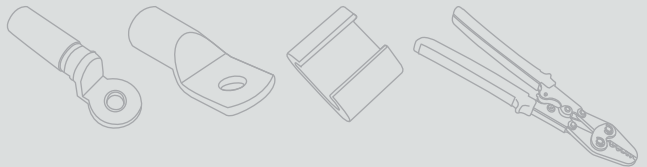


Precision in Every Dimension

Products Catalogue 2012
Cable Lugs, Crimping Tools & Bus Bar







(1929-2006)

In loving memory of

Shri. Govindbhai S. Patel

The Pioneer of Cable Jointing Technology in India

The Founder of Dowell's and

3D brand Cable Lugs and Crimping Tools.



Precision in Every Dimension

CERTIFICATIONS



Sl. No.	Particulars	Remarks	Remarks	Value
1	1.1.1.1	...	...	...
2	1.1.1.2	...	...	...
3	1.1.1.3	...	...	...
4	1.1.1.4	...	...	...
5	1.1.1.5	...	...	...
6	1.1.1.6	...	...	...
7	1.1.1.7	...	...	...
8	1.1.1.8	...	...	...
9	1.1.1.9	...	...	...
10	1.1.1.10	...	...	...
11	1.1.1.11	...	...	...
12	1.1.1.12	...	...	...
13	1.1.1.13	...	...	...
14	1.1.1.14	...	...	...
15	1.1.1.15	...	...	...
16	1.1.1.16	...	...	...
17	1.1.1.17	...	...	...
18	1.1.1.18	...	...	...
19	1.1.1.19	...	...	...
20	1.1.1.20	...	...	...

Electrical Research & Development Association



IS - 8309



Test Certificate for Cu. light duty & Cu. Heavy duty terminals



ISO 9001 : 2008 CERTIFICATE

AWARDS



Highest Exporter Performance Award 1990 - 1991



All India Highest Export Performance Award 1991 - 92



Highest Exporter Performance Award 1992 - 1993









Regional Trophy for Highest Exporter 2002 - 03






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COMPANY PROFILE

Billets Elektro Werke Pvt. Ltd. began its journey of engineering excellence and innovation from a small shop manufacturing cycle rickshaws in Nagpur. Mr. Govindbhai Patel, the founder, and his son, Mr. Ashok Patel, then diversified into manufacturing of switchgear products and Stardelta starters for the electrical industry. They put to use their academic engineering background to pioneer the use of cold crimping technology for cable terminations. They manufactured cable lugs and crimping tools under the brand name **Dowells**, which has over the time become synonymous with cable lugs.

Not content with dominating the domestic market, they have begun exporting to Germany, Spain, Australia, New Zealand, UK, South Africa, Malaysia, Hong Kong, Vietnam and the Middle-East.

Their expertise in design, manufacturing and quality control has been acknowledged by clients with whom they share business ties that go back for many decades.

Now, as the company grows and diversifies in the electrical components market, they have plans to cater to the high volume copper semis market, and it is with this plan to diversify that they present their newest range of copper tubes, rods, sections and strips.

Their founder, Mr. Govindbhai Patel always believed in the motto, "Manufacture in-house, Serve Better". With his words in mind they have set up a comprehensive manufacturing facility along with state of the art machineries under one roof at Umbergaon, Gujarat. This facility has a floor space of 80,000 sq. ft. and is sprawled across an area of 7 acres. The unit is an EOU and the only plant of its kind in India offering wide range of products for cable termination with international standards like ISO 9001:2008. It is professionally managed by Mr. Ashok G. Patel, Managing Director, and Mr. Chirag A. Patel, Executive Director.




Ashok G. Patel
(Managing Director)



Chirag A. Patel
(Executive Director)

OUR MOTTO

The dimensions of our  brand are

1. R&D 2. Consistency of Quality 3. Assured Deliveries.
and to understand the exact needs of the users to recommend/guide them in the proper direction with latest available technique in cable termination.

QUALITY BENEFITS OF 3D TERMINALS

Don't compromise on quality for the sake of price. A cheap quality terminal can affect the optimum functioning of your product. At billets Elektro Werke Pvt. Ltd. we have an experience of more than 40 years in designing and manufacturing cable terminals and crimping tools. We have stringent in-house quality and inspection standards. And we don't compromise...

Conductivity: All our input raw materials are checked for conductivity. We only use ETP grade, 99.9% conductivity copper and 60% conductivity aluminium . Incoming material is checked for conductivity and dimensional accuracy.

Finish: All terminals go through deburring and polishing operations to eliminate sharp edges.

Accuracy: Our tool room has two wire cutting EDM's (Charmilles, Germany), a machining center (Haas, USA), and two spark erosion machines, besides a wide array of lathes, milling machines, drilling machines, grinding machines etc. Our press tools are designed keeping in mind high accuracy, productivity and quality which makes the final product within excellent dimensional tolerance.

Brazing: we use high quality brazing wire containing 2% silver. This ensures a high flowing rate after melting and an even layer. This leaves a brazing seam with no lumps which may spoil the finish of the terminal or affect the crimpability. We also normalize the terminals after brazing and conduct a bend test at the seam to ensure that there is no cracking.

Crimpability: We ensure that our material is at the optimum softness so that operator can crimp the terminal with minimal effort without even hair crack and at the same time ensures that it is hard enough to sustain deformation.

Plating: Our terminals have a tin coating of minimum 5 microns to ensure a shelf life of at least two years. Thickness is checked by Coulometric testing and salt spray tests.

Insulation: Our insulation does not show any stress marks or colour changes even with extreme crimping. We also conduct heat aging and dielectric tests to ensure that the insulation does not degrade in high temperature environments.



FREQUENTLY ASKED QUESTIONS

1. Which material is used for insulation of sheet metal terminals?

We use sleeves made out of PVC for insulating sheet metal terminals. The operating temperature for these lugs is from 60 degrees C to 100 degrees C. For high temperature applications we can also provide Nylon or Polycarbonate insulating sleeves. For applications where there is a chance of the sleeve coming off due to vibrations (eg railway locomotive) we use a copper sleeve under the PVC insulation "Double grip terminals" for enhancing the rigidity.

2. Why is the colour of insulation different for various cable sizes?

As per international practice in use, **Red** colour is for terminals of 1.5 Sq.mm, **Blue** colour is for terminals of **Yellow** 2.5 Sq.mm & colour is for terminals of 4-6 Sq.mm,

3. What are the Indian standard specifications for our products?

Indian standard specifications are formulated for Aluminium terminals only. At present specifications for copper or sheet metal terminals are not formulated.

IS 8308 - 1993 covers Aluminium In Line Connectors & IS 8309 - 1993 covers Aluminium Tubular Terminal Ends. We however have obtained license for aluminium "Tubular terminals" only.

We have also developed lugs and connectors as per DIN specifications, however we don't have certification for the same.

4. How do we know the purity of copper or Aluminium used in our products?

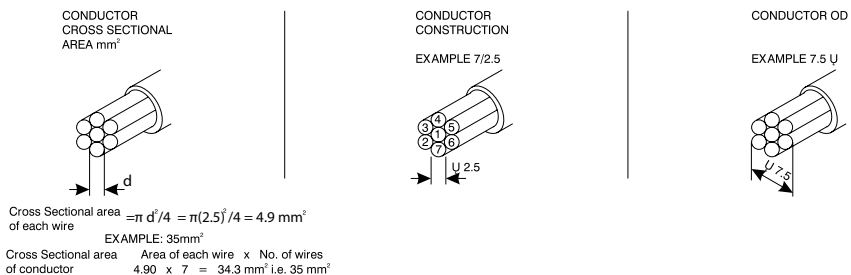
We manufacture our copper lugs and connectors from cathodes obtained from LME approved warehouses only. Our aluminium lugs and connectors are manufactured from ISI certified tube manufacturers, who use aluminium ingots of the highest purity.

We have in-house testing facilities to check the conductivity for copper and aluminium.

5. Does 99% copper content guarantee 99% IACS conductivity?

No. Conductivity is affected by the type of impurities content in balance 1%. It has been observed that 0.5% arsenic may bring down the conductivity to the tune of 50% to 60%

6. How to select the right lug for the right cable size?



7. Flexible wire does not go into the barrel of the same size of terminal?

Outer diameter of flexible wire is maximum compared to the other (stranded or solid) shape. Our terminals are designed to easily receive stranded wires. It becomes difficult to insert the flexible wire into the barrel. Best practice is to form the wire with forming dies or use one higher size of terminal (however that may cause flashing). Use of terminals having easy entry barrels will also provide ease of insertion.

FREQUENTLY ASKED QUESTIONS

8. Why serrations are provided?

Serrations help in cutting oxide film formed over the conductor. (In case of aluminium the oxide film is formed at normal temperature or humidity). Serrations also help in providing better grip of the joint. However, we have taken the pull off test over the same size of crimped terminal, with and without serrations. Though the terminals without serrations withstand lesser pull off load, it is well within the limits of 4Kg./Sq.mm. The use of a corrosion-inhibiting compound (3D-112) is a better option for breaking the oxide layer on the conductor.

9. How can corrosion after crimping be reduced or prevented?

It can be prevented or reduced by applying special corrosion inhibiting compounds between the surfaces of different material being used in electrical circuit.

CRIMPING TECHNIQUES

1. How Corrosion Inhibiting Compound (3D-112) should be used?

Compound should be freely applied over the stripped portion of wire and also on the inside surface of barrel. Excess compound will seal the barrel mouth after crimping and in turn prevent the ingress of moisture or other contaminated substances present in the surrounding atmosphere.

Compound is recommended to be used when aluminium or copper lug is used with aluminium conductor.

2. How can we know that the crimped joint is proper or not?

A properly crimped joint is one in which the compressed section of the joint is so tightly packed that it almost becomes homogenous.

It can be ascertained by:

Pull Off Load Test - Crimped joint should withstand the pull off load of 4Kg./Sq.mm. Say for 240 Sq.mm. cable, it should withstand $240 \times 4 = 960$ Kg.

Joint Resistance - As per IS 8337 the resistance of crimped joint on aluminium wire should not be more than the resistance across the length of the conductor equal to the length of barrel of the terminal.

Visual Inspection - Cut a section of the crimped portion and examine the section for air gaps between the conductors, or between the ID wall of the lug and the conductors. Presence of air gaps indicates that the crimping is not homogenous. As shown in the picture:

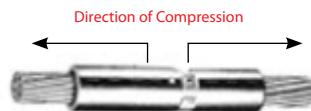
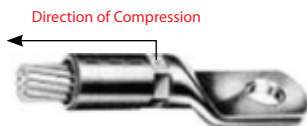


3. Can insulated terminals be crimped with the tools meant for non-insulated terminals?

NO. The tools designed for Non-insulated terminals will not properly crimp the terminals, it will also damage the insulating sleeve. Similarly tool designed for insulated terminal will not properly crimp the non insulated terminal since the crimp profile are different.

4. What should be the direction of crimping, when crimping multiple crimps on longer barrel lugs?

The direction of crimping should always be away from the palm portion of the barrel in the case of lugs, and should start from the centre in the case of connectors.



CRIMPING TECHNIQUES

5. What should be the stripping length of conductor?

It should be slightly more than the barrel length, which will give the rough idea whether the conductor has been fully inserted or not. However, wherever possible, it is recommended to use the terminals having inspection vent, which will show if the conductor is fully inserted or not.

6. Terminals having bigger stud hole (say 16-mm) can be used with smaller bolt (say 12-mm)?

NO. When the smaller bolt is used with the terminal having higher stud hole, the bolt washer starts forming dish shape while tightening and does not exert proper pressure on the palm. This results in improper contact, which can lead to failure of the termination due to excess heat generation. This is illustrated by the picture here. The electrical contractor in this case had terminated the lug on a fuse gear with a considerably smaller area, resulting in melting of the lug.



7. What is the importance of spring washer in any bolted connections?

When the current flows through any conductive metal, heat is generated. The conducting metal expands when the heat is generated and contracts when the current stops flowing. Spring washer helps in maintaining proper pressure on bolted joints during expansion and contraction.

8. Can terminals be crimped without the recommended crimping tools?

Our lugs and tools are designed to offer the best possible electrical and mechanical joint. We have found that some electricians and electrical contractors prefer using hammers or pliers to crimp a lug. This technique brought about just to save some expense, is absolutely NOT recommended by us. Mainly because hammering a terminal will not provide homogenous joint and the adequate pull-off load strength.



9. Why crimping should be on top of the lug and not the bottom?

Crimping from the bottom of the lug causes it to deform at the palm portion, which will prevent it from complete contact with busbar upon termination.



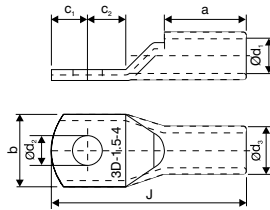
Crimping from Bottom










Crimping from Top

COPPER TUBULAR CABLE LUGS

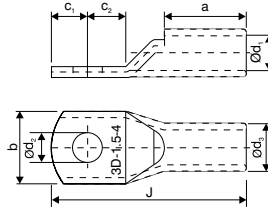
Standard Type, With Inspection Hole
for Copper Conductors
Material: ETP-copper
Surface: Tin Plated








Conductors mm ²	Bolt 0	3D Cat No.	Dimension In mm								Tools	Crimping Profile	Packing Qty
			Barrel ID	Barrel OD	Stud Size	Palm Width	Barrel Length	Stud Distance from top	Stud Distance from Barrel	Total Length			
			d ₁	d ₂	d ₃	b	a	c ₁	c ₂	J			
1.5	M 4	3D-2622	1.8	3.7	4.2	8	5	4	5	16	3D-17		200
	M 5	3D-2623	1.8	3.7	5.2	8	5	4	5	16	3D-2		
	M 6	3D-2624	1.8	3.7	6.5	10	5	5	6	18	3D-117 3D-108		
2.5	M 4	3D-2625	2.4	4	4.2	8	7	4	5	18	3D-17		200
	M 5	3D-2627	2.4	4	5.2	8	7	4	5	18	3D-2		
	M 6	3D-2628	2.4	4	6.5	10	7	5	6	20			
	M 8	3D-2629	2.4	4	8.2	11	7	7	8	24			
4	M 5	3D-2630	3.1	4.8	5.2	10	7	5	6	20	3D-17		200
	M 5	3D-2632	3.1	4.8	5.2	9	7	5	6	20	3D-2		
	M 6	3D-2631	3.1	4.8	6.5	10	7	5	6	20	3D-117		
	M 8	3D-2633	3.1	4.8	8.2	12	7	6.5	8.5	24	3D-108		
6	M 5	3D-2634	3.8	5.5	5.2	10	9	5	6	23	3D-17		200
	M 6	3D-2635	3.8	5.5	6.2	10	9	5	6	23	3D-2		
	M 8	3D-2637	3.8	5.5	8.4	12	9	6	9	27			
10	M 5	3D-2642	4.5	6.2	5.2	12	9	6	7	25	3D-2		200
	M 6	3D-2643	4.5	6.2	6.5	12	9	6	7	25	3D-88		
	M 8	3D-2645	4.5	6.2	8.4	12	9	6	9	27	3D-117 3D-108		
16	M 5	3D-2652	5.4	7.1	5.2	12	12	7	7	30	3D-2		200
	M 6	3D-2653	5.4	7.1	6.5	12	12	7	7	30			
	M 8	3D-2655	5.4	7.1	8.4	12	12	7	9	32			
25	M 6	3D-2663	6.8	8.8	6.5	13	12	7	7	30	3D-88		200
	M 8	3D-2665	6.8	8.8	8.4	13	12	7	9	32	3D-117		
	M 8	3D-2666	6.8	8.8	8.4	16	12	10	11	37	3D-108		
	M 10	3D-2668	6.8	8.8	10.5	16	12	10	11	37	3D-100		
	M 12	3D-2670	6.8	8.8	13	18	12	12	13	41			

COPPER TUBULAR CABLE LUGS

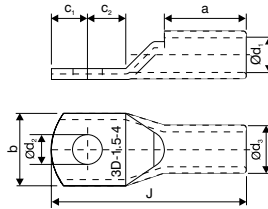
Standard Type, With Inspection Hole
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Material: ETP-copper
Surface: Tin Plated










Conductors mm ²	Bolt 0	3D Cat No.	Dimension In mm								Tools	Crimping Profile	Packing Qty
			Barrel ID	Barrel OD	Stud Size	Palm Width	Barrel Length	Stud Distance from top	Stud Distance from Barrel	Total Length			
			d ₁	d ₃	d ₂	b	a	C ₁	C ₂	J			
35	M 6	3D-2673	8.2	10.6	6.5	15	12	9	9	35	3D-117		200
	M 6	3D-2674	8.2	10.6	6.5	15	15	9	9	38	3D-88		
	M 8	3D-2676	8.2	10.6	8.4	15	12	9	9	35	3D-108		
	M 8	3D-2677	8.2	10.6	8.4	15	15	9	9	38	3D-100		
	M 10	3D-2679	8.2	10.6	10.2	15	15	9	11	40			400
	M 10	3D-2680	8.2	10.6	10.5	18	12	10	11	38			
	M 10	3D-2681	8.2	10.6	10.5	18	15	10	11	41			
	M 12	3D-2683	8.2	10.6	13	20	15	12	13	45			
50	M 6	3D-2687	10	12.8	6.5	18	16	10	11	43	3D-117		300
	M 8	3D-2689	10	12.8	8.4	18	16	10	11	43	3D-88		
	M 10	3D-2691	10	12.8	10.5	18	16	10	11	43	3D-100		
	M 12	3D-2693	10	12.8	13	20	16	12	13	47			
	M 12	3D-2695	10	12.8	12.5	18	16	12	13	47			
70	M 6	3D-2697	11.2	14.7	6.5	21	18	12	13	50	3D-117		150
	M 8	3D-2698	11.2	14.7	8.4	21	18	12	13	50	3D-88		
	M 10	3D-2699	11.2	14.7	10.5	21	18	12	13	50	3D-108		
	M 12	3D-2700	11.2	14.7	13	21	18	12	13	50	3D-100		
	M 14	3D-2704	11.2	14.7	15	28	18	16	16	57			
	M 16	3D-2705	11.2	14.7	17	28	18	16	16	57			
95	M 8	3D-2708	13.5	17.4	8.4	25	20	13	13	55	3D-117		100
	M 10	3D-2709	13.5	17.4	10.5	25	20	13	13	55	3D-100		
	M 12	3D-2712	13.5	17.4	13	25	20	13	13	55			
	M 14	3D-2713	13.5	17.4	15	28	20	16	16	61			
	M 16	3D-2715	13.5	17.4	17	28	20	16	16	61			
120	M 8	3D-2716	15.0	19.4	8.4	28	22	14	14	60	3D-117		80
	M 10	3D-2717	15.0	19.4	10.5	28	22	14	14	60	3D-88		
	M 12	3D-2719	15.0	19.4	13	28	22	14	14	60	3D-108		
	M 14	3D-2721	15.0	19.4	15	28	22	16	16	64	3D-100		
	M 16	3D-2722	15.0	19.4	17	28	22	16	16	64			

