60DB

Conductor with C-Tap to 76" RGB
HGRKTD60C46

Conductor with C-Tap to 19" RGB HGRKTDA60C46

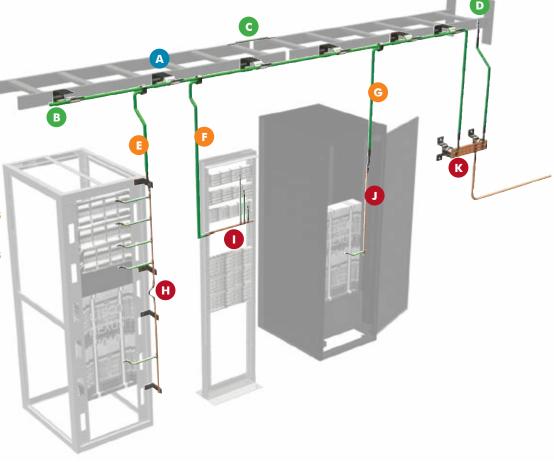
G Conductor with C-Tap to 36" RGB HGRKTDB60C46

H 76" x ¾" RGB Busbar HBBBVR76KT

19" Horizontal RGB HBBBHR19KT

36" x ¾" RGB Busbar HBBBVR36KT

10" x 2" TGB Busbar HBBB14210A



### **Building Layout**



B TBB Bonding Backbone

Compression Lug or Tap

**D** Building Steel Bond

Service Panel

F Ground Rod

G Compression Tap

H Pipe Clamp

1 TMGB





# **Busbar Kits**

### On-Rail Kits



Description	Material	Catalog No.
On-rail mounted; 19" rack grounding busbar	Copper	HGRKTHC*
Contents:		

Tin-plated

19" busbar

Insulators: (2) nylon bushings, (2) nylon washers

Mounting hardware: (2) M6 stainless screws, (2) #12-24 stainless screws
Lug (DA) crimped to 60", 6AWG
Lug Mount: (8) #6-32 stainless screws
ESD port for 4mm banana plug
VELCRO® strap

ESD port for 4mm banana plug VELCRO® strap

**Antioxidant** 



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\*For 10 pack, add 10 to the end of the Catalog No.

### **In-Cabinet Kits**



Description	Material	Catalog No.
In-cabinet mounted; 36" rack grounding busbar	Copper	HGRKTVC*
Contents: • 19" busbar • Insulators: (2) nylon bushings, (2) nylon washers		

Mounting hardware: (2) M6 stainless screws, (2) #12-24 stainless screws Lug (DA) crimped to 60", 6AWG Lug Mount: (8) #6-32 stainless screws Tin-plated

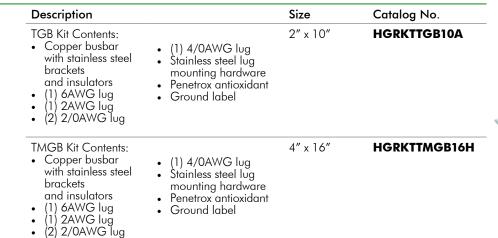
**HGRKTVT\*** 

**HGRKTHT\*** 

\*For 10 pack, add 10 to the end of the Catalog No.

**Antioxidant** 

### TGB and TMGB Kits



VELCRO® is a registered trademark of Velcro Industries B.V.





# **Ground Conductor Kits**

### All Ground Conductor Kits Include:

Lug and Tap Hardware Accessories Hardware
(2) #12-24 ss screws;
(2) #12-24 ss hex nuts;
(2) #12 ss flat washers; Lug Traceable, crimped, die indexed 7, long barrel, inspection window Labels

Tap C-t<u>ap/H-tap</u>

(2) #12-24 ss sc (2) #12-24 ss he (2) #12 ss flat wo (2) M6 ss screws

Caution label applied at both ends; circle ground reflective sticker

**Antioxidant** 0.5oz tube Penetrox IF THIS CONNECTOR OR CABLE IS LOOSE OR MUST BE REMOVED, PLEASE CALL THE BUILDING TELECOMMUNICATIONS MANAGE

### Common Ground Conductor Kits

Catalog No.	Common Application	Lug 1	Conductor Length	Lug 2	
HGRKTD9D	Ladder tray jumper	D	9″	D	
HGRKTD30S	Mounted busbar suppressor to rail	D	30"	S	
HGRKTD30DN	Front to rear rail jumper (network cabinet)		30″	DN	
HGRKTD45DN	Front to rear rail jumper (server cabinet	D	45"	DN	
HGRKTDA144D	19" rail mounted busbar to wall mounted busbar	DA	144"	D	
HGRKTD30KS25	Fiber armor grounding	D	30"	KS25	

