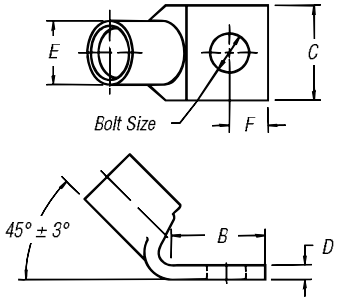
Compression Connectors for Copper Conductor

One-Hole Lugs — 45° Standard Barrel 600V to 35kV

Material: High-Conductivity Wrought Copper

Finish: Electro Tin Plate



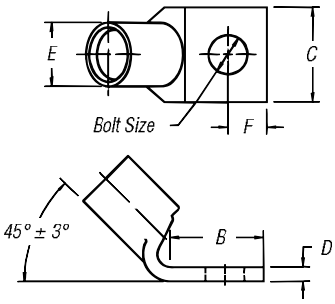
CAT. NO.	WIRE SIZE CODE	WIRE SIZE FLEX CLASS G, H, I, K, M†	WIRE SIZE BOLT SIZE	DIMENSIONS (IN.) B	C	D	E	F	DIE CODE	DIE COLOR
54104UF	#8 AWG	23 Navy	#10	.50	.39	.08	.25	1/32	21	RED
54130UF		#8 Weld	1/4	.61	.45	.07	.25	1/4	21	
54131UF		37/24 = 14.9 kcmil	5/16	.64	.56	.05	.25	9/32	21	
54132UF			3/8	.64	.56	.05	.25	9/32	21	
54134UF	#6 AWG	30 Navy	#10	.53	.44	.07	.31	7/32	24	BLUE
54105UF		#6 Weld	1/4	.53	.44	.07	.31	7/32	24	
54135UF		61/24 = 24.6 kcmil	5/16	.67	.60	.07	.31	5/16	24	
54136UF		133/.014	3/8	.67	.60	.07	.31	5/16	24	
54138UF	#4 AWG	#4 Weld	#10	.60	.55	.09	.37	1/4	29	GRAY
54106UF		40–50 Navy	1/4	.60	.55	.09	.37	1/4	29	
54139UF		91/24 = 36.7 kcmil	5/16	.66	.61	.07	.37	5/16	29	
54140UF		133/.0177	3/8	.66	.61	.07	.37	5/16	29	
256-30695-264UF		49/.029	1/2	1.40	1.00	.06	.37	1/2	29	
		#5–91/24								
54107UF	#2 AWG	60 Navy	1/4	.65	.59	.11	.41	1/4	33	BROWN
54142UF		125/24 = 50.4 kcmil	5/16	.88	.59	.11	.41	3/8	33	
54143UF		#3 Weld	3/8	.80	.59	.11	.41	3/8	33	
54145UF			1/2	1.08	.75	.08	.41	1/2	33	
54108UF	#1 AWG	75 Navy, #2 Weld	1/4	.65	.68	.11	.47	1/4	37	GREEN
54147UF		150/24 = 60.5 kcmil	5/16	.93	.68	.11	.47	3/8	37	
54148UF		175/24 = 70.6 kcmil	3/8	.98	.68	.11	.47	3/8	37	
54150UF		133/.0223	1/2	1.25	.76	.11	.47	1/2	37	
54152UF	1/0 AWG	100 Navy	1/4	.65	.75	.13	.52	1/4	42	PINK
54153UF		#1 Weld	5/16	.88	.75	.13	.52	3/8	42	
54109UF		225/24 = 90.8 kcmil	3/8	.93	.75	.13	.52	3/8	42	
54155UF		133/.0254	1/2	1.25	.75	.13	.52	1/2	42	
54157UF	2/0 AWG	125 Navy	1/4	.65	.83	.13	.57	1/4	45	BLACK
54158UF		1/0 Weld	5/16	.88	.83	.13	.57	3/8	45	
54110UF		275/24 = 111 kcmil	3/8	.93	.83	.13	.57	3/8	45	
54160UF		427/.0155, 133/.0282	1/2	1.25	.83	.13	.57	1/2	45	
54162UF	3/0 AWG	150 Navy, 2/0 Weld	1/4	.65	.92	.13	.63	1/4	50	ORANGE
54163UF		325/24 = 131 kcmil	5/16	.88	.92	.13	.63	3/8	50	
54111UF		133/.0316, 259/.0227	3/8	.93	.92	.13	.63	3/8	50	
54165UF		427/.0177	1/2	1.25	.92	.13	.63	1/2	50	
54167UF	4/0 AWG	200 Navy	1/4	.65	1.03	.14	.70	1/4	54	PURPLE
54168UF		3/0 Weld	5/16	.87	1.03	.14	.70	3/8	54	
54112UF		450/24 = 182 kcmil	3/8	.93	1.03	.14	.70	3/8	54	
54170UF		703/.0154	1/2	1.25	1.03	.14	.70	1/2	54	
58161UF		4/0 Weld	1/4	.78	1.25	.15	.79	3/8	62	YELLOW
58162UF		550/24 = 222 kcmil	5/16	.88	1.25	.15	.79	3/8	62	
58163UF		133/.0399	3/8	.93	1.25	.15	.79	3/8	62	
58165UF		259/.0286	1/2	1.25	1.25	.15	.79	1/2	62	
58166UF		637/.0183	5/8	1.58	1.25	.15	.79	5/8	62	

