03

Compression joints and lugs

Mid Span Joints

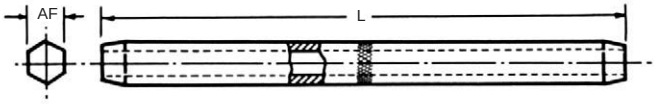
- Full Tension
- Non Tension

Compression Lugs

- Jumper Terminal
- Aluminium
- 4 Core Sector

Compression Mid Span Joints - Full Tension

for Hexagonal Compression Dies in accordance with AS1154



Conductor type – AAC

AAC Full Tension Midspan Joints, are manufactured from an Aluminium extrusion, equivalent in strength to the conductor onto which the fitting is applied.

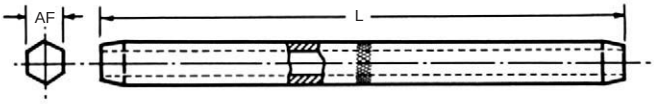
Each fitting is manufactured with internal and external tapers, to eliminate stresses associated with compression, and reduce corona discharge.

Each fitting is clearly marked with the compression length, the applicable conductor stranding, and the appropriate compression die size. All design parameters for the items in this section are in accordance with AS1154.

Cat. No.	AAC Code Name	Conductor Stranding	Nom. Overall Cond. Dia.	Dimensions mm		Die
				A/F	L	
HM603	Jupiter	7/2.25	6.75	11.0	240	38-110AL
HM604	Leo	7/2.50	7.50	14.0	240	38-140AL
HM606	Libra	7/3.00	9.00	14.0	280	38-140AL
HM608	Mars	7/3.75	11.25	18.0	320	38-180AL
HM611	Mercury	7/4.50	13.50	22.0	360	38-220AL
HM612	Moon	7/4.75	14.25	22.0	360	38-220AL
HM615	Neptune	19/3.25	16.25	28.5	400	40-283AL
HM616	Pluto	19/3.75	18.75	28.5	440	40-283AL
HM618	Saturn	37/3.00	21.00	34.5	480	40-345AL
HM620	Taurus	19/4.75	23.75	40.0	560	40-400AL
HM621	Triton	37/3.75	26.25	40.0	560	40-400AL
HM623	Uranus	61/3.25	29.25	44.5	640	40-445AL
HM624	Venus	61/3.75	33.75	47.5	780	40-475AL

Compression Mid Span Joints - Full Tension

for Hexagonal Compression Dies in accordance with AS1154



Conductor type AAAC & AAAC/1120

AAAC Full Tension Compression Midspan Joints, are manufactured from an Aluminium extrusion, equivalent in strength to the conductor onto which the fitting is applied.

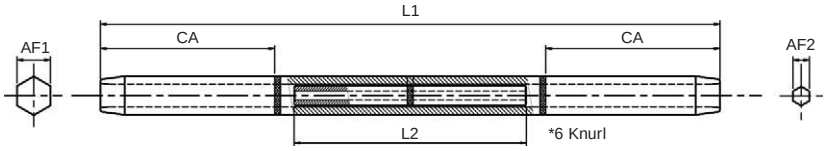
Each fitting is manufactured with internal and external tapers, to eliminate stresses associated with compression, and reduce corona discharge.

Each fitting is clearly marked with the compression length, the applicable conductor stranding, and the appropriate compression die size. All design parameters for the items in this section are in accordance with AS1154.