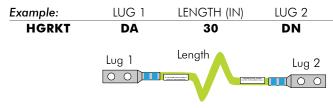
### **Hole Mounting Dimensions**

Lug Style	Hole Diameter	Hole Spacing	Angle
S	0.25"	_	0
D	0.25"	0.625"	0
DF	0.25"	0.625"	45
DN	0.25"	0.625"	90
DA	0.25"	0.75"	0
DB	0.25"	1.0″	0

### How to Configure Lug-Lug Ground Conductor Kits

To create a ground kit part number, add three characteristics to the base HGRKT. Example HGRKTDA30DN is shown below.

BASE	LUG 1	LENGTH (IN)	LUG 2
Catalog No.	Catalog No.	Catalog No.	Catalog No.
HGRKT	D	30	D
	DA	45	DF
	DB	60	DN
		90	DA
		144	DB



Many configurations are possible to fit any installation.

### How to Configure Lug-Tap Ground Conductor Kits

To create a ground kit part number, add three characteristics to the base HGRKT. Example HGRKTDA30YH6 is shown below.

BASE	LUG	LENGTH (IN)	TAP	
Catalog No.	Catalog No.	Catalog No.	Catalog No.	
HGRKT	D	30	YC4	
	DA	45	C46	
	DF	60	YH6	

Example:	LUG	LENGTH (IN)	TAP
HGRKT	DA	30	YH6
	Lug	Length	Тар

Many configurations are possible to fit any installation.



# **Compression Lugs**

- Solid copper construction and tin plated
- UL Listed 90° C, 600V to 35kV
- Die Index Traceable
- UL and CSA Listed



Lug Reference

Hole Diameter: 38 = 3/8" = 0.375"

Window: Inspect Wire

Barrel Length: Long Series

Die Index:

Match with Traceable Die

### Lugs

Style

Single

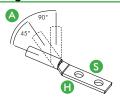
Double D

Double Double DB

Single Double DF

Double

Double DN



Kit

DA

V			6AWG	4AWG	2AWG	1AWG	1/0	2/0	3/0
	S	Pkg Qty	50	50	25	25	10	10	10
0		Barrel Color	Blue	Gray	Brown	Green	Pink	Black	Orange
A = Angle	H = Hole	S = Spacing							
O°	0.250"	_	HGBL06S	HGBL04S	HGBL02S	HGBL01S	HGBL10S		
0°	0.375"	_			HGBL02SA	HGBL01SA	HGBL10SA	HGBL20SA	HGBL30SA
0°	0.250"	0.625"	HGBL06D	HGBL04D	HGBL02D	HGBL01D	HGBL10D	HGBL20D	
0°	0.250"	0.750"	HGBL06DA	HGBL04DA	HGBL02DA	HGBL01DA	HGBL10DA	HGBL20DA	HGBL30DA
0°	0.375"	1.000"	HGBL06DB	HGBL04DB	HGBL02DB	HGBL01DB	HGBL10DB	HGBL20DB	HGBL30DB
45	0.250"	_	HGBL06SF	HGBL04SF	HGBL02SF				
45°	0.250"	0.625"	HGBL06D45	HGBL04D45	HGBL02D45		HGBL10D45		
90°	0.250"	0.625"	HGBL06D90	HGBL04D90	HGBL02D90		HGBL10D90		
90°	0.375"	1.000"	HGBL06DB90	HGBL04DB90	HGBL02DB90		HGBL10DB90		
		Die Index	7	8	10	11	12	13	14
		HU Series	HU5CRT	HU4CRT	HU2CRT	HU1CRT	HU25RT	HU26RT	HU27RT
		HW Series	HW5CRT	HW4CRT	HW2CRT	HW1CRT	HW25RT	HW26RT	HW27RT

**HX2CRT** 

(2)

**HX1CRT** 

(4)

HX25RT

(4)

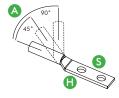
HX26RT

(4)

HX27RT

(4)

1	_	Ι	
Larg	е	LU	us



1		_		4/0	250kcmil	300kcmil	350kcmil	500kcmil	6000kcmil	750kcmil
	We	S	Pkg Qty	10	5	5	5	5	5	5
	1		Barrel Color	Purple	Yellow	White	Red	Brown	Green	Black
Style	A = Angle	H = Hole	S = Spacing							
Double	0°	0.375"	1.0"	HGBL40DB	HGBL250DB	HGBL300DB	HGBL350DB	HGBL500DB	HGBL600DB	HGBL750DB
			Die Index	15	16	17	18	20	22	24
			HU Series	HU28RT	HU29RT	HU30RT	HU31RT	HU34RT	HU36RT	HU39RT
			HW Series	HW28VT	HW29VT	HW30VT	HW31VT	HW34VT	-	-
			Dieless	(2)	-	-	-	-	-	-