† *Contact Technical Services for specific stranding listings*

Tooling: ***pp. F-80–F-100***

Die Selector Chart: ***pp. F-101–F-104***

One-Hole Lugs — 45° Standard Barrel 600V to 35kV *(continued)*



Material: High-Conductivity Wrought Copper

Finish: Electro Tin Plate

CAT. NO.	WIRE SIZE CODE	WIRE SIZE FLEX CLASS G, H, I, K, M†	WIRE SIZE BOLT SIZE	DIMENSIONS (IN.) B	C	D	E	F	DIE CODE	DIE COLOR
54172UF			¼	.65	1.13	.14	.77	¼	62	YELLOW
54173UF	250 kcmil	250 Navy	5/16	.88	1.13	.14	.77	⅜	62	
54174UF			⅜	.93	1.13	.14	.77	⅜	62	
54113UF			½	1.25	1.13	.14	.77	½	62	
58168UF		250 Weld, 650/24 = 262 kcmil, 259/.0311, 703/.0189	½	1.25	1.25	.15	.85	½	66	WHITE
54178UF			5/16	.88	1.25	.15	.85	⅜	66	
54179UF	300 kcmil	300 Navy	⅜	.93	1.25	.15	.85	⅜	66	
54114UF			½	1.25	1.25	.15	.85	½	66	
54181UF			⅝	1.58	1.25	.15	.85	⅝	66	
58171UF		300 Weld, 259/.034, 427/.0265, 889/.0183 775/24 = 313 kcmil	½	1.25	1.36	.18	.93	½	71	RED
54115UF06			⅜	1.25	1.36	.18	.93	½	71	
54115UF	350 kcmil	350 Navy	½	1.25	1.36	.18	.93	½	71	
54183UF			⅝	1.58	1.36	.18	.93	⅝	71	
58174UF		350 Weld, 259/.0368, 427/.0285, 703/.0224, 889/.0201	½	1.25	1.61	.22	1.09	½	76	BLUE
54116UF	400 kcmil	400 Navy	½	1.25	1.41	.17	.96	½	76	
54185UF			⅝	1.58	1.41	.17	.96	⅝	76	
58177UF06		400 Weld	⅜	1.31	1.61	.22	1.04	⅝	80	N/A
58177UF		925/24 = 373 kcmil	½	1.25	1.61	.22	1.04	½	80	
54118UF	500 kcmil	500 Navy	½	1.25	1.61	.22	1.10	½	87	BROWN
54187UF			⅝	1.58	1.61	.22	1.10	⅝	87	
58180UF		1100/24 = 444 kcmil, 450, 1127 450, 4522	⅝	1.58	1.75	.24	1.20	½	94	GREEN
54120UF	600 kcmil		⅝	1.58	1.75	.24	1.20	½	94	
54122UF	700 kcmil		⅝	1.58	1.84	.23	1.26	½	99	
58182UF		1325/24 = 535 kcmil	½	1.69	1.81	.28	1.25	13/16	99	PINK
58182UF		427/.0342	⅝	1.58	1.81	.28	1.25	⅝	99	
54123UF	750 kcmil	600 Flex 427 Str.	⅝	1.58	1.94	.27	1.33	⅝	106	BLACK
58184UF		1600/24 = 646 kcmil	⅝	1.58	1.94	.27	1.33	⅝	106	
54124UF	800 kcmil	800 Navy	⅝	1.58	2.01	.27	1.38	⅝	107	ORANGE
54126UF	900 kcmil	1925/24 = 777 kcmil, 900 Navy	⅝	1.58	2.17	.31	1.50	⅝	115	YELLOW
54128UF	1000 kcmil	1000 Navy	⅝	1.58	2.27	.30	1.55	⅝	125	N/A