COPPER TUBULAR CABLE LUGS

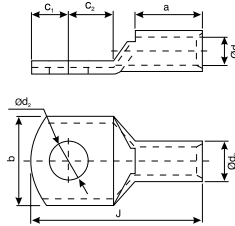
Standard Type, With Inspection Hole
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Conductors mm ²	Bolt Ø	3D Cat No.	Dimension In mm								Tools	Crimping Profile	Packing Qty			
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			d ₁	d ₃	d ₂	b	a	C ₁	C ₂	J						
150	M 8	3D-2726	16.5	21.2	8.4	30	26	16	16	69	3D-117		50			
	M 10	3D-2727	16.5	21.2	10.5	30	26	16	16	69	3D-88					
	M 12	3D-2729	16.5	21.2	13	30	26	16	16	69	3D-108					
	M 14	3D-2732	16.5	21.2	15	30	26	16	16	69	3D-100					
	M 16	3D-2733	16.5	21.2	17	30	26	16	16	69						
	M 20	3D-2734	16.5	21.2	21	34	26	19	23	79						
185	M 10	3D-2736	18.5	23.5	10.5	34	32	17	17	78	3D-117		50			
	M 12	3D-2737	18.5	23.5	13	34	32	17	17	78	3D-108					
	M 14	3D-2738	18.5	23.5	15	34	32	17	17	78	3D-100					
	M 16	3D-2741	18.5	23.5	17	34	32	17	17	78						
	M 20	3D-2743	18.5	23.5	21	34	32	17	17	78						
	240	M 10	3D-2747	21	26.5	10.5	38	38	20	20	92			3D-117		25
M 12		3D-2748	21	26.5	13	38	38	20	20	92	3D-100					
M 14		3D-2749	21	26.5	15	38	38	20	20	92						
M 16		3D-2750	21	26.5	17	38	38	20	20	92						
M 20		3D-2751	21	26.5	21	38	38	20	20	92						
300		M 12	3D-2754	23.5	30	13	43	42	22	22	101	3D-117		25		
	M 14	3D-2755	23.5	30	15	43	42	22	22	101						
	M 16	3D-2756	23.5	30	17	43	42	22	22	101						
	M 20	3D-2757	23.5	30	21	43	42	22	22	101						
	400	M 12	3D-2760	26.8	34.8	13	50.1	44	26	26	114	3D-117				15
		M 14	3D-2761	26.8	34.8	15	50.1	44	26	26	114	3D-100				
M 16		3D-2762	26.8	34.8	17	50.1	44	26	26	114						
M 16		3D-2763	26.8	34.8	17	50.1	44	22	27	105						
M 20		3D-2764	26.8	34.8	21	50.1	44	22	27	105						
M 20		3D-2765	26.8	34.8	21	50.1	44	26	26	114						
500	M 16	3D-2769	30	39	17	56	48	28	28	124	3D-120		10			
	M 20	3D-2770	30	39	21	56	48	28	28	124						
630	M 16	3D-2773	35	45	17	65	56	33	33	144	3D-120		8			
	M 20	3D-2774	35	45	21	65	56	33	33	144						

COPPER TUBULAR CABLE LUGS

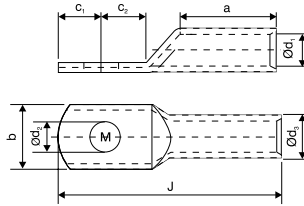
Extra Wide Palm Type
With Inspection Hole
Material - ETP-Copper
Surface - Tin Plated














Conductors mm ²	Bolt Ø	3D Cat No.	Dimension In mm								Crimping Profile	Packing Qty
			Barrel ID	Barrel OD	Stud Size	Palm Width	Barrel Length	Stud Distance from top	Stud Distance from Barrel	Total Length		
			d ₁	d ₃	d ₂	b	a	C ₁	C ₂	J		
6	10	3D-2638	3.8	6.2	10.2	16	9	9	11	32		200
10	10	3D-2648	4.7	7.1	10.5	16	10	9	10	32		200
16	10	3D-2658	5.5	7.9	10.5	16	12	10	10	36		200
16	12	3D-2659	5.5	8.5	13	18	12	12	12	40		200

COPPER TUBULAR CABLE LUGS

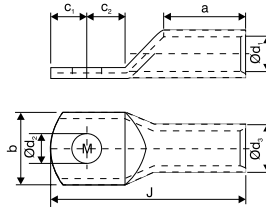
Extra Long Type,
W/O Inspection Hole
Material: ETP-copper
Surface: Tin Plated


















Conductors mm ²	Bolt Ø	3D Cat No.	Dimension In mm								Tools	Crimping Profile	Packing Qty
			Barrel ID	Barrel OD	Stud Size	Palm Width	Barrel Length	Stud Distance from top	Stud Distance from Barrel	Total Length			
			d ₁	d ₂	d ₃	b	a	C ₁	C ₂	J			
25	M 8	3D-2340	7	9	8.2	13	16	8	12	41	3D-7		200
	M 10	3D-2340A	7	9	10.2	13	16	8	12	41	3D-88		
35	M 8	3D-2341	8	10.6	8.2	15	20	9	14	48	3D-7		300
	M 10	3D-2341A	8	10.6	10.2	15	20	9	14	48	3D-124		
50	M 8	3D-2342	9.2	12.2	8.2	17	26	10	16	59	3D-7		200
	M 10	3D-2342A	9.2	12.2	10.2	17	26	10	16	59	3D-88		
	M 12	3D-2342B	9.2	12.2	12.7	17	26	10	16	59			
70	M 10	3D-2343	11.5	15	10.2	20	28	12	19	66	3D-7		100
	M 12	3D-2343A	11.5	15	12.7	20	28	12	19	66			
95	M 12	3D-2344	12.8	17	12.7	24	32	12	20	74	3D-7		80
	M 16	3D-2344A	12.8	17	16.2	24	32	12	20	74	3D-124		
120	M 12	3D-2345	14.8	19.6	12.7	28	35	14	23	82	3D-7		50
	M 16	3D-2345A	14.8	19.6	16.2	28	35	14	23	82	3D-88		
150	M 12	3D-2346	16	21.2	12.7	30	38	14	24	86	3D-7		50
	M 16	3D-2346A	16	21.2	16.2	30	38	14	24	86	3D-108		
185	M 12	3D-2347	18	24	12.7	34	43	17	23	95	3D-7		25
	M 16	3D-2347A	18	24	16.2	34	43	17	23	95	3D-108		
	M 20	3D-2347B	18	24	21	34	43	17	23	95	3D-124		
240	M 16	3D-2348	22	28	16.2	40	50	20	30	112	3D-7		20
	M 20	3D-2348A	22	28	21	40	50	20	30	112			
300	M 16	3D-2998	24.5	32	17	48	50	19	22	119	3D-7		15
	M 20	3D-2999	24.5	32	21	48	50	19	22	122	3D-124		
400	M 16	3D-3000	27.5	38.5	17	55	70	25	25	140	3D-124		10
	M 20	3D-3000A	27.5	38.5	21	55	70	25	25	140			

COPPER TUBULAR CABLE LUGS

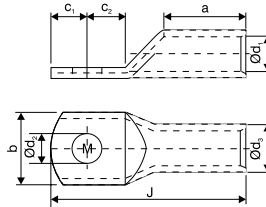
Light Duty W/O Inspection Hole
for Aluminium Conductors
Material: ETP-Copper
Surface: Tin Plated












Conductors mm ²	Bolt Ø	3D Cat No.	Dimension In mm								Tools	Crimping Profile	Packing Qty
			Barrel ID	Barrel OD	Stud Size	Palm Width	Barrel Length	Stud Distance from top	Stud Distance from Barrel	Total Length			
			d ₁	d ₃	d ₂	b	a	C ₁	C ₂	J			
2.5	M 5	3D-2501	2.3	3.8	5.2	9	7	5	5	20	3D-17 3D-2		200
4	M 6	3D-2502	3.1	4.8	6.4	11	7	6	6	22	3D-17 3D-2		200
6	M 6	3D-2503	3.8	5.5	6.4	11	9	6	6	24	3D-17 3D-2		200
10	M 6	3D-2504	4.5	6.2	6.4	11	9	6	6	24	3D-2		200
16	M 6	3D-2505	5.4	7.1	6.4	11	12	6	8	30	3D-2		200
25	M 6	3D-2506	7	9	6.4	13	12	8	12	37	3D-116		200
35	M 6	3D-2507	8	10	6.4	15	12	8	12	37	3D-116		200
	M 8	3D-2508	8	10	8.2	15	12	8	12	37	3D-88 3D-125		
50	M 6	3D-2509	9.2	11.2	6.4	16	16	9	12	45	3D-7		300
	M 8	3D-2510	9.2	11.2	8.2	16	16	9	12	45			
	M 10	3D-2511	9.2	11.2	10.2	16	16	9	12	45			
70	M 8	3D-2512	11.5	13.8	8.2	20	18	13	15	56	3D-116		200
	M 10	3D-2513	11.5	13.8	10.2	20	18	13	15	56	3D-88		
	M 12	3D-2514	11.5	13.8	12.7	20	18	13	15	56	3D-125		
95	M 10	3D-2515	12.8	15.6	10.2	23	20	13	15	58	3D-7		100
	M 12	3D-2516	12.8	15.6	12.7	23	20	13	15	58			
120	M 10	3D-2517	14.8	17.8	10.2	26	22	14	16	62	3D-116		80
	M 12	3D-2518	14.8	17.8	12.7	26	22	14	16	62	3D-88		
	M 16	3D-2519	14.8	17.8	16.2	26	22	14	16	62	3D-125		
150	M 10	3D-2520	16	19.6	10.2	28	26	15	18	70	3D-7		50
	M 12	3D-2521	16	19.6	12.7	28	26	15	18	70			
	M 16	3D-2522	16	19.6	16.2	28	26	15	18	70			

COPPER TUBULAR CABLE LUGS

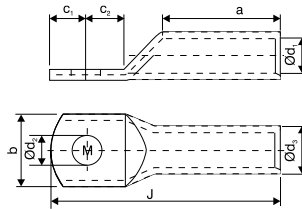
Light Duty W/O Inspection Hole
for Aluminium Conductors
Material: ETP-Copper
Surface: Tin Plated


















Conductors mm ²	Bolt 0	3D Cat No.	Dimension In mm								Tools	Crimping Profile	Packing Qty
			Barrel ID	Barrel OD	Stud Size	Palm Width	Barrel Length	Stud Distance from top	Stud Distance from Barrel	Total Length			
			d ₁	d ₂	d ₃	b	a	C ₁	C ₂	J			
185	M 12	3D-2523	18	22	12.7	32	28	21	21	83	3D-116		20
	M 16	3D-2524	18	22	16.2	32	28	21	21	83	3D-125		
240	M 16	3D-2525	22	26	16.2	38	34	24	24	97	3D-116		10
	M 20	3D-2526	22	26	20.3	38	34	24	24	97			
300	M 16	3D-2527	24	28.7	16.2	42	37	25	25	103	3D-116		5
	M 20	3D-2528	24	28.7	20.3	42	37	25	25	103	3D-125		
400	M 20	3D-2529	28	33.2	20.3	49	44	27	27	116	3D-116 3D-125		5
500	M 20	3D-2530	30	36	20.3	53	48	27	27	122	3D-121		5
630	M 20	3D-2531	35	41.5	20.3	61	53	31	33	137	3D-121		5
800	BLK	3D-2532	39	46.3		67	68		75	165	3D-121		10
1000	BLK	3D-2533	43	53.8		76	90		90	210	3D-121		10

COPPER TUBULAR CABLE LUGS

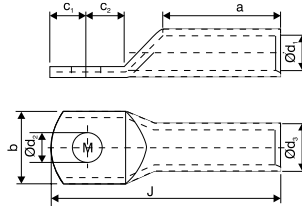
Light Duty Long Barrel
W/O Inspection Hole
for Aluminium Conductors
Material: ETP-Copper
Surface: Tin Plated












Conductors mm ²	Bolt Ø	3D Cat No.	Dimension In mm								Tools	Crimping Profile	Packing Qty
			Barrel ID	Barrel OD	Stud Size	Palm Width	Barrel Length	Stud Distance from top	Stud Distance from Barrel	Total Length			
			d ₁	d ₂	d ₃	b	a	C ₁	C ₂	J			
2.5	M 5	3D-2501 LB	2.3	3.8	5.2	9	10.5	5	5	23.5	3D-17 3D-2		200
4	M 6	3D-2502 LB	3.1	4.8	6.4	11	10.5	6	6	25.5	3D-17 3D-2		200
6	M 6	3D-2503 LB	3.8	5.5	6.4	11	13.5	6	6	28.5	3D-17 3D-2		200
10	M 6	3D-2504 LB	4.5	6.2	6.4	11	13.5	6	6	28.5	3D-2		200
16	M 6	3D-2505 LB	5.4	7.1	6.4	11	18	6	8	36	3D-2		200
25	M 6	3D-2506 LB	7	9	6.4	13	18	8	12	43	3D-116		200
35	M 6	3D-2507 LB	8	10	6.4	15	18	8	12	43	3D-116		200
	M 8	3D-2508 LB	8	10	8.2	15	18	8	12	43	3D-88 3D-125		
50	M 6	3D-2509 LB	9.2	11.2	6.4	16	24	9	12	53	3D-7		300
	M 8	3D-2510 LB	9.2	11.2	8.2	16	24	9	12	53			
	M 10	3D-2511 LB	9.2	11.2	10.2	16	24	9	12	53			
70	M 8	3D-2512 LB	11.5	13.8	8.2	20	27	13	15	65	3D-116		200
	M 10	3D-2513 LB	11.5	13.8	10.2	20	27	13	15	65	3D-88		
	M 12	3D-2514 LB	11.5	13.8	12.7	20	27	13	15	65	3D-125		
95	M 10	3D-2515 LB	12.8	15.6	10.2	23	30	13	15	68	3D-7		100
	M 12	3D-2516 LB	12.8	15.6	12.7	23	30	13	15	68			
120	M 10	3D-2517 LB	14.8	17.8	10.2	26	33	14	16	73	3D-116		80
	M 12	3D-2518 LB	14.8	17.8	12.7	26	33	14	16	73	3D-88		
	M 16	3D-2519 LB	14.8	17.8	16.2	26	33	14	16	73	3D-125		
150	M 10	3D-2520 LB	16	19.6	10.2	28	39	15	18	83	3D-7		50
	M 12	3D-2521 LB	16	19.6	12.7	28	39	15	18	83			
	M 16	3D-2522 LB	16	19.6	16.2	28	39	15	18	83			

COPPER TUBULAR CABLE LUGS

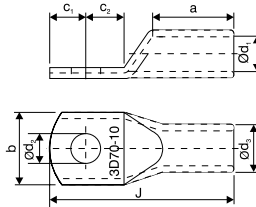
Light Duty Long Barrel
W/O Inspection Hole
for Aluminium Conductors
Material: ETP-Copper
Surface: Tin Plated








Conductors mm ²	Bolt 0	3D Cat No.	Dimension In mm								Tools	Crimping Profile	Packing Qty
			Barrel ID	Barrel OD	Stud Size	Palm Width	Barrel Length	Stud Distance from top	Stud Distance from Barrel	Total Length			
			d_1	d_2	d_3	b	a	C_1	C_2	J			
185	M 12	3D-2523 LB	18	22	12.7	32	45	21	21	100	3D-116		20
	M 16	3D-2524 LB	18	22	16.2	32	45	21	21	100	3D-125		
240	M 16	3D-2525 LB	22	26	16.2	38	54	24	24	117	3D-116		10
	M 20	3D-2526 LB	22	26	20.3	38	54	24	24	117			
300	M 16	3D-2527 LB	24	28.7	16.2	42	58	25	25	124	3D-116		5
	M 20	3D-2528 LB	24	28.7	20.3	42	58	25	25	124	3D-125		
400	M 20	3D-2529 LB	28	33.2	20.3	49	66	27	27	138	3D-116		5
											3D-125		
500	M 20	3D-2530 LB	30	36	20.3	53	72	27	27	144	3D-121		5
630	M 20	3D-2531 LB	35	41.5	20.3	61	83	31	33	167	3D-121		5
800	BLK	3D-2532 LB	39	46.3		67	98		75	195	3D-121		10
1000	BLK	3D-2533 LB	43	53.8		76	135		90	255	3D-121		10

COPPER TUBULAR CABLE LUGS

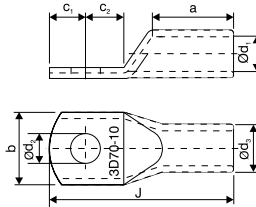
Standard New Type,
W/O Inspection Hole
for Copper Conductors
Material: Electrolytic Copper
Surface: Tin Plated







Conductors mm ²	Bolt 0	3D Cat No.	Dimension In mm								Tools	Crimping Profile	Packing Qty
			Barrel ID	Barrel OD	Stud Size	Palm Width	Barrel Length	Stud Distance from top	Stud Distance from Barrel	Total Length			
			d ₁	d ₃	d ₂	b	a	C ₁	C ₂	J			
6	M 5	3D-2149	3.5	6.5	5.5	10	9	6.5	7.5	27.5	3D-2		200
	M 6	3D-2150	3.5	6.5	6.5	12	9	6.5	7.5	27.5	3D-17		
	M 8	3D-2110	3.5	6.5	8.5	15	9	10	10	33	3D-117		
	M 10	3D-2158	3.5	6.5	10.5	17	9	12	12	37	3D-108		
	M 12	3D-2159	3.5	6.5	13	19	9	13	13	41			
10	M 5	3D-2041	4.5	7	5.5	12	10	6.5	7.5	28.5	3D-2		200
	M 6	3D-2183	4.5	7	6.5	12	10	6.5	7.5	28.5	3D-117		
	M 8	3D-2184	4.5	7	8.5	15	10	10	10	35	3D-88		
	M 10	3D-2160	4.5	7	10.5	17	10	12	12	39	3D-108		
	M 12	3D-2161	4.5	7	13	19	10	13	13	42			
16	M 5	3D-2185	5.5	8.5	5.5	12	13	5.5	6.5	31.5	3D-2		200
	M 6	3D-2186	5.5	8.5	6.5	12	13	6.25	7.5	33.25	3D-117		
	M 8	3D-2187	5.5	8.5	8.5	15	13	8.5	9.5	37.5	3D-88		
	M 10	3D-2162	5.5	8.5	10.5	17	13	10.5	11.5	41.5	3D-108		
	M 12	3D-2163	5.5	8.5	13	19	13	12	13	45			
25	M 5	3D-2165	7	10	5.5	14	15	7.5	7.5	37.5	3D-117		200
	M 6	3D-2189	7	10	6.5	14	15	7.5	7.5	37.5	3D-88		
	M 8	3D-2190	7	10	8.5	16	15	10	10	42	3D-108		
	M 10	3D-2191	7	10	10.5	18	15	12	12	46			
	M 12	3D-2166	7	10	13	19	15	13	13	48			
	M 14	3D-2167	7	10	15	21	15	14.5	14.5	52.5			
35	M 6	3D-2192	8.5	12	6.5	17	17	7.5	7.5	39.5	3D-117		200
	M 8	3D-2193	8.5	12	8.5	17	17	10	10	44	3D-88		
	M 10	3D-2014	8.5	12	10.5	19	17	12	12	49	3D-100		
	M 12	3D-2168	8.5	12	13	21	17	13	13	51			
	M 14	3D-2169	8.5	12	15	21	17	14.5	14.5	54.5			
	M 16	3D-2006	8.5	12	17	26	17	16	16	58			

COPPER TUBULAR CABLE LUGS

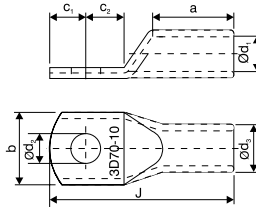
Standard New Type,
W/O Inspection Hole
for Copper Conductors
Material: Electrolytic Copper
Surface: Tin Plated








Conductors mm ²	Bolt Ø	3D Cat No.	Dimension In mm								Tools	Crimping Profile	Packing Qty
			Barrel ID	Barrel OD	Stud Size	Palm Width	Barrel Length	Stud Distance from top	Stud Distance from Barrel	Total Length			
			d ₁	d ₃	d ₂	b	a	C ₁	C ₂	J			
50	M 6	3D-2001	10	14	6.5	20	19	10	10	47	3D-117		200
	M 8	3D-2003	10	14	8.5	20	19	10	10	47	3D-88		
	M 10	3D-2004	10	14	10.5	20	19	12	12	51	3D-100		
	M 12	3D-2170	10	14	13	23	19	13	13	56			
	M 14	3D-2171	10	14	15	23	19	14.5	14.5	59.5			
	M 16	3D-2007	10	14	17	28	19	16	16	62			
	M 20	3D-2008	10	14	21	30	19	19	19	67			
70	M 6	3D-2005	12	16.5	6.5	23	21	10	10	53	3D-117		150
	M 8	3D-2121	12	16.5	8.5	23	21	10	10	53	3D-88		
	M 10	3D-2164	12	16.5	10.5	23	21	12	12	56	3D-100		
	M 12	3D-2188	12	16.5	13	23	21	13	13	59			
	M 14	3D-2172	12	16.5	15	23	21	14.5	14.5	62.5			
	M 16	3D-2173	12	16.5	17	28	21	16	16	66			
	M 20	3D-2129	12	16.5	21	30	21	19	19	72			
95	M 8	3D-2015	13.5	18	8.5	26	25	12	12	60	3D-117		100
	M 10	3D-2018	13.5	18	10.5	26	25	12	12	60	3D-88		
	M 12	3D-2019	13.5	18	13	26	25	13	13	62	3D-100		
	M 14	3D-2174	13.5	18	15	26	25	14.5	14.5	65.5			
	M 16	3D-2175	13.5	18	17	28	25	16	16	70.0			
	M 20	3D-2130	13.5	18	21	36	25	22	22	82.0			
120	M 8	3D-2020	15	19.5	8.5	28	26	14	14	65	3D-117		75
	M 10	3D-2021	15	19.5	10.5	28	26	14	14	65	3D-88		
	M 12	3D-2022	15	19.5	13	28	26	14	14	65	3D-100		
	M 14	3D-2023	15	19.5	15	28	26	15	15	67			
	M 16	3D-2035	15	19.5	17	30	26	16	16	70			
	M 20	3D-2176	15	19.5	21	36	26	22	22	85			