**Actual Size:** 



0.25" Hole 0.625" Spacing

**HX5CRT** 

(2)

**HX** Series **Dieless** 

**HX4CRT** 

(2)



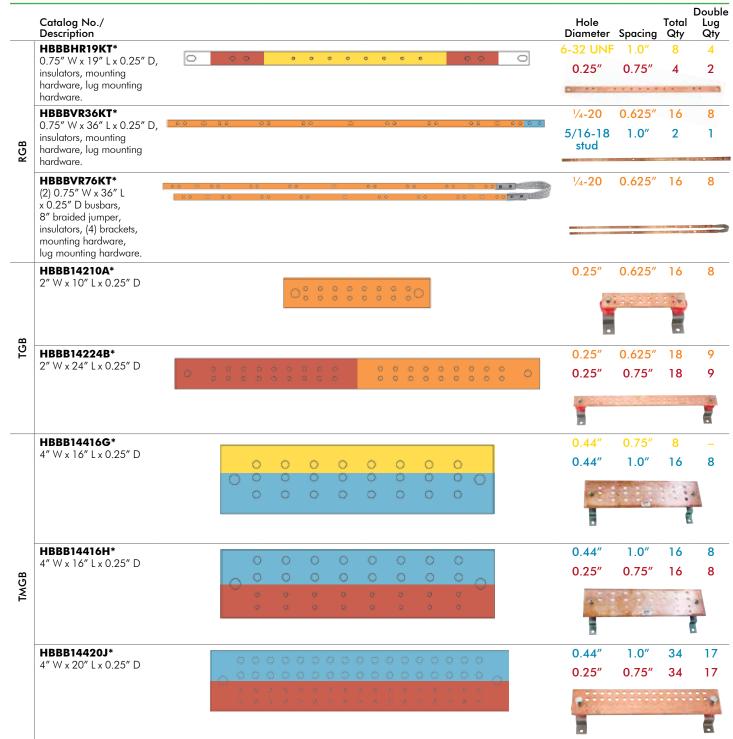


0.375"Hole 1.0" Spacing

### **Busbars**

- Rack Ground Busbar (RGB)
- Telecommunications Grounding Busbar (TGB)
- Telecommunications Main Grounding Busbar (TMGB)
- TGB and TMGB include insulators and assembly hardware

### **Busbars**



For all connections to busbars, oxidation must be scrubbed away and the application of an antioxidant is required. \*Add "**TP**" at the end of any busbar Catalog No. for 99% Copper Tin Plated.



# **Irreversible Connectors**

Irreversible Busbar and I-Beam Connectors provide a high level of bonding security and are as permanent as welding.

### Typical Busbar Connector Applications

- TGB to GE
- TGB to TBB
- TGB to beam steel
- TGB to TGB
- TGB to mesh BN

### **Busbar Connectors**

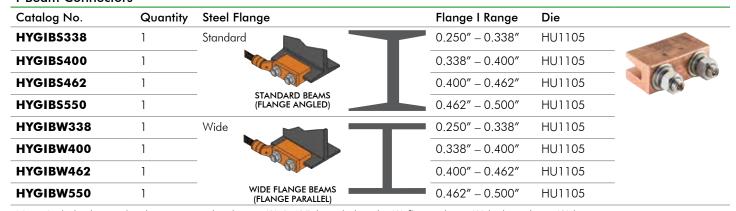
Catalog No.	Quantity	Dimensions	Wire 1	Wire 2	Die	
HYG14B2TC2C6C	1	1.5" x 1.37" x 0.81"	#2AWG	#6AWG	HU1105	Comment
HYG14B2TC2C2C	1	1.5" x 1.37" x 0.81"	#2AWG	#2AWG	HU1105	حزاله
HYG14BTC28	1	1.5" x 1.37" x 0.81"	4/0 -1/0AWG	_	HU1105	81
HYG14BTC26	1	1.5" x 1.37" x 0.81"	#2 -2/0AWG	_	HU1105	4

Note: Individually packaged, Penetrox applied, compatible with 0.25" thick busbars.