Cat. No.	AAAC Code Name	AAAC/1120 Code Name	Conductor Stranding	Nom. Overall Cond. Dia.	Dimensions mm		Die
					A/F	L	
HM702	Diamond	Chlorine	7/2.50	7.50	14.0	240	38-140AL
HM703	Emerald	Fluorine	7/3.00	9.00	14.0	280	38-140AL
HM704	Garnet	Helium	7/3.75	11.25	18.0	320	38-180AL
HM705	Jade	Hydrogen	7/4.50	13.50	22.0	360	38-220AL
HM706	Jasper	Iodine	7/4.75	14.25	22.0	360	38-220AL
HM707	Opal	Krypton	19/3.25	16.25	28.5	400	40-283AL
HM708	Pearl	Neon	19/3.75	18.75	30.0	440	40-285AL
HM709	Ruby	Nitrogen	37/3.00	21.00	34.5	480	40-345AL
HM710	Rutile	Oxygen	19/4.75	23.75	40.0	560	40-400AL
HM711	Sapphire	Phosphorous	37/3.75	26.25	40.0	560	40-400AL
HM712	Spinel	Selenium	61/3.25	29.25	44.5	640	40-445AL
HM713	Topaz	Sulphur	61/3.75	33.75	47.5	780	40-475AL

Compression Mid Span Joints - Full Tension

for Hexagonal Compression Dies in accordance with AS1154



Conductor type – ACSR

ACSR Full Tension Compression Midspan Joints, are manufactured from an Aluminium outer extrusion, and an inner steel tubular core. The two piece design ensures a design strength equivalent to the conductor onto which the fitting is applied.

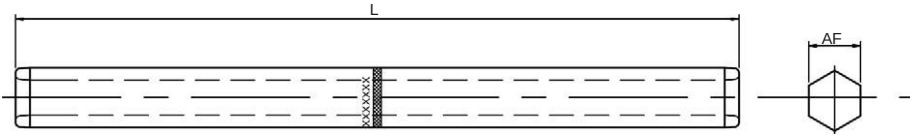
Each fitting is manufactured with internal and external tapers, to eliminate stresses associated with compression, and reduce corona discharge.

Each fitting is clearly marked with the compression length, the applicable conductor stranding, and the appropriate compression die size. All design parameters for the items in this section are in accordance with AS1154.

ACSR		Conductor Stranding	Nom. Overall Cond. Dia.	Aluminium				Steel		
				Dimensions						
Cat. No.	Code Name			A/F1	Die	L1 Nom.	CA	A/F2	Die	L2 Nom.
HM507	Almond	6/1/2.50	7.50	14.0	38-140AL	400	100	6.8	38-68ST14	160
HM512	Apple	6/1/3.00	9.00	14.0	38-140AL	400	100	6.8	38-68ST14	160
HM516	Banana	6/1/3.75	11.25	18.0	38-180AL	440	120	9.5	38-95ST	160
HM521	Cherry	6/4.75+7/1.60	14.30	22.0	38-220AL	480	140	9.5	38-95ST	160
HM525	Grape	30/7/2.50	17.50	28.5	40-283AL	600	180	16.0	38-160ST	200
HM530	Lemon	30/7/3.00	21.00	34.5	40-345AL	640	180	17.0	40-170ST	240
HM532	Lime	30/7/3.50	24.50	40.0	40-400AL	680	200	19.0	40-190ST	240
HM535	Mango	54/7/3.00	27.00	40.0	40-400AL	720	220	17.0	40-170ST	240
HM536	Orange	54/7/3.25	29.25	44.5	40-445AL	720	220	19.0	40-190ST	240
HM538	Olive	54/7/3.50	31.50	47.5	40-475AL	760	240	19.0	40-190ST	240

Compression Mid Span Joints - Non Tension

for Hexagonal compression Dies in accordance with AS1154



Conductor type – AAC

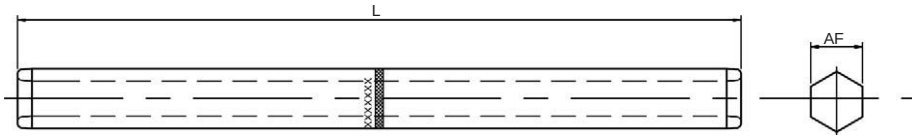
Non Tension Compression Mid Span Joints are manufactured from an Aluminium extrusion.