COPPER TUBULAR CABLE LUGS

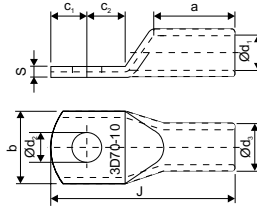
Standard New Type,
W/O Inspection Hole
for Copper Conductors
Material: Electrolytic Copper
Surface: Tin Plated



Conductors mm ²	Bolt 0	3D Cat No.	Dimension In mm								Tools	Crimping Profile	Packing Qty
			Barrel ID	Barrel OD	Stud Size	Palm Width	Barrel Length	Stud Distance from top	Stud Distance from Barrel	Total Length			
			d ₁	d ₃	d ₂	b	a	C ₁	C ₂	J			
150	M 8	3D-2036	16.5	21	8.5	31	30	14	14	70	3D-117		50
	M 10	3D-2037	16.5	21	10.5	31	30	14	14	70	3D-100		
	M 12	3D-2038	16.5	21	13	31	30	15	15	72			
	M 14	3D-2039	16.5	21	15	31	30	15	15	72			
	M 16	3D-2040	16.5	21	17	31	30	16	16	74			
	M 20	3D-2177	16.5	21	21	36	30	22	22	88			
185	M 10	3D-2042	19	24	10.5	35	30	18	18	83	3D-117		25
	M 12	3D-2043	19	24	13	35	30	18	18	83	3D-100		
	M 14	3D-2044	19	24	15	35	30	18	18	83			
	M 16	3D-2045	19	24	17	35	30	18	18	83			
	M 20	3D-2046	19	24	21	39	30	22	22	91			
240	M 10	3D-2047	21	26	10.5	38	35	20	20	93.5	3D-117		20
	M 12	3D-2048	21	26	13	38	35	20	20	93.5	3D-100		
	M 14	3D-2049	21	26	15	38	35	20	20	93.5			
	M 16	3D-2050	21	26	17	38	35	20	20	93.5			
	M 20	3D-2051	21	26	21	38	35	20	20	93.5			
300	M 12	3D-2052	23.5	29.5	13	43	44	24	24	111	3D-117		15
	M 14	3D-2053	23.5	29.5	15	43	44	24	24	111	3D-100		
	M 16	3D-2122	23.5	29.5	17	43	44	24	24	111			
	M 20	3D-2131	23.5	29.5	21	43	44	24	24	111			
400	M 12	3D-2123	27	34	13	49	44	24	24	114	3D-117		10
	M 14	3D-2124	27	34	15	49	44	24	24	114	3D-100		
	M 16	3D-2125	27	34	17	49	44	24	24	114			
	M 20	3D-2109	27	34	21	49	44	24	24	114			

RAILWAY SERIES LUGS

Standard New Type,
W/O Inspection Hole
for Copper Conductors
Material: ETP Copper
Surface: Tin Plated



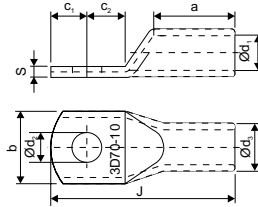
Copper Tubular Terminal Ends for solderless crimping to Copper Conductors

REF : I.C.F.

Conductors mm ²	3D Cat No.	Dimension In mm									
		d1	a	b	d2	d3	C1	C2	K	J	s
17-5	3D-5042	6.0	14.0	11.9	5.2	8.5	6.0	10.0	3	33	2.5
17-6	3D-5043	6.0	14.0	11.9	6.5	8.5	6.0	10.0	3	33	2.5
17-8	3D-5044	6.0	14.0	16.0	8.2	8.5	9.0	11.0	3	37	1.7
17-10	3D-5045	6.0	14.0	16.0	10.2	8.5	9.0	11.0	3	37	1.7
23-5	3D-5046	7.1	18.0	14.3	5.2	10.2	7.0	10.0	4	39	3.1
23-6	3D-5047	7.1	18.0	14.3	6.5	10.2	7.0	10.0	4	39	3.1
23-8	3D-5048	7.1	18.0	14.3	8.2	10.2	7.0	10.0	4	39	3.1
23-10	3D-5049	7.1	18.0	19.0	10.2	10.2	10.0	12.0	4	44	2.2
29-5	3D-5050	8.0	18.0	16.3	5.2	11.7	8.0	11.0	4	41	3.7
29-6	3D-5051	8.0	18.0	16.3	6.5	11.7	8.0	11.0	4	41	3.7
29-8	3D-5052	8.0	18.0	16.3	8.2	11.7	8.0	11.0	4	41	3.7
29-10	3D-5053	8.0	18.0	20.0	10.2	11.7	11.0	14.0	4	47	2.8
29-13	3D-5054	8.0	18.0	20.0	13.0	11.7	11.0	14.0	4	47	2.8
45-5	3D-5055	9.8	18.0	19.3	5.2	13.7	10.0	10.0	5	43	3.9
45-6	3D-5056	9.8	18.0	19.3	6.5	13.7	10.0	10.0	5	43	3.9
45-8	3D-5057	9.8	18.0	19.3	8.2	13.7	10.0	10.0	5	43	3.9
45-10	3D-5058	9.8	18.0	19.3	10.2	13.7	10.0	10.0	5	43	3.9
45-13	3D-5059	9.8	18.0	22.0	13.0	13.7	11.0	14.0	5	48	3.2
57-6	3D-5060	11.1	24.0	22.2	6.5	15.8	11.0	15.0	6	56	4.7
57-8	3D-5061	11.1	24.0	22.2	8.2	15.8	11.0	15.0	6	56	4.7
57-10	3D-5062	11.1	24.0	22.2	10.2	15.8	11.0	15.0	6	56	4.7
57-13	3D-5062E13	11.1	24.0	22.2	13.0	15.8	11.0	15.0	6	56	4.7
75-6	3D-5063	12.6	24.0	25.0	6.5	17.8	13.0	15.0	6	58	5.2
75-8	3D-5064	12.6	24.0	25.0	8.2	17.8	13.0	15.0	6	58	5.2
75-10	3D-5065	12.6	24.0	25.0	10.2	17.8	13.0	15.0	6	58	5.2
75-13	3D-5066	12.6	24.0	25.0	13.0	17.8	13.0	15.0	6	58	5.2

RAILWAY SERIES LUGS

Standard New Type,
W/O Inspection Hole
for Copper Conductors
Material: ETP Copper
Surface: Tin Plated



Copper Tubular Terminal Ends for solderless crimping to Copper Conductors

REF : I.C.F.

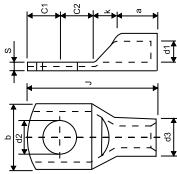
Conductors mm ²	3D Cat No.	Dimension In mm									
		d1	a	b	d2	d3	C1	C2	K	J	s
90-6	3D-5067	13.7	24.0	26.9	6.5	19.1	13.0	16.0	6	59	5.4
90-8	3D-5068	13.7	24.0	26.9	8.2	19.1	13.0	16.0	6	59	5.4
90-10	3D-5069	13.7	24.0	26.9	10.2	19.1	13.0	16.0	6	59	5.4
90-13	3D-5070	13.7	24.0	26.9	13.0	19.1	13.0	16.0	6	59	5.4
110-6	3D-5071	15.3	24.0	29.6	6.5	20.9	15.0	17.0	6	62	5.6
110-8	3D-5072	15.3	24.0	29.6	8.2	20.9	15.0	17.0	6	62	5.6
110-10	3D-5073	15.3	24.0	29.6	10.2	20.9	15.0	17.0	6	62	5.6
110-13	3D-5074	15.3	24.0	29.6	13.0	20.9	15.0	17.0	6	62	5.6
146-8	3D-5075	17.5	29.0	34.0	8.2	24.0	17.0	18.0	7	71	6.5
146-10	3D-5076	17.5	29.0	34.0	10.2	24.0	17.0	18.0	7	71	6.5
146-12	3D-5077	17.5	29.0	34.0	13.0	24.0	17.0	18.0	7	71	6.5
146-16	3D-5078	17.5	29.0	34.0	17.0	24.0	17.0	18.0	7	71	6.5
183-10	3D-5079	19.8	29.0	38.2	10.2	26.9	18.0	21.0	8	76	7.1
183-12	3D-5080	19.8	29.0	38.2	13.0	26.9	18.0	21.0	8	76	7.1
183-16	3D-5081	19.8	29.0	38.2	17.0	26.9	18.0	21.0	8	76	7.1
225-10	3D-5082	21.9	29.0	42.2	10.2	29.7	21.0	24.0	9	83	7.8
225-12	3D-5083	21.9	29.0	42.2	13.0	29.7	21.0	24.0	9	83	7.8
225-16	3D-5084	21.9	29.0	42.2	17.0	29.7	21.0	24.0	9	83	7.8
225-20	3D-5085	21.9	29.0	42.2	21.0	29.7	21.0	24.0	9	83	7.8
299-12	3D-5086	25.4	29.0	48.5	13.0	34.0	24.0	26.0	10	89	8.6
299-16	3D-5087	25.4	29.0	48.5	17.0	34.0	24.0	26.0	10	89	8.6
299-20	3D-5088	25.4	29.0	48.5	21.0	34.0	24.0	26.0	10	89	8.6
366-12	3D-5089	28.0	38.0	53.6	13.0	37.6	27.0	29.0	11	105	9.6
366-16	3D-5090	28.0	38.0	53.6	17.0	37.6	27.0	29.0	11	105	9.6
366-20	3D-5091	28.0	38.0	53.6	21.0	37.6	27.0	29.0	11	105	9.6
437-12	3D-5092	30.5	38.0	59.1	13.0	41.7	29.0	32.0	12	111	11.2
437-16	3D-5093	30.5	38.0	59.1	17.0	41.7	29.0	32.0	12	111	11.2
437-20	3D-5094	30.5	38.0	59.1	21.0	41.7	29.0	32.0	12	111	11.2

RAILWAY SERIES LUGS

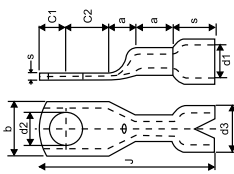
Standard New Type,
With Inspection Hole
for Copper conductors
Material: ETP Copper
Surface: Tin Plated



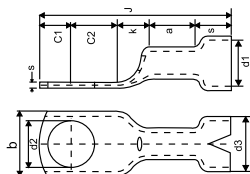
Type I



Type III



Type VII

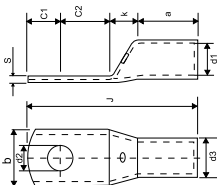


Copper Tubular Terminal Ends for solderless crimping to Copper Conductors

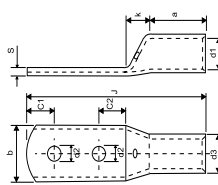
REF : C.L.W.

Conductors mm ²	3D Cat No.	Dimension In mm											
		d1	a	b	d2	d3	C1	C2	K	Type	j	s	l2
3-3	3D-5016	2.6	5.5	7.0	3.2	4.6	3.5	6.5		I	15.5	1.6	
3-3	3D-5017	2.6	5.5	5.0	3.2	4.6	2.5	6.5		I	14.5	2.0	
3-4	3D-5018	2.6	5.5	7.3	4.2	4.6	4.0	6.5		I	16.0	1.5	
3-4	3D-5019	2.6	5.5	8.0	4.2	4.6	4.0	6.5		I	16.0	1.4	
3-5	3D-5020	2.6	5.5	8.0	5.2	4.6	4.0	6.5		I	16.0	1.4	
3-6	3D-5021	2.6	8.0	10.0	6.2	5.0	5.0	10.0	3	III	34.0	1.4	
10-6	3D-5022	5.0	10.0	10.0	6.2	7.0	7.0	11.0	4	VII	40.0	2.0	
10-8	3D-5023	5.0	10.0	12.0	8.2	7.0	7.0	11.0	4	VII	40.0	1.6	
10-10	3D-5024	5.0	10.0	14.0	10.2	7.0	7.0	11.0	4	VII	40.0	1.4	
25-6	3D-5025	8.0	16.0	15.0	6.2	10.0	10.0	14.0	5	IV	45.0	2.0	
25-8	3D-5026	8.0	16.0	15.0	8.2	10.0	10.0	14.0	5	IV	45.0	2.0	
35-8	3D-5027	9.6	20.0	17.0	8.2	12.0	14.0	21.0	5	IV	60.0	2.4	

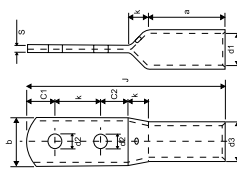
Type IV



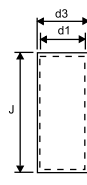
Type V



Type VIII



Type VI

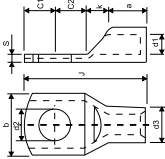


RAILWAY SERIES LUGS

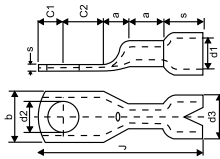
Standard New Type,
With Inspection Hole
for Copper conductors
Material: ETP Copper
Surface: Tin Plated



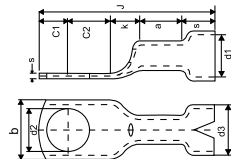
Type I



Type III



Type VII

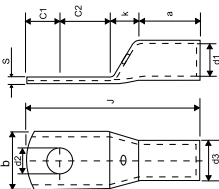


Copper Tubular Terminal Ends for solderless crimping to Copper Conductors

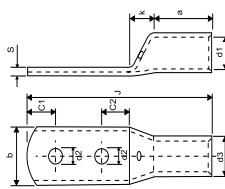
REF : C.L.W.

Conductors mm ²	3D Cat No.	Dimension In mm											
		d1	a	b	d2	d3	C1	C2	K	Type	j	s	l2
50-10	3D-5028	10.8	20.0	20.0	10.5	14.0	14.0	20.0	6	IV	60.0	3.2	
50-14	3D-5029	10.8	20.0	20.0	15.0	14.0	14.0	20.0	6	IV	60.0	3.2	
70-10	3D-5030	12.8	25.0	24.0	11.0	17.0	12.0	18.0	10	IV	65.0	4.2	
120-13	3D-5031	17.0	30.0	32.0	14.0	22.2	18.0	27.0	13	IV	88.0	5.2	
120-20	3D-5032	17.0	30.0	32.0	21.0	22.2	18.0	27.0	13	IV	88.0	5.2	
150-15	3D-5033	18.0	35.0	34.0	16.0	24.0	18.0	25.0	12	IV	90.0	6.0	
225-15	3D-5034	22.0	45.0	40.0	16.0	28.0	18.0	25.0	12	IV	100.0	6.0	
225-10X2	3D-5035	22.0	45.0	40.0	11.0	28.0	15.0	22.0	12	V	130.0	6.0	36
225-10	3D-5036	22.0	45.0	40.0	11.0	28.0	18.0	25.0	12	IV	100.0	6.0	
270-10X2	3D-5037	26.0	55.0	40.0	11.0	32.0	15.0	24.0	12	VIII	142.0	6.0	36
270	3D-5038	26.0				30.0				VI	70.0		
475-10X2	3D-5039	36.5	75.0	50.0	11.0	46.1	15.0	24.0	15	VIII	165.0	9.6	36
475-21	3D-5040	36.5	75.0	50.0	22.0	46.1	22.0	33.0	15	IV	145.0	9.6	
475-10	3D-5041	36.5	75.0	50.0	11.0	46.1	22.0	33.0	15	IV	145.0	9.6	

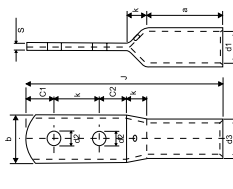
Type IV



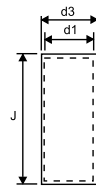
Type V



Type VIII



Type VI

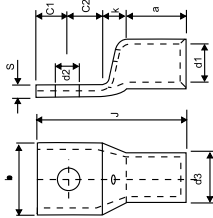


RAILWAY SERIES LUGS

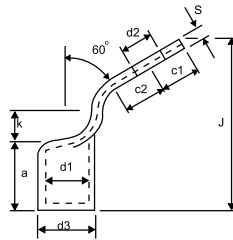
Standard New Type,
With Inspection Hole
for Copper Conductors
Material: ETP Copper
Surface: Tin Plated



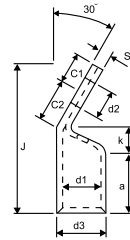
Type I



Type II



Type III

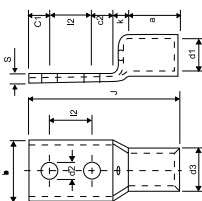


Copper Tubular Terminal Ends for solderless crimping to Copper Conductors

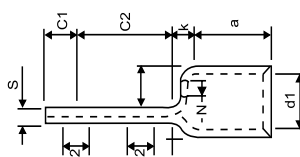
REF : D.L.W.

Conductors mm ²	3D Cat No.	Dimension In mm											
		d1	a	b	d2	d3	C1	C2	K	Type	J	s	l2
133-10	3D-5000	17.0	27	32	10.3	22.2	19	28	8	I	82	5.2	
133-13	3D-5001	17.0	27	32	13.5	22.2	19	28	8	I	82	5.2	
133-13	3D-5002	17.0	27	32	13.5	22.2	14	19	7	I	67	5.2	
133-10	3D-5003	17.0	27	32	10.3	22.2	14	19	7	I	67	5.2	
133-10	3D-5004	17.0	27	32	10.3	22.2	14	19	12	II	62	5.2	
133-10	3D-5005	17.0	27	32	10.3	22.2	14	19	12	III	67	5.2	
133-8X2	3D-5006	17.0	27	32	8.7	22.2	11	11	8	IV	79	5.2	22.2
133-8X2	3D-5007	17.0	27	32	8.7	22.2	13	14	11	VI	109	5.2	44.4

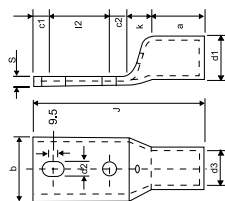
Type IV



Type V



Type VI

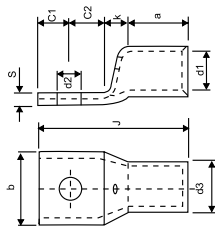


RAILWAY SERIES LUGS

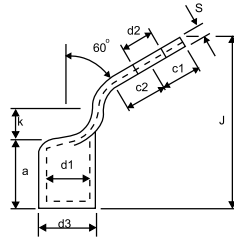
Standard New Type,
With Inspection Hole
for Copper Conductors
Material: ETP Copper
Surface: Tin Plated



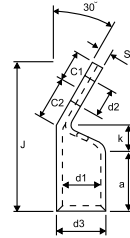
Type I



Type II



Type III

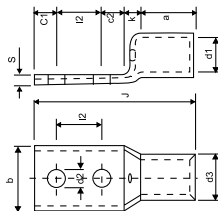


Copper Tubular Terminal Ends for solderless crimping to Copper Conductors

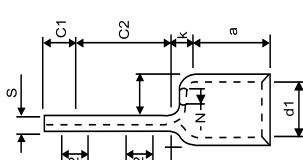
REF : D.L.W.