† *Contact Technical Services for specific stranding listings*

Tooling: ***pp. F-80–F-100***

Die Selector Chart: ***pp. F-101–F-104***

Thomas&Betts

United States
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800.816.7809
Fax: 901.252.1354

Technical Services
Tel: 888.862.3289

www.tnb.com

Overview

Order Form

Catalog No. _____ ***Qty.*** _____

(For 54100, 54200, 54800 & 54900 Series Copper Lugs Only)

Design Controls and Requirements

All "MADE-UP" catalog numbers start with a standard or basic catalog number and are followed by the customer-required extra features: tongue shape, bolt hole size, distance between bolt holes, stacking, plating and inspection hole (peep hole). A code letter or a number has been assigned to each extra feature. See CODE TABLE.

Notes: *1) Lack of any of the extra features on the "MADE-UP" catalog number means that the standard Cat. No. features are prevalent.*

2) If either bolt hole size or distance between bolt holes needs to be changed from standard Cat. No., both code numbers will appear on the "MADE-UP" Cat. No. (See example below)

CAT. NO. 54212 UB 04 16 B SP

54212	UB	04	16	B	SP
2-hole 4/0 AWG copper lug basic CAT. NO.	90° tongue	¼" bolt hole	1" hole spacing	bottom stack	silver plating

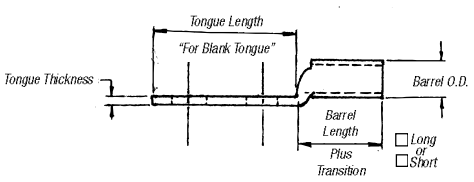
Code Table

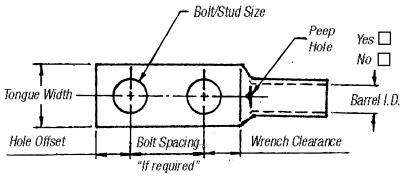
TONGUE SHAPE		BOLT HOLES			BOLT HOLE CENTERS		STACKING		FINISH (PLATING)		INSPECTION HOLE (LONG BARREL)		INSPECTION HOLE (SHORT BARREL)	
TYPE	CODE	SIZE .020		CODE	DISTANCE .015	CODE	TYPE	CODE	TYPE 1	CODE	I.D.	CODE	I.D.	CODE
15°	UI	#8	.173	02	½"	08	Top	T**	Silver Plate	SP	Peep Hole	PH	Blind End	BE
30°	UT	#10	.204	03	⅝"	10	Bottom	B	Lead Plate	LP				
45°	UF	¼"	.281	04	¾"	12			Nickel Plate	NP				
60°	US	5/16"	.344	05	⅞"	14			Plain Finish	PF				
90°	UB	⅜"	.406	06	1"	16			No Marking	NM				
Blank	BT	½"	.531	08	1⅛"	18			Not QTP if					
(No Bolt Hole)		⅝"	.656	10	1¼"	20			suffix other					
		¾"	.812	12	1⅜"	22			than - PF or					
		⅞"	.937	14	1½"	24			standard					
		1"	1.062	16	1⅝"	26			tin plate					
					1¾"	28								
					1⅞"*	30								
					2"*	32								