As these joints are installed at low tension values, one fitting can be used for all cable types of the same size (OD).

Cat. No.	AAC Code Name	Conductor Stranding	Nom. Overall Cond. Dia.	Dimensions mm		Die
				A/F	L	
HN603	Jupiter	7/2.25	6.75	11.0	160	38-110AL
HN604	Leo	7/2.50	7.50	14.0	180	38-140AL
HN606	Libra	7/3.00	9.00	14.0	180	38-140AL
HN608	Mars	7/3.75	11.25	18.0	220	38-180AL
HN611	Mercury	7/4.50	13.50	22.0	240	38-220AL
HN612	Moon	7/4.75	14.25	22.0	260	38-220AL
HN615	Neptune	19/3.25	16.25	28.5	260	40-283AL
HN616	Pluto	19/3.75	18.75	28.5	260	40-283AL
HN618	Saturn	37/3.00	21.00	34.5	280	40-345AL
HN620	Taurus	19/4.75	23.75	40.0	280	40-400AL
HN621	Triton	37/3.75	26.25	40.0	300	40-400AL
HN623	Uranus	61/3.25	29.25	44.5	320	40-445AL
HN624	Venus	61/3.75	33.75	47.5	380	40-475AL

Compression Mid Span Joints - Non Tension

for Hexagonal Compression Dies in accordance with AS1154



Conductor type - AAAC & AAAC/1120

Cat. No.	AAAC Code Name	AAAC/1120 Code Name	Conductor Stranding	Nom. Overall Cond. Dia.	Dimensions mm		Die
					A/F	L	
HN604	Diamond	Chlorine	7/2.50	7.50	14.0	180	38-140AL
HN606	Emerald	Fluorine	7/3.00	9.00	14.0	180	38-140AL
HN608	Garnet	Helium	7/3.75	11.25	18.0	220	38-180AL
HN611	Jade	Hydrogen	7/4.50	13.50	22.0	240	38-220AL
HN612	Jasper	Iodine	7/4.75	14.25	22.0	260	38-220AL
HN615	Opal	Krypton	19/3.25	16.25	28.5	260	40-283AL
HN616	Pearl	Neon	19/3.75	18.75	28.5	260	40-285AL
HN618	Ruby	Nitrogen	37/3.00	21.00	34.5	280	40-345AL
HN620	Rutile	Oxygen	19/4.75	23.75	40.0	280	40-400AL
HN621	Sapphire	Phosphorous	37/3.75	26.25	40.0	300	40-400AL
HN623	Spinel	Selenium	61/3.25	29.25	44.5	320	40-445AL
HN624	Topaz	Sulphur	61/3.75	33.75	47.5	380	40-475AL

Conductor type - ACSR

Cat. No.	ACSR Code Name	Conductor Stranding	Nom. Overall Cond. Dia.	Dimensions mm		Die
				A/F	L Nom.	
HN604	Almond	6/1/2.50	7.50	14.0	180	38-140AL
HN606	Apple	6/1/3.00	9.00	14.0	180	38-140AL
HN608	Banana	6/1/3.75	11.25	18.0	220	38-180AL
HN521	Cherry	6/4.75+7/1.60	14.30	22.0	260	38-220AL
HN634	Grape	30/7/2.50	17.50	28.5	260	40-283AL
HN618	Lemon	30/7/3.00	21.00	34.5	280	40-345AL
HN532	Lime	30/7/3.50	24.50	40.0	300	40-400AL
HN631	Mango	54/7/3.00	27.00	40.0	320	40-400AL
HN623	Orange	54/7/3.25	29.25	44.5	320	40-445AL
HN635	Olive	54/7/3.50	31.50	47.5	350	40-475AL

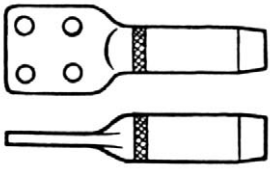
Compression Jumper Lugs

Type HL for AAC, AAAC & ACSR Conductors

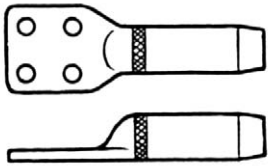
Manufactured to Australian Standard AS 1154 (with palms to AS 2395)
Material: High electrical conductivity grade aluminium alloy with terminal palms produced by forging or welding process, enabling required palm types to meet Australian Standard &/or customer requirements, irrespective of the size of the barrel section.