Conductors mm ²	3D Cat No.	Dimension In mm											
		d1	a	b	d2	d3	C1	C2	K	Type	J	s	l2
270-16	3D-5008	24.6	40	46	16.6	31.7	21	22	11	I	94	7.1	
270-13	3D-5009	24.6	40	46	13.5	31.7	21	22	11	I	94	7.1	
270-13	3D-5010	24.6	35	46	13.5	31.7	21	22	15	III	86	7.1	
270-10X2	3D-5011	24.6	40	46	10.3	31.7	12	13	8	V	97	7.1	25.4
270-13X2	3D-5012	24.6	40	46	13.5	31.7	12	13	8	IV	105	7.1	31.7
400-17	3D-5013	29.3	47	53	17.4	37.2	22	29	10	I	108	7.9	
400-13	3D-5014	29.3	47	53	13.5	37.2	22	29	10	I	108	7.9	
400-14X2	3D-5015	29.3	51	53	14.3	37.2	13	27	7	IV	130	7.9	31.7

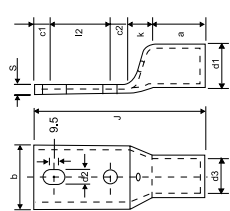
Type IV



Type V

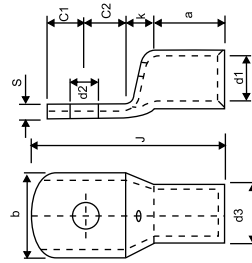


Type VI



RAILWAY SERIES LUGS

Standard New Type,
With Inspection Hole
for Copper Conductors
Material : ETP-Copper
Surface : Tin Plated



REF : R.C.F.

Conductor mm ²	Bolt Ø	3D CAT NO.	Dimensions in mm										
			Barrel ID	Barrel OD	Stud Size	Palm Width	Palm Thickness	Barrel Length	Stud Dist -ance From Top	Stud Dist -ance From Barrel	Creepage distance	Total Length	Inspection Hole
			d1	d3	d2	b	s	a	C1	C2	l	J	ØK
16	M 6	3D-5043RCF	5.8	8.5	6.5	11.9	2.7	14	6	10	27	33	3
	M 8	3D-5044RCF	5.8	8.5	8.2	16.0	1.9	14	9	11	28	37	3
	M 10	3D-5045RCF	5.8	8.5	10.2	16.0	1.9	14	9	11	28	37	3
25	M 8	3D-5048RCF	7.2	11.5	8.2	16.0	4.3	18	8	11	33	41	3
	M 10	3D-5049RCF	7.2	11.5	10.2	19.6	3.4	18	11	14	36	47	3
35	M 10	3D-5053RCF	8.2	13.0	10.2	17.9	4.8	18	10	10	33	43	3
50	M 8	3D-5057RCF	10.0	15.5	8.2	21.6	5.5	24	11	15	45	56	3
	M 10	3D-5058RCF	10.0	15.5	10.2	21.6	5.5	24	11	15	45	56	3
	M 12	3D-5059RCF	10.0	15.5	13.0	21.6	5.5	24	11	15	45	56	3
70	M 10	3D-5065RCF	12.0	17.8	10.2	25.0	5.8	24	13	15	45	58	3
	M 12	3D-5066RCF	12.0	17.8	13.0	25.0	5.8	24	13	15	45	58	3
	M 16	3D-5066E16RCF	11.2	14.7	17	28	2.2	18	16	16	41	57	3
95	M 8	3D-5068RCF	13.5	20.0	8.2	27.8	6.5	24	15	17	47	62	4
	M 10	3D-5069RCF	13.5	20.0	10.2	27.8	6.5	24	15	17	47	62	4
	M 12	3D-5070RCF	13.5	20.0	13.0	27.8	6.5	24	15	17	47	62	4
	M 16	3D-5070E16RCF	13.5	17.4	17	28	3.2	20	16	16	45	61	4
120	M 12	3D-5074RCF	15.4	23.0	13.0	32.0	7.6	29	17	18	54	71	4
	M 16	3D-5074E16RCF	15.0	19.4	17	28	4.4	22	16	16	48	64	4
150	M 12	3D-5077RCF	17.4	26.0	13.0	36.4	8.6	29	18	21	58	76	4
	M 16	3D-5078RCF	17.4	26.0	17.0	36.4	8.6	29	18	21	58	76	4
	M 16	3D-5078-1RCF	16.5	21.2	17.0	30	4.7	26	16	16	53	69	4
185	M 16	3D-5081RCF	18.5	23.5	17	34	5.0	32	17	17	61	78	4

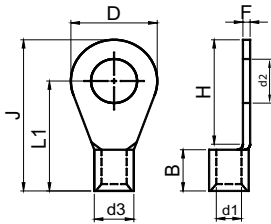
RAILWAY SERIES LUGS

Sheet Metal Lugs, Ring Type
 Type-I Brazed Seam
 Type-II With Insulating Sleeve
 Material: ETP-Copper
 Surface: Tin Plated

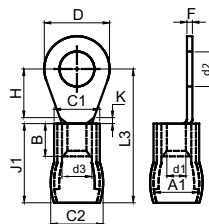
Type I



Type I



Type II



Type II

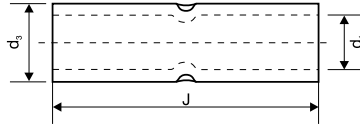


REF : R.C.F.

Conductor mm ²	Bolt Ø	3D CAT NO	Dimensions in mm															TYPE
			d2	d1	d3	D	F	B	K	H	L1	J	A1	C1	J1	C2	L3	
1.5	M 5	3D-3086RCF	5.2	1.8	3.8	10.0	1.0	5	2	8	15	20	4.4	5.4	10	6	20	II
2.5	M 6	3D-3132RCF	6.4	2.7	5.3	12.0	1.3	6	2	8	16	22	7.6	7.3	15	9.2	25	II
4	M 3	3D-3198RCF	3.2	2.9	5.5	7.2	1.3	6	-	8.4	-	18	6.4	7.1	15	8.6	23.4	II
	M 6	3D-3202RCF	6.4	2.8	5.0	12.0	1.1	6	-	8	-	20	6.4	7.1	15	8.6	23.0	II
	M 8	3D-3203RCF	8.2	3.3	5.3	14.0	1.0	6	2	10.5	-	22.5	6.4	7.1	15	8.6	27.5	II
6	M 5	3D-1431RCF	5.2	3.6	6.2	9.6	1.3	8	-	13	21	25.8	-	-	-	-	-	I
	M 6	3D-1415RCF	6.4	3.6	6.2	12.0	1.3	8	-	15.8	23.8	29.8	-	-	-	-	-	I
	M 8	3D-1421RCF	8.2	3.6	6.2	16.0	1.3	8	-	20.5	28.5	36.5	-	-	-	-	-	I
	M 10	3D-1427RCF	10.2	3.8	6.2	16.0	1.2	8	-	20.5	28.5	36.5	-	-	-	-	-	I
10	M 12	3D-1430RCF	13.0	3.8	6.2	19.0	1.2	8	-	21	29	38.5	-	-	-	-	-	I
	M 6	3D-1465RCF	6.4	4.8	7.4	16.0	1.3	8	-	22.3	30.3	38.3	-	-	-	-	-	I
	M 8	3D-1466RCF	8.2	4.8	7.4	16.0	1.3	8	-	22.3	30.3	38.3	-	-	-	-	-	I
	M 10	3D-1461RCF	10.5	5.2	8.4	22	1.6	8	-	32	30.3	49	-	-	-	-	-	I

COPPER CONNECTORS

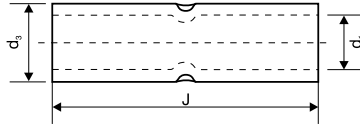
Standard Type with Cable Stopper
 Material: ETP-copper
 Surface: Tin Plated
























Conductors mm ²	3D Cat No.	Dimension In mm			Tools	Crimping Profile	Packing Qty
		d ₁	d ₂	J			
1.5	3D-2802	1.8	3.7	12	3D-17, 3D-2		200
2.5	3D-2804	2.4	4.0	15	3D-17, 3D-2		200
4	3D-2806	3.1	4.8	15	3D-17, 3D-2		200
6	3D-2808	3.8	5.5	15	3D-17, 3D-2		200
10	3D-2810	4.5	6.2	20	3D-2, 3D-117, 3D-88		200
16	3D-2812	5.4	7.1	20	3D-2, 3D-117, 3D-88		200
20	3D-2816	6.0	7.7	20	3D-117, 3D-100, 3D-88		200
25	3D-2817	6.8	8.8	32	3D-117, 3D-100, 3D-88		200
35	3D-2820	8.2	10.6	36	3D-117, 3D-100, 3D-88		150
50	3D-2823	10	12.8	40	3D-117, 3D-100, 3D-88		200
70	3D-2826	11.2	14.7	40	3D-117, 3D-100, 3D-88		150
95	3D-2828	13.5	17.4	45	3D-117, 3D-100, 3D-88		100
120	3D-2830	15.0	19.4	45	3D-117, 3D-100, 3D-88		80
150	3D-2833	16.5	21.2	55	3D-117, 3D-100, 3D-88		50
185	3D-2836	18.5	23.5	65	3D-117, 3D-100		50
240	3D-2838	21.0	26.5	80	3D-117, 3D-100		25
300	3D-2841	23.5	30.0	85	3D-117, 3D-100		25
400	3D-2843	26.8	34.8	91	3D-117, 3D-100		15
500	3D-2844	30.0	39.0	100	3D-120		10
630	3D-2846	35.0	45.0	112	3D-120		5
800	3D-2847	39.0	50.6	150	3D-120		20
1000	3D-2848	43.0	56.2	170	3D-120		10

COPPER CONNECTORS

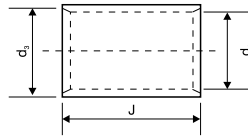
Standard Type Long Barrel
with Cable Stopper
Material: ETP-copper
Surface: Tin Plated



Conductors mm ²	3D Cat No.	Dimension In mm			Tools	Crimping Profile	Packing Qty
		d ₁	d ₂	J			
1.5	3D-2802LB	1.6	3.2	23.0	3D-17, 3D-2		200
2.5	3D-2804LB	2.0	3.7	23.0	3D-17, 3D-2		200
4	3D-2806LB	3.1	4.8	23.0	3D-17, 3D-2		200
6	3D-2808LB	3.8	5.5	23.0	3D-17, 3D-2		200
10	3D-2810LB	4.4	6.2	30.0	3D-2, 3D-117, 3D-88		200
16	3D-2812LB	5.3	7.1	30.0	3D-2, 3D-117, 3D-88		200
25	3D-2817LB	7.0	9.0	38.0	3D-117, 3D-100, 3D-88		200
35	3D-2820LB	8.0	10.0	45.0	3D-117, 3D-100, 3D-88		150
50	3D-2823LB	9.2	11.2	53.0	3D-117, 3D-100, 3D-88		200
70	3D-2826LB	11.6	13.8	60.0	3D-117, 3D-100, 3D-88		150
95	3D-2828LB	12.8	15.6	68.0	3D-117, 3D-100, 3D-88		100
120	3D-2830LB	14.8	17.8	75.0	3D-117, 3D-100, 3D-88		80
150	3D-2833LB	16.0	19.6	83.0	3D-117, 3D-100, 3D-88		50
185	3D-2836LB	18.0	22.0	90.0	3D-117, 3D-100		50
240	3D-2838LB	22.0	26.0	98.0	3D-117, 3D-100		25
300	3D-2841LB	24.0	28.7	113.0	3D-117, 3D-100		25
400	3D-2843LB	28.0	33.2	135.0	3D-117, 3D-100		15
500	3D-2844LB	30.0	36.0	143.0	3D-120		10
630	3D-2846LB	35.0	41.5	158.0	3D-120		5
800	3D-2847LB	39.0	46.3	180.0	3D-120		20
1000	3D-2848LB	43.0	53.8	225.0	3D-120		10

COPPER CONNECTORS

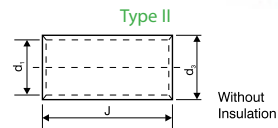
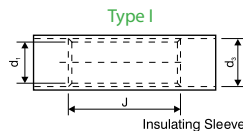
Butt Connectors
For Parallel Connection
W/O Cable Stopper
Material: ETP-copper
Surface: Tin Plated



Conductors mm ²	3D Cat No.	Dimension In mm			Tools	Crimping Profile	Packing Qty
		d ₁	d ₃	J			
1.5	3D-2790	1.6	3.2	7	3D-17, 3D-2		200
2.5	3D-2791	2.4	4.0	7	3D-17, 3D-2		200
6	3D-2792	3.5	5.5	7	3D-17, 3D-2		200
10	3D-2793	4.5	6.2	10.5	3D-2, 3D-117, 3D-88		200
16	3D-2794	5.4	7.1	11.5	3D-2, 3D-117, 3D-88		200
25	3D-2795	6.8	8.8	13	3D-117, 3D-100, 3D-88		200
35	3D-2796	8.2	10.6	14	3D-117, 3D-100, 3D-88		100
50	3D-2797	10	12.8	16	3D-117, 3D-100, 3D-88		100
70	3D-2798	11.2	14.7	18	3D-117, 3D-100, 3D-88		100
95	3D-2799	13.5	17.4	19	3D-117, 3D-100, 3D-88		100

COPPER CONNECTORS

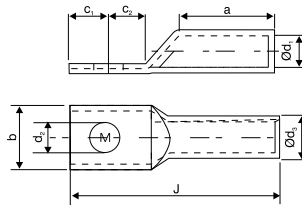
Butt Connectors
For Copper Conductors
with & without Insulating Sleeve
Insulation : Hard PVC
Material: ETP-copper
Surface: Tin Plated



















Conductors mm ²	3D Cat No.	Dimension In mm			Tools	Crimping Profile	Packing Qty	Type
		d ₁	d ₃	J				
1.5	3D-1845	1.6	3.2	15	3D-17 3D-2		200	II
2.5	3D-1846	2.4	4.0	15	3D-17 3D-2		200	II
4	3D-1847	3.5	5.5	15	3D-17 3D-2		200	II
1.5	3D-3762	1.6	3.2	25	3D-41		200	I
2.5	3D-3763	2.4	4.0	25	3D-41		200	I
4	3D-3764	3.5	5.5	27	3D-41		200	I

ALUMINIUM TUBULAR CABLE LUGS

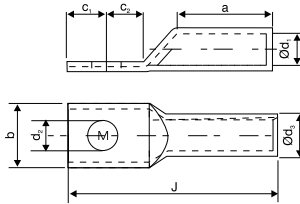
Compression Type,
for Crimping to XLPE Conductors,
Material : Aluminium
Surface : Natural

















Conductors mm ²	Bolt 0	3D Cat No.	Dimension In mm							Tools	Crimping Profile	Packing Qty	
			Barrel ID	Barrel OD	Stud Size	Palm Width	Barrel Length	Stud Distance from top	Stud Distance from Barrel				Total Length
			d ₁	d ₃	d ₂	b	a	C ₁	C ₂				J
16	M 6	3D-4000	5	8.3	6.2	12	38	9	12	66	3D-7 3D-88 3D-100		200
25	M 8	3D-4001	7.2	9.6	8.2	14	38	9	12	66	//		200
35	M 8	3D-4002	8.3	11.1	8.2	16	47	11	11	76	//		100
50	M 10	3D-4003	10.1	13.5	10.2	19.5	46	11	13	78	//		100
70	M 10	3D-4004	11.2	14.5	10.2	20.5	59	13	13	93	//		150
95	M 12	3D-4005	12	16.9	12.7	23.5	70	14	14	107	//		50
120	M 12	3D-4006	13.7	19	12.7	26.5	70	15	15	111	//		25
150	M 12	3D-4007	15.1	21.1	12.7	29.5	80	17	17	125	//		20
	M 16	3D-4008	15.1	21.1	17	29.5	80	17	17	125			
185	M 12	3D-4009	16.6	23.9	12.7	33	80	18	18	128	3D-7		15
	M 16	3D-4010	16.6	23.9	17	33	80	18	18	128	3D100		
240	M 12	3D-4012	19.3	27.2	12.7	37.5	83	22	22	141	//		10
	M 16	3D-4013	19.3	27.2	17	37.5	83	22	22	141			
300	M 12	3D-4015	21.8	30.2	12.7	42	86	27	27	154			10
	M 16	3D-4016	21.8	30.2	17	42	86	27	27	154			
	M 20	3D-4014	21.8	30.2	20.1	42	86	27	27	154	//		
400	M 20	3D-4017	25	34.8	20.3	48	110	30	30	184	3D-120		25
500	M 20	3D-4018	28.2	39.1	20.3	54	122	32	32	202	//		20
630	BLK	3D-4019	31.7	44.4		61	137	34	34	222	//		10
800	BLK	3D-4020	35.7	49.5		68	144	39	39	247	//		10
1000	BLK	3D-4021	41	56		77.5	157	45	45	277	//		5

ALUMINIUM TUBULAR CABLE LUGS

Compression Type,
Aluminium Terminal ends,
for Crimping to XLPE Conductors,
Material : Aluminium
Surface : Natural

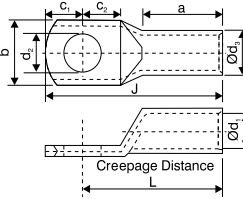












Ref: IS 8309
(For XLPE Conductors)

Conductors mm ²	Bolt Ø	3D Cat No.	Dimension In mm								Tools	Crimping Profile	Packing Qty
			Barrel ID	Barrel OD	Stud Size	Palm Width	Barrel Length	Stud Distance from top	Stud Distance from Barrel	Total Length			
			d ₁	d ₂	d ₃	b	a	C ₁	C ₂	J			
16	8	3D-4000 XLPE	5.75	10.25	8.4	16.25	32	8	10	57	3D-7 3D-88 3D-100		200
25	8	3D-4001 XLPE	6.95	12.25	8.4	16.25	32	8	10	57	//		200
35	10	3D-4002 XLPE	8.15	14.25	10.5	20.25	42	10	12	72	//		100
50	10	3D-4003 XLPE	9.45	16.25	10.5	21.75	42	10	12	72	//		100
70	12	3D-4004 XLPE	11.4	18.75	13	25.25	52	13	15	90	//		150
95	12	3D-4005 XLPE	12.9	22.25	13	30.25	56	13	15	95	//		50
120	12	3D-4006 XLPE	14.9	23.25	13	31.75	56	15	20	102	//		25
150	12	3D-4007 XLPE	16.5	25.25	13	34.75	60	15	20	108	//		20
185	16	3D-4010 XLPE	18.5	28.75	17	39.75	60	15	20	110	3D-7 3D-100		15
240	16	3D-4013 XLPE	21.2	32.25	17	44.75	70	19	24	130	//		10
300	16	3D-4016 XLPE	23.5	34.25	17	47.75	70	19	24	130	//		10
400	16	3D-4017 XLPE	26.2	38.75	17	53.75	75	19	24	138	3D-120		25
500	16	3D-4018 XLPE	29.2	44.25	17	60.75	80	22	24	148	//		20
630	16	3D-4019 XLPE	34.2	50.25	17	69.75	90	26	28	170	//		10

ALUMINIUM TUBULAR CABLE LUGS

Compression Type,
Aluminium Terminal ends,
for Crimping to Aluminium Conductors,
Material : Aluminium
Surface : Natural

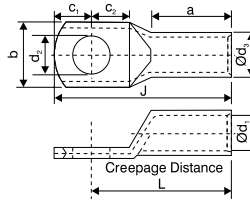


Conductors mm ²	Bolt 0	3D Cat No.	Dimension In mm									Tools	Crimping Profile	Packing Qty
			Barrel ID	Barrel OD	Stud Size	Palm Width	Barrel Length	Stud Distance from top	Stud Distance from Barrel	Creepage Distance	Total Length			
			d ₁	d ₂	d ₃	b	a	C ₁	C ₂	L	J			
2.5	M 3	3D-2535	2.6	5.5	3.2	6.7	7	4	4	14	18	3D-17		200
4	M 4	3D-2536	2.9	5.5	4.2	7.2	7	4	4	14	18	3D-17		200
	M 5	3D-2537	2.9	5.5	5.2	12.0	7	5	5	16	21	3D-2		
6	M 6	3D-2538	3.5	5.5	6.4	12.0	7	6	6	17	23	3D-17		200
10	M 6	3D-2539	4.4	7.2	6.4	9.7	9	8	9	22	30	3D-7		200
	M 8	3D-2540	4.4	7.2	8.2	15.0	9	8	9	22	30	3D-2		
16	M 6	3D-2541	5.4	8.3	6.4	11.4	13	9	11	28	37	3D-7		200
	M 8	3D-2542	5.4	8.3	8.2	11.7	13	9	11	28	37	3D-88		
	M 10	3D-2543	5.4	8.3	10.2	18.0	13	9	11	29	38			
25	M 6	3D-2544	7.0	9.7	6.4	13.7	16	10	11	34	44	3D-7		200
	M 8	3D-2545	7.0	9.7	8.2	13.7	16	10	11	34	44	3D-124		
	M 10	3D-2546	7.0	9.7	10.2	14.0	16	10	11	34	44	3D-95H		
	M 12	3D-2547	7.0	9.7	12.7	20.0	16	12	12	35	47			
35	M 6	3D-2548	8.0	10.8	6.4	15.4	18	11	11	35	46	3D-7		300
	M 8	3D-2549	8.0	10.8	8.2	15.4	18	11	11	35	46	3D-124		
	M 10	3D-2550	8.0	10.8	10.2	15.7	18	11	11	35	46	3D-88		
50	M 8	3D-2551	9.3	13.0	8.2	18.3	22	11	13	43	54	3D-7		200
	M 10	3D-2552	9.3	13.0	10.2	18.3	22	11	13	43	54	3D-124		
	M 12	3D-2553	9.3	13.0	12.7	18.5	22	12	13	42	54			
70	M 8	3D-2554	11.3	15.5	8.2	21.8	26	13	13	47	60	3D-7		100
	M 10	3D-2555	11.3	15.5	10.2	21.8	26	13	13	47	60	3D-124		
	M 12	3D-2556	11.3	15.5	12.7	21.8	26	13	13	47	60			
95	M 10	3D-2557	13.2	17.4	10.2	24.8	28	14	14	50	64	3D-7		100
	M 12	3D-2558	13.2	17.4	12.7	24.8	28	14	14	50	64	3D-124		
	M 16	3D-2559	13.2	17.4	16.2	24.8	28	15	15	51	66			