** These bolt centers not available for bolt holes larger than 1 3/16".*

*** Not required for 45° & 90° top stacking.*

Cable	Code ❑ Weld ❑	
❑ #8	❑ #6	❑ #4
❑ #2	❑ #1	❑ 1/0
❑ 2/0	❑ 3/0	❑ 4/0
❑ 250 kcmil & up (Code Only)		



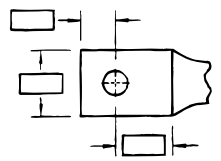


Overview

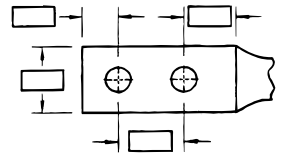
Tongue Specifications — See Chart "A" For Dimensions

Stud Sizes

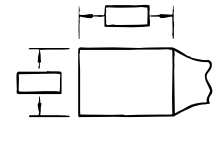
- ❑ #8
- ❑ #10
- ❑ ¼"
- ❑ 5/16"
- ❑ ⅜"
- ❑ ½"
- ❑ ⅝"
- ❑ ¾"
- ❑ ⅞"
- ❑ 1"



❑ *Single Hole*



❑ *Double Hole*



❑ *Blank*

Chart A

NOMINAL BOLT HOLE SIZE .015		HOLE OFFSET .030	WRENCH CLEARANCE MIN.	TONGUE WIDTH CABLE SIZE									
				#8 CODE #8 WELD	#6 CODE #6 WELD	#4 CODE	#2 CODE #4 WELD	#1 CODE #2 WELD	1/0 CODE #1 WELD	2/0 CODE 1/0 WELD	3/0 CODE 2/0 WELD	4/0 CODE 3/0 WELD	250 CODE
#8	.173	.200	.240	.406	.437	.562	.593	.672	.750	.825	.937	1.030	1.125
#10	.204	.218	.250	.406	.437	.562	.593	.672	.750	.825	.937	1.030	1.125
¼	.281	.250	.312	.469	.500	.562	.593	.672	.750	.825	.937	1.030	1.125
5/16	.344	.375	.406	.562	.562	.562	.675	.672	.750	.825	.937	1.030	1.125
⅜	.406	.375	.440	.578	.578	.594	.675	.672	.750	.825	.937	1.030	1.125
½	.531	.500	.562	—	—	—	.750	.750	.750	.825	.937	1.030	1.125
⅝	.656	.625	.875	—	—	—	—	—	—	—	.937	1.030	1.125
¾	.812	.750	.770	—	—	—	—	—	—	—	—	—	—
⅞*	.937	.875	.890	—	—	—	—	—	—	—	—	—	—
1*	1.062	.937	1.000	—	—	—	—	—	—	—	—	—	—

** These bolt holes available in one-hole lug only.*

Chart B

CABLE SIZE	TONGUE THICKNESS	STRAIGHT LUG BARREL LENGTH PLUS TRANSITION		BARREL		DIM "X" STACKED LUGS			DIM "Y"		DIM "H"	
		SHORT	LONG	O.D.	I.D.	STRAIGHT	45°	90°	SHORT	LONG	SHORT	LONG
#8	.080	.635	.935	.260	.180	.158	.478	.394	.595	.808	.779	1.079
#6	.081	.675	.975	.296	.215	.134	.544	.432	.587	.799	.767	1.067
#4	.099	.685	.985	.365	.266	.175	.622	.502	.637	.849	.838	1.138
#2	.108	.815	1.115	.410	.302	.216	.649	.535	.711	.923	.958	1.258
#1	.106	.825	1.275	.467	.361	.212	.731	.592	.710	1.028	.956	1.406
1/0	.125	.975	1.325	.520	.396	.250	.789	.646	.794	1.042	1.075	1.425
2/0	.125	.965	1.315	.571	.446	.250	.859	.696	.829	1.077	1.125	1.475
3/0	.125	1.085	1.435	.632	.507	.250	.946	.757	.900	1.148	1.225	1.575
4/0	.137	1.255	1.705	.701	.564	.274	1.031	.826	1.015	1.333	1.387	1.837
250	.137	1.375	1.925	.766	.629	.274	1.123	.891	1.085	1.474	1.487	2.037
300	.153	1.900	2.675	.850	.660	.459	1.226	.975	1.180	1.726	1.924	2.679
350	.177	2.090	2.896	.926	.720	.531	1.333	1.103	1.267	1.830	2.096	2.896
400	.173	2.460	2.980	.960	.757	.519	1.370	1.085	1.551	1.913	2.484	2.984
500	.218	2.670	3.610	1.100	.852	.654	1.514	1.225	1.629	2.266	2.669	3.619
600	.244	2.900	3.490	1.200	.926	.732	1.630	1.325	1.762	2.147	2.897	3.497
700	.228	2.784	—	1.255	.997	.684	1.662	1.375	1.780	—	3.011	—
750	.270	3.050	3.925	1.330	1.030	.810	1.745	1.455	1.827	2.434	3.050	3.925
800	.266	3.213	—	1.375	1.079	.800	1.728	1.625	1.952	2.787	3.213	4.554
900	.313	3.450	4.550	1.500	1.145	.940	1.900	1.650	2.065	—	1.387	—
1,000	.297	3.356	4.500	1.550	1.203	.890	2.070	1.675	2.031	2.787	1.487	4.506