Enquiries and orders should specify the following:

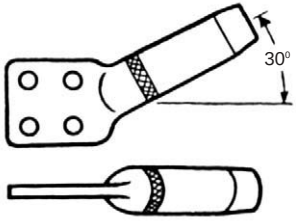
a. Conductor Code - as per table on page 3-9
b. Hole details - number of holes, diameter and spacing
c. Bend details - palm angle and orientation
d. Preferred standard palm orientations & configurations



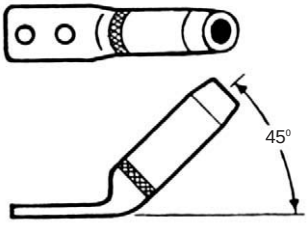
Centre Palm



Offset Palm

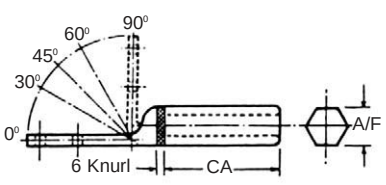


30° Palm bent on edge

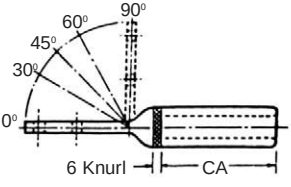


45° Palm bent on flat

Compression Terminal Connector



Offset Palm



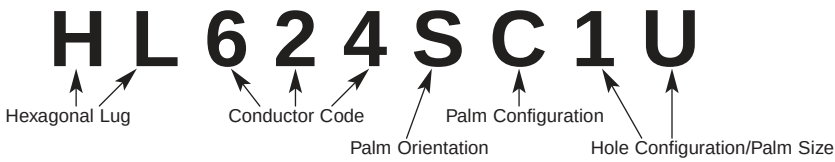
Centre Palm

Refer Information Sheet on page 14

Compression Jumper Lugs

Type HL for AAC, AAAC & ACSR Conductors

Nomenclature for lug part numbers



Character

1) H

2) L

3) Conductor Code — The preferred code for use is the AAC over the AAAC or ACSR codes. If the lug is required for an ACSR or AAAC conductor and a suitable AAC design is unavailable, only then use the ACSR or AAAC code.

4) Palm Orientation:

S	"S"traight	(Only used in conjunction with the below "C" or "O" palm configuration)
3	30°	(Only used in conjunction with the below "E" or "F" palm configuration)
4	45°	
6	60°	
9	90°	

5) Palm Configuration:

E	"E"dge Bent	(Only centre squashed. Only used in conjunction with the above angled lugs)
F	"F"lat Bent	
C	Straight "C"entre	(Only used in conjunction with above "S" palm orientation for straight lugs)
O	Straight "O"ffset	

6/7) Hole code:

1	1 x 14mm hole palm 32±3 wide x 35min long x 6 min thick
1U	undrilled palm per type 1 above.
2	1 x 14mm hole palm 40±3 wide x 45min long x 6min thick
2U	undrilled palm per type 2 above.
3	2 x 14mm hole 50crs palm 40±3 wide x 105min long x 12min thick
3U	undrilled palm per type 3 above.
4	2 x 14mm hole 50crs palm 50±5 wide x 105min long x 12min thick
4U	undrilled palm per type 4 above.
5	4 x 14mm hole 50crs palm 100±5 wide x 105min long x 12min thick
5U	undrilled palm per type 5 above.
6	2 x 14mm hole 50crs palm 46±1 wide x 105min long x 12min thick
6U	undrilled palm per type 6 above.
7	2 x 18mm hole 60crs palm 66±1 wide x 135min long x 20min thick
7U	undrilled palm per type 7 above.
8	4 x 18mm hole 60crs palm 130±5 wide x 135min long x 20min thick
8U	undrilled palm per type 8 above.
9	2 x 18mm hole 60crs palm 56±1 wide x 135min long x 20min thick
9U	undrilled palm per type 9 above.
X	Non standard palm or hole configuration
XU	undrilled palm per type X above.