Note : ISI Licence is given for catalogue numbers 3D-2541 Through 3D-2577 (16 mm² to 1000 mm²)
16-10 3D-2543, 25-12 3D-2547, 50-12 3D-2553 & 95-16 3D-2559 W/O ISI Mark

ALUMINIUM TUBULAR CABLE LUGS

Compression Type,
Aluminium Terminal ends,
for Crimping to Aluminium Conductors,
Material : Aluminium
Surface : Natural



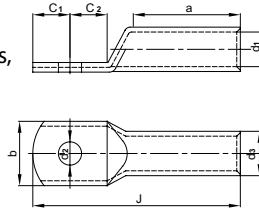
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Conductors mm ²	Bolt Ø	3D Cat No.	Dimension In mm									Tools	Crimping Profile	Packing Qty
			Barrel ID	Barrel OD	Stud Size	Palm Width	Barrel Length	Stud Distance from top	Stud Distance from Barrel	Creepage Distance	Total Length			
			d ₁	d ₂	d ₃	b	a	C ₁	C ₂	L	J			
120	M 10	3D-2560	14.7	19.6	10.2	28.0	32	15	15	58	73	3D-7		50
	M 12	3D-2561	14.7	19.6	12.7	28.0	32	15	15	58	73	3D-124		
	M 16	3D-2562	14.7	19.6	16.2	28.0	32	15	15	58	73	3D-88		
150	M 10	3D-2563	16.4	21.5	10.2	30.8	34	17	17	62	79	3D-7		50
	M 12	3D-2564	16.4	21.5	12.7	30.8	34	17	17	62	79	3D-124		
	M 16	3D-2565	16.4	21.5	16.2	30.8	34	17	17	62	79	3D-95H		
185	M 10	3D-2566	18.4	24.0	10.2	34.5	36	18	18	66	84	3D-7		25
	M 12	3D-2567	18.4	24.0	12.7	34.5	36	18	18	66	84	3D-124		
	M 16	3D-2568	18.4	24.0	16.2	34.5	36	18	18	66	84	3D-95H		
240	M 12	3D-2569	21.0	28.0	12.7	40.0	44	22	22	80	102	3D-7		30
	M 16	3D-2570	21.0	28.0	16.2	40.0	44	22	22	80	102	3D-124		
300	M 16	3D-2571	23.8	31.0	16.2	45.0	47	27	27	88	115	3D-7		20
	M 20	3D-2572	23.8	31.0	20.3	45.0	47	27	27	88	115	3D-124		
400	M 20	3D-2573	26.8	35.5	20.3	50.8	56	30	31	100	130	3D-7		15
500	M 20	3D-2574	29.9	41.0	20.3	57.8	60	32	33	108	140	3D-150		10
630	M 20	3D-2575	34.9	46.0	20.3	65.8	59	34	35	120	154	3D-150		5
800	BLK	3D-2576	39.0	51.0		73.3	77	39	39	141	180	3D-150		20
1000	BLK	3D-2577	43.0	57.0		81.5	100	45	45	175	220	3D-150		15

Note : ISI Licence is given for catalogue numbers 3D-2541 Through 3D-2577 (16 mm² to 1000 mm²)
16-10 3D-2543, 25-12 3D-2547, 50-12 3D-2553 & 95-16 3D-2559 W/O ISI Mark

ALUMINIUM TUBULAR CABLE LUGS

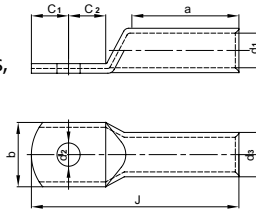
Compression Type, Long Barrel,
Aluminium Terminal ends,
for Crimping to Aluminium Conductors,
Material : Aluminium
Surface : Natural






















Conductors mm ²	Bolt 0	3D Cat No.	Dimension In mm								Tools	Crimping Profile	Packing Qty
			Barrel ID	Barrel OD	Stud Size	Palm Width	Barrel Length	Stud Distance from top	Stud Distance from Barrel	Total Length			
			d1	d3	d2	b	a	C1	C2	J			
2.5	M 3	3D-2535 LB	2.6	5.5	3.5	7	10.5	4	4	21.5	3D-17		200
	M 3.5	3D-2535E3.5 LB	2.6	5.5	3.5	7	10.5	4	4	21.5	3D-2		
4.0	M 4	3D-2536 LB	2.9	5.5	4.2	7	10.5	4	4	21.5	3D-17		200
	M 5	3D-2537 LB	2.9	5.5	5.2	12	10.5	5	8	27.5	3D-2		
6.0	M 5	3D-2538E5 LB	3.5	5.5	5.2	8	10.5	6	7	27.5	3D-17		200
	M 6	3D-2538 LB	3.5	5.5	6.4	12	10.5	6	7	27.5	3D-2		
10	M 6	3D-2539 LB	4.4	7.4	6.4	10	13.5	8	9	34.5	3D-7		200
	M 8	3D-2540 LB	4.4	7.4	8.2	15	13.5	8	9	34.5	3D-2		
16	M 6	3D-2541 LB	5.4	8.3	6.4	11	19.5	9	11	43.5	3D-7		200
	M 8	3D-2542 LB	5.4	8.3	8.2	11	19.5	9	11	43.5	3D-88		
	M 10	3D-2543 LB	5.4	8.3	10.4	18	19.5	9	11	43.5			
25	M 8	3D-2545 LB	7	10	8.2	14	24	10	11	52	3D-7		200
	M 10	3D-2546 LB	7	10	10.4	20	24	10	11	52	3D-124		
	M 12	3D-2547 LB	7	10	12.7	20	24	10	11	52	3D-95H		
35	M 8	3D-2549 LB	8	10.8	8.2	15	27	11	11	56	3D-7		300
	M 10	3D-2550 LB	8	10.8	10.4	20	27	11	11	56	3D-124		
50	M 8	3D-2551 LB	9.3	13	8.2	18	33	11	13	65	3D-7		200
	M 10	3D-2552 LB	9.3	13	10.4	23	33	11	13	65	3D-124		
	M 12	3D-2553 LB	9.3	13	12.7	23	33	11	13	65			
70	M 8	3D-2554 LB	11.6	16	8.2	22	39	13	13	73	3D-7		100
	M 10	3D-2555 LB	11.6	16	10.4	22	39	13	13	73	3D-124		
	M 12	3D-2556 LB	11.6	16	12.7	22	39	13	13	73			

ALUMINIUM TUBULAR CABLE LUGS

Compression Type, Long Barrel,
Aluminium Terminal ends,
for Crimping to Aluminium Conductors,
Material : Aluminium
Surface : Natural



Conductors mm ²	Bolt 0	3D Cat No.	Dimension In mm								Tools	Crimping Profile	Packing Qty
			Barrel ID	Barrel OD	Stud Size	Palm Width	Barrel Length	Stud Distance from top	Stud Distance from Barrel	Total Length			
			d1	d3	d2	b	a	C1	C2	J			
95	M 10	3D-2557 LB	12.9	17.1	10.4	25	42	14	14	78	3D-7		100
	M 12	3D-2558 LB	12.9	17.1	12.7	25	42	14	14	78	3D-124		
	M 16	3D-2559 LB	12.9	17.1	17.0	25	42	14	14	78			
120	M 10	3D-2560 LB	14.8	19.6	10.4	28	48	15	15	89	3D-7		50
	M 12	3D-2561 LB	14.8	19.6	12.7	28	48	15	15	89	3D-124		
	M 16	3D-2562 LB	14.8	19.6	17.0	28	48	15	15	89	3D-88		
150	M 10	3D-2563 LB	16.1	21.2	10.4	31	51	17	17	96	3D-7		50
	M 12	3D-2564 LB	16.1	21.2	12.7	31	51	17	17	96	3D-124		
	M 16	3D-2565 LB	16.1	21.2	17.0	31	51	17	17	96			
185	M 10	3D-2566 LB	18	23.7	10.4	34	54	18	18	102	3D-7		25
	M 12	3D-2567 LB	18	23.7	12.7	34	54	18	18	102	3D-124		
	M 16	3D-2568 LB	18	23.7	17.0	34	54	18	18	102	3D-95H		
225	M 12	3D-25225 LB	20.6	27	12.7	39	60	20	20	114	3D-7		
240	M 12	3D-2569 LB	22	28	12.7	40	66	22	22	124	3D-7		30
	M 16	3D-2570 LB	22	28	17.0	40	66	22	22	124	3D-124		
300	M 16	3D-2571 LB	24	31	17.0	45.7	70.5	27	27	138.5	3D-7		20
	M 20	3D-2572 LB	24	31	21.0	45.7	70.5	27	27	138.5	3D-124		
400	M 20	3D-2573 LB	28	36	21.0	51	84	30	31	158	3D-7		15
500	M 20	3D-2574 LB	30	41	21.0	58	90	32	33	170	3D-150		10
630	M 20	3D-2575 LB	35	46	21.0	66	103.5	34	35	188.5	3D-150		5
800	BLK	3D-2576 LB	39	51		73	115.5	39	39	218.5	3D-150		20
1000	BLK	3D-2577 LB	43.5	57		81	150	45	45	270	3D-150		15

ALUMINIUM CONNECTORS

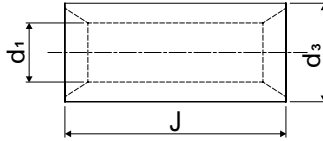
Aluminium Tubular In Line
Connectors for Crimping to
Aluminium Conductors,
Material : Aluminium
Surface : Natural



















Conductors mm ²	3D Cat No.	Dimension In mm			Tools	Crimping Profile	Packing Qty
		d ₁	d ₂	J			
2.5	3D-2578	2.6	5.5	16	3D-17, 3D-2, 3D-88		200
4	3D-2579	2.9	5.5	16	3D-17, 3D-2, 3D-88		200
6	3D-2580	3.5	5.5	20	3D-17, 3D-2, 3D-88		200
10	3D-2581	4.4	7.2	20	3D-2, 3D-7, 3D-88		500
16	3D-2582	5.4	8.3	26	3D-2, 3D-7, 3D-88		500
25	3D-2583	7.0	9.7	34	3D-7, 3D-124, 3D-88		500
35	3D-2584	8.0	10.8	39	3D-7, 3D-124, 3D-95H		300
50	3D-2585	9.3	13.0	44	3D-7,3D-124, 3D-88		200
70	3D-2586	11.3	15.5	53	3D-7,3D-124, 3D-88		100
95	3D-2587	13.2	17.4	58	3D-7,3D-124, 3D-88		80
120	3D-2588	14.7	19.6	63	3D-7,3D-124, 3D-88		50
150	3D-2589	16.4	21.5	67	3D-7,3D-124		50
185	3D-2590	18.4	24.0	72	3D-7,3D-124		50
240	3D-2591	21.0	28.0	86	3D-7,3D-124		30
300	3D-2592	23.8	31.0	96	3D-7,3D-124		25
400	3D-2593	26.8	35.5	110	3D-7,3D-124		15
500	3D-2594	29.9	41.0	111	3D-150		10
630	3D-2595	34.9	46.0	134	3D-150		5
800	3D-2596	39.0	51.0	153	3D-150		10
1000	3D-2597	43.0	57.0	201	3D-150		10

ALUMINIUM CONNECTORS

Aluminium Tubular In Line Long Barrel
Connectors for Crimping to
Aluminium Conductors,
Material : Aluminium
Surface : Natural



Conductors mm ²	3D Cat No.	Dimension In mm			Tools	Crimping Profile	Packing Qty
		d ₁	d ₂	J			
25	3D-2583-LB	7.2	9.6	82.0	3D-7, 3D-124, 3D-88		500
35	3D-2584-LB	8.3	11.1	90.0	3D-7, 3D-124, 3D-95H		300
50	3D-2585-LB	10.1	13.5	100.0	3D-7,3D-124, 3D-88		200
70	3D-2586-LB	10.2	14.5	104.0	3D-7,3D-124, 3D-88		100
95	3D-2587-LB	12.0	16.9	108.0	3D-7,3D-124, 3D-88		80
120	3D-2588-LB	13.7	19.0	112.0	3D-7,3D-124, 3D-88		50
150	3D-2589-LB	15.1	21.2	116.0	3D-7,3D-124		50
185	3D-2590-LB	16.6	23.9	128.0	3D-7,3D-124		50
225	3D-225-CLB	18.6	26.1	136.0	3D-7,3D-124		50
240	3D-2591-LB	19.3	27.2	148.0	3D-7,3D-124		30
300	3D-2592-LB	21.8	30.2	160.0	3D-7,3D-124		25
400	3D-2593-LB	25.0	34.8	182.0	3D-7,3D-124		15
500	3D-2594-LB	28.2	39.1	190.0	3D-150		10
630	3D-2595-LB	31.7	44.4	200.0	3D-150		5
800	3D-2596-LB	35.7	49.5	225.0	3D-150		10
1000	3D-2597-LB	41	56.0	250.0	3D-150		10

Note : All Aluminium terminals and connectors can be tin plated upon request

"3D-112" Corrosion Inhibiting Compound

(Based on Recommendations of Aluminium Federation of U.K. / British Standards Institutions spec. G-184/188)

Recommended Practice for Resistance to Corrosion

Whilst Aluminium withstands weathering without protection during many years of service, the use of a corrosion inhibiting compound is recommended where conditions are particularly aggressive, such as chemical of salt-laden atmospheres, or where inspection and cleaning are likely to be irregular.

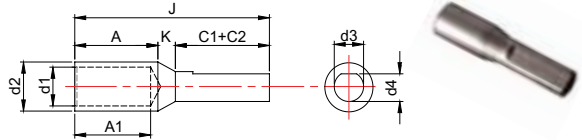
Such an inhibitor must:

- not affect electrical properties of the compression joint.
- be non-corrosive to Aluminium, copper, steel, tin, zinc and combinations of these :
- not deteriorate on exposure to atmosphere at conductor operating temperatures :
- have good sealing properties against moisture and contaminating substances in the atmosphere.
- have a high temperature drop point: This Corrosion Inhibiting Compound "3D-112" made as per British Standards Institution specification, is recommended for application over the prepared end of the conductor and inside the ferrule/terminal end, before crimping.



WIRE PIN

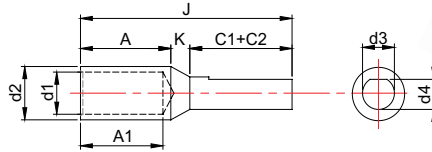
Copper Reducer,
For Aluminium Conductors
Material : ETP-Copper
Surface-TIN Plated



Conductors mm ²	3D Cat No.	Dimensions in mm									
		d1	d2	d3	d4	A	A1	K	C1 + C2	J	
2.5	3D-3798	2.5	4.7	3.8	3.3	6	5	4	10	20	
4	3D-3799	2.8	4.7	3.8	3.3	6	5	4	10	20	
6	3D-3800	3.1	4.7	3.8	3.3	6	5	4	10	20	
10	3D-3050	4.4	6.2	3.8	3.3	9	8	4	10	23	
16	3D-3051	5.3	7.1	3.8	3.3	12	11	5	13	30	
25	3D-3801	7	9	6	5.5	12	11	5	15	32	
	3D-3052	7	9	7.5	6.5	12	11	5	20	37	
35	3D-3802	8	10	7.5	6.5	12	11	5	20	37	
50	3D-3803	9.2	11.2	7.5	6.5	16	15	5	20	41	
70	3D-3804	11.5	13.8	7.5	6.5	18	16	5	20	43	
	3D-3805	11.5	13.8	11.5	10.5	18	16	5	25	48	
	3D-3806	11.5	13.8	11.5	10.5	18	16	5	32	55	
95	3D-3807	12.8	15.6	11.5	10.5	20	18	6	25	51	
	3D-3808	12.8	15.6	7.5	6.5	20	18	6	22	48	
	3D-3809	12.8	15.6	12.8	11.8	20	18	6	32	58	
120	3D-3810	14.8	17.8	11.8	10.5	22	20	6	25	53	
	3D-3811	14.8	17.8	7.5	6.5	22	20	6	22	50	
	3D-3812	14.8	17.8	11.5	10.5	22	20	6	32	60	
150	3D-3813	16	19.6	11.5	10.5	26	25	6	32	64	
185	3D-3814	18	22	11.5	10.5	32	30	6	32	70	
240	3D-3815	22	26	16	15	38	36	8	42	88	
300	3D-3816	24	28.7	16	15	42	40	8	42	92	
400	3D-3817	28	33.2	15.6	14	46	44	12	32	90	

WIRE PIN

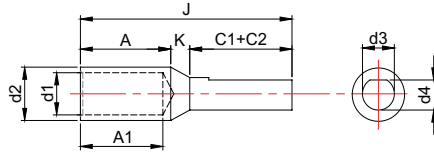
Copper Reducer,
For Copper Conductors
Material : ETP-Copper
Surface : Tin Plated



Conductors mm ²	3D Cat No.	Dimensions in mm								
		d1	d2	d3	d4	A	A1	K	C1 + C2	J
35	3D-3053	8.2	10.6	7.5	7.5	18	12	4	20	37
50	3D-3054	9.5	12.4	7.5	7.5	17	16	4	25	41
70	3D-3055	11.2	14.7	11.5	11.5	19	18	4	25	48
95	3D-3056	13.5	17.5	11.5	11.5	21	20	4	25	51
120	3D-3057	15	19.4	11.5	11.5	24	22	4	25	53
150	3D-3058	16.5	21.5	15.6	15.6	28	26	4	32	64
185	3D-3059	18.5	24	15.6	15.6	34	32	4	32	70
240	3D-3060	21	27.3	15.6	15.6	40	38	6	32	78
300	3D-3061	23.5	30.6	15.6	15.6	44	42	6	32	82

WIRE PIN

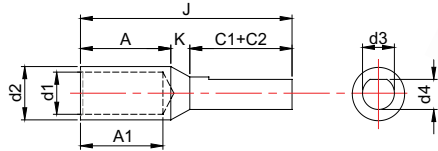
Aluminium Reducer,
For Aluminium Conductors
Material : Aluminium
Surface : Natural



Conductors mm ²	3D Cat No.	Dimensions in mm							
		d1	d2	d3	d4	A	K	C1 + C2	J
2.5	3D-3798 AL	2	5.5	4.5	4	7	4	10	21
	3D-3798 AL1	2.6	5.5	3.3	3.3	7	4	10	21
4	3D-3799 AL	2.9	5.5	4.5	4	7	4	10	21
	3D-3799 AL1	2.9	5.5	3.8	3.3	7	4	10	21
6	3D-3800 AL	3.5	5.5	4.5	4	7	4	10	21
	3D-3800 AL1	3.5	5.5	4.8	3.3	7	4	10	21
10	3D-3050 AL	3.8	7.4	4.5	4	9	4	10	23
	3D-3050 AL1	3.8	7.4	3.8	3.3	9	4	10	23
	3D-3050 AL2	4.4	7.4	4.5	4	9	4	10	23
	3D-3050 AL3	4.4	7.4	3.8	3.3	9	4	10	23
16	3D-3051 AL	5.4	8.3	6	5.5	13	5	15	33
	3D-3051 AL1	5.4	8.3	6	5.5	13	5	20	38
	3D-3051 AL2	5.4	8.3	3.8	3.3	13	5	13	31
25	3D-3801 AL	7	10	6	5.5	16	5	15	36
	3D-3052 AL	7	10	7.5	6.5	16	5	20	41
35	3D-3802 AL	8	10.8	7.5	6.5	18	5	20	43
50	3D-3803 AL	9.3	13	7.5	6.5	22	5	20	47
	3D-3803 AL1	10.4	14	14	13	22	7	24	53