- Steel beam to TBB
- Steel beam to TGB
- Steel beam to TMGB

### **I-Beam Connectors**



Note: Includes heavy duty lug mounting hardware: (2) 0.42" threaded studs, (2) flat washers, (2) lock washers, (2) hex nuts. Hole spacing for heavy duty HYGHA lugs.

### Heavy Duty Lugs

,,	,-						
Catalog No.	Quantity	Conductor Size	Hole Size	Spacing	Die Index	Die	
HYGHA02	1	2AWG	0.56"	1.75"	11	HU1 CRT	À
HYGHA25	1	1/0AWG	0.56"	1.75"	14	HU27RT	
HYGHA26	1	2/0AWG	0.56"	1.75"	15	HU28RT	The state of the s
HYGHA27	1	3/0AWG	0.56"	1.75"	16	HU29RT (2)	

Note: Individually packaged, Penetrox filled, compatible with HYGIB I-beam connectors.







# **Compression Taps**

### Thin Wall C-Taps

Catalog No.	Qty	Run-Tap Stranded	Run-Tap Stranded	Run-Tap Stranded	Length	Color Code	No. Ribs	Die Index	HW Series	HU Series	
HYC4L12	25	6-6			1.18"	Brown	1	10	HW2CVT(2)	HUC4	
HYC2L12	25	4-4	2-6		1.18"	Pink	1	12	HW25VT (2)	HUC2	
HYC1L12	10	2-4	1-6		1.75"	Black	2	13	HW26VT (2)	HUC1	
HYC25L12	10	2-2	1-4	1/0-4	1.75"	Orange	2	14	HW27VT(3)	HU25	_
HYC26L12	5	1-1	1/0-2	2/0-2	1.75"	Purple	2	15	HW28VT(3)	HU26	
HYC27L12	5	1/0-1/0	2/0-2	3/0-2	1.75"	Yellow	2	16	HW29VT(3)		_



Catalog No.	Qty	Run-Tap Stranded	Run-Tap Stranded	Run-Tap Stranded	Length	Die Index	HW Series	HU Series
HYC4C6	10	6-6	4-6		0.625"	BG	HWBG (2)	HUBG (2)
HYC4C4	10	4-4	4-6		0.625"	BG	HWBG (2)	HUBG (2)
HYC2C4	10	2-4	2-6		0.75"	С	HWCC (2)	HUC (2)
HYC2C2	10	2-2			0.75"	С	HWCC (2)	HUC (2)
HYC26C2	5	2/0-6	2/0-4	2/0-2	0.875"	0	_	HU0
HYC26C26	5	2/0-2/0			0.875"	0	_	HU0
HYC28C2	1	4/0-6	4/0-4	4/0-2	1.07"	D3	-	HUD3
HYC28C26	1	4/0-2/0			1.07"	D3	_	HUD3
HYC28C28	1	4/0-4/0			1.07"	D3	_	HUD3





H-Taps

ii iups									
Catalog No.	Qty	Run-Tap Stranded	Run-Tap Stranded	Run-Tap Stranded	Length	Color Code	Die Index	HW Series	HU Series
НҮН6С6С	1	6-6			0.6"	Orange	BG	HWBG	HUBG
HYH2C2C	1	2-2,4,6	4-4,6		0.75"	Brown	С	HWCC	HUC
HYH292C	1	4/0-2,6	2/0-2,6	1/0-2,6	0.9"	Purple	654	_	HU654
HYH2929	1	4/0-4/0,2	3/0-3/0,2	2/0-2/0,2	0.9"	Purple	654	_	HU654
HYH3429	1	500-250,1/0	350-250,1/0	4/0-1/0	1.0	Brown	1104	_	HU1104
HYH3434	1	500-500,4/0	350-350,4/0		1.0	Brown	1104	_	HU1104
HYH3931	1	750-4/0,1/0	650-4/0,1/0	500-4/0,1/0	0.95	Yellow	K-R	_	HUKR
HYH3939	1	750-750,350	650-650,350	500-350	1.25	Yellow	K-R	_	HUKR





H-Taps with Clear Cover

Catalog No.	Qty	Run-Tap Stranded	Run-Tap Stranded	Run-Tap Stranded	Length	Color Code	Die Index	HW Series	HU Series
HYH2CWC	1	2-2,4,6	4-4,6		0.75"	Brown	С	HWCC	HUC
HYH29WC	1	4/0-2,6	2/0-2,6	1/0-2,6	0.9"	Purple	654	_	HU654
HYH2929WC	1	4/0-4/0,2	3/0-3/0,2	2/0-2/0,2	0.9"	Purple	654	-	HU654