8) Variations: If variations on the standard compression lugs are required, please contact Tyco.

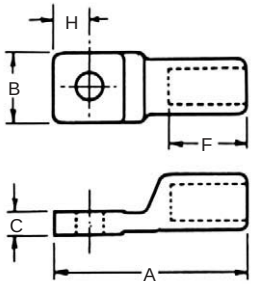
Compression Jumper Lugs

Type HL for AAC, AAAC & ACSR Conductors

Cond. Code	AAC & AAAC Conductors	Conductor Stranding	ACSR Conductors	Conductor Stranding	Conductor Dia. mm	Dimensions mm			Die Cat. No.
						A/F	CA	Std Bolt	
603	Jupiter Amethyst Boron	7/2.25			6.75	11.0	60	2 x M10	38-110AL
604	Leo Diamond Chlorine	7/2.50	Almond	6/1/2.50	7.50	14.0	60	2 x M10	38-140AL
605	Libra Emerald Fluorine	7/3.00	Apple	6/1/3.00	9.00	14.0	70	2 x M10	38-140AL
608	Mars Garnet Helium	7/3.75	Banana	6/1/3.75	11.25	18.0	80	2 x M10	38-180AL
611	Mercury Jade Hydrogen	7/4.50			13.50	22.0	80	2 x M12	38-220AL
612	Moon Jasper Iodine	7/4.75	Cherry	6/4.75+7/1.60	14.30	22.0	80	2 x M12	38-220AL
615	Neptune Opal Krypton	19/3.25			16.25	28.5	80	2 x M12	38-284AL
525			Grape	30/7/2.50	17.50	28.5	85	2 x M12	38-284AL
616	Pluto Pearl Neon	19/3.75			18.75	28.5 30.0 30.0	90	2 x M12	38-284AL
618	Saturn Ruby Nitrogen	37/3.00	Lemon	30/7/3.00	21.00	34.5	90	2 x M12	40-345AL
620	Taurus Rutile Oxygen	19/4.75			23.75	40.0	100	2 x M12	40-400AL
532			Lime	30/7/3.50	24.50	40.0	100	2 x M12	40-400AL
621	Triton Sapphire Phosphorus	37/3.75			26.25	40.0	100	4 x M12	40-400AL
535			Mango	54/7/3.00	27.00	40.0	100	4 x M12	40-400AL
623	Uranus Spinel Selenium	61/3.25	Orange	54/7/3.25	29.30	44.5	110	4 x M12	40-445AL
538			Olive	54/7/3.50	31.50	47.5	110	4 x M12	40-475AL
624	Venus Topaz Sulphur	61/3.75	Paw Paw	54/3.75+19/2.25	33.80	47.5	120	4 x M12	40-475AL

Aluminium Compression Lug

One hole palm



All lugs are partly filled with oxide inhibitor and sealed with a plastic plug.

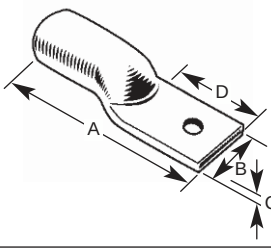
Cat. No.	Conductor Size mm²	Stud Size	Dimensions mm A	B	C	F	H	Hex Die Cat. No.	No. Of Crimps
H15114	25	10	65	22	5	32	10.5	38-90AL	1
H15119	35	10							1
H15124	50	10	73	26	8	32	14	38-132AL	1
H15129	70	10							1
H15134	95	10	80	30	10	32	15	38-173AL	1
H15138	120	10						40-172AL	1
H15142	150	10	90	36	11	30	18	38-220AL	1
H15147	185	12						40-220AL	1
H15153	240	12	115	46	12	41	25	38-284AL	2
H15159	300	12						40-283AL	1

NOTE: Blank palms are also available.