Note: *Stacking lugs are available for one bolt only.*
Consult Factory: Straight: 700 kcmil & up.
45°: 400 kcmil & up
90°: 500 kcmil & up

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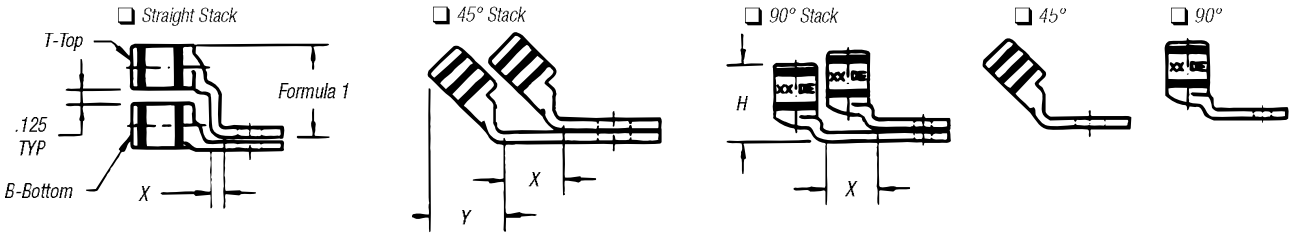
Overview



Formula 1 = (.125 + 2 (OD) + .037 – Tongue Thickness)

Chart C

	TONGUE WIDTH .030 CODE CABLE SIZE										
BOLT HOLE SIZE	300 KCMIL 4/0 WELD	350 KCMIL	400 KCMIL	500 KCMIL 400 WELD	600 KCMIL 500 WELD	1325/24	700 KCMIL	750 KCMIL	800 KCMIL	900 KCMIL	1000 KCMIL
#8	—	—	—	—	—	—	—	—	—	—	—
#10	—	—	—	—	—	—	—	—	—	—	—
¼	1.250	1.355	1.410	1.605	1.745	1.805	1.840	1.935	2.010	2.180	2.265
5/16	1.250	1.355	1.410	1.605	1.745	1.805	1.840	1.935	2.010	2.180	2.265
⅜	1.250	1.355	1.410	1.605	1.745	1.805	1.840	1.935	2.010	2.180	2.265
½	1.250	1.355	1.410	1.605	1.745	1.805	1.840	1.935	2.010	2.180	2.265
⅝	1.250	1.355	1.410	1.605	1.745	1.805	1.840	1.935	2.010	2.180	2.265
¾	1.250	1.355	1.410	1.605	1.745	1.805	1.840	1.935	2.010	2.180	2.265
⅞*	—	—	—	1.605	1.745	1.805	1.840	1.935	2.010	2.180	2.265
1*	—	—	—	—	1.745	1.805	1.840	1.935	2.010	2.180	2.265

** These bolt holes available in one-hole lug only.*