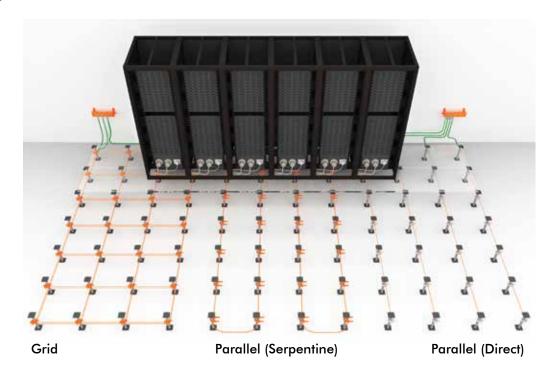
H-Tap Covers

Clear Cover	Black Cover	Qty	H-Tap Size	Color Code
HCCFBGFR	HCFBGFR	1	HYH6Cxx	Orange
HCCFOFR	HCFOFR	1	HYH2Cxx	Brown
HCCFDFR	HCFDFR	1	HYH29xx	Purple
HCCFN	HCFN	1	HYH34xx	Brown
HCCFR	HCFR	1	HYH39xx	Yellow





# Clamps



### **Raised Floor Pedestal Clamps**

Catalog No.	Pedestal	Wire Range	Configuration	Hardware	Install Torque	
HGBGXP1828RF	0.75″-1.5″ Square	6 – 4/0AWG	Grid or Parallel	Stainless Steel 1/2"	120in-lb Conductor 180in-lb Clamp	
	0.75″-1.875″ Round					ab In
HGBGP1526G1	1.0″-1.25″ Round	4 – 2/0AWG	Parallel	Silicon Bronze 9/16″	240in-lb	O.
HGBGRF4C3	0.75″-1.0″ Round or Square	8 – 2AWG	Parallel	Silicon Bronze 9/16"	240in-lb	

Note: Torque values may differ based on the Grounding and Bonding Standard selected. The Mesh Bonding Network shall have a support attached at a maximum of 3' (36") intervals.

### Pipe Clamps

HGBGAR1526         1.0"         2-7/8"         2-5/8"         4AWG-2/0AWG         3/8"         9/16"           HGBGAR1726         1.5"         3-1/2"         3"         4AWG-2/0AWG         3/8"         9/16"           HGBGAR1826         2.0"         4"         3-1/4"         4AWG-2/0AWG         3/8"         9/16"           HGBGAR1926         2.5"         4-1/4"         3-3/4"         4AWG-2/0AWG         3/8"         9/16"           HGBGAR2026         3.0"         5"         4-1/4"         4AWG-2/0AWG         3/8"         9/16"           HGBGAR2126         3.5"         5-5/8"         4-3/4"         4AWG-2/0AWG         3/8"         9/16"           HGBGAR2226         4.0"         6-1/4"         5-3/8"         4AWG-2/0AWG         3/8"         9/16"           HGBGAR2426         5.0"         6-3/8"         5-7/8"         4AWG-2/0AWG         3/8"         9/16"           HGBGAR8629         6.0"         8-13/16"         8-3/8"         2AWG-250kcmil         1/2"         3/4"	Catalog No.	I.P.S. Pipe Diameter	Height	Width	Conductor Range	U-Bolt Size	Nut Size	
HGBGAR1826       2.0"       4"       3-1/4"       4AWG-2/0AWG       3/8"       9/16"         HGBGAR1926       2.5"       4-1/4"       3-3/4"       4AWG-2/0AWG       3/8"       9/16"         HGBGAR2026       3.0"       5"       4-1/4"       4AWG-2/0AWG       3/8"       9/16"         HGBGAR2126       3.5"       5-5/8"       4-3/4"       4AWG-2/0AWG       3/8"       9/16"         HGBGAR2226       4.0"       6-1/4"       5-3/8"       4AWG-2/0AWG       3/8"       9/16"         HGBGAR2426       5.0"       6-3/8"       5-7/8"       4AWG-2/0AWG       3/8"       9/16"	HGBGAR1526	1.0"	2-7/8"	2-5/8"	4AWG-2/0AWG	3/8"	9/16"	
HGBGAR1926       2.5"       4-1/4"       3-3/4"       4AWG-2/0AWG       3/8"       9/16"         HGBGAR2026       3.0"       5"       4-1/4"       4AWG-2/0AWG       3/8"       9/16"         HGBGAR2126       3.5"       5-5/8"       4-3/4"       4AWG-2/0AWG       3/8"       9/16"         HGBGAR2226       4.0"       6-1/4"       5-3/8"       4AWG-2/0AWG       3/8"       9/16"         HGBGAR2426       5.0"       6-3/8"       5-7/8"       4AWG-2/0AWG       3/8"       9/16"	HGBGAR1726	1.5"	3-1/2"	3″	4AWG-2/0AWG	3/8"	9/16"	
HGBGAR2026       3.0"       5"       4-1/4"       4AWG-2/0AWG       3/8"       9/16"         HGBGAR2126       3.5"       5-5/8"       4-3/4"       4AWG-2/0AWG       3/8"       9/16"         HGBGAR2226       4.0"       6-1/4"       5-3/8"       4AWG-2/0AWG       3/8"       9/16"         HGBGAR2426       5.0"       6-3/8"       5-7/8"       4AWG-2/0AWG       3/8"       9/16"	HGBGAR1826	2.0"	4"	3-1/4"	4AWG-2/0AWG	3/8"	9/16"	
HGBGAR2126       3.5"       5-5/8"       4-3/4"       4AWG-2/0AWG       3/8"       9/16"         HGBGAR2226       4.0"       6-1/4"       5-3/8"       4AWG-2/0AWG       3/8"       9/16"         HGBGAR2426       5.0"       6-3/8"       5-7/8"       4AWG-2/0AWG       3/8"       9/16"	HGBGAR1926	2.5"	4-1/4"	3-3/4"	4AWG-2/0AWG	3/8"	9/16"	
HGBGAR2226       4.0"       6-1/4"       5-3/8"       4AWG-2/0AWG       3/8"       9/16"         HGBGAR2426       5.0"       6-3/8"       5-7/8"       4AWG-2/0AWG       3/8"       9/16"	HGBGAR2026	3.0"	5″	4-1/4"	4AWG-2/0AWG	3/8"	9/16"	
<b>HGBGAR2426</b> 5.0" 6-3/8" 5-7/8" 4AWG-2/0AWG 3/8" 9/16"	HGBGAR2126	3.5"	5-5/8"	4-3/4"	4AWG-2/0AWG	3/8"	9/16"	
	HGBGAR2226	4.0"	6-1/4"	5-3/8"	4AWG-2/0AWG	3/8"	9/16"	
<b>HGBGAR8629</b> 6.0" 8-13/16" 8-3/8" 2AWG-250kcmil 1/2" 3/4"	HGBGAR2426	5.0"	6-3/8"	5-7/8"	4AWG-2/0AWG	3/8"	9/16"	
	HGBGAR8629	6.0"	8-13/16"	8-3/8"	2AWG-250kcmil	1/2"	3/4"	