Terminal Lugs - Type SL

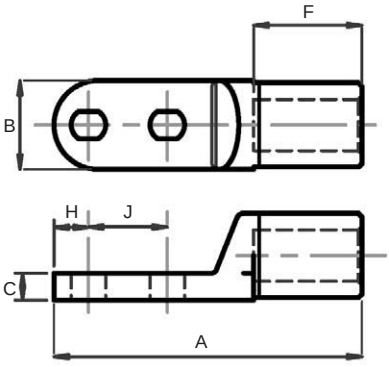
• Extruded aluminium tube • Pre-filled with jointing compound • Individually packed in plastic bags • Designed for compression by hexagonal or indent type tools • Available also with blank palms • Recommended conductor ACSR or AAC - conventional and smooth body • Suitable for non tension joints in all industrial, overhead transmission applications.

Cat. No.	Conductor Range O.D.	Imperial Stud Size ins.	Dimensions mm A	B	C	D
SL36	6 - 8	0.6	81.0	22.2	7.4	38.1
SL44	8 - 10	0.375	90.0	27.0	9.0	38.1
SL50	10 - 12	0.5	92.1	27.6	7.9	38.1
SL58	12 - 13.5	0.5	101.6	31.8	7.5	38.1
SL61	13 - 14.5	0.5	104.8	34.9	9.9	38.1
SL68	14 - 16	0.5	131.5	34.9	8.4	38.1
SL80	16.5 - 19.5	0.5	125.4	41.3	9.9	38.1



Aluminium Compression Lug

Two hole palm



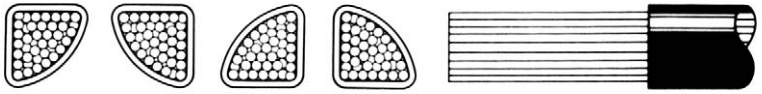
Die cast in high electrical conductivity grade aluminium. Barrel partly filled with oxide inhibitor and sealed with a plastic plug.

Cat. No.	Conductor Size mm2	Stud Size	Dimensions mm						Hex Die Cat. No.
			A	B	C	F	H	J	
AHC095M2	95	10	122	32	9	43	14	31	38-173AL
AHC120M2	120	10	122	32	9	43	14	32	38-173AL
AHC150M2	150	10	118	37	10	33	15	32	38-220AL
AHC240M2	240	10	159	38	11	69	16	32	38-284AL
AHC300M2	300	10	159	38	11	69	16	32	40-283AL

4 Core Sector Aluminium Compression Lug

Type AHCS

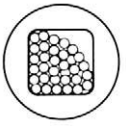
The Dulmison 4 core sector lug is for use on stranded and solid sector cables, and compacted round conductors. The lug design offers many advantages, especially when working in confined spaces such as URD turrets, pits or compact switchgear.



Dulmison 4 core sector lugs allow 90° sector shaped cable to be inserted in any of the four possible orientations. The assembly then requires a twist of no more than 45° for proper alignment. With conventional sector lugs, a twist of up to 180° may be required and this is often difficult to achieve in a confined space.

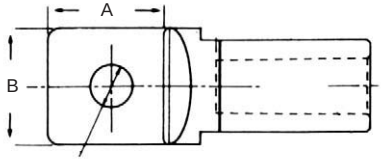
The lug features a unique square shape inside the barrel to accommodate solid sector shapes, and eliminates the need for pre-rounding of stranded sectors.