WIRE PIN

Aluminium Reducer,
For Aluminium Conductors
Material : Aluminium
Surface : Natural



Conductors mm ²	3D Cat No.	Dimensions in mm							
		d1	d2	d3	d4	A	K	C1 + C2	J
70	3D-3804 AL	11.6	16	7.5	6.5	26	5	20	51
	3D-3805 AL	11.6	16	11.5	10.5	26	5	25	56
	3D-3806 AL	11.6	16	11.5	10.5	26	5	32	63
95	3D-3807 AL	12.9	17.1	11.5	10.5	28	6	25	59
	3D-3808 AL	12.9	17.1	15.6	14	28	6	27	61
	3D-3809 AL	12.9	17.1	7.5	6.5	28	6	22	56
	3D-3809 AL1	12.9	17.1	12.8	11.8	28	6	32	66
120	3D-3810 AL	14.8	19.6	11.5	10.5	32	6	25	63
	3D-3811 AL	14.8	19.6	7.5	6.5	32	6	27	60
	3D-3812 AL	14.8	19.6	11.5	10.5	32	6	22	70
	3D-3812 AL1	14.8	19.6	15.6	14	32	6	32	70
150	3D-3813 AL	16.1	21.2	15.6	14	34	6	32	72
	3D-3813 AL1	16.1	21.2	11.5	10.5	34	6	32	72
185	3D-3814 AL	18	23.7	15.6	14	36	6	32	74
	3D-3814 AL1	18	23.7	11.5	10.5	36	6	32	74
240	3D-3815 AL	22	28	16	15	44	8	42	94
	3D-3815 AL1	22	28	15.6	14	44	8	32	84
300	3D-3816 AL	24	31	16	15	47	8	42	97
	3D-3816 AL1	24	31	15.6	14	47	8	32	87

END-SLEEVES

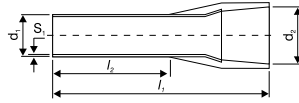
With Insulating Sleeve, DIN 46228, Part 4

Material: ETP-Copper

Surface: Tin Plated

Insulated: Free of Halide

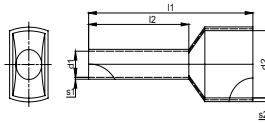
Synthetic Material: Polypropylene



Conductors mm ²	3D Cat No.	Dimension In mm					Colour Group II	Tools	Packing Qty
		d_1	d_2	S_1	l_1	l_2			
0.5	3D-8004 H	1.0	2.6	0.15	12.0	6.0	WHITE	3D-48	1000
	3D-8147 H				14.0	8.0		3D-52	
	3D-8035 H				16.0	10.0			
0.75	3D-8005 H	1.2	2.8	0.15	12.0	6.0	GREY	3D-48	1000
	3D-8149 H				14.0	8.0		3D-52	
	3D-8036 H				16.0	10.0			
1	3D-8154 H	1.4	3.0	0.15	14.0	8.0	RED	3D-48	1000
	3D-8007 H				16.0	10.0		3D-52	
1.5	3D-8159 H	1.7	3.5	0.15	14.0	8.0	BLACK	3D-48	1000
	3D-8009 H				16.0	10.0		3D-52	
	3D-8038 H				24.0	18.0			
2.5	3D-8162 H	2.2	4.2	0.15	14.0	8.0	BLUE	3D-48	1000
	3D-8011 H				18.0	12.0		3D-52	
4	3D-8012 H	2.8	4.8	0.2	17.0	10.0	GREY	3D-48	1000
	3D-8013 H				20.0	12.0		3D-52	
6	3D-8015 H	3.5	6.3	0.2	20.0	12.0	YELLOW	3D-48 3D-52	100
10	3D-8017 H	4.5	7.6	0.2	22.0	12.0	RED	3D-48	100
16	3D-8020 H	5.8	8.8	0.2	24.0	12.0	BLUE	3D-48 3D-53	100
25	3D-8046 H	7.3	11.2	0.2	30.0	16.0	YELLOW	3D-110	100
	3D-8047 H				32.0	18.0			
35	3D-8050 H	8.3	12.7	0.2	30.0	16.0	RED	3D-110	100
50	3D-8053 H	10.3	15.0	0.3	36.0	20.0	BLUE	3D-110	100

END SLEEVES

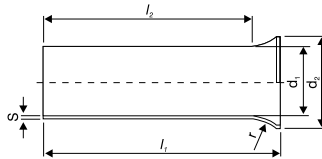
Twin Type, with Insulating Sleeve
 Material: ETP-Copper + PVC
 Surface: Tin Plated
 Insulated: Free of Halide
 Synthetic Material: Polypropylene



Conductors mm ²	3D Cat No.	Dimension In mm						Colour
		d1	d2	s1	s2	l1	l2	
0.5-8 2	3D-7000	1.5	4.7	0.15	0.35	15.0	8.0	WHITE
0.75-8 2	3D-7001	1.8	5.0	0.15	0.35	15.0	8.0	GREY
0.75-10 2	3D-7002	1.8	5.0	0.15	0.35	17.0	10.0	
1.0-8 2	3D-7003	2.0	5.4	0.15	0.40	15.0	8.0	RED
1.0-10 2	3D-7004	2.0	5.4	0.15	0.40	17.0	10.0	
1.5-8 2	3D-7005	2.2	6.6	0.15	0.40	16.0	8.0	BLACK
1.5-12 2	3D-7006	2.2	6.6	0.15	0.40	20.0	12.0	
2.5-10 2	3D-7007	2.8	7.8	0.20	0.40	18.5	10.0	BLUE
2.5-13 2	3D-7008	2.8	7.8	0.20	0.40	21.5	13.0	
4.0-12 2	3D-7009	3.7	8.8	0.20	0.50	23.0	12.0	GREY
6.0-14 2	3D-7010	4.8	10.0	0.20	0.50	26.0	14.0	YELLOW
10-14 2	3D-7011	6.4	13.0	0.20	0.60	26.0	14.0	RED
16-14 2	3D-7012	8.3	18.4	0.30	0.60	30.0	14.0	BLUE

END-SLEEVES

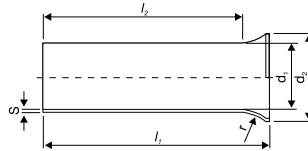
W/O Insulating Sleeve, DIN 46228, Part 1
 Material: ETP-Copper
 Surface: Tin Plated




Conductors mm ²	3D Cat No.	Dimension In mm					Tools	Packing Qty.
		d_1	d_2	s	L_1	L_2		
0.5	3D-8004	1.0	1.7	0.15	6	5.3	3D-48	1000
	3D-8035	1.0	1.7	0.15	10	9.3	3D-52	
0.75	3D-8005	1.2	2.2	0.15	6	5.3	3D-48	1000
	3D-8036	1.2	2.2	0.15	10	9.3	3D-52	
1	3D-8006	1.4	2.4	0.15	6	5.3	3D-48	1000
	3D-8007	1.4	2.4	0.15	10	9.3	3D-52	
1.5	3D-8008	1.7	2.8	0.15	7	6.0	3D-48	1000
	3D-8009	1.7	2.8	0.15	10	9.0	3D-52	
	3D-8037	1.7	2.8	0.15	12	11.0		
2.5	3D-8010	2.3	3.4	0.15	7	6.0	3D-48	1000
	3D-8039	2.3	3.4	0.15	10	9.0	3D-52	
	3D-8011	2.3	3.4	0.15	12	11.0		
4	3D-8012	2.8	4.0	0.2	9	8.0	3D-48	1000
	3D-8013	2.8	4.0	0.2	12	11.0	3D-52	
6	3D-8014	3.5	4.7	0.2	10	9.0	3D-48	250
	3D-8015	3.5	4.7	0.2	12	11.0	3D-52	
	3D-8016	3.5	4.7	0.2	15	14.0		
	3D-8043	3.5	4.7	0.2	18	17.0		
10	3D-8017	4.5	5.8	0.2	12	10.8	3D-48	250
	3D-8018	4.5	5.8	0.2	15	13.8	3D-53	
	3D-8019	4.5	5.8	0.2	18	16.8		
16	3D-8020	5.8	7.5	0.2	12	10.5	3D-48	250
	3D-8021	5.8	7.5	0.2	15	13.5	3D-53	
	3D-8022	5.8	7.5	0.2	18	16.5		

END SLEEVES

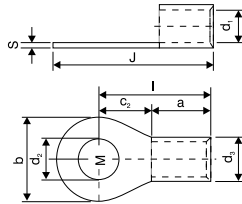
W/O Insulating Sleeve, DIN 46228, Part 1
 Material: ETP-Copper
 Surface: Tin Plated





Conductors mm ²	3D Cat No.	Dimension In mm					Tools	Packing Qty. 
		d ₁	d ₂	s	L ₁	L ₂		
25	3D-8046	7.3	9.5	0.2	15	13.0	3D-110	250
	3D-8047	7.3	9.5	0.2	18	16.0		
	3D-8048	7.3	9.5	0.2	25	23.0		
	3D-8049	7.3	9.5	0.2	32	29.0		
35	3D-8050	8.3	10.5	0.2	18	16.0	3D-110	100
	3D-8051	8.3	10.5	0.2	25	23.0		
	3D-8052	8.3	10.5	0.2	32	30.0		
50	3D-8053	10.3	13.0	0.3	18	15.0	3D-110	100
	3D-8054	10.3	13.0	0.3	25	22.0		
	3D-8055	10.3	13.0	0.3	32	29.0		
70	3D-8056	13.5	15.5	0.4	25	22.0	3D-110	100
	3D-8057	13.5	15.5	0.4	32	29.0		
95	3D-8058	14.7	17.0	0.4	25	22.0	3D-110	100
	3D-8059	14.7	17.0	0.4	32	29.0		
120	3D-8060	16.7	19.0	0.45	32	29.0	3D-110	50
	3D-8061	16.7	19.0	0.45	40	37.0		
150	3D-8062	19.5	21.5	0.5	32	29.0	3D-110	50
	3D-8063	19.5	21.5	0.5	40	37.0		
185	3D-8064	20.0	23.5	0.6	32	29.0	3D-110	25
	3D-8065	20.0	23.5	0.6	40	37.0		

SHEET METAL LUGS

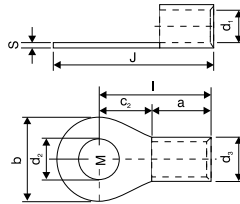
Ring Type
 Brazed Seam
 Material: ETP-Copper
 Surface: Tin Plated





Conductors mm ²	Bolt Ø	3D Cat No.	Dimensions in mm										Tools	Crimping Profile	Packing Qty
			d ₁	d ₂	d ₃	b	s	a	C ₂	l	J				
0.5 To 1.5mm ²	M 2	3D-1263	1.6	3.2	2.2	6	0.8	5	6	11	14	3D-2 3D-17		200	
	M 2.5	3D-1242	1.6	3.2	2.6	6	0.8	5	6	11	14				
	M 3	3D-1247	1.6	3.2	3.2	6	0.8	5	6	11	14				
	M 3	3D-1260	1.6	3.2	3.2	6.8	0.8	5	4.6	9.6	13				
	M 3	3D-1265	1.6	3.2	3.2	8	0.8	5	7	12	16				
	M 3.5	3D-1269	1.6	3.2	3.7	6	0.8	5	6	11	14				
	M 3.5	3D-1257	1.6	3.2	3.7	6.8	0.8	5	4.6	9.6	13				
	M 4	3D-1241	1.6	3.2	4.2	6	0.8	5	6	11	14				
	M 4	3D-1258	1.6	3.2	4.2	6.8	0.8	5	4.6	9.6	13				
	M 4	3D-1246	1.6	3.2	4.2	8	0.8	5	7	12	16				
	M 4	3D-1261	1.6	3.2	4.2	7	0.8	5	6	11	14.5				
	M 4	3D-1266	1.6	3.2	4.2	10	0.8	5	8	13	18				
	M 5	3D-1262	1.6	3.2	5.2	8	0.8	5	7	12	16				
	M 5	3D-1267	1.6	3.2	5.2	10	0.8	5	8	13	18				
	M 6	3D-1224	1.6	3.2	6.4	10	0.8	5	8	13	18				
M 6	3D-1268	1.6	3.2	6.4	12	0.8	5	7	12	18					
M 8	3D-1252	1.6	3.2	8.2	12	0.8	5	12	17	23					
2.5mm ²	M 3	3D-1308	2.3	3.9	3.2	6.5	0.8	5	4.5	9.5	12.7	3D-2 3D-17		200	
	M 3.5	3D-1292	2.3	3.9	3.7	6.5	0.8	5	4.5	9.5	12.7				
	M 3.5	3D-1309	2.3	3.9	3.7	8	0.8	5	7	12	16				
	M 4	3D-1296	2.3	3.9	4.2	8	0.8	5	7	12	16				
	M 5	3D-1304	2.3	3.9	5.2	8	0.8	5	7	12	16				
	M 5	3D-1310	2.3	3.9	5.2	10	0.8	5	8	13	18				
	M 5	3D-1313	2.3	3.9	5.2	12	0.8	5	11	16	22				
	M 6	3D-1342	2.3	3.9	6.4	10	0.8	5	8	13	18				
	M 6	3D-1305	2.3	3.9	6.4	12	0.8	5	11	16	22				
	M 6	3D-1314	2.3	3.9	6.4	16	0.8	5	12	17	25				
	M 8	3D-1307	2.3	3.9	8.2	12	0.8	5	11	16	22				
	M 8	3D-1311	2.3	3.9	8.2	16	0.8	5	12	17	25				
	M 10	3D-1287	2.3	3.9	10.2	16	0.8	5	12	17	25				
M 10	3D-1524	2.3	3.9	10.2	18	0.8	5	15	20	29					
M 12	3D-1438	2.3	3.9	12.7	18	0.8	5	15	20	29					

SHEET METAL LUGS

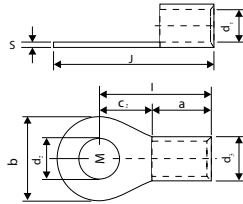
Ring Type
 Brazed Seam
 Material: ETP-Copper
 Surface: Tin Plated






Conductors mm ²	Bolt 0	3D Cat No.	Dimension in mm									Tools	Crimping Profile	Packing Qty
			d ₁	d ₂	d ₃	b	s	a	c ₂	l	J			
4mm ² To 6mm ²	M 4	3D-1432	3.5	5.5	4.2	8	1	6	7	13	17	3D-17		200
	M 4	3D-1435	3.5	5.5	4.2	10	1	6	8	14	19				3D-2
	M 5	3D-1431	3.5	5.5	5.2	8	1	6	7	13	17			
	M 5	3D-1408	3.5	5.5	5.2	10	1	6	8	14	19			
	M 5	3D-1433	3.5	5.5	5.2	8	1	6	12.8	18.8	22.8			
	M 5	3D-1405	3.5	5.5	5.2	12	1	6	8	14	20			
	M 5	3D-1404	3.5	5.5	5.2	12	1	6	10	16	22			
	M 6	3D-1415	3.5	5.5	6.4	12	1	6	8	14	20			
	M 6	3D-1417	3.5	5.5	6.4	12	1	6	10	16	22			
	M 6	3D-1406	3.5	5.5	6.4	14	1	6	12.5	18.5	25.5			
	M 8	3D-1416	3.5	5.5	8.2	12	1	6	8	14	20			
	M 8	3D-1421	3.5	5.5	8.2	14	1	6	12.5	18.5	25.5			
	M 8	3D-1407	3.5	5.5	8.2	16	1	6	16	22	30			
	M 8	3D-1429	3.5	5.5	8.2	18	1	6	15	21	30			
	M 9	3D-1410	3.5	5.5	9.7	14	1	6	12.5	18.5	25.5			
	M 10	3D-1427	3.5	5.5	10.2	16	1	6	16	22	30			
M 10	3D-1428	3.5	5.5	10.2	18	1	6	15	21	30				
M 12	3D-1430	3.5	5.5	12.7	18	1	6	15	21	30				
10mm ²	M 4	3D-1463	4.3	6.3	4.2	10	1	8	9	17	22	3D-2		200
	M 4	3D-1464	4.3	6.3	4.2	10	1	8	7	15	20			
	M 5	3D-1459	4.3	6.3	5.2	10	1	8	9	17	22			
	M 5	3D-1460	4.3	6.3	5.2	10	1	8	7	15	20			
	M 6	3D-1465	4.3	6.3	6.4	12	1	8	9	17	23			
	M 8	3D-1466	4.3	6.3	8.2	16	1	8	11	19	27			
	M 8	3D-1467	4.3	6.3	8.2	18	1	8	13	21	30			
	M 10	3D-1461	4.3	6.3	10.2	18	1	8	13	21	30			
	M 10	3D-1468	4.3	6.3	10.2	22	1	8	15	23	34			
	M 12	3D-1462	4.3	6.3	12.7	22	1	8	15	23	34			

SHEET METAL LUGS

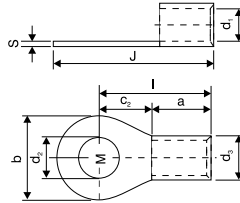
Ring Type
 Brazed Seam
 Material: ETP-Copper
 Surface: Tin Plated









Conductors mm ²	Bolt 0	3D Cat No.	Dimension in mm									Tools	Crimping Profile	Packing Qty
			d ₁	d ₃	d ₂	b	s	a	C ₁	l	J			
16mm ²	M 5	3D-1516	5.6	8	5.2	10	1.2	10	9	19	24	3D-2 3D-109		200
	M 5	3D-1517	5.6	8	5.2	12	1.2	10	10	20	26			
	M 6	3D-1511	5.6	8	6.4	12	1.2	10	10	20	26			
	M 6	3D-1518	5.6	8	6.4	16	1.2	10	12	22	30			
	M 8	3D-1512	5.6	8	8.2	16	1.2	10	12	22	30			
	M 8	3D-1519	5.6	8	8.2	18	1.2	10	14	24	33			
	M 9	3D-1513	5.6	8	9.7	16	1.2	10	12	22	30			
	M 10	3D-1514	5.6	8	10.2	18	1.2	10	14	24	33			
	M 10	3D-1520	5.6	8	10.2	22	1.2	10	14	24	35			
	M 12	3D-1515	5.6	8	12.7	22	1.2	10	14	24	35			
25mm ²	M 6	3D-1561	7.5	11.1	6.4	12	1.8	11	14	25	31	3D-109		200
	M 6	3D-1557	7.5	11.1	6.4	16	1.8	11	11	22	30			
	M 6	3D-1558	7.5	11.1	6.4	16	1.8	11	14	25	33			
	M 8	3D-1556	7.5	11.1	8.2	12	1.8	11	14	25	31			
	M 8	3D-1552	7.5	11.1	8.2	16	1.8	11	11	22	30			
	M 8	3D-1554	7.5	11.1	8.2	16	1.8	11	14	25	33			
	M 10	3D-1553	7.5	11.1	10.2	16	1.8	11	11	22	30			
	M 10	3D-1559	7.5	11.1	10.2	18	1.8	11	14	25	34			
	M 10	3D-1560	7.5	11.1	10.2	22	1.8	11	20	31	42			
	M 12	3D-1555	7.5	11.1	12.7	22	1.8	11	20	31	42			
35mm ²	M 6	3D-1584	9	12.6	6.4	16	1.8	12	11	23	31	3D-109		400
	M 8	3D-1581	9	12.6	8.2	16	1.8	12	11	23	31			
	M 8	3D-1585	9	12.6	8.2	18	1.8	12	15	27	36			
	M 8	3D-1582	9	12.6	10.8	18	1.8	12	15	27	36			
	M 8	3D-1586	9	12.6	10.2	22	1.8	12	19	31	42			
	M 8	3D-1583	9	12.6	12.7	22	1.8	12	19	31	42			