Note: All pipe clamps secure the grounding conductor to the pipe in a parallel or perpendicular manner.



# **Mechanical Connectors**

### **Terminals**

Catalog No.	Qty	Minimum	Maximum	Material	Mount Hole Diameter	Torque (in lb)	
HGBKA6U	100	14AWG	6AWG	Aluminum	0.25"	45	0-
HGBBGBL4	100	14AWG	4AWG	Aluminum	0.22"	35	5
HGBKLU35	100	14AWG	6AWG	Copper	0.19"	45	
HGBCL501	100	14AWG	4AWG	Copper	0.22"	35	3

### **On-Rail Terminal**

Catalog No.	Qty	Minimum	Maximum	Material	Mount Hole Diameter	Hole Spacing
HGBKARB	1	14AWG	2/0	Aluminum	0.31"	0.625"



### **Split Bolt Connectors**

Catalog No.	Qty	STR Min Run and Tap	STR Max Run and Tap	SOL Max Run and Tap	Material	Bolt Size	Length	Torque (in lb)	
HGBKS17	50	8AWG	6AWG	6AWG	Copper	7/16"	1.14"	165	
HGBKS20	50	8AWG	4AWG	4AWG	Copper	1/2"	1.20"	165	
HGBKS22	50	6AWG	3AWG	2AWG	Copper	19/32"	1.50"	275	
HGBKS23	25	6AWG	2AWG	1AWG	Copper	5/8"	1.54"	275	
HGBKS25	25	4AWG	1/0AWG	2/0AWG	Copper	3/4"	1.77"	385	- (
HGBKS26	10	2AWG	2/0AWG	3/0AWG	Copper	7/8"	1.94"	385	
HGBKS27	10	1AWG	3/0AWG	4/0AWG	Copper	1 1/8"	1.86"	500	
HGBKS29	5	1AWG	250Kcmil	4/0AWG	Copper	1 1/8"	2.07"	650	

### **Split Bolt Covers**

Catalog No.	Qty	Size Minimum	Size Maximum	Color	
HGBSC4	1	HGBKS17	HGBKS20	Black	_
HGBSC2	1	HGBKS22	HGBKS23	Black	
HGBSC20	1	HGBKS25	HGBKS26	Black	

### **ShieldBond Connector**

Catalog No.	Qty	Description	
BC285SB100	100	ShieldBond connector kits for cable jackets. Each kit includes brass screw and nut, (2) retaining washers, (1) gripping. Install tool included.	