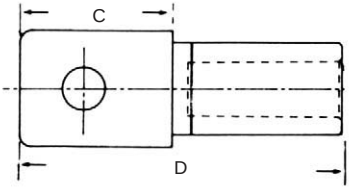
The lugs are compressed onto the cables using standard hexagonal dies ensuring that the barrel of the lug and the cable sector are properly formed together. Comprehensive tests have been performed to ensure that optimum electrical contact and mechanical properties have been achieved.



Before compression

After compression





Cat. No.	Conductor Size mm²	Dimensions mm				Hole Dia.	Hex Die Cat. No.
		A	B	C	D		
AHCS1212	120	35	32	48	93	13.5	38-200AL
AHCS1812	185	35	38	50	105	14	38-250AL
AHCS240	240	38	34	38	121	13.5	38-284AL

Hexagonal Compression Dies

For Aluminium Crimp Lugs, Sleeves & Bi-metal Lugs

Cable Size mm2	Die Cat. No.	Crimp Dimensions		Hydraulic Tool Cat. No.
		A/F	W	
25 35	38-90AL	9.00	25	12 Tonne #38A
50 70	38-132AL	13.20	25	
95 120	38-173AL	17.30	22	
150 185	38-220AL	22.00	18	
240 300	38-284AL	28.40	18	
400 500	40-390AL	39.00	50	60 Tonne #40B
630	40-432A	43.20	50	

Other tools are available please refer Tyco or Utilux catalogue.

For Copper Crimp Lugs & Sleeves

Cable Size mm2	Die Cat. No.	Crimp Dimensions		Hydraulic Tool Cat. No.
		A/F	W	
16	38-63CU	6.3	17.5	12 Tonne #38A
25	38-77CU	7.7	17.5	
35	38-92CU	9.3	17.5	
50	38-104CU	10.4	17.5	
70	38-115CU	11.5	17.5	
95	38-142CU	14.2	17.5	
120	38-165CU	16.6	14.3	
150	38-183CU	18.3	14.3	
185	38-200CU	19.9	14.3	
240	38-231CU	23.1	9.5	
300	38-260CU	26	9.5	
400	40-281CU	28.1	25	60 Tonne #40B
500	40-310CU	31	25	
630	40-370CU	37	25	

Other tools are available please refer Tyco or Utilux catalogue.

Order/Inquiry Information Sheet

All to be supplied to AS1154 and AS2395 standard dimensions unless specified otherwise

Conductor Stranding .....

Conductor Diameter .....

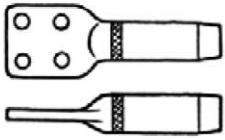
Conductor Code Name .....

Quantity Required .....

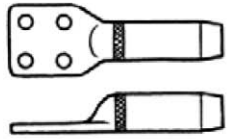
Please copy this sheet, fill in the relevant details and forward to the Tyco Electronics sales office in your region.

Jumper Terminals (Clearly circle or mark as appropriate)

Palm Style



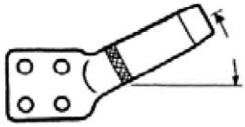
Centre (C)



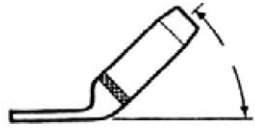
Offset (O)

(Palm angle for offset = 0°)

Palm Type and Angle



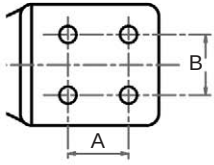
Edge (E)

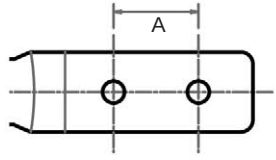


Flat (F)

0°
30°
45°
60°
90°

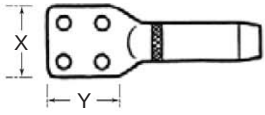
No. of Holes _____





Spacing of Holes: A = _____ B = _____

Diameter of Holes (to suit bolt diameter)_____



Palm Dimensions (if not standard to AS2395): X =_____ Y =_____ Z =_____