SHEET METAL LUGS

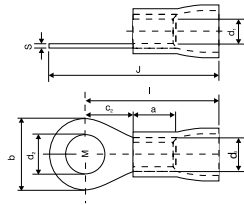
Ring Type
 Brazed Seam
 Material: ETP-Copper
 Surface: Tin Plated





Conductors mm ²	Bolt 0	3D Cat No.	Dimension in mm										Tools	Crimping Profile	Packing Qty 
			d ₁	d ₃	d ₂	b	s	a	C ₂	l	J				
50mm ²	M 8	3D-1609	10.5	14.1	8.2	18	1.8	16	18	34	43	3D-109		200	
	M 10	3D-1607	10.5	14.1	10.2	18	1.8	16	18	34	43				
	M 10	3D-1610	10.5	14.1	10.2	22	1.8	16	16	32	43				
	M 10	3D-1611	10.5	14.1	10.2	24	1.8	16	20	36	48				
	M 12	3D-1608	10.5	14.1	12.7	24	1.8	16	20	36	48				
	M 16	3D-1612	10.5	14.1	16.2	32	1.8	16	22	38	54				
70mm ²	M 10	3D-1637	12	16	10.4	22	2	18	18	36	47	3D-109		150	
	M 12	3D-1636	12	16	12.7	22	2	18	18	36	47				
	M 12	3D-1638	12	16	12.7	24	2	18	18	36	48				
	M 16	3D-1639	12	16	16.2	28	2	18	22	40	54				
95mm ²	M 10	3D-1651	13.5	18.1	10.2	22	2.3	20	15	35	46	3D-109		100	
	M 10	3D-1652	13.5	18.1	10.2	24	2.3	20	20	38	50				
	M 12	3D-1650	13.5	18.1	12.7	24	2.3	20	18	38	50				
	M 16	3D-1653	13.5	18.1	16.2	28	2.3	20	24	44	58				
120mm ²	M 12	3D-1658	15	20.2	12.7	26	2.6	22	17	39	52	3D-109		100	
	M 16	3D-1659	15	20.2	16.2	32	2.6	22	26	48	64				
	M 20	3D-1660	15	20.2	20.3	40	2.6	22	30	52	72				
150mm ²	M 12	3D-1668	16.5	23.7	12.7	34	3.6	24	25	49	66	3D-109		50	
	M 16	3D-1666	16.5	23.7	16.2	34	3.6	24	25	49	66				
	M 16	3D-1669	16.5	23.7	16.2	40	3.6	24	30	54	74				
	M 20	3D-1667	16.5	23.7	20.3	40	3.6	24	30	54	74				

SHEET METAL LUGS

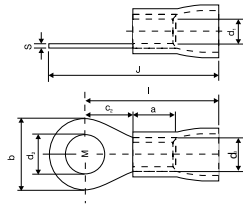
Ring Type, With Insulating Sleeve
 Material: ETP-Copper With PVC Sleeve
 Surface: Tin Plated





Conductors mm ²	Bolt 0	3D Cat No.	Dimension in mm									Tools	Crimping Profile	Packing Qty
			d ₁	d ₃	d ₂	b	s	a	C ₂	l	J			
0.5 To 1.5 mm ²	M 2	3D-3076	1.6	3.2	2.2	6	0.8	5	4	16	19	3D-41		200
	M 2.5	3D-3077	1.6	3.2	2.6	6	0.8	5	4	16	19			
	M 3	3D-3078	1.6	3.2	3.2	6	0.8	5	4	16	19			
	M 3	3D-3081	1.6	3.2	3.2	6.8	0.8	5	3.6	14.6	18			
	M 3	3D-3084	1.6	3.2	3.2	8	0.8	5	5	17	21			
	M 3.5	3D-3079	1.6	3.2	3.7	6	0.8	5	4	16	19			
	M 3.5	3D-3082	1.6	3.2	3.7	6.8	0.8	5	3.8	14.6	18			
	M 4	3D-3080	1.6	3.2	4.2	6	0.8	5	4	16	19			
	M 4	3D-3083	1.6	3.2	4.2	6.8	0.8	5	3.6	14.6	18			
	M 4	3D-3085	1.6	3.2	4.2	8	0.8	5	5	17	21			
	M 4	3D-3087	1.6	3.2	4.2	7.2	0.8	5	5	16	19.5			
	M 4	3D-3088	1.6	3.2	4.2	10	0.8	5	6	18	23			
	M 5	3D-3086	1.6	3.2	5.2	8	0.8	5	5	17	21			
	M 5	3D-3074	1.6	3.2	5.2	10	0.8	5	6	18	23			
	M 6	3D-3089	1.6	3.2	6.4	10	0.8	5	6	18	23			
M 6	3D-3090	1.6	3.2	6.4	12	0.8	5	6	17	23				
2.5 mm ²	M 3	3D-3126	2.3	3.9	3.2	6.5	0.8	5	3.5	14.5	17.7	3D-41		200
	M 3.5	3D-3127	2.3	3.9	3.7	6.5	0.8	5	3.5	14.5	17.7			
	M 3.5	3D-3128	2.3	3.9	3.7	8	0.8	5	5	17	21			
	M 4	3D-3129	2.3	3.9	4.2	8	0.8	5	5	17	21			
	M 5	3D-3130	2.3	3.9	5.2	8	0.8	5	5	17	21			
	M 5	3D-3131	2.3	3.9	5.2	10	0.8	5	7	18	23			
	M 5	3D-3133	2.3	3.9	5.2	12	0.8	5	9	21	27			
	M 6	3D-3132	2.3	3.9	6.4	10	0.8	5	7	18	23			
	M 6	3D-3134	2.3	3.9	6.4	12	0.8	5	9	21	27			
	M 6	3D-3136	2.3	3.9	6.4	16	0.8	5	10	22	30			
M 8	3D-3135	2.3	3.9	8.2	12	0.8	5	9	21	27				

SHEET METAL LUGS

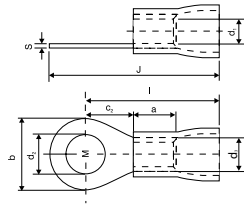
Ring Type, With Insulating Sleeve
 Material: ETP-Copper With PVC Sleeve
 Surface: Tin Plated





Conductors mm ²	Bolt Ø	3D Cat No.	Dimension in mm										Tools	Crimping Profile	Packing Qty
			d ₁	d ₂	d ₃	b	s	a	C ₂	l	J				
2.5 mm ²	M 8	3D-3137	2.3	3.9	8.2	16	0.8	5	10	22	30			200	
	M 10	3D-3138	2.3	3.9	10.2	16	0.8	5	10	22	30				
	M 10	3D-3139	2.3	3.9	10.2	18	0.8	5	14	25	34				
	M 12	3D-3140	2.3	3.9	12.7	18	0.8	5	14	25	34				
4 - 6 mm ²	M 4	3D-3196	3.5	5.5	4.2	8	1	6	5	21	25	3D-41		200	
	M 5	3D-3197	3.5	5.5	5.2	8	1	6	5	21	25				
	M 4	3D-3198	3.5	5.5	4.3	10	1	6	5	22	27				
	M 5	3D-3199	3.5	5.5	5.2	10	1	6	5	22	27				
	M 5	3D-3200	3.5	5.5	5.2	8	1	6	9.8	26	30				
	M 5	3D-3201	3.5	5.5	5.2	12	1	6	6	22	28				
	M 5	3D-3204	3.5	5.5	5.2	12	1	6	7	24	30				
	M 6	3D-3202	3.5	5.5	6.4	12	1	6	6	22	28				
	M 6	3D-3205	3.5	5.5	6.4	12	1	6	7	24	30				
	M 6	3D-3206	3.5	5.5	6.4	14	1	6	10.5	26.5	33.5				
	M 8	3D-3203	3.5	5.5	8.2	12	1	6	6	22	28				
	M 8	3D-3207	3.5	5.5	8.2	14	1	6	10.5	26.5	33.5				
	M 8	3D-3209	3.5	5.5	8.2	16	1	6	13	30	38				
	M 8	3D-3211	3.5	5.5	8.2	18	1	6	12	29	38				
	M 9	3D-3208	3.5	5.5	9.7	14	1	6	10.5	26.5	33.5				
	M 10	3D-3210	3.5	5.5	10.2	16	1	6	13	30	38				
M 10	3D-3212	3.5	5.5	10.2	18	1	6	12	29	38					
M 12	3D-3213	3.5	5.5	12.7	18	1	6	12	29	38					

SHEET METAL LUGS

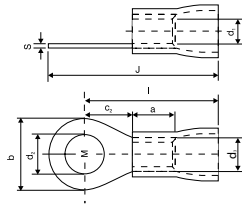
Ring Type Double Grip
 With Insulating Sleeve
 Material: ETP-Copper + PVC Sleeve
 Surface: Tin Plated




Conductors mm ²	Bolt 0	3D Cat No.	Dimension in mm									Tools	Crimping Profile	Packing Qty
			d ₁	b	d ₂	s	a	d ₃	C ₂	l	J			
0.5 To 1.5mm ²	M 2.5	3D-3337	1.6	6	2.6	0.8	5	3.2	4	16	19	3D-41		200
	M 3	3D-3338	1.6	6	3.2	0.8	5	3.2	4	16	19			
	M 3	3D-3341	1.6	6.8	3.2	0.8	5	3.2	3.6	14.6	18			
	M 3	3D-3344	1.6	8	3.2	0.8	5	3.2	5	17	21			
	M 3.5	3D-3366	1.6	7.2	3.7	0.8	5	3.2	4	17.4	21			
	M 3.5	3D-3339	1.6	6	3.7	0.8	5	3.2	4	16	19			
	M 3.5	3D-3342	1.6	6.8	3.7	0.8	5	3.2	3.8	14.6	18			
	M 4	3D-3340	1.6	6	4.2	0.8	5	3.2	4	16	19			
	M 4	3D-3343	1.6	6.8	4.2	0.8	5	3.2	3.6	14.6	18			
	M 4	3D-3345	1.6	8	4.2	0.8	5	3.2	5	17	21			
	M 4	3D-3347	1.6	7	4.2	0.8	5	3.2	5	16	19.5			
	M 4	3D-3348	1.6	10	4.2	0.8	5	3.2	6	18	23			
	M 5	3D-3346	1.6	8	5.2	0.8	5	3.2	5	17	21			
	M 5	3D-3349	1.6	10	5.2	0.8	5	3.2	6	18	23			
	M 6	3D-3350	1.6	10	6.4	0.8	5	3.2	6	18	23			
M 6	3D-3351	1.6	12	6.4	0.8	5	3.2	6	17	23				
2.5mm ²	M 3	3D-3382	2.3	6.5	3.2	0.8	5	3.9	3.5	14.5	17.8	3D-41		200
	M 3.5	3D-3383	2.3	6.5	3.7	0.8	5	3.9	3.5	14.5	17.7			
	M 3.5	3D-3384	2.3	8	3.7	0.8	5	3.9	5	17	21			
	M 4	3D-3385	2.3	8	4.2	0.8	5	3.9	5	17	21			
	M 5	3D-3386	2.3	8	5.2	0.8	5	3.9	5	17	21			
	M 5	3D-3387	2.3	10	5.2	0.8	5	3.9	7	18	23			
	M 5	3D-3389	2.3	12	5.2	0.8	5	3.9	9	21	27			
	M 6	3D-3388	2.3	10	6.4	0.8	5	3.9	7	18	23			
	M 6	3D-3390	2.3	12	6.4	0.8	5	3.9	9	21	27			
	M 6	3D-3392	2.3	16	6.4	0.8	5	3.9	10	22	30			
	M 8	3D-3391	2.3	12	8.2	0.8	5	3.9	9	21	27			
	M 8	3D-3393	2.3	16	8.2	0.8	5	3.9	10	22	30			
	M 10	3D-3394	2.3	16	10.2	0.8	5	3.9	10	22	30			
	M 10	3D-3395	2.3	18	10.2	0.8	5	3.9	14	25	34			
	M 12	3D-3396	2.3	18	12.7	0.8	5	3.9	14	25	34			

SHEET METAL LUGS

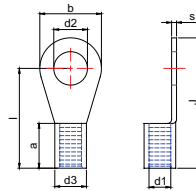
Ring Type Double Grip
 With Insulating Sleeve
 Material: ETP-Copper + PVC Sleeve
 Surface: Tin Plated









Conductors mm ²	Bolt Ø	3D Cat No.	Dimension in mm									Tools	Crimping Profile	Packing Qty
			d ₁	d ₂	d ₃	b	s	a	C ₂	l	J			
4 - 6mm ²	M 4	3D-3493	3.5	5.5	4.2	8	1	6	5	22	26	3D-41		200
	M 4	3D-3495	3.5	5.5	4.2	10	1	6	5	23	28			
	M 5	3D-3494	3.5	5.5	5.2	8	1	6	5	22	26			
	M 5	3D-3496	3.5	5.5	5.2	10	1	6	5	23	28			
	M 5	3D-3497	3.5	5.5	5.2	8	1	6	9.8	27.8	31.8			
	M 5	3D-3498	3.5	5.5	5.2	12	1	6	6	23	29			
	M 5	3D-3501	3.5	5.5	5.2	12	1	6	7	25	31			
	M 6	3D-3499	3.5	5.5	6.4	12	1	6	6	23	29			
	M 6	3D-3502	3.5	5.5	6.4	12	1	6	7	25	31			
	M 6	3D-3503	3.5	5.5	6.4	14	1	6	10.5	27.5	34.5			
	M 8	3D-3500	3.5	5.5	8.2	12	1	6	6	23	29			
	M 8	3D-3504	3.5	5.5	8.2	14	1	6	10.5	27.5	34.5			
	M 8	3D-3506	3.5	5.5	8.2	16	1	6	13	31	39			
	M 8	3D-3508	3.5	5.5	8.2	18	1	6	12	30	39			
	M 9	3D-3505	3.5	5.5	9.7	14	1	6	10.5	27.5	34.5			
	M 10	3D-3507	3.5	5.5	10.2	16	1	6	13	30	39			
M 10	3D-3509	3.5	5.5	10.2	18	1	6	12	30	39				
M 12	3D-3510	3.5	5.5	12.7	18	1	6	12	30	39				

SHEET METAL LUGS

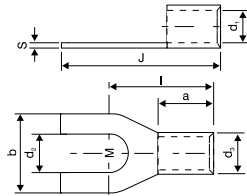
Tailormade Ring Type,
 Brazed Seam
 Material: ETP-Copper
 Surface: Tin Plated








Conduc-tors mm ²	Bolt 0	3D Cat No.	Dimension in mm								Tools	Crimping Profile	Packing Qty
			d1	d3	d2	b	s	a	l	J			
4	5	3D-1368	3.1	5.5	5.2	10	1.2	6	14	19	3D-17		200
4	6	3D-1370	3.1	5.5	6.4	12	1.2	6	16	22	3D-2		200
4-6	8	3D-1421D DDI	3.6	6.2	8.2	16	1.3	8	28.5	36.5	3D-17		200
4-6	10	3D-1427D DDI	3.8	6.2	10.2	16	1.2	8	28.5	36.5	3D-2		200
70	16	3D-1639D BHE	11.5	15.5	16.2	32	2	28	54	70	3D-109		150
95	16	3D-1653D BHE	14	19	16.2	32	2.5	32	72	88	3D-109		100

SHEET METAL LUGS

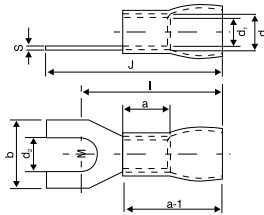
Fork Type , Brazed Seam
 Material: ETP-Copper
 Surface: Tin Plated






Conductors mm ²	Bolt 0	3D Cat No.	Dimension in mm							Tools	Crimping Profile	Packing Qty	
			d ₁	b	d ₂	s	a	d ₃	l				J
0.5 To 1.5mm ²	M 2	3D-1709	1.6	4.6	2.3	0.8	5.0	3.2	10.6	13	3D-17 3D-2		200
	M 3	3D-1923	1.6	6.0	3.1	0.8	5.0	3.2	11.0	14			
	M 3.5	3D-1699	1.6	6.8	3.6	0.8	5.0	3.2	11.1	14.5			
	M 3.5	3D-1700	1.6	6.0	3.6	0.8	5.0	3.2	11.0	14			
	M 4	3D-1701	1.6	8.0	4.1	0.8	5.0	3.2	12.0	16			
	M 4	3D-1704	1.6	6.5	4.1	0.8	5.0	3.2	11.0	15			
	M 5	3D-1875	1.6	8.0	5.1	0.8	5.0	3.2	12.0	16			
	M 5	3D-1702	1.6	10.0	5.1	0.8	5.0	3.2	13.0	18			
M 5	3D-1698	1.6	8.0	5.1	0.8	5.0	3.2	17.0	21				
2.5mm ²	M 3	3D-1902	2.4	5.6	3.1	0.8	5.0	4	10.0	14	3D-17 3D-2		200
	M 3	3D-1889	2.3	6.0	3.1	0.8	5.0	3.9	11.0	14			
	M 3.5	3D-1890	2.3	6.0	3.6	0.8	5.0	3.9	11.0	14			
	M 3.5	3D-1884	2.3	6.5	3.6	0.8	5.0	3.9	11.8	15			
	M 4	3D-1898	2.3	6.5	4.1	0.8	5.0	3.9	11.8	15			
	M 4	3D-1891	2.3	8.0	4.1	0.8	5.0	3.9	12.0	16			
	M 5	3D-1892	2.3	10.0	5.1	0.8	5.0	3.9	14.0	19			
	M 5	3D-1903	2.6	10.6	5.0	1.0	6.2	4.6	15.7	21			
	M 6	3D-1896	2.3	10.0	6.5	0.8	5.0	3.9	14.0	19			
4mm ² To 6mm ²	M 3	3D-1906	3.5	6.0	3.1	1.0	6.0	5.5	11.5	15	3D-17 3D-2		200
	M 3.5	3D-1907	3.5	6.0	3.6	1.0	6.0	5.5	11.0	15			
	M 4	3D-1733	3.5	8.0	4.1	1.0	6.0	5.5	13.0	18.5			
	M 4	3D-1914	3.6	8.0	4.1	1.0	6.0	5.6	14.0	18			
	M 5	3D-1734	3.5	8.0	5.1	1.0	6.0	5.5	13.0	18.5			
	M 5	3D-1916	3.6	10.0	5.1	1.0	6.0	5.6	15.0	20			
	M 6	3D-1915	3.6	11.0	6.4	1.0	6.0	5.6	16.0	21.5			
10mm ²	M 6	3D-1917	4.5	16.0	6.5	1.2	8.0	6.9	19.0	27	3D-2		200
	M 8	3D-1918	4.5	16.0	8.2	1.2	8.0	6.9	19.0	27			
16mm	M 5	3D-1922	5.3	10.0	5.1	1.2	10.0	7.7	20.0	26	3D-2		200

SHEET METAL LUGS

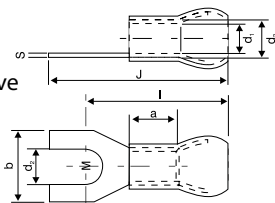
Fork Type with Insulating Sleeve
 Material: ETP-Copper With PVC Sleeve
 Surface: Tin Plated