# **Tools**

### **Tooling Capability**

Tool		HMRC840	HOUR840	HMD7	HPAT600LI	HY750CHSXT	HPAT750LI
Capability	Beam & Busbar Connector					•	•
	C-Tap & H-Tap 3/0AWG					•	•
	C-Tap & H-Tap Up to 2AWG			•	•	•	•
	C-Tap & H-Tap Up to 4AWG		•	•	•	•	•
	Lug	•	•	•	•	•	•
Work/Effort		Standard	Standard	Standard	Easy	Involved	Easy
Speed		Average	Average	Average	Fast	Involved	Fastest

### Tools, W- and X-Dies

	Tools Require Lugs or Taps								
Catalog No.	Description	Lugs	Die	Taps	Die				
HPAT600LI	6-ton automatic compression tool, 18V lithium powered, carrying case, lanyard, (2) lithium batteries, (1) charging station	HW5CRT HW4CRT HW2CRT HW1CRT HW25RT HW26RT	6AWG 4AWG 2AWG 1AWG 1/0AWG 2/0AWG	HWCC HWO HW28K HWBG HW2CVT	C 0 CUTOFF BG 10 12				
HMD7	9000lb manual compression tool, built-in BG die, handle length 25"	HW27RT HW28VT HW29VT HW30VT HW31VT HW34VT	3/0AWG 4/0AWG 250kcmil 300kcmil 350kcmil 400kcmil	HW26VT HW27VT HW28VT HW29VT	13 14 15 16				

### Tools, W- and X-Dies

			Tool Requires	Lugs or Taps		
Catalog No.	Description	Lugs	Die	Taps	Die	
HOUR840	8000lb manual compression tool, hand ratcheting forward cycle until max capacity reset, metal carrying case with die holders	HX5CRT HX4CRT HX2CRT HX1CRT HX25RT HX26RT HX27RT	#6AWG #4AWG #2AWG #1AWG #1/0AWG #2/0AWG #3/0AWG	нхвс	BG	

### Tools and U-Dies

			Tools Require	Lugs or Taps		
Catalog No.	Description	Lugs	Die	Taps	Die	
HPAT750LI	12 ton automatic compression tool, 18V lithium powered, carrying case, lanyard, (2) lithium batteries, (1) charging station	HU5CRT HU4CRT HU2CRT HU1CRT HU25RT HU26RT HU27RT	#6AWG #4AWG #2AWG #1AWG #1/0AWG #2/0AWG	HU1105 HU1104 HU654 HU997 HUC4 HUC2 HUC1	1105 1104 654 997 C4 C2 C1	
HY750CHSXT	12 ton manual hydraulic compression tool, carrying case, handle length 24"	HU28RT HU29RT HU30RT HU31RT HU34RT HU36RT HU39RT	4/0AWG 250kcmil 300kcmil 350kcmil 400kcmil 500kcmil 750kcmil	HUC25 HUC HUO HUBG HUC25	C25 C 0 BG 26	

# **Tools**

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Die Information

**HU Series** 

**HW Series** 

**HX Series** 

HMRC840

### Integrated Die Tool

Catalog No.	Description	
HMRC840	Manual compression tool, dies for #6AWG to 4/0AWG are integrated into the head, color coded dies unlock and can be rotated to lug barrel size; 26" leveraged handles	

### Torque Wrenches

Catalog No.	Description	
HBT30150	30-150in-lb torque wrench, carrying case, certification calibration	
HBT150750	150-750in-lb torque wrench, carrying case, certification calibration	

Catalog No.	Description	
HWDIETREE	Die tree for use with HW and HX dies; Holds 6 sets	
HWDIECASE	Die case for use with HW and HX dies; Holds 12 sets	
HUDIECASE	Die case for HU dies:	