Conductors mm ²	Bolt 0	3D Cat No.	Dimension in mm										Tools	Crimping Profile	Packing Qty
			d ₁	b	d ₂	s	a	a-1	d ₁	l	J	J			
0.5 To 1.5mm ²	M 2	3D-3695	1.6	4.6	2.3	0.8	5	11	3.2	15.2	18	3D-41		200	
	M 3	3D-3640	1.6	6	3.1	0.8	5	11	3.2	16	19				
	M 3.5	3D-3641	1.6	6	3.6	0.8	5	11	3.2	16	19				
	M 3.5	3D-3639	1.6	6.8	3.5	0.8	5	11	3.2	15	19				
	M 4	3D-3647	1.6	6.5	4.1	0.8	5	11	3.2	16	20				
	M 4	3D-3642	1.6	8	4.1	0.8	5	11	3.2	17	21				
	M 5	3D-3650	1.6	8	5.1	0.8	5	11	3.2	17	21				
	M 5	3D-3643	1.6	10	5.1	0.8	5	11	3.2	19	23				
	M 5	3D-3638	1.6	8	5.1	0.8	5	11	3.2	22	26				
2.5mm ²	M 3	3D-3671	2.4	5.6	3.1	0.8	5	11	4	15	19	3D-41		200	
	M 3	3D-3661	2.3	6	3.1	0.8	5	11	3.9	16	19				
	M 3.5	3D-3662	2.3	6	3.6	0.8	5	11	3.9	16	19				
	M 3.5	3D-3657	2.3	6.5	3.5	0.8	5	11	3.9	16.8	20				
	M 4	3D-3663	2.3	8	4.1	0.8	5	11	3.9	17	21				
	M 4	3D-3668	2.3	6.5	4.1	0.8	5	11	3.9	16.8	20				
	M 5	3D-3664	2.3	10	5.1	0.8	5	11	3.9	19	24				
	M 5	3D-3673	2.6	10.6	5.0	1	6.2	11	4.6	20	25				
	M 6	3D-3670	2.3	10	6.4	0.8	5	11	3.9	19	24				
4mm ² To 6mm ²	M 3	3D-3674	3.5	6	3.1	1	6	14	5.5	21	24	3D-41		200	
	M 3.5	3D-3675	3.5	6	3.5	1	6	14	5.5	21	24				
	M 4	3D-3679	3.6	8	4.1	1	6	14	5.6	23	27				
	M 4	3D-3720	3.5	8	4.1	1	6	11	5.5	21	25				
	M 5	3D-3721	3.5	8	5.1	1	6	11	5.5	21	25				
	M 5	3D-3681	3.6	10	5.1	1	6	14	5.6	24	29				
	M 6	3D-3680	3.6	11	6.4	1	6	14	5.6	25	30.5				

SHEET METAL LUGS

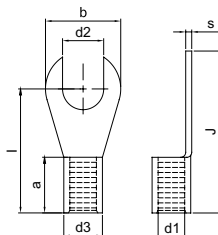
Fork Type Double Grip,
With Insulating Sleeve
Material: ETP-Copper With PVC Sleeve
Surface: Tin Plated





Conductors mm ²	Bolt 0	3D Cat No.	Dimension in mm									Tools	Crimping Profile	Packing Qty
			d1	d3	d2	b	s	a	l	J				
0.5 to 1.5mm ²	M 3.5	3D-3685	1.6	3.2	3.5	6.8	0.8	4	14.8	19	3D-41		200	
2.5mm ²	M 3.5	3D-3687	2.3	3.9	3.5	6.5	0.8	5	16.8	20	3D-41		200	
4mm ² to 6mm ²	M 3	3D-3689	3.5	5.5	3.1	6	1	6	20.5	24	3D-41		200	
	M 3.5	3D-3690	3.5	5.5	3.5	6	1	6	20	24				

SHEET METAL LUGS

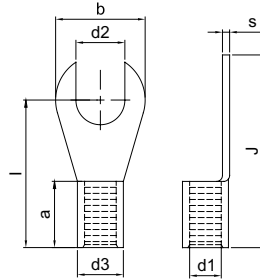
Tailormade Fork Type
With Brazed Seam
Material: ETP-Copper
Surface: Tin Plated







Conductors mm ²	Bolt 0	3D Cat No.	Dimension in mm									Tools	Crimping Profile	Packing Qty
			d1	d3	d2	b	s	a	l	J				
1.5	M 3	3D-1672	1.60	3.20	3.10	6.00	0.80	5.00	11.00	14.00	3D-17		200	
	M 4	3D-1673	1.60	3.20	4.10	8.00	0.80	5.00	12.00	16.00	3D-2			
	M 4	3D-1674	1.60	3.20	4.10	7.00	0.80	5.00	11.00	14.50				
	M 5	3D-1675	1.60	3.20	5.10	10.00	0.80	5.00	13.00	18.00				
	M 3.5	3D-1676	1.60	3.20	3.60	6.00	0.80	5.00	11.00	14.00				
	M 3.5	3D-1678	1.60	3.20	3.60	6.80	0.80	5.00	9.60	13.00				
	M 6	3D-1679	1.60	3.20	6.10	10.00	0.80	5.00	13.00	18.00				
2.5	M 4	3D-1680	2.30	3.90	4.10	8.00	0.80	5.00	12.00	16.00	3D-17		200	
	M 5	3D-1681	2.30	3.90	5.10	10.00	0.80	5.00	13.00	18.00	3D-2			
	M 3	3D-1682	2.30	3.90	3.10	6.50	0.80	5.00	9.50	12.70				
	M 3.5	3D-1683	2.30	3.90	3.60	6.50	0.80	5.00	9.50	12.20				

SHEET METAL LUGS

Tailormade Fork Type
With Brazed Seam
Material: ETP-Copper
Surface: Tin Plated



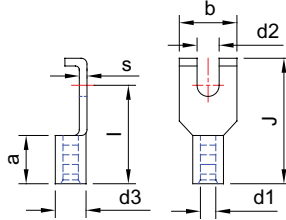
Conductors mm ²	Bolt Ø	3D Cat No.	Dimension in mm								Tools	Crimping Profile	Packing Qty
			d1	d3	d2	b	s	a	l	J			
4-6	M 4	3D-1685	3.50	5.50	4.10	8.00	1.00	6.00	13.00	17.00	3D-17		200
	M 5	3D-1688	3.50	5.50	5.10	12.00	1.00	6.00	16.00	22.00	3D-2		200
10	M 4	3D-1690	4.30	6.30	4.10	10.00	1.00	8.00	17.00	22.00	3D-2		200
	M 6	3D-1692	4.30	6.30	6.10	12.00	1.00	8.00	17.00	23.00			
	M 8	3D-1693	4.30	6.30	8.20	16.00	1.00	8.00	19.00	27.00			
16	M 5	3D-1694	5.60	8.00	5.10	10.00	1.20	10.00	19.00	24.00	3D-2		200
	M 6	3D-1695	5.60	8.00	6.10	12.00	1.20	10.00	20.00	26.00			
	M 8	3D-1696	5.60	8.00	8.10	16.00	1.20	10.00	22.00	30.00			
	M 8	3D-1697	5.60	8.00	8.10	18.00	1.20	10.00	24.00	33.00			





SHEET METAL LUGS

Fork Type With hook Brazed Seam

Material: ETP-Copper

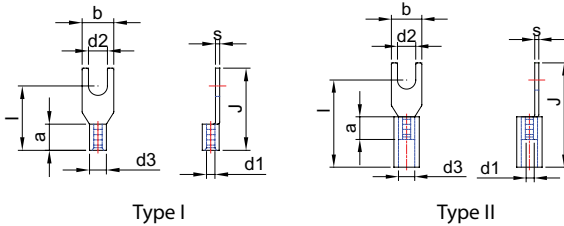
Surface: Tin Plated



Conductors mm ²	Bolt 0	3D Cat No.	Dimension in mm								Tools	Crimping Profile	Packing Qty
			d1	d3	d2	b	s	a	l	j			
0.75	M 2	3D-1707	0.90	1.90	2.30	4.60	0.50	3.00	8.00	11.00	3D-17		200
1.5	M 5	3D-1708	1.60	3.20	5.20	8.00	0.80	5.00	12.00	17.00	3D-17		200
	M 2	3D-1709	1.60	3.20	2.30	4.60	0.80	5.00	-	13.00	3D-2		
	M 6	3D-1710	1.60	3.20	6.30	12.00	0.80	5.00	13.00	19.00			
	M 8	3D-1711	1.60	3.20	8.10	12.00	0.80	5.00	13.00	19.00			
	M 2	3D-1712	1.30	3.20	2.30	6.00	0.80	5.00	10.20	13.00			
	M 4	3D-1713	1.70	3.30	4.20	7.50	0.80	5.00	9.40	15.00			
	M 3	3D-1714	1.80	3.20	3.60	6.50	0.70	5.00	10.00	15.00			
	M 3	3D-1717	1.60	3.20	3.70	6.80	0.80	5.00	10.00	15.00			
2.5	M 4	3D-1718	2.30	3.90	4.20	7.70	0.80	5.00	10.00	16.00	3D-17		200
	M 5	3D-1719	2.30	3.90	5.20	10.00	0.80	5.00	12.00	18.00	3D-2		
	M 6	3D-1720	2.30	3.90	6.30	12.00	0.80	5.00	13.00	19.00			
	M 8	3D-1721	2.30	3.90	8.10	12.00	0.80	5.00	13.00	19.00			
	M 4	3D-1722	2.30	3.90	4.10	8.00	0.80	5.00	13.00	17.00			
4	M 4	3D-1726	3.10	5.50	4.10	10.00	1.20	6.00	14.00	20.00	3D-17		200
	M 5	3D-1727	3.10	5.50	5.10	10.00	1.20	6.00	14.00	20.00	3D-2		
	M 8	3D-1729	3.10	5.50	8.10	12.00	1.20	6.00	14.00	20.00			
4-6	M 5	3D-1731	3.50	5.50	5.20	10.00	1.00	6.00	14.00	20.00	3D-17		200
	M 5	3D-1732	3.50	5.50	5.20	12.00	1.00	6.00	14.00	20.00	3D-2		

SHEET METAL LUGS

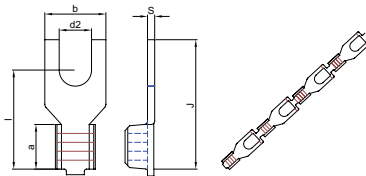
Tailormade Fork Type
 Type-I Brazed Seam
 Type-II With Insulating Sleeve
 Material: ETP-Copper
 Surface: Tin Plated



Conductor mm ²	Bolt Ø	3D CAT NO	Dimensions in mm									TYPE
			d1	d3	d2	b	s	a	l	J		
1.5	3.5	3D-1700 RCF	1.6	3.2	3.6	6	0.8	5	12.3	15.7	I	
1.5	3.5	3D-3641 RCF	1.6	3.2	3.6	6	0.8	5	17.8	21.2	II	

SHEET METAL LUGS

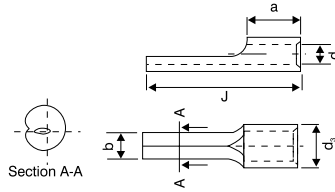
Chain Form Fork Type
 Material: ETP-Copper
 Surface: Tin Plated







Conductor mm ²	Bolt Ø	3D CAT NO	Dimensions in mm					
			d2	b	s	a	l	J
1.5	3.5	3D-1700-1	3.6	6	0.8	5	11.1	14.5
2.5	3.5	3D-1884-1	3.6	6.5	0.8	5	11.8	15

SHEET METAL LUGS

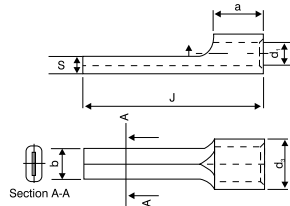
Round Pin Type,
Brazen Seam
Material: ETP-Copper
Surface: Tin Plated











Conductors mm ²	3D Cat No.	Dimension in mm					Tools	Crimping Profile	Packing Qty
		d ₁	d ₃	b	a	J			
0.5 To 1.5mm ²	3D-1012	1.6	3.2	1.9	5	17	3D-17		200
	3D-1015	1.6	3.2	1.9	5	14	3D-2		
	3D-1019	1.8	3.2	1.9	5	17			
2.5mm ²	3D-1020	2.4	4	1.7	4.2	14.4	3D-17		200
	3D-1021	2.3	3.9	1.9	5	17	3D-2		
	3D-1023	2.3	3.9	1.9	5	21			
4mm ²	3D-1028	2.8	4.5	1.7	4.2	14.4	3D-17		200
	3D-1030	2.9	4.9	2.7	6	20	3D-2		
6mm ²	3D-1037	3.6	5.6	2.6	6.4	20.4	3D-17		200
	3D-1036	3.6	5.6	2.7	6	20	3D-2		
	3D-1039	4	6	2.7	6	20			

SHEET METAL LUGS

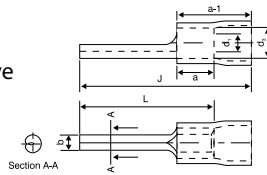
Rectangular Pin Type,
Brazen Seam,
Material : ETP-Copper
Surface : Tin Plated







Conductors mm ²	3D Cat No.	Dimension in mm						Tools	Crimping Profile	Packing Qty
		d ₁	d ₃	b	s	a	J			
10mm ²	3D-1041	4.3	6.7	4.3	2.4	8	22	3D-17		200
16mm ²	3D-1042	5.3	7.3	2.7	2	10	25	3D-17		200
16mm ²	3D-1043	5.8	8.2	5.5	2.4	10	26.0	3D-17		200
25mm ²	3D-1044	7.5	11.1	7.0	3.6	11	31.0	3D-109		200
35mm ²	3D-1045	9.0	12.6	8.0	3.6	12	37.0	3D-109		400
50mm ²	3D-1046	10.5	14.1	9.0	3.6	16	42.0	3D-109		200
70mm ²	3D-1047	12.0	16.0	10.0	4	18	45.0	3D-109		100
95mm ²	3D-1048	13.5	18.5	12.5	5	24	55.0	3D-109		25

SHEET METAL LUGS

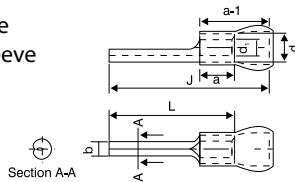
Round Pin Type,
With Insulating Sleeve
Material: ETP-Copper With PVC Sleeve
Surface: Tin Plated




Conductors mm ²	3D Cat No.	Dimension in mm						Tools	Crimping Profile	Packing Qty
		d ₁	d ₃	b	a	a-1	J			
0.5 To 1.5mm ²	3D-3008	1.6	3.2	1.9	5	11	22	3D-41		200
	3D-3013	1.6	3.2	1.9	5	11	19			
	3D-3020	1.8	3.8	1.9	5	11	22			
2.5mm ²	3D-3022	2.3	3.9	1.9	5	11	22	3D-41		200
4mm ²	3D-3026	2.9	4.9	2.7	6	14	28	3D-41		200
6mm ²	3D-3030	3.6	5.6	2.7	6	14	28	3D-41		200

SHEET METAL LUGS

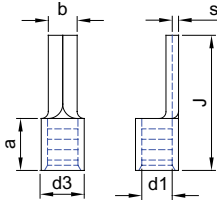
Round Pin Type
Double Grip, with Insulating Sleeve
Material: ETP-Copper with PVC Sleeve
Surface: Tin Plated




Conductors mm ²	3D Cat No.	Dimension in mm									Tools	Crimping Profile	Packing Qty
		d ₁	d ₃	b	s	a	a-1	J	L				
0.5 to 1.5mm ²	3D-3040	1.6	3.2	1.9	0.8	5	11	22	17	3D-41		200	
2.5mm ²	3D-3043	2.3	3.9	1.9	0.8	5	11	22	17	3D-41		200	
4mm ²	3D-3046	2.9	4.9	2.7	1	6	14	29	20	3D-41		200	

SHEET METAL LUGS

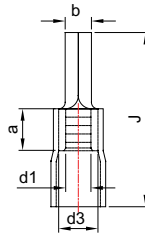
Tailormade Round Pin Type
 Material: ETP-Copper
 Surface: Tin Plated



Conductors mm ²	3D Cat No.	Dimension in mm						Tools	Crimping Profile	Packing Qty
		d1	d3	b	s	a	J			
1	3D-1010B	1.2	2.8	1.8	0.8	4	16	3D-17		200

SHEET METAL LUGS

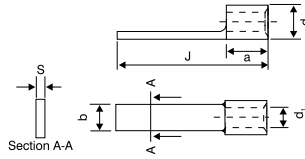
Tailormade Rectangular Pin Type
 with Insulating Sleeve
 Material: ETP-Copper With PVC Sleeve
 Surface: Tin Plated






Conductors mm ²	3D Cat No.	Dimension in mm						Packing Qty
		d1	d3	b	s	a	J	
10	3D-3033	4.3	6.7	4.3	1.2	8	30	200
16	3D-3034	5.8	8.2	5.5	1.2	10	36	200

SHEET METAL LUGS

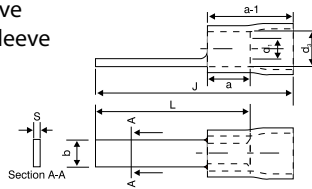
Flat Pin Type, Brazed Seam
 Material: ETP-Copper
 Surface: Tin Plated






Conductors mm ²	3D Cat No.	Dimension in mm						Tools	Crimping Profile	Packing Qty
		d ₁	d ₂	b	s	a	J			
0.5 to 1.5mm ²	3D-1011	1.6	3.2	3.1	0.8	5	17	3D-17		200
	3D-1013	1.6	3.2	2.3	0.8	5	15.5	3D-2		
	3D-1014	1.6	3.2	2.3	0.8	5	23.5			
2.5mm ²	3D-1022	2.3	3.9	3.1	0.8	5	17	3D-17		200
	3D-1027	2.4	4	3.1	0.8	4.2	14.4	3D-2		
	3D-1024	2.3	3.9	2.3	0.8	5	23.5			
	3D-1025	2.3	3.9	2.8	0.8	5	14			
	3D-1029	2.8	4.4	3.1	0.8	4.2	14.4			
4mm ² To 6mm ²	3D-1032	3.6	5.6	5.1	1	6	20	3D-17		200
	3D-1035	3.4	5.5	5.1	1	6.35	20.6	3D-2		
	3D-1038	3.6	5.6	2.8	1	6	16			

SHEET METAL LUGS

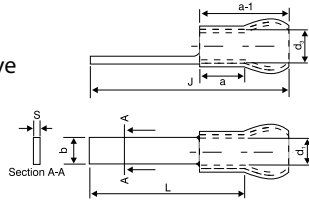
Flat Pin Type with Insulating Sleeve
 Material: ETP-Copper with PVC Sleeve
 Surface: Tin Plated




Conductors mm ²	3D Cat No.	Dimension in mm								Tools	Crimping Profile	Packing Qty
		d ₁	d ₂	b	s	a	a-1	J	L			
0.5mm ² To 1.5mm ²	3D-3009	1.6	3.2	3.1	0.8	5	11	22	17	3D-41		200
	3D-3011	1.6	3.2	2.3	0.8	5	11	20.5	15.5			
	3D-3012	1.6	3.2	2.3	0.8	5	11	28.5	23.5			
2.5mm ²	3D-3023	2.3	3.9	3.1	0.8	5	11	22	17	3D-41		200
	3D-3025	2.3	3.9	2.3	0.8	5	11	28.5	23.5			
4mm ² to 6mm ²	3D-3027	3.6	5.6	5.1	1	6	14	36	20	3D-41		200

SHEET METAL LUGS

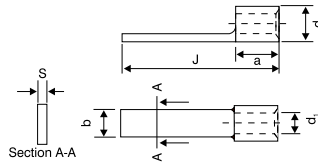
Flat Pin Type Double grip
with insulating sleeve
Material: ETP-Copper With PVC Sleeve
Surface: Tin Plated





Conductors mm ²	3D Cat No.	Dimension in mm									Tools	Crimping Profile	Packing Qty
		d ₁	d ₂	b	s	a	a-1	J	L				
2.5	3D-3044	2.3	3.9	3.1	0.8	5	11	22	17	3D-41		200	

SHEET METAL LUGS

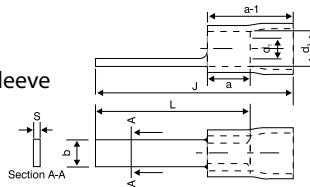
Tailormade Flat Pin Type
Material: ETP-Copper
Surface: Tin Plated




Conductors mm ²	3D Cat No.	Dimension in mm						Tools	Crimping Profile	Packing Qty
		d ₁	d ₂	b	s	a	J			
1	3D-1010	1.2	2.8	3.1	0.8	4	16	3D-17		200
2.5	3D-1024	2.6	4	2.5	0.7	5.1	25.2	3D-17 & 3D-2		200

SHEET METAL LUGS

Tailormade Flat Pin Type
with Insulating Sleeve
Material: ETP-Copper with PVC Sleeve
Surface: Tin Plated



Conductors mm ²	3D Cat No.	Dimension in mm								Tools	Crimping Profile	Packing Qty
		d ₁	d ₂	b	s	a	a-1	J	L			
1.5	3D-3012S DG	1.6	3.2	2.3	0.8	5	11	23.5	18.5	3D-41		200

COPPER SEMIS



Copper Bus Bar



Copper Bus Bar



T - Aluminium & Copper Connector



X - Aluminium & Copper Connector



Copper Earthing Strips
Plain & Perforated

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E : sales@bowl.in, export@bowl.in

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