# **Tooling Best Practices**

Holds 15 sets

reeming been	1 delices	
HPAT600LI and HPAT750LI	Lugs: Insert and align lug in the stationary die. Press and hold forward button until pressure release resets, use reverse button to draw back die.	
	C-Tap and H-Tap: Use VELCRO®, string or a plastic cable tie to hold wires in place while applying pressure.	
HMRC840 and HMD7	Lugs: Insert and align lug in dies, gently close handles to put a light hold on the lug before inserting the stripped copper wire into the lug. By holding the lug vertically (barrel up), gravity will keep the ground wire in place while applying pressure.  C-Tap:  Use VELCRO®, string or a plastic cable tie to hold wires in place while applying pressure.	
HOUR840	Lugs: Insert and Align lug in dies, gently squeeze handles a few times to put a light hold on the lug before inserting the stripped copper wire into the Lug.	30



# **Accessories**

### **Installation Accessories**

Catalog No.	Description	Qty	Catalog No	. Description	Qty	
HGBESDKT10	ESD port for 4mm banana plug; 0.5oz Penetrox; ESD Label; (2) #12-24 TFS; (2) M6 stainless TFS	10	HGBESDE	C ESD cloth bracelet; 6ft cord 4mm banana plug	l; 1	0
HGB25CNWH	1/4" belleville washer	50	HGBESDE	M ESD metal bracelet; 6ft con 4mm banana plug	d; 1	
HGB38CNWH	3/8" belleville washer	50	HGB025D	BS 3/16" drill bit for steel material and 1/4" thread forming screw	1	-
HGB1224ST	#12-24 x 3/4" stainless steel screws	50	HGBCWB	Wire brush for power drill	1	0
HGBM6ST	M6 x 16mm stainless steel screws	50	HGB24AP	2" x 4" abrasive pad	6	
HGBESDLBL	ESD label	25	HGBP8A	8oz bottle Penetrox	1	CHRIST
HGBGNDLBL	Ground label	25	HPENEA0	<b>550</b> 0.5oz tube Penetrox	50	1 de 1
HGRKTLBL	Ground wire label	25	IF THES CONNECTOR OR CABLE IS LOOSE OR MUST BE REMOVED, PLEASE CALL THE BUILDING TILLECOMMUNICATIONS MANAGER	W Serrated paint piercing washer	50	

### **Braided Jumper**

_					
Qty	Length	Width	Hole Size	Hole Spacing	
10	6"	0.5"	1/4"	-	
10	9″	0.5"	1/4"	_	CO CO
1	12"	0.94"	3/8"	1.25"	
1	18"	0.94"	3/8"	1.25"	• •
1	24"	0.94"	3/8″	1.25"	•
	10	10 6" 10 9" 1 12" 1 18"	10 6" 0.5" 10 9" 0.5" 1 12" 0.94" 1 18" 0.94"	10     6"     0.5"     1/4"       10     9"     0.5"     1/4"       1     12"     0.94"     3/8"       1     18"     0.94"     3/8"	10     6"     0.5"     1/4"     -       10     9"     0.5"     1/4"     -       1     12"     0.94"     3/8"     1.25"       1     18"     0.94"     3/8"     1.25"

### **QUADCAB®** Wall Mount Cabinet Ground Kit

Catalog No.	Description	
REKGB	Ground bar with (6) ¼"-20 male studs (2) ¼"-20 carriage bolts and isolating hardware (2) ground straps (6) ¼"-20 nuts with star washers	

Specification text available. Contact your local sales representative.



# **Accessories**

### **Installation Accessories**

Catalog No.	Description	Qty	
HGBTEBCBRKL10	TEBC bracket for ladder rack, aluminum painted black	10	
HGBTEBCBRKW10	TEBC bracket for wire tray, aluminum painted black	10	

### Insulated Halo Bracket

Catalog No.	Description	Qty	
HGBSETH	Stainless steel bracket, insulator, UV Rated cable holding clips for 0.25", 0.31", 0.38", 0.50", 0.56", 0.75" and 0.88" cables	1	9

# **Ladder & Tray Kits**

### **Ladder Tray Bonding Jumper Kits**

Catalog No.	Description	Connector
HGRKTKA9KA5	Contents: • (10) connectors • (5) #6 AWG conductors 9" • (10) hardware for securing • Labels for each conductor	Parallel Aluminum
HGRKTKLU9KLU5	Contents: • (10) connectors • (5) #6 AWG conductors 9" • (10) hardware for securing • Labels for each conductor	Standoff Copper

### Wire Basket Tray Bonding Jumper Kits

Catalog No.	Description	Connector	
HGRKTWC45	Contents: • (10) Connectors • (5) #6 AWG Conductors 9" • Labels for each conductor	C-Tap (Requires BG die)	7
HGRKTWB5	Contents: • (10) Connectors • (5) #6 AWG Conductors 9" • Labels for each conductor	Split Bolt	





# **Grounding and Bonding